

IF DARWIN HAD KNOWN ABOUT DNA

**The Darwinism That Developed
in a Climate of Ignorance**

HARUN YAHYA

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TO THE READER

A special chapter is assigned to the collapse of the theory of evolution because this theory constitutes the basis of all anti-spiritual philosophies. Since Darwinism rejects the fact of creation--and therefore, Allah's existence--over the last 140 years it has caused many people to abandon their faith or fall into doubt. It is therefore an imperative service, a very important duty to show everyone that this theory is a deception. Since some readers may find the chance to read only one of our books, we think it appropriate to devote a chapter to summarize this subject.

All the author's books explain faith-related issues in light of Qur'anic verses, and invite readers to learn Allah's words and to live by them. All the subjects concerning Allah's verses are explained so as to leave no doubt or room for questions in the reader's mind. The books' sincere, plain, and fluent style ensures that everyone of every age and from every social group can easily understand them. Thanks to their effective, lucid narrative, they can be read at one sitting. Even those who rigorously reject spirituality are influenced by the facts these books document and cannot refute the truthfulness of their contents.

This and all the other books by the author can be read individually, or discussed in a group. Readers eager to profit from the books will find discussion very useful, letting them relate their reflections and experiences to one another.

In addition, it will be a great service to Islam to contribute to the publication and reading of these books, written solely for the pleasure of Allah. The author's books are all extremely convincing. For this reason, to communicate true religion to others, one of the most effective methods is encouraging them to read these books.

We hope the reader will look through the reviews of his other books at the back of this book. His rich source material on faith-related issues is very useful, and a pleasure to read.

In these books, unlike some other books, you will not find the author's personal views, explanations based on dubious sources, styles that are unobservant of the respect and reverence due to sacred subjects, nor hopeless, pessimistic arguments that create doubts in the mind and deviations in the heart.

ABOUT THE AUTHOR

Now writing under the pen-name of HARUN YAHYA, Adnan Oktar was born in Ankara in 1956. Having completed his primary and secondary education in Ankara, he studied arts at Istanbul's Mimar Sinan University and philosophy at Istanbul University. Since the 1980s, he has published many books on political, scientific, and faith-related issues. Harun Yahya is well-known as the author of important works disclosing the imposture of evolutionists, their invalid claims, and the dark liaisons between Darwinism and such bloody ideologies as fascism and communism.

Harun Yahya's works, translated into 57 different languages, constitute a collection for a total of more than 45,000 pages with 30,000 illustrations.

His pen-name is a composite of the names Harun (Aaron) and Yahya (John), in memory of the two esteemed Prophets who fought against their peoples' lack of faith. The Prophet's seal on his books' covers is symbolic and is linked to their contents. It represents the Qur'an (the Final Scripture) and Prophet Muhammad (may Allah bless him and grant him peace), last of the prophets. Under the guidance of the Qur'an and the Sunnah (teachings of the Prophet [may Allah bless him and grant him peace]), the author makes it his purpose to disprove each fundamental tenet of irreligious ideologies and to have the "last word," so as to completely silence the objections raised against religion. He uses the seal of the final Prophet (may Allah bless him and grant him peace), who attained ultimate wisdom and moral perfection, as a sign of his intention to offer the last word.

All of Harun Yahya's works share one single goal: to convey the Qur'an's message, encourage readers to consider basic faith-related issues such as Allah's existence and unity and the Hereafter; and to expose irreligious systems' feeble foundations and perverted ideologies.

Harun Yahya enjoys a wide readership in many countries, from India to America, England to Indonesia, Poland to Bosnia, Spain to Brazil, Malaysia to Italy, France to Bulgaria and Russia. Some of his books are available in English, French, German, Spanish, Italian, Portuguese, Urdu, Arabic, Albanian, Chinese, Swahili, Hausa, Dhivehi (spoken in Mauritius), Russian, Serbo-Croat (Bosnian), Polish, Malay, Uygur Turkish, Indonesian, Bengali, Danish and Swedish.

Greatly appreciated all around the world, these works have been instrumental in many people recovering faith in Allah and gaining deeper insights into their faith. His books' wisdom and sincerity, together with a distinct style that's easy to understand, directly affect anyone who reads them. Those who seriously consider these books, can no longer advocate atheism or any other perverted ideology or materialistic philosophy, since these books are characterized by rapid effectiveness, definite results, and irrefutability. Even if they continue to do so, it will be only a sentimental insistence, since these books

refute such ideologies from their very foundations. All contemporary movements of denial are now ideologically defeated, thanks to the books written by Harun Yahya.

This is no doubt a result of the Qur'an's wisdom and lucidity. The author modestly intends to serve as a means in humanity's search for Allah's right path. No material gain is sought in the publication of these works.

Those who encourage others to read these books, to open their minds and hearts and guide them to become more devoted servants of Allah, render an invaluable service.

Meanwhile, it would only be a waste of time and energy to propagate other books that create confusion in people's minds, lead them into ideological chaos, and that clearly have no strong and precise effects in removing the doubts in people's hearts, as also verified from previous experience. It is impossible for books devised to emphasize the author's literary power rather than the noble goal of saving people from loss of faith, to have such a great effect. Those who doubt this can readily see that the sole aim of Harun Yahya's books is to overcome disbelief and to disseminate the Qur'an's moral values. The success and impact of this service are manifested in the readers' conviction.

One point should be kept in mind: The main reason for the continuing cruelty, conflict, and other ordeals endured by the vast majority of people is the ideological prevalence of disbelief. This can be ended only with the ideological defeat of disbelief and by conveying the wonders of creation and Qur'anic morality so that people can live by it. Considering the state of the world today, leading into a downward spiral of violence, corruption and conflict, clearly this service must be provided speedily and effectively, or it may be too late.

In this effort, the books of Harun Yahya assume a leading role. By the will of Allah, these books will be a means through which people in the twenty-first century will attain the peace, justice, and happiness promised in the Qur'an.

FOREWORD

From the Depths of the Universe to the DNA Molecule

Too small to be seen with the naked eye, DNA serves as the data bank of our cells. Information about all the living things around you is concealed within this miniaturized data bank inside every cell of every organism. All the structural characteristics of a rose, an orange, a sparrow, a tiger or a human being are present in the nuclei of the cells that comprise these organisms. Look at your hand that is holding this book. These data stores exist in the nucleus of every single one of the cells that compose that hand.

These DNA molecules are invisible to the naked eye but in terms of their contents and data-storage capacity, they are equal to a library consisting of tens of thousands of books. As you observe the miraculous aspects of DNA, which can be seen only by magnifying it thousands of times, you will also appreciate how such minute essential component of life places the theory of evolution in an insuperable quandary. Examining the details of this extraordinary structure will give you the opportunity to ponder the infinite might, incomparable knowledge, scope and dominion of our Lord, Allah (God) and the universe He has created.

Every day, new discoveries are being made about the universe we inhabit. Billions of galaxies lie hundreds of thousands of light years away from one another. Millions of stars that fill those galaxies, whose dimensions defy our powers of conception. Giant planets constantly revolve in a complex order at speeds of thousands of kilometers without ever colliding with one another. Here, on one of the smaller of these planets, we examine the cells, the building blocks of life on Earth, themselves no bigger than a mere speck, under the electron microscope, an invention of the 20th century.

Each of the conditions that makes this planet suitable for life is indispensable to it. The Earth's environment exists and persists by the mercy of Allah.

Albert Einstein, one of the 20th century's most eminent scientists, expressed man's difficulty in comprehending the order in the universe in these terms:

The human mind is not capable of grasping the Universe. We are in the position of a little child entering a huge library filled with books in many languages. The child knows someone must have written those books. It does not know how. It does not understand the languages in which they are written. The child dimly suspects a mysterious order in the arrangement of the books, but doesn't know what it is. ¹

Human beings have been equipped with all the systems they need within this extraordinary environment. The more details that we learn about the body, the more we

realize how miraculous our lives are. As they discover the systems concealed inside their bodies, many people--who would otherwise live without reflection, caught up in the daily course of their lives--will reflect on the purpose behind their existence and become aware of their responsibilities to Allah, their Creator. Indeed, various scientists have acquired faith in the existence of Allah by seeing the greatness of His knowledge and the perfections He has created.

But some of them continue to refuse to see that they live in need of Allah, even though their consciences may tell them otherwise. Yet their refusal to admit the truth will not alter the facts. Allah reveals some people's approach in the Qur'an:

Do not mix up truth with falsehood and knowingly hide the truth. (Surat al-Baqara, 42)

O Humanity! You are the poor in need of Allah whereas Allah is the Rich Beyond Need, the Praiseworthy. (Surah Fatir, 15)

INTRODUCTION

The Most advanced Data Bank Known: DNA

The truth revealed by science as it progresses is that living things possess flawless and highly complex structures that could never have emerged by chance. This is evident proof that our Almighty and Omniscient Lord has created living things. The theory of evolution, which rejects the idea of our Creator and pins its hopes on coincidences, has been dealt one of its most severe blows by developments in the field of molecular biology, which demolishes—with clear and irrefutable evidence, the fundamental of Darwinism, which maintains that life originated based on supposedly simple structures.

As scientists discovered the complex structures inside the cell, which some have referred to as a "molecular machine," they also clearly saw that these could never have come into being as the result of chance.

One such structure is DNA, the cell's data bank, discovered in the 1950s with the invention of the electron microscope. DNA is a giant molecule contained in every cell. On that long molecular chain is encoded all the information that determines the physical and chemical structure of that cell and of the entire organism to which that cell belongs. However, the presence of such a data bank within the cell means nothing by itself. The information within that DNA must be read as needed, and processes carried out in the light of that information. It is impossible for inanimate substances to write and decipher codes, take progressive precautionary measures, and to establish a system to ensure that the information they possess comes to no harm.

Molecules made up of chemical elements from the earth and air cannot be expected to do these things spontaneously. Yet Darwinists are so blindly devoted to their theory of evolution that, as you shall see in the chapters that follow, they insist on claims that are utterly unscientific, violating reason and logic, solely for the sake of convincing themselves and others that everything is a coincidence.

Despite being an evolutionist, Francis Crick—a Nobel Prize-winning biochemist and one of the scientists who discovered DNA—admits the facts in his book *Life Itself*:

An honest man, armed with all the knowledge available to us now, could only state that, in some sense, the origin of life appears at the moment to be almost a miracle.²

Richard Dawkins, known for his evolutionist views, describes the complexity concealed within the cell:

Physics books may be complicated, but . . . the objects and phenomena that a physics book describes are simpler than a single cell in the body of its author. And the author consists of trillions of those cells, many of them different from each other, organized with intricate architecture and precision--engineering into a working machine capable of writing a book. . . . Each nucleus . . . contains a digitally coded database larger,

in information content, than all thirty volumes of the Encyclopedia Britannica put together. And this figure is for each [individual] cell, not all the cells of the body put together.³

If you had found a CD on your desk 25 years ago, and even if you had never seen one before, you would still never try attempt to account for its existence in terms of chance. Despite its being a very thin, flat, round piece of plastic, the regularity of its shape would still make it clear that it had been produced by an intelligent, knowledgeable human being. Even if you never met the person who designed and manufactured that CD, you would still never claim that metals and plastics had assumed such a perfect form as the result of successive accidents.

And what if you learned, through a detailed examination of the CD's structure, that in indentations and protrusions on its surface, there was information coded in the form of the numbers 0 and 1? At first glance it appeared like just a flat plastic disc, but were it enlarged to the size of a football stadium, the indentations on it would be approximately the same size as grains of sand.⁴

All the CD's indentations and protrusions represent coded data containing text, sounds and images. The fact that dozens of books' worth of data has been compressed into this flat disk makes it obvious that intelligent, knowledgeable minds have had a hand in its manufacture. No one could possibly maintain anything different. On the contrary, the presence here of a highly advanced technology, the processes of recording, coding and compression of data are evidence that this CD was consciously produced, and for a specific purpose.

Yet some people, who see that claims of chance are impossible to account for a flat disk of plastic, fail to employ the same honest logic in the face of DNA's perfect creation. They maintain that the DNA molecules, too small to be seen with the naked eye but containing enough compressed and encoded data to fill thousands of encyclopedias, came into being as the work of chance. Yet the human brain that produced the CD and wrote the information it contains also consists of cells that function thanks to the information contained in DNA.

The illogicality here is obvious. In the same way that the information in the CD implies that it has been written there by someone, DNA—a far more comprehensive data bank with a far superior technology—shows the existence of a superior intellect, of a Creator. That intellect is the infinite mind of our Almighty Lord. DNA is a miracle of Allah, the sublime nature of the creation of which we have been able to comprehend through 20th-century technology.

Our Lord reveals the purpose of the things He created in one of the verses:

It is Allah Who created the seven heavens and of the Earth the same number, the Command descending down through all of them, so that you might know that Allah has power over all things and that Allah encompasses all things in His knowledge. (Surat at-Talaq, 12)

CHAPTER 1

Aspect of The Cell Discovered In the 20th Century

In the second half of the 20th century, advances in the field of molecular biology entirely altered our perspective on the miniaturized world inside the cell. With today's rapidly developing technology, biologists have become aware of the flawless and complex mechanisms possessed by the cell, realizing that these could not have come into being by chance or spontaneously. Most of the systems that constitute the cell are smaller than the wavelength of visible light. Some details in the cell can be examined only by advanced techniques such as X-ray crystallography. However, at the time when Darwin launched his theory, the level of science was extremely backward. Not even the basic structure of the cell had been revealed, let alone the discovery of the helix structure and data capacity of the DNA molecule, which James Watson and Francis Crick revealed nearly 100 years after the publication of Darwin's book *The Origin of Species*

Darwin had no means of foreseeing the advances that molecular biology would subsequently make. Clearly, his theory of evolution built on fundamentally flawed knowledge and hypotheses cannot account for the existence of a structure like DNA, which amazes scientists.

The well-known Cambridge University philosopher Dr. Stephen C. Meyer compares modern science with that of Darwin's day:

During the last half of the twentieth century, advances in molecular biology and biochemistry have revolutionized our understanding of the miniature world within the cell. Research has revealed that cells--the fundamental units of life--store--transmit, and edit information and use that information to regulate their most fundamental metabolic processes . . . biologists now describe cells as, among other things, "distributive real-time computers" or complex information processing systems. Darwin, of course, neither knew about these intricacies nor sought to explain their origin. Instead, his theory of biological evolution sought to explain how life could have grown gradually more complex starting from "one or a few simple forms" . . . in the 1870s and 1880s, scientists assumed that devising an explanation for the origin of life would be fairly easy. For one thing, they assumed that life was essentially a rather simple substance called protoplasm that could be easily constructed by combining and recombining simple chemicals such as carbon dioxide, oxygen, and nitrogen.⁵

However, some scientists, the heirs of Darwin, still consider that atoms spontaneously combined to give rise to complex living things. In the light of the extraordinary advances made in the field of molecular biology especially over the last 50

years, it is quite astonishing that Darwin's claim should have survived this long. This state of affairs is admitted in a statement by Dr. Richard Lewontin, an evolutionist and Harvard University biologist and geneticist:

... evolution is not a fact, it's a philosophy. The materialism comes first (a priori), and the evidence is interpreted in light of that unchangeable philosophical commitment. ⁶

Because of their devotion to materialism, the inheritors of the theory of evolution are generally unable to accept scientific facts. They therefore insist on trying to carry an outdated 19th-century scientific conception into the present day. However, the facts are too evident to be covered up by any superstitious philosophy.

In the Qur'an, Allah reveals that there will be those who "**use fallacious arguments to deny the truth**" (Surat al-Kahf, 56). In another verse, He tells us:

Rather We hurl the truth against falsehood and it cuts right through its brain and it vanishes clean away! Woe without end for you for what you portray! (Surat al-Anbiya', 18)

The Cell Is More Complex Than a Major City

Some four billion years ago, according to the evolutionist scenario, various inanimate chemical substances entered into reactions in the primitive Earth's atmosphere; these then combined with the effects of lightning and earthquakes—and thus the first living cell emerged. The fact is, however, that the structure of the cell is more complex than even the most populous and technologically advanced city. A great many systems operate non-stop with a flawless organization, from power stations that produce energy inside the cell to protein-producing factories, from a freight system that transports raw materials to decoders that translate DNA, and a dense and constant communications system.

For evolutionists to believe that the cell came into being by chance is as illogical and nonsensical as claiming that all the buildings, roads, transportation systems, electricity and water networks in a city such as Istanbul, with its almost 15 million population, came into existence spontaneously as the result of such natural phenomena as storms and earthquakes.

Prof. Gerald L. Schroeder, an Israeli scientist working in the fields of physics and biology at the Massachusetts Institute of Technology (MIT) describes the order inside the cell:

The human body acts as a finely tuned machine, a magnificent metropolis in which, as its inhabitants, each of the 75 trillion cells, composed of 1027 atoms, moves in symbiotic precision. Seldom are two cells simultaneously performing the same act, yet their individual contributions combine smoothly to form life. ⁷

Despite being an evolutionist, the late astrobiologist Carl Sagan speaks of the amazing order in the cell as if it were a work of art:

A living cell is a marvel of detailed and complex architecture. Seen through a microscope, there is an appearance of almost frantic activity. On a deeper level it is known that molecules are being synthesized at an enormous rate. Almost any enzyme catalyzes the synthesis of more than 100 other molecules per second. In ten minutes, a sizeable fraction of total mass of a metabolizing bacterial cell has been synthesized. The information content of a simple cell had been estimated as around 10¹² bits, comparable to about a hundred million pages of the Encyclopedia Britannica.⁸

The nucleus inside the cell bears the DNA, the most important genetic material. Mitochondria inside the cell turn glucose (in the form of food products) into energy packets. Microscopic tubes extend throughout the cell, constituting vital pathways along which proteins and other required substances can be carried to the appropriate location. In addition, the billions of cells in our bodies build all their systems out of molecules, at the same time consistently maintaining and repairing themselves. As well as performing their own tasks, they also renew themselves.⁹ They also obtain their own energy.

Prof. Werner Gitt, director of the German Federal Institute of Physics and Technology, emphasizes how the cell is far superior to any machinery made by human beings: "The biological energy conversion system is brilliantly and cleverly designed that energy engineers can only watch, fascinated. Nobody has yet been able to copy this miniaturized and extremely efficient mechanism."¹⁰

In his book *Blind Faith: Evolution Exposed*, the science writer Howard Peth states that there is no such thing as a simple cell:

Formerly, it was thought that a cell was composed of nucleus and a few other parts in a "sea" of cytoplasm, with large spaces in the cell unoccupied. Now it is known that a cell literally "swarms." That is, it's packed full of important functioning units necessary to the life of the cell and the body containing it. The theory of evolution assumes life developed from a "simple" cell - but science today demonstrates that there is no such thing as a simple cell.¹¹

In conclusion, cells are not simple sacs of jelly, as was imagined in Darwin's day. On the contrary, as the 20th century physicist and astrobiologist Prof. Paul Davies puts it, they resemble computers with the most highly advanced technology, or complex cities.

CHAPTER 2

The Source of the Data of Life

DNA, the basic genetic material of all living things, is a long molecule resembling a spiral staircase, whose details we shall be examining in due course. DNA exists in all living things—human beings, flowers, birds, flies, and even bacteria. It contains all the necessary information regarding the features of the living cell and its regular operations. In addition, detailed information regarding a living thing's external appearance, the kind of structure it will have, how it will grow and how its organs will work, are all determined beforehand in DNA. For example, an individual's DNA contains information about such details as height, eye color and physical structure, how the body will defend itself in the face of which dangers, and how it will produce proteins, the building blocks of the cell. The DNA of a rosebush contains millions of pieces of detailed, coded information about its flower's scent and color, the structure of its thorns, the shape of its leaves and the thickness of its stems. DNA molecules are rather like blueprints that determine how a living thing will be constructed and function.

Human beings carry this molecule, which exhibits far greater knowledge than themselves, in every one of their cells. For example, a DNA chain is packaged in every cell in your eyes as you read these lines. There are DNA molecules in every cell in the fingers that turn over the pages of this book, in the cells of your heart and bones, and in every cell that makes up your body. What is more, they are constantly at work to keep the individual alive.

The information theoretician Dr. Werner Gitt expresses the extraordinary range of the data in DNA:

It seems necessary to assume that in addition to its protein-coding portions, DNA contains countless additional levels of structure and function. Such stored information concepts are just as much required to code for the development of the smallest organelles such as the mitochondria and ribosomes, as for building the large organs (e.g., heart, kidneys, brain) and the overall integrated organism. As yet, no one has been able to decode this incredibly complex system.¹²

As noted by Professor Gitt, the sphere of operation of the DNA's information is very broad. DNA does not determine just physical characteristics; at the same time it plans thousands of different functions throughout the cell, the body's organs and systems. Thanks to the information placed in DNA:

*The bones grow in exactly the right place, shape and size. The skull, ribs, pelvic bone and vertebrae all have special shapes and thickness in line with specific purposes. The vertebrae, for instance, possess just the right shape for the vitally important spinal cord to be able to pass through them. Similarly, the skull has been specially shaped to

protect the brain, and the ribs to shield the lungs and heart. The balanced development of every one of these is part of the total blueprint recorded in the DNA.

*The 206 separate bones in the human body are connected to one another by ligaments and muscles in such a way as to allow them to move. The elasticity and mobility of these muscles that allows us to go up and down stairs, run, bend down and stand up again is again recorded in DNA. Thanks to the information set out by Allah in DNA, we can move our muscles in almost any direction we desire. Thus a human being can hold a glass of water, turn the pages of a book, sit in a chair without falling out of it, or carry packages weighing many kilograms.

*The cartilage that prevents friction between bones is a very special tissue in terms of its shape, structure and position. In the knees, for example, cartilage acts as a shock absorber that allows those joints to carry the whole weight of the body—tens of kilograms—without feeling stress. The detailed blueprint for the knee is also set out in DNA.

*The veins that stretch approximately 100,000 kilometers (62,140 miles) and carry vitally important blood to nourish all the body's tissues. The veins work jointly with the heart's special pumping system. Some are thinner than a hair, carrying red blood cells to every corner of the body, from the eyelids to the fingertips, from the brain to the kidneys.

*The way that the nerves interpenetrate the entire body lets them react very quickly to changes that the senses perceive, allowing different parts of the body to work together as a single unit.

*The 200 or so different kinds of cell in the body possess the same basic features and mechanisms, but perform very different activities. A liver cell, for example, carries out 500 different chemical processes within a matter of milliseconds (thousandths of a second), while a heart cell can produce its own electricity over a whole lifetime.

*The production of the energy you need to stand up and walk, remain standing, breathe and to open and close your eyes—in short to survive—is part of the blueprint recorded in each cell. Thanks to this blueprint, every cell knows how to obtain the most energy from foodstuffs consumed and how to make the most efficient use of them.

*The stomach secretes acids that digest meat, but do not break down its tissues. Up to 20 enzymes go into action to make blood clot during the repair of a deep cut. These are just two of the precautionary measures recorded in DNA.

*The hormonal system is a highly efficient communications system among the cells, permitting the regulation of all the balances in the body. It functions according to the information set out in DNA. How much of which substances the body will use, and how surpluses are to be stored or expelled, are also included in this specific blueprint.

*On the other hand, DNA also determines how the cells in the immune system are to exchange information. In the event of a tissue being wounded or infected, for instance, the immune system initiates reactions. Defense cells identify the site of the wound in a very short time to counter-attack the microbes entering the body through the injury. They then analyze the threat and transmit messages that begin the war against those microbes.

Whole libraries of books could be written about the details in the human body, both known and as yet undiscovered. All are parts of a blueprint recorded in the DNA's data bank. In short, DNA acts as a planning center in every living thing, literally undertaking the responsibilities of architects, engineers, scent experts, botanists, laboratory technicians, interior designers, designers, artists, doctors and countless other experts and scientists. At every moment, Our Almighty Lord creates and controls these molecules that are in constant operation so that you can read these lines, see, breathe, think and in short, remain alive.

This fact is revealed in one verse of the Qur'an:

[Hud said,] "I have put my trust in Allah, my Lord and your Lord. There is no creature He does not hold by the forelock. My Lord is on a Straight Path." (Surah Hud, 56)

As a very simple example, compare the information in DNA with a book. Obviously, no book can write itself. Even if we assume that this was in some way possible, it still will be absolutely impossible for anything written in that book to be meaningful. Based on this analogy, Prof. Phillip Johnson states that random coincidences can have no such power, ability or intelligence:

. . . just everybody (including Richard Dawkins) agrees that it is essentially impossible to produce a coherent book of average length by randomly combining letters, spaces and punctuation marks. Even a single sentence—like "In the beginning was the Word"—is extremely unlikely to come from pouring out a random mix of letters and spaces.¹³

No doubt that the data recorded in DNA have an incomparable structure more complex than the sentence. In the beginning was the Word, and that this complex structure cannot possibly have come into existence spontaneously or by chance. Moreover, all the trillions of DNA molecules possessed by billions of living things for millions of years have all been encoded with a perfect system, placed within an area too small to be seen with the naked eye and yet used in the most rational manner. That being so, there is a Creator Who plans and arranges human beings, their cells and their DNA in that flawless and perfect manner. That Creator is Almighty Allah. To maintain the opposite is to ignore the facts, reason and logic.

However, many who would quickly agree it is impossible for letters to arrange themselves into even three small words still manage to listen with no objection to the deceit that millions of atoms combined together by chance, one by one, in a specific sequence to create a molecule containing the equivalent of whole libraries of information. The sole reason for this is their blind devotion to Darwinism, which prevents some intelligent people from seeing the evident fact of Creation and leads them into the most irrational beliefs. Everyone freed from this preconception to use his intellect will clearly

see that an infinite data bank such as DNA can only come into existence through being created.

When they are told, "Follow what Allah has sent down to you," They say, "We are following what we found our fathers doing." What, even though their fathers did not understand a thing and were not guided! The likeness of those who do not believe is that of the beast which, call out to it as one may, can hear nothing but a shout and a cry. Deaf–dumb–blind. They do not use their intellect. (Surat al-Baqara, 170-171)

CHAPTER 3

The DNA Molecule's Miraculous Structure

In discussing the chemical structure of the DNA molecule, our objective is not simply to provide the kind of information you can find in a great many books on biology, but to show the details in human creation and the extremely sensitive order on which our existence depends—and thus, to properly appreciate our Lord's greatness and His mercy upon us.

Some people prefer to remain far removed from technical details and don't want to tire their minds with them. But they reflect that same superficial perspective in their analyses, comments and statements. In fact, there is sublime wisdom in every detail of creation, and each of those details has been created for a specific purpose.

In one verse of the Qur'an our Lord tells us that:

We did not create the heavens and Earth and everything between them, except with truth. The Hour is certainly coming, so turn away graciously. Your Lord, He is the Creator, the All-Knowing. (Surat al-Hijr, 85-86)

Let's examine some of the details in the creation of the DNA in the trillions of cells inside every one of the billions of people on Earth.

Chemical Structure of the DNA Helix

The giant molecule of DNA (deoxyribonucleic acid) that plays a role in all the cell's vital functions consists of carbon, hydrogen, oxygen, nitrogen and phosphate atoms. There are billions of these atoms in a single human DNA molecule,¹⁴ all arranged in a manner particular to that individual.

DNA is an acronym of the words deoxyribo, nucleic and acid that express the molecule's chemical structure. This molecule in the nucleus of every human cell consists of **nucleic acid** arranged in a helix shape like a miniature sphere just 5 microns in diameter.¹⁵ (One micron equals one thousandth of a millimeter.) Nucleic acids are exceedingly important compounds, despite making up only 2% of our bodies. The basic structural units of nucleic acids are **nucleotides**. Some 6 billion nucleotides combine in the double helix that gives rise to DNA.¹⁶

The DNA molecule's structure resembles a spiral staircase, and its architectural regularity amazes scientists. The sides of the staircase, made up of various sugars and phosphates, represent the DNA molecule's dual backbones. The steps, on the other hand, consist of pairs of four conjoined chemical substances known as bases: adenine, thymine, cytosine and guanine. Bases are molecules consisting of between 12 and 16 atoms

including carbon, oxygen, hydrogen and nitrogen.¹⁷ These chemicals are also specially arranged on the DNA spiral. Only two combinations of arrangements are possible: adenine (A) always bonds to thymine (T), and cytosine (C) always bonds to guanine (G).¹⁸

Scientists have established the special sequence in which the atoms making up DNA give rise to nucleotides. But knowing the structure of the building blocks of life is not the same thing as producing them. Indeed, although the correct materials—atoms and the technology to combine them—are available to scientists, they are utterly incapable of making a living DNA molecule.

In the Qur'an our Lord reveals that:

It is He Who gives life and causes to die. When He decides on something, He just says to it, "Be!" and it is. (Surah Ghafir, 68)

Your deity is Allah alone, there is no deity but Him. He encompasses all things in His knowledge'. (Surah Ta Ha, 98)

A special creation is evident in the arrangements of the atoms. Every nucleotide contains some 34 atoms. Since there are 6 billion nucleotides in DNA, 204 billion atoms (34 times 6,000,000,000) need to combine chemically to form a single DNA molecule.¹⁹ Were you able to process one atom a second and worked eight hours a day for 350 days a year, it would still take you longer than 20,000 years to produce a single DNA molecule.²⁰ Since this is beyond the capacity of even rational human beings, can anyone imagine that the DNA molecule came into existence by chance? Such a thing is of course out of the question. In addition, bear in mind that in the absence of DNA molecules, living things could not exist.

Indeed, the slightest error in DNA's structure gives rise to very serious consequences, as the well-known science writer Richard Milton describes:

... [E]ach nucleotide has to be "written" in precisely the correct order and in precisely the correct location in the DNA molecule for the offspring to remain viable, and as described earlier, major functional disorders in humans, animals, and plants are caused by the loss or displacement of a single DNA molecule, or even a single nucleotide within that molecule.²¹

Every base sequence in the DNA strip—the arrangement of the nucleotides adenine, thymine, cytosine and guanine in the cell nucleus—constitutes a genetic text containing information needed for the building of essential proteins. From that point of view, it is noteworthy that DNA maintains its regular structure on the one hand while on the other having an arrangement that permits information diversity.

The DNA Strip is Wound around Bobbins

A single DNA strip in human cells consists of around 3 billion base pairs and is approximately 2 meters long. Both chains of that length need to be reduced in size to dimensions invisible to the eye. Similarly to the way in which a long thread is wound around a reel, the DNA is packaged and installed in the nucleus through a similar cellular mechanism. The DNA strip is packaged by being wound around nucleosomes, which give rise to chromosomes. The job of the nucleosomes is undertaken by proteins known as histones.

There is a 15-turn section of the DNA spiral in one nucleosome; and this is the length of 150 nucleotides.²² This 15-turn section is wound twice around a protein nucleus, made up of eight histones containing a large number of positively charged amino acids. These perfectly complement the negatively charged phosphates on the DNA.

When information written anywhere on the DNA is needed for protein production, the nucleosome opens and the DNA strip is released for "reading." After this, the DNA winds back around the histones, protected from the damaging effects of the molecules around it, until the next time need arises. Genetic data require not just content, but also a sensitive order in their structure and in the features of the surrounding environment.

This order is just one of the works of our Almighty Lord, Creator of the Earth and sky. In one verse, we are told that:

. . . My Lord is kind to anyone He wills. He is indeed All-Knowing and All-Wise. (Surah Yusuf, 100)

Genes: Data Packages

A single cell nucleus, invisible to our eyes, contains a DNA strip that is 4 meters (13.12 feet) long, packaged inside the nucleus in the form of groups known as **chromosomes**. The nuclei of the cells in your body contain a total of 23 chromosome pairs. When chromosomes are magnified under an electron microscope, the DNA molecule inside these chromosomes are seen to be compressed in a spiral form. Despite occupying a very small volume, this packaging system possesses a stunning data-storage capacity, as you'll see in a later chapter.

DNA strips contain all the information required to form proteins of all kinds—enzymes, molecular motors, hormones and other building blocks.²³ The information encoded in the DNA molecule determines the symmetrical formation of the eyes and ears, the pumping of blood by the heart, the transportation of oxygen to the cells via that blood, the gastric acid that breaks down foodstuffs, and all the body's other physical features. There are around eighty thousand of these kinds of information packets, known as genes, in the human body.²⁴

If the total amount of genetic information—the **genome**, in other words—is compared to a library, every book in that library represents a chromosome, and the chapters in the

books are genes. Genes are rather like the headings in a giant encyclopedia, containing a detailed blueprint of a human being's biologic characteristics.²⁵

The chromosomes passed on by way of inheritance are determined by the different arrangements of the four chemical bases constituting the DNA steps. Thousands of these steps, or base pairs, constitute a single gene. James Watson, one of the co-discoverers of DNA's structure, notes that base sequences are the source of the differences in genes:

The four nucleotides were not however, completely different, for each contained the same sugar and phosphate components. Their uniqueness lay in their nitrogenous bases, which were either a purine (adenine and guanine) or a pyrimidine (cytosine and thymine) . . . If the base sequences were always the same, all DNA molecules would be identical. And there would not exist the variability that must distinguish one gene from another.²⁶

From these four base sequences, Allah has created billions of different human beings and keeps creating. Thanks to the flawless order that Allah created in DNA, human beings emerge with a detailed and complex structure and the rich characteristics they possess.

In verse 45 of Surat an-Nur it is revealed that:

. . . Allah creates whatever He wills. Allah has power over all things. (Surat An-Nur, 45)

DNA is a Stable Molecule

DNA is the most suitable molecule for carrying information. Chemists refer to it being stable, which means the molecule is not easily damaged or dissolved. Scientists engaged in research in the field of molecular biology are well aware of the importance of this stability, because DNA's structure is far more resistant than most biochemicals used in the laboratory. Unlike many biochemicals, it can preserve its stability for months in solution, even at room temperature.²⁷ Prof. Daniel Dennet expresses the stable nature of the bases in DNA:

One of the important features of DNA is that all the permutations of sequences of adenine, cytosine, guanine, and thymine are about equally stable, chemically. All could be constructed, in principle, in the gene-splicing laboratory, and, once constructed, would have an indefinite shelf like a book in a library.²⁸

All shows that the DNA molecule is specially created to contain and conceal information. It is absolutely impossible for all of DNA's properties to have come into existence together instantaneously, as the result of chance. Each one of these has been consciously brought together at our Almighty Lord's command.

In one verse of the Qur'an, Allah reveals that:

. . . That is Allah, your Lord. The Kingdom is His. Those you call on besides Him have no power over even the smallest speck. (Surah Fatir, 13)

The Astonishing Order in DNA's Spiral Structure

Imagine the coiled cord that leads from a telephone receiver. A long cable has been squeezed into a much shorter distance, but in such a way that it can be extended if necessary. Nobody seeing that cable could possibly imagine that it had assumed that shape by chance, because the place where the cable is used, its purpose and the ease it affords are all signs of an intellect and conscious knowledge.

The DNA in human cells has a similarly spiral shape, but is far more regular, longer and more convoluted. There is enormous wisdom behind the use of this shape. DNA's extraordinary data capacity, which we shall be discussing shortly, and the way it is compressed into a minute space, are made possible thanks to this special form. DNA, which measures 4 meters (13.12 feet) when its spiral is fully extended, takes up no more space than one two millionth of a millimeter, and is hard to see even under an electron microscope.²⁹

DNA is Reminiscent of a Highly Regular Spiral Staircase

The DNA molecule is a coiled helix, consisting of two spirals, rather like a staircase. The coils in the DNS spiral have an exceedingly regular structure. The vertebrae consisting of sugar and phosphate in both DNA chains revolve at an equal distance around a common axis and twist in the same direction, from right to left. Moreover, there is no haphazard sequencing in the steps between the two arms. The bases that make up the rungs form an angle of 90 degrees to the spiral axis, giving the DNA strip its highly regular, staircase-like appearance.

The steps are joined to one another with a special locking system. The four different components of the rungs –adenine, guanine, cytosine and thymine– are of different sizes. The adenine and guanine bases are large, and cytosine and thymine are small molecules. The dimensions of the molecules that will be opposite one another have been determined in such a way as to ensure equal spaces at every point on the spiral staircase.

In order for the steps to be always regular, guanine always pairs with cytosine, and adenine with thymine. Thus small bases always being opposite large ones in the DNA molecule means the distance is stable at every point. The result is a regular staircase extending with no interruptions. However, if the base adenine were to be paired with guanine just once, instead of with thymine, it would be impossible for the helix structure to proceed in a regular manner. Any error in the sequence might thus entirely impair the molecule's chemical structure and prevent the data being used, copied and transmitted. This again indicates that the sequence cannot be the work of chance.

The distance between the turns of neighboring base pairs is also stable. This system ensures equidistance between the staircase coils, some 10 base pairs –in other words, 10 steps– form a complete revolution of 360 degrees.³⁰ DNA coils a billion times a second,

and the staircase steps twist by performing their spiral movement.³¹ This action plays a very important role in DNA's performing two vital functions--directing the formation of protein and self-replication.

Prof. Werner Gitt, director of the German Federal Institute of Physics and Technology, says this about this special structure:

The coding system used for living beings is optimal from an engineering standpoint. This fact strengthens the argument that it was a case of purposeful design [Creation] rather than fortuitous chance.³²

Importance of the Bonds used in the Building the Spiral

The dual backbones of the long DNA molecule –or the banisters of the staircase– are very strong, made up of consecutive sugar and phosphate molecules. These molecules attach to one another with a special bond known as **ester covalent bonds**. These are exceptionally strong and it is very difficult to break them. This strength provides protection against harmful factors that might impair genetic information.³³ The existence of these bonds makes the DNA molecule resistant and stable even while the DNA molecule is in a single-strand form.

However, there is a risk of damage to the DNA spiral structure as the coils unfold. For that reason, the spiral needs to be strong and stable enough to protect its structure but also elastic enough to be opened up very quickly so that the information can be easily used. In fact, a combination of powerful covalent bonds that protect DNA's basic molecular structure of, and weaker **hydrogen bonds** that can be broken more quickly, enables the elasticity-solidity problem to be overcome. Since the hydrogen bonds forming between the four opposed nucleotides are not as strong as ester bonds, they can easily be separated with less energy by means of such factors as pH variation (acid-base equilibrium), heat, and pressure. Weak bonds play a very important role in the shaping of the large molecules in an organism, and endow with elasticity the substance they compose. However, no breakage in the bonds ever takes place. Thanks to this distinguishing feature of hydrogen bonds, the information in the DNA molecule can be used whenever required.

The significance of the elasticity in the bonds is that the vital function of protein production is made possible by DNA being copied when cells divide, and that transmission is made possible by the elastic property of the bonds between them. Since the two chains of the DNA molecule are attached to one another only by hydrogen bonds, they can easily be unraveled and separated from one another. They can also, when necessary, recombine and form a new helix structure. No breakage or impairment ever takes place in the nucleotides that constitute the steps of the DNA chain during detachment or separation. While the hydrogen bonds in the center can easily separate from

one another, no breakage or stretching ever develops in the long chains at either side, attached by means of covalent bonds.

The molecular biologist Michael Denton describes the perfection in the biochemical structure of DNA:

The geometric **perfection of the molecule is particularly** evident in the fact that the strength of **each of the five hydrogen bonds** –the two between adenine and thymine and the three between guanine and cytosine– is optimal because each of the hydrogen atoms points directly at its acceptor atom, and the bond lengths are all at the energy maximum for hydrogen bonds. This is most remarkable, for it confers great stability on the molecule and makes for highly accurate base pairing during replication.³⁴

On the one hand, there is a need for a sound and stable structure for the containing of genetic information, while on the other a flexible structure is required for the genes to be read and copied. So the strength of the bond between the two arms that make up the DNA helix has to be just right for it to fulfill its essential functions. And indeed, the DNA helix does have just the right level of strength and elasticity. If the bond between the DNA strips were any stronger, the two arms would stop moving and become fixed. But if the bond were weaker, the molecule would break apart.³⁵ Yet by the will of Allah, the bonds that constitute DNA have the ideal structure to make the helix both highly regular and exceedingly functional.

The Importance of Phosphate in DNA

Phosphates keep together the nucleotide bases on DNA, because the DNA helix functions in an environment containing water, and water breaks down the bonds between phosphates and sugars. Thus it is both advantageous and essential that the phosphate groups in DNA be negatively charged. That negative charge eliminates the danger of the DNA being broken down in the watery environment surrounding it.

What compounds, other than phosphates, could establish a chemical bond and still manage to remain negatively charged? There are various possibilities. Yet none of these can form genetic information in the way that phosphate does. Silicic acid and arsenic esters break down rapidly in water. Although citric acid dissolves more slowly in water, it lacks the stability to maintain the molecule's geometry.³⁶

Therefore, if phosphate did not have its own unique properties, the DNA's double helix could not form. No self-replication biochemical system could be established, and life would be impossible. The well-known professor of chemistry Frank Henry Westheimer says this: "All of these conditions are met by phosphoric acid and no other alternative is obvious."³⁷ This situation and all the other details we have examined so far clearly show that our Lord has created the DNA molecule with miraculous properties. In one verse of the Qur'an, it is revealed that:

He knows what is in front of them and behind them. But their knowledge does not encompass Him. (Surah Ta Ha, 110)

CHAPTER 4

DNA's Extraordinary Data-storage Capacity

Modern technological progress in the field of data storage is truly amazing. Computer hard discs, CDs, diskettes, data sticks and similar products are becoming more advanced and efficient every day. Computer firms are seeking answers to how the maximum amount of data can be stored in the minimum space without being impaired, and how that information can be downloaded in the fastest possible manner. Even though whole encyclopedias of data can be compressed onto a single CD, it is still large enough to cover your hand. The astonishing data-miniaturizing or data-compression ability of DNA, on the other hand, far surpasses modern technology.

According to calculations by Leonard Adleman of Los Angeles South California University, just 1 gram (0.0022 pounds) of DNA can contain the equivalent amount of data to 1 trillion CDs.³⁸ This shows that data are concealed in a million, million times more efficiently in DNA than in a CD.³⁹

The volume of a human being's DNA is 3 billionths of a cubic millimeter (3×10^{-9} mm³).⁴⁰ According to G. G. Simpson, if all the features of all the species that have ever lived were to be loaded onto DNA, the resulting total volume of DNA would fill only a small part of a teaspoon. Enough space would even be left over the rest of the teaspoon to contain all the books that have ever been written.⁴¹

Dr. Leonard Adleman, the inventor of the DNA computer, which represents a new sphere of technology, says this about the mechanism in DNA and the cell:

If we look inside the cell, we see extraordinary machines that we couldn't make ourselves. It's a great tool chest.⁴²

According to Darwinists, however, this giant data bank in the cell –capable of holding the equivalent of tens of thousands of books– came into being spontaneously as the result of chance. In the eyes of Darwinists, who have no qualms about building another total impossibility on top of that one, chance has compressed all the data in a library large enough to fill an entire football stadium, undamaged, into a space too small to be seen with the naked eye. Darwinists still blindly advocate such a total impossibility. Yet neither the cell nor DNA, its data bank, can emerge from the chance combination of unconscious atoms. Even the very smallest components of living things have been created for a specific purpose, and every one of them are far too complex to admit any possibility of chance.

Michael George Pitman, a professor of biology from University of Sydney, uses the German philosopher Arthur Schopenhauer's words to express how life is not just a collection of inanimate substances:

Every organism is organic through and through in all its parts, and nowhere are these, not even in their smallest particles, mere aggregates of inorganic matter.⁴³

If we were to express the volume of data in DNA in numerical terms, then a 4-meter (13.12-foot) long DNA molecule has been packaged and compressed into a cell only 3 to 5 microns in diameter (1 micron = 1/1000 millimeter). If the DNA codes in every one of the body's 100 trillion cells were laid out end to end, the resulting length would stretch to the Sun and back 600 times.⁴⁴

Prof. Jerry Bergman, known for his scientific papers, emphasizes the engineering in DNA in an analogy:

Suppose you were asked to take two long strands of fisherman's monofilament line—125 miles [201 kilometers] long— then form it into a double-helix structure and neatly fold and pack this line so it would fit into a basketball. Furthermore, you would need to ensure that the double helix could be unzipped and duplicated along the length of this line, and the duplicate copy removed, all without tangling the line. Possible? This is directly analogous to what happens in the billions of cells in your body every day. Scale the basketball down to the size of a human cell and the line scales down to six feet [2 meters] of DNA. . . . The DNA packing process is both complex and elegant and is so efficient that it achieves a reduction in length of DNA by a factor of 1 million.⁴⁵

The molecular biologist Michael Denton describes the extraordinary nature of DNA's data compression ability:

. . . it is clear that cells are immensely complex entities. . . more than a number in a jumbo jet. . . the complexity of a jumbo jet packed into a speck of dust invisible to the human eye. It is hardly conceivable that anything more complex could be compacted into such a small volume. Moreover, it is a speck-sized jumbo jet which can duplicate itself quite effortlessly⁴⁶

DNA's ability to hold information is so efficient that all the data concerning to a human being can be compressed into an area weighing just a few trillionths of a gram.⁴⁷ According to Yale University's Prof. George Gaylord Simpson, the data belonging 1 billion living things can be squeezed with ease into a single grain of salt.⁴⁸

Prof. Francis S. Collins, a physicist and geneticist and also director of the National Human Genome Research Institute, describes the results of his study of DNA:

Now fifty years since Watson and Crick unraveled the structure of the double helix, I think it is amazing to contemplate the elegance of DNA carrying information . . . This digital code allows, in a very easily copyable form, such a massive amount of information to be carried inside each cell of the human body. This double helix DNA is made up of base pair letters. The whole human genome consists of three billion of these base pairs all packaged inside the cell's nucleus. . . The three billion letters are able to direct all of the biological properties of a human being.⁴⁹

The well-known molecular biologist Michael Denton mentions that biological information to be packed into the tiny volume of the cell nucleus seems to be specifically

arranged for human beings.⁵⁰ If DNA did not have this data compression ability, the cell would have to be very much larger in order to hold irregular DNA strips. But it is impossible for cells to be any larger, because the cell's sources of oxygen and nutrients are efficient only given the existing diameter of the cell.⁵¹ From that point of view, the cell's size and therefore, its ability to hold DNA, is of vital importance.

This glorious packaging system is made possible by the DNA molecule's ability to coil and form long spirals that bend and give rise to intertwined, regular helixes. This packaging technology evidencing highly advanced engineering, can be seen in the nucleus of every cell. By means of this packaging system that our Almighty Lord created in our cells, millions of kilometers of DNA "letters" remain contained in a volume we cannot see with the naked eye.

The Giant Encyclopedia in the Human Cell

So extraordinary is the amount of information recorded in DNA that a single DNA molecule contains enough information to fill a million encyclopedia pages. To put that another way, 1,000,000 pages of data that control the functioning of the human body have been encoded inside the nucleus of every cell. You can obtain a better idea of this amount when you consider that even the 23-volume Encyclopedia Britannica, has only 25,000 pages. This gives rise to an extraordinary picture. Inside the nucleus, itself far smaller than the microscopic cell in which it is contained; is a data bank 40 times larger than one of the largest encyclopedias on Earth, equivalent to a 920-volume encyclopedia. Research has shown that this giant encyclopedia contains some 5 billion different pieces of information. Let's repeat those two words, "contains information"

We now need to stop and think about what this means. It is easy enough to say that a cell contains billions of pieces of information. However, we are discussing not a computer or a library, but an area 100 times smaller than a millimeter made up solely of protein, fat and water molecules. It would be astonishing for only a single piece of information, let alone millions, to be contained inside this tiny molecule. Moreover, books and encyclopedias are inert and inanimate. Someone possessed of consciousness needs to read the information and act on the instructions it contains. Yet DNA is a living source of information that does not just contain data, but also uses that information and acts upon it.

How can a chain consisting of atoms arranged one behind the other, in a space just a billionth of a millimeter in diameter, possess such knowledge and memory? While each of the 100 trillion cells in your body are capable of learning a million pages by heart, how many pages could you –an intelligent individual– learn during the course of your lifetime? Any rational person will conclude that the cell is the work of a superior mind and superior knowledge. It is impossible, as evolutionists maintain, for DNA to have arisen by chance in one single cell, let alone in an organism consisting of billions. Almighty Allah (is the Creator of all things. Allah reveals in one verse of the Qur'an as follows:

They do not measure Allah with His true measure. Allah is All-Strong, Almighty. (Surat al-Hajj, 74)

The Data Storage Technology in DNA Is Greater Than That of Computers

The computer is the most advanced technology through which large quantities of information can be stored. The information possessed by room-sized computers 50 years ago can now be stored on small discs. Yet the latest computer technology, developed by human intelligence as the result of centuries of accumulated knowledge and many years of effort, comes nowhere near to approaching the data-storage capacity of DNA.

A strand of DNA is only one 2 millionth of a millimeter in thickness. Despite this extraordinary thinness and the fact it is 4 meters (13.12 feet) long, DNA strips never become tangled up with one another. Thanks to its special structure, the DNA is folded up perfectly inside the cell's nucleus - an example of incomparable engineering.

One of the main goals of computer engineers is to be able to store as much information as possible in as small a space as possible. At present, the highest level storage capacity on Earth is that belonging to DNA molecule.⁵² In his book *The Road Ahead*, Bill Gates, the president of Microsoft, writes:

Human DNA is like a computer program but far, far more advanced than any software we've ever created.⁵³

The well-known American philosopher Prof. Daniel Dennet describes the density of information contained in DNA in his book *Darwin's Dangerous Idea*:

Even to those of us accustomed to the "engineering miracles" of the computer age, the facts are hard to encompass. Not only molecule-sized copying machines, but proofreading enzymes that correct mistakes, all at blinding speed, on a scale that super computers still can not match. Biological macromolecules have a storage capacity that exceeds that of the best present-day information stores by several orders of magnitude.⁵⁴

The sequencing of the codes in DNA resembles that of the digits in a computer system. The numbers in a computer environment can contain an image, the instructions for a computer game, or the text of a book. The codes in DNA contain information that serves to produce new proteins.⁵⁵ But no computer engineer can imitate DNA, which contains sufficient information to fill a million encyclopedia pages in a space invisible to the naked eye. To claim that DNA emerged by chance is even more irrational than maintaining that the most advanced computers could have done so. DNA exhibits evident proofs of Allah's sublime creation. Allah reveals this matchless creation in the Qur'an:

He is the Originator of the heavens and the Earth. . . (Surat al-An'am, 101)

Astonishing Comparisons That Elucidate the Giant Data Capacity in DNA

Instead of using units of measurement, scientists resort to various comparisons to emphasize the vast amount of genetic data in human beings. Here are some examples that stress the breadth of the data capacity in DNA:

*If the information in the human genome could be written down using the alphabet, it would fill 1,000 books of 1,000 pages each, each page containing 3,000 letters.⁵⁶ 1,000 books times 1,000 pages times 3,000 letters equals 3,000,000,000 (3 billion) letters.

*If those 3 billion letters in the human genome were written out as a single sentence, it would stretch from the North Pole to the Equator. Someone working at a typewriter at a rate of 300 letters per minute for 8 hours a day, 220 days a year, would take 95 years to complete the task.⁵⁷

*For the genetic information to be written out would require 12,000 160-page books. Compared with computer chips with a 16 MB capacity (a megabyte is 1 million bytes, the smallest data units in a computer), the DNA strip in the human genome contains 1,400 times more information.⁵⁸

*If a pinhead 2 millimeters (0.078 of an inch) in diameter were stretched out to the thinness of the DNA molecule, it would be 33 times longer than the Equator.⁵⁹

*The information in DNA is sufficient to fill a library consisting of 100 sets of a 30-volume encyclopedia.⁶⁰

*Were the information in DNA to be placed in books piled one on top of the other, those books would attain a height of 70 meters (229 feet). Alternatively, that information could fill 200 phone books of 500 pages each.⁶¹

*If the DNA in all the cells in the human body were flattened out and laid end to end, they would stretch for some 50,000,000 kilometers (31,070,000 miles.) That distance is enough to go from the Earth to the Solar System. Light would take approximately two days to travel the entire length of the DNA in your body.⁶²

*According to professor Jérôme Lejeune, a genetics expert, the genetic data belonging to all the human beings on Earth could be contained in a quantity of DNA no larger than a few aspirin tablets.⁶³

*The information in the DNA in a single human cell could fill 1 million encyclopedia pages. Individuals could not live long enough to read their own genetic data. Where they to read the DNA code every day, 24 hours a day, non-stop, it would take 100 years to complete the task.

*To envisage the density of the data in the DNA molecule, assume that you have enough DNA to cover a pinhead. Now consider that this same information is written down in books of 160 pages each. The data in such a small amount of DNA could fill 15 trillion (15 times 10¹²) of those 160-page books. If you placed that many books one on top of the other, their height would be 500 times the distance between the Earth and the Moon (384,000 kilometers, or 238,600 miles). Alternatively, if these books were equally

distributed among the 6 billion or so people in the world, every individual would receive 2,500 volumes.⁶⁴

The boundless information that these examples try to express is stored inside every cell nucleus. The presence of DNA, storing the equivalent amount of information to a large library, in some 100 trillion cells, means 100 trillion of these libraries. Were we to compare that level of information with the level so far achieved by mankind, we would be unable to find an example sufficiently large. In addition, if we multiplied that quantity by the 6 billion people currently living on the Earth and the billions of others who lived in the past, a boundless quantity of data would appear before us.

Moreover, we are now speaking only of human genetic information. Bearing in mind the genetic information possessed by the millions of living creatures that have ever existed, the level rises to heights that exceed comprehension. The knowledge that our Omniscient and Almighty Lord has manifested in DNA leaves absolutely no room for claims based on chance.

In one verse, it is stated that:

There is no one in the heavens and Earth who will not come to the All-Merciful as a servant. He has counted them and numbered them precisely. (Surah Maryam, 93-94)

Rather We hurl the truth against falsehood and it cuts right through it and it vanishes clean away! Woe without end for you for what you portray! (Surat al-Anbiya', 18)

DNA Is an Example of the Artistry and Intellect of Allah, the Lord of Infinite Knowledge

The basic claims of the theory of evolution are based on blind chance, which cannot give rise to information. If the chemical formula for a drug that cures cancer is written down one day, all the authorities would join forces to identify the discoverers and even give them an award. Nobody would wonder if that formula was the result of ink being spilled on the page. Any rational mind would think that it could have been written only by someone with expertise in chemistry, physiology, oncology (the branch of medicine that studies cancer) and pharmacology (the branch that studies drugs).

Evolutionists seek to account for the origin of the information in DNA in terms of chance, which is even more illogical than claiming that the page you are reading was formed by coincidence. The detailed molecular formula for every one of the 100,000 types of proteins in the body and the instructions to be followed during their production are all encoded in DNA. Also encoded in DNA are the communication protocols to be adhered to

in communications between cells, the production of messenger hormones to be used, and countless other varieties of information.

To maintain that DNA and the boundless information it contains came into being spontaneously is a serious collapse of logic. Gene Myers, one expert on the subject from *Celera Genomics*, the company that carried out the Human Genome Project, expresses the extraordinary nature of the information in DNA:

We don't understand ourselves yet . . . There's still a metaphysical, magical element. . . What really astounds me is the architecture of life. The system is extremely complex. . . There's a huge intelligence there. I don't see that as being unscientific. Others may, but not me.⁶⁵

Evolutionists' claims regarding the origin of DNA quoted in later sections of this book are full of such expressions as "an unsolved secret." Sometimes, as Myers did, attempts are made to account for DNA's this extraordinary nature in terms of a huge intelligence. This intelligence, which some scientists are unable to put into words but which deeply impresses them, reflects the infinite wisdom and knowledge of our Almighty Lord, Allah. One verse from the Qur'an reads:

Allah is the Light of the heavens and the Earth. The metaphor of His Light is that of a niche in which is a lamp, the lamp inside a glass, the glass like a brilliant star, lit from a blessed tree, an olive, neither of the east nor of the west, its oil all but giving off light even if no fire touches it. Light upon Light. Allah guides to His Light whoever He wills and Allah makes metaphors for humanity and Allah has knowledge of all things. (Surat an-Nur, 35)

CHAPTER 5

The Cryptography in the DNA Molecule

In every cell in your body lies a glorious treasure house of information, written in a language spoken by nobody on Earth,. The alphabet of this language consists of just four letters, and each letter stands for a chemical molecule known as a **base** or **nucleotide**. The genetic "words" known as **codons** are made up of these letters. This DNA language of just four letters consists of the molecules adenine, thymine, guanine and cytosine, or the letters A, T, G and C for short. All the information contained in the data bank within the nucleus is encoded in this four-letter alphabet. When hundreds of the letters A, T, G and C are taken together, the result is long, meaningful "sentences" known as genes, which describe how the processes in the body should take place and give instructions regarding them. Millions of these "letters" set out in a meaningful sequence one after the other comprise the DNA molecule.

In his book *Our Molecular Nature*, the molecular biologist David S. Goodsell refers to the DNA molecule as ". . . perhaps the most beautiful of our molecules, but like a fine book, its true beauty lies not in binding, but in the words written within."⁶⁶

All of a person's physical characteristics have been encoded by means of this special language and stored in the cell nucleus. An organism's body shape, the vital functions of all its organs and the organization of how those organs function, the genetic codes and amounts of proteins that need to be produced within the cell are all encoded in DNA. This enormous code contains information about a person's entire body, ever since it was no more than a single cell. To put it another way, before the individual even became a human being, a comprehensive blueprint for the entire body was ready in a single molecule.

When referring to the nucleic acids that make up DNA in the cell nucleus, we shall continue to use the letter analogy. These letters, as we explained earlier, come together in specific pairs to form the "steps" on the staircase. By being added one on top the next, these steps then constitute genes. Every gene in part of the DNA molecule controls specific human features. Height, eye color, the structure of the nose, ears and skull, and countless other characteristics all come into being by the commands of relevant genes. We may compare these genes to the pages of a book written with only the letters A, T, G and C.

There are some 30,000 genes in a human cell's DNA. Every gene consists of between 1,000 and 186,000 nucleotides arranged in a particular sequence, depending on the kind of protein to which it corresponds. These genes contain the codes for some 200,000 proteins that operate inside the human body, and also regulate the production of those same proteins. The information contained by these 30,000 genes represents only 3%

of the total information that DNA contains. The data in the remaining 97% is still unknown, but it has been established that this portion contains information essential to the activities of the cell. (For more detail, see the Chapter 12, "How the Miracle of DNA Invalidates the Theory of Evolution.")

Genes exist inside chromosomes, and there are 46 chromosomes in the nucleus of every human cell (apart from the reproductive cells). To compare every chromosome to a volume consisting of pages in the form of genes, then we can say that in each cell, there is a 46-volume cellular encyclopedia containing all of a human being's characteristics. As we've already made clear, this cellular encyclopedia contains an amount of information equivalent to a 920-volume *Encyclopedia Britannica*.

The arrangement of the letters in every individual's DNA is different. That is why all the people who have ever lived have been different from one another. The basic structure and functions of the organs are the same in everyone. Yet everyone is specially created with such fine differences and in such a detailed manner that although all human beings develop the same basic structure through the division of a single cell, the result is still billions of people with wholly different appearances.

The arrangement of the letters in DNA determines a person's characteristics, right down to the tiniest details. In addition to features such as height and the colors of one's eye, hair and skin color, blueprints for the 206 bones in the body, 600 muscles, a 10,000-component network of hearing nerves, 2 million-part network of optic nerves, 100 billion nerve cells, blood vessels 130,000,000,000 meters (80,780,000 miles) in length and 100 trillion cells all exist in the DNA in a single cell. The Canadian science writer Denyse O'Leary refers to the information in DNA:

The truly puzzling type of information is the type that is characteristics of human artifacts, and is also written in our DNA. It does not follow a repetitive pattern. But it has a pattern that relates it to other information and it is complex. For example, the DNA in a cat embryo is a complex series of instructions for a kitten that the embryo is carrying out.⁶⁷

Since not even a single word cannot form in the absence of a writer, how did the billions of "letters" in the human genome come into existence? How have these letters been arranged in a meaningful way to constitute the matchless blueprint for such perfect and complex bodies? The slightest alteration to the arrangement of these letters could lead to us having fingers on our feet, eyes in our stomachs or heads facing backwards. Our arms might be longer or shorter than they actually are, or our lips might be sealed together. If we currently exist as normal human beings, that is only through the permission of our Almighty Lord. Allah has made the arrangement in the letters in every human being's DNA the means whereby this comes about. In one verse, He informs us that:

He is Allah-the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and Earth glorifies Him. He is the Almighty, the All-Wise. (Surat al-Hashr, 24)

The DNA Molecule Contains Coded Messages

The sublime creation inside the DNA molecule is able to carry the specific arrangement of its own atoms and the maximum amount of code in the minimum area. Every letter that constitutes this genetic code is written into the cell nucleus by means of a molecule with its own particular chemical features and three-dimensional structure.

Arthur Ernest Wilder-Smith, a professor of chemistry, refers to the message in the DNA molecule in one of his books:

All biological cells are guided by program stored in the cell nucleus on DNA molecules in code form. . . all cellular syntheses and catabolic processes are teleonomically remotely controlled by the coded program in the nucleus . . . In order to avoid the lengthy explanations necessary to clarify such a system theoretically, we shall describe the major traits of the genetic code system with the aid of several simple analogies. The internationally recognized distress call is "S O S."

This call contains information within a coded phrase, which may also be expressed as: . . . - - -. . . The dots and dashes represent the two letters of Morse code. . . . is equivalent to our letter "S" and - - - to our "O." We can store or transmit the Morse alphabet in various manners. For example, the letters can be retained on paper, written on a birthday cake with cake icing, or an airplane could write [them]. The message and the information remain the same, namely "S O S," in whatever medium they are transmitted or stored. The dots and dashes of the Morse code might even be knotted on a string, the dash being represented as a larger knot and the dot as a smaller knot. In this last case, no paper surface is required to relay the message contained in the Morse code, the dimension of only a simple piece of string will suffice. By means of a system of this type. a string carrying single knots and double knots (= dashes) could be used to "write" and to store Goethe's Faust.⁶⁸

As set out above, the information content is independent of its mode of transmission. Therefore, not just the arrangement of the bases in the DNA, but also the coded information, the message that it contains, is noteworthy. The science writer Richard Milton highlights the delicate organization in the coding of messages in DNA:

Each instruction in a program must be carefully considered by the programmer as to both its immediate effect on the computer hardware and its effects on other parts of the program. The letters and numbers which the programmer uses to write the instructions have to be written down with absolute precision with regard to the vocabulary and syntax of the programming language he uses in order for the computer system to function at all. Even the most trivial error can lead to a complete malfunction. In 1977, for example, an

attempt by NASA to launch a weather satellite from Cape Canaveral ended in disaster when the launch vehicle went off course shortly after takeoff and had to be destroyed. Subsequent investigation by NASA engineers found that the accident was caused by failure of the onboard computer guidance system-because a single comma had been misplaced in the guidance program. Anyone who has programmed a computer to perform the simplest task in the simplest language –Basic, for instance– will understand the problem. **If you make the simplest error in syntax, misplacing a letter, a punctuation mark or even a space, the program will not run at all. In just the same way, each nucleotide has to be "written" in precisely the correct order and in precisely the correct location in the DNA molecule for the offspring to remain viable,** and, as described earlier, major functional disorders in humans, animals, and plants are caused by the loss or displacement of a single DNA molecule, or even a single nucleotide within that molecule.⁶⁹

Professor Murray Eden is an expert from the Massachusetts Institute of Technology on the subject of information theory and official languages. He says that "No currently existing formal language can tolerate random changes in the symbol sequences which express its sentences. Meaning is almost invariably destroyed. Any changes must be syntactically lawful ones."⁷⁰ He goes on to state that this rule also applies to the language of DNA that constitutes genetic information.

All these statements show that the information in DNA could not possibly have emerged as the result of chance. In the face of these fictitious claims made by evolutionists, we may cite the mathematical science of coding information to ensure its security, known as cryptology. One aim of this science is let information be read accurately and prevent its being altered. For example, a hacker monitoring the communication between two individuals on the Internet, may make changes to the information they send to one another. Thus the preservation of original information is of great importance. The greater the importance of the information, the greater the importance and difficulty of the coding technique to be employed. That is why special programs prevent information being readily accessible to just anyone. Only specific authorized individuals can read and alter this program's information, whose accuracy is confirmed by means of security systems.

Since genetic information is of direct importance to human life, it too must not be subjected to any alteration. Only within the last 50 years did scientists discover that such an important treasure store of information was concealed inside the cell, but this priceless information has been protected inside the cell nucleus, using a special code, ever since human beings were first created. Every detail regarding this molecule is full of examples of Allah's sublime creation. DNA prompts us to ask the following questions:

- Who possesses the information needed to construct a perfect body?
- Who conceals that information inside living tissue?

- Who compresses such wide-ranging information into such a minute space, and how?
 - Who knows how very important this information is and maintains it under protection?
 - Who encodes the information and who deciphers it?
 - Who ensures that there are no deficiencies or impairments during the deciphering process?
 - Who knows that this information must be transmitted to future generations and knows the technique to employ in doing so?
 - Who copies this information into new cells as they are renewed and multiply, and how?
 - These questions, to which hundreds more could be added, lead us to the existence of our omniscient, sublimely intelligent Creator. DNA is ". . . **the handiwork of Allah Who gives to everything its solidity.** . . (Surat an-Naml, 88)
- In the Qur'an, Allah reveals the organization in His creation:

O man! What has deluded you in respect of your Noble Lord? He Who created you and formed you and proportioned you and assembled you in whatever way He willed. (Surat al-Infitar, 6-8)

In order to write a work about what is needed for all of an organism's bodily functions, the author must know all the details about that organism's cellular activities will be performed at the atomic and molecular level and to accurately determine its special requirements at every stage of life, from infancy right up to death. Only our Lord knows all this information and "**proportioned**" **humankind**. (Surah 'Abasa, 19)

In addition, all other living things on Earth –bacteria, viruses, insects, horses and plants– also have DNA in their cells. Each one's DNA contains detailed information about the needs and body structure of the organism to which it belongs. Recalling the millions of species on Earth, one can better grasp the scope of the information in question. Our Almighty Lord equips every living thing right from the outset with all the information it needs, places that information inside the cells, and creates the separate DNA sequences for each living species.

The Translation From DNA's Four Letters into a 20-Letter Protein

As you saw in earlier sections of this book, the data bank inside the DNA has been encoded in the form of four chemical bases represented by the letters A, T, G and C. But for this 4-letter DNA language to be used, it must be translated into a 20-letter protein language. The information in DNA becomes meaningful for proteins only as a result of this translation process.

The well-known chemist Prof. Wilder Smith notes the difficult nature of a system able to translate between these two languages:

Translation of information from one language into another constitutes one of the most difficult tasks which can be presented to a computer. The computer must be fed very carefully with extensive and highly complicated programs, if it is to carry out the translation satisfactorily. Americans have spent millions of dollars in the attempt to obtain machine translations from Russian into English automatically from computers. After more than twenty years of work, there still exists no machine which is capable of independently translating idiomatic Russian into idiomatic English without being constantly checked by a good interpreter who continually supervises the machine's work. The mechanized translation of idioms from one language to another is so difficult that preprogramming of the machine seldom suffices.⁷¹

As this extract shows, complete and accurate translation between two languages does not appear possible by means of a technical program. In fact, however, the way that DNA language is translated into the protein language is pre-programmed in DNA, so that this system functions in a flawless manner in every cell in the billions of human beings.

The Canadian science writer Denyse O'Leary refers to the communication difficulty to be expected between a four-letter gene language and a 20-letter protein one:

Here is what we know about the human genome: Our genes work together in complex combinations, talking to each other constantly as they direct the building of a bewildering variety of proteins, the machines that carry out the operations in each cell that keep us alive. The really tough part is that, instead of having only four building blocks, as genes do, proteins have 20.⁷²

Despite this apparent difficulty, however, the coded descriptions written in the DNA language is read properly, translated and used in all the living things on Earth. This intelligence manifested inside the cell belongs to our Almighty Lord, the Lord and Sovereign of all things, Who has created and continues to create living things through His mercy.

This is revealed in the Qur'an:

Glorify the Name of your Lord, the Most High. He Who created and molded.
(Surat al-A'la, 1-2)

From what thing did He create him? From a drop of sperm He created him and proportioned him. (Surah 'Abasa, 18-19)

CHAPTER 6

Protein Synthesis: The Matchless Production System Recorded In DNA

Proteins are large, complex molecules that perform a great many essential tasks in the body. The proteins that carry out most of the processes in the cell are essential to the formation of the body's tissues and organs and to those organs' ability to do their own jobs. Proteins consist of hundreds or even thousands of smaller units known as amino acids. Twenty different kinds of amino acid are used to give rise to one protein, and every protein consists of a combination of between three hundred and over a thousand amino acids.⁷³ The arrangement of the amino acids determines proteins' unique three-dimensional structures and functions. Thus every organ uses these proteins specially manufactured for it and operates the systems that keep the individual alive.

Inside the human body there are around 200,000 different types of protein, each with its own individual importance. Were the 20 amino acids that comprise proteins to combine together haphazardly, the result would be masses of amino acids in various functionless sequences. Yet these very special arrangements permit proteins to come into existence, essential to human beings' vital functions.

Depending on their own particular sequences, proteins are building blocks in the various regions of the body and assume responsibility for different tasks. For example, proteins compose the enzymes that combine to accelerate processes in the body, antibodies that fight disease, and hormones that regulate the functioning of the organs. Each one of these has its own individual, essential importance for the body.

Proteins absorbed in food do not work in the body in their existing form. They are first taken into special laboratories in the cell and broken down into smaller molecules—amino acids. Then, these amino acids are recombined in different sequences to constitute whichever of the 200,000 kinds of proteins encoded in DNA is required at any given time. This mechanism, every stage of which is a miracle in its own right, is known as protein synthesis.

Protein synthesis is the main job of the cells, because proteins carry out just about all the work inside cells. Tens of thousands of different kinds of proteins in the human body are repaired when required and replaced with new ones when they grow old. Blueprints inside the genetic information are noted for the production of a new protein, and the required variety is duly manufactured. The production plan for each protein exists in detailed instructions encoded into DNA.

The molecular biologist Michael Denton refers to the protein production blueprint:

Where DNA is the data bank of life, the ultimate repository of all biological information, the proteins are life's animated actors, the universal constructor devices, the nanomanipulators which translate the one-dimensional DNA dream into the vital three-dimensional reality of the cell. By reading and following the instructions in the DNA, the proteins manipulate the atoms and molecules of life into the trillions of unique and specific conformations upon which the miracle of self-replication and self-assembly depends.⁷⁴

As an individual goes through daily life, just about all the 100 trillion or so cells in the body are carrying out complex processes at every moment. All cells, apart from reproductive and blood cells, produce around 2,000 proteins a second. The approximately 100 trillion cells in an adult human body flawlessly organize some 150,000,000,000,000,000,000 (150 quintillion) amino acids to give rise to protein chains.⁷⁵ This process goes on every day, every minute, every second.

Prof. Gerald L. Schroeder describes this environment inside the cell:

Our cells are a nonstop marvel. Transport in all directions satisfies the needs for the two thousand proteins manufactured every second of every day, seven days a week. No night-time snooze . . . here.⁷⁶

The system for the flawless production of proteins, so vitally important to the survival of living things, is incomparably more complex and organized than any Earthly analogy that could be cited. In this complex production plant, there is no room for the slightest error.

Any disruption at any stage is immediately put right by the security system, ensuring that the proteins that permit the organism to remain alive are produced with no disruption, at exactly the right time, and in exactly the right place and form.

Another miraculous aspect of protein production is that it occurs at very high speeds. A protein molecule carrying 100 amino acids, for instance, is synthesized by the *E. coli* bacterium cell in five seconds.⁷⁷ No factory on Earth is able to complete its entire production process, in a flawless manner, at such a speed. This speed is very important, because several proteins are needed in the cells at any time in order for the organism to survive. In his book *The Machinery of Life*, the molecular biologist David S. Goodsell expresses the importance to life of protein synthesis:

The key molecular process that makes modern life possible is protein synthesis, since proteins are used in nearly every aspect of living. The synthesis of proteins requires a tightly integrated sequence reactions most of which are themselves performed by proteins. Thus posing one of the unanswered riddles of biochemistry: **which came first, protein or protein synthesis? If proteins are needed to make proteins, how did the whole thing get started?**⁷⁸

It is impossible for evolutionists to answer this question, because their Darwinist preconceptions prevent them seeing the facts- or rather, prevents them from openly stating them. The fact is, however, that the fact of creation is inescapable: it is Almighty Allah

Who simultaneously creates proteins and the protein synthesis that takes place at great speed inside the cell. Using the coded information in the DNA as a vehicle, our Lord has permitted such vital processes as protein synthesis to continue without interruption.

During protein production, many proteins work at the same time. All the required components work flawlessly together inside the cell. More than 80 ribosome proteins, a messenger molecule with more than 20 amino acids, more than a dozen helper enzymes, more than 100 enzymes that carry out the final processes, and 300 macromolecules, more than 40 of them being RNA molecules- all play co-coordinated roles in protein synthesis.⁷⁹

A large engineering team would have difficulty co-coordinating this impeccable production system. Yet it takes place in a space no larger than 1/1000 millimeter, and the intense activity of hundreds of much smaller molecules permits life to continue. The absence of just one of the molecules involved in the production will disrupt the entire chain. A system that functions in such a planned way and with such evident consciousness is possible only through creation by Allah, the absolute Lord of all things.

For a detailed account of how protein synthesis actually takes place, see Harun Yahya, *The Miracle of Protein*, Ara?t?rma Yay?nc?l?k. This chapter will describe only the general lines of the process as we show how use is made of the information in DNA.

Protein synthesis is carried out in two stages, known as transcription and translation, which permit the information in DNA to be transmitted to RNA, and from there to the proteins.

Transcription, the first step, begins in the cell nucleus. The genetic information in the double strip of DNA is to be transported by means of the single-strip RNA molecule.

Translation, the final step in protein synthesis, takes place in the cell cytoplasm outside the nucleus, where of the genetic information in RNA is transmitted to new proteins.

Let's now look at the general outlines of these stages:

The Wisdom Behind DNA and RNA Molecules Being Different

In cells, nucleic acids are found in two separate forms: DNA (short for deoxyribonucleic acid) and RNA (ribonucleic acid), which perform different tasks. The general differences between the two are as follows:

Their sugars are different.

The backbone of the RNA molecule is ribose sugar, instead of the deoxyribose sugar molecule in DNA.

The bases are different.

There is uracil (U) in RNA instead of the thymine (T) in DNA.

RNA is shorter and consists of just a single strip.

RNA is a polymer (a compound formed by a large number of molecules joining together with chemical bonds in a regular manner). It has a structural similarity to DNA and like DNA, it also carries information. But unlike DNA, RNA consists of a single strip.

DNA is a more stable molecule.

RNA has an extra oxygen atom in every sugar molecule and lacks one carbon atom in every thymine base. The absence of oxygen in DNA's sugar molecules –that is, the fact that DNA has a deoxyribose sugar structure–makes it a more stable molecule than RNA. For that reason, DNA is the ideal molecule for information storage and is far better suited to the long– term storage of data in the cell.

Indeed, it is DNA's task to carry information that ensures the survival of the organism and the continuation of subsequent generations. The RNA molecule plays temporary roles and serves in the short-term carrying of information.⁸⁰

RNA enters into reactions faster.

In addition, since RNA has an extra hydroxyl (OH) group, it enters into reactions more easily than DNA, but which also makes it less stable. This is why RNA is not as well suited as DNA for storing information. Thanks to the way that the single-strip RNA molecule can adapt to complex three-dimensional structures, it's able to engage in catalytic activities that the strong and double-striped DNA helix cannot perform. (A catalytic effect enables a substance to undergo no change, but to effect in a chemical reaction or the speed at which it does so.) Thanks to their catalytic abilities, RNA molecules can alter chemical structures in a most astonishing manner. For example, during the processes in the cell nucleus, they turn a large copy of the DNA sequence into a "messenger RNA" sequence much smaller than themselves. The ribosome then converts messenger RNA into the protein's amino acid sequence.⁸¹

The information in DNA can be reached more easily.

If the RNA molecule had a double-helix structure like that of DNA, the structural folds in RNA would not occur, which would prevent its being recognized by proteins. Also a double-helix structure would give, RNA with a deep recess, making it harder for proteins to reach it and for its coded information to be read.⁸² Proteins could not recognize a double-helix RNA and its base sequences as easily as they do with DNA. Therefore, DNA is better suited for containing genetic information because it is more stable and more easily reached.⁸³

DNA and RNA are the ideal molecules for their own separate tasks.

RNA carries the genetic message it receives from the DNA inside the nucleus to the cytoplasm (that part of the cell that lies outside the nucleus), where the message is translated. The essential differences between these two molecules help them perform their separate tasks. DNA is a stable and approachable data-preservation center inside the cell, while RNA is a variable carrier that enables genetic information to be translated.

In his book *Nature's Destiny*, the molecular biologist Michael Denton notes the importance of these properties:

. . . the evidence suggests that any change would be detrimental and no other polymers are known which possess precisely the chemical and physical properties of DNA and RNA.⁸⁴

RNA, with its single strip, is much more flexible than DNA's double helix. As you see, both the DNA and RNA molecules have been specially created for their own functions. The differences in their structures may seem very minor, but are actually exceedingly important in terms of the jobs they perform, and all these details form a highly complex organization.

Prof. Gerald L. Schroeder refers to the complexity in the DNA-RNA mechanism:

One basic cell structure, one basic energy source, one set of organelles common to all life. And one system for regulating this unity, the DNA-RNA team that takes individual lifeless raw materials and organizes them into living, thinking, choosing beings. The complexity in the commonness stretches the imagination.⁸⁵

No human being has any influence on this system. Our Almighty Lord installed this system, too small to be seen with the naked eye, while the individual was still no more than one single cell. Human beings, enfolded by the mercy of Allah, stand in need of Him in all things:

Say: "He is Allah, Absolute Oneness, Allah, the Everlasting Sustainer of all. He has not given birth and was not born. And no one is comparable to Him." (Surat al-Ikhlās, 1-4)

Protein Production According to the Instructions in DNA

Whenever the body needs any kind of protein, a message expressing that need reaches the DNA of the cell where that production is to be performed. There is a very important point here which needs to be borne in mind: when there is a need for any kind of protein in the body it is again certain messenger proteins know where they have to apply, are able to locate those sites in the entire body, and forward the message there in readable form. The protein enabling this communication finds its way without becoming lost in the dark interior of the bloodstream, and deposits its message without any part of it being lost or damaged. In short, we are looking at a considerable awareness and sense of responsibility.

The message reaching the cell nucleus forms the protein as the result of a series of complex and highly organized processes. The way that the demand for protein reaches the correct cells out of all the 100 trillion other cells in the body, how the cells understand what is required of them and immediately goes to work, and produce a perfect result are all phenomena that amaze scientists.

The genetic code in the DNA molecule is so programmed that only the cell itself is capable of knowing its content, its meaning, and how it will affect the body throughout its lifetime. However, these cells are merely masses of unconscious inanimate atoms. Under the direction of our Almighty Lord, Who regulates all things on the Earth and in the skies, processes that human beings are unable to carry out are performed in a perfect manner.

In the Qur'an, Allah reveals that:

[Hud said,] "I have put my trust in Allah, my Lord and your Lord. There is no creature He does not hold by the forelock. My Lord is on a Straight Path." (Surah Hud, 56)

It is Allah Who created the seven heavens and of the Earth the same number, the Command descending down through all of them, so that you might know that Allah has power over all things and that Allah encompasses all things in His knowledge. (Surat at-Talaq, 12)

Protein molecules are produced in blocks, in much the same way that a house is built by bricks placed on top of one another. Every different protein is manufactured according to a specific blueprint. The particular amino acid sequence of each protein is determined according to the data recorded in the DNA. The deciphering of the DNA's genetic code, and protein production based on that information, take place in two main stages:

The synthesis of RNA from DNA (transcription)

The first stage in protein production is the synthesis of RNA. This process begins with the opening of the DNA helix. The bases adenine, guanine, cytosine and thymine opposite one another in the DNA molecule combine in such a way as to join the two backbones and give rise to a helical structure. During the transcription phase, these bases let go of one another and the double helix of the DNA molecule begins separating, just like the two sides of a zipper.

As the DNA begins to unravel, a special protein known as **RNA polymerase** begins reading the DNA by traveling along it. During the course of this reading, new RNA is produced by the successive addition of the corresponding bases. This RNA being manufactured is messenger RNA (mRNA). The difference between mRNA and DNA is that instead of the base adenine being opposite thymine, a base known as uracil (represented by the letter U, for short) does so.

These bases are arranged in groups of three. The messenger RNA, whose production is now complete, is then subjected to a series of processes and separated from the DNA. In much the same way that a sculptor adjusts carved a statue right down to the finest detail, the cell directs a string of enzymes to adjust the crude RNA produced.

The synthesis of protein from RNA (translation)

The messenger RNA, whose adjustment processes completed, emerges from the nucleus and bonds an organelle known as the **ribosome**, the cell's energy-production plant. One feature of the messenger RNA molecule is that its bases are set out in groups of three, known as **codons**. The reading of these three-part groups begins after mRNA has bonded to the ribosome.

Another variety of RNA known as transporter RNA (Trna) which, during protein synthesis carry the amino acids that will make up the new proteins. Unlike the messenger RNA or DNA molecules, transporter RNA is not long, with only 15 to 20 base sequences. Also, its consecutive bases are bonded in such a way as to form a circle.

There are two important regions in the transporter RNA link. The first is the region that permits recognition of the amino acids it will transport; the other region, known as the **anti-codon**, is consists of three bases that will attach to the mRNA.

The anti-codon in the transporter RNA attaches to the triple groups known as codons on the mRNA bonded to the ribosome. One after the other, the transporter RNA anti-codons bond to the codons on the messenger RNA and also bring with them amino acids. As the transporter RNAs attach to the codons, the attached amino acids begin bonding to one another. When hundreds or thousands of tRNAs are lined up alongside one another, the amino acids they bear are also lined up side by side and begin protein synthesis by constructing bonds with one another.

At that point, the tRNA, whose work is done and that has discharged its load, breaks the bond with the mRNA and separates from the ribosome.

During production, one single amino acid being added in the wrong place is enough to make a functionless protein molecule. Yet this process is carried out in a flawless manner in all living things. Every tRNA molecule serves as a transporter, carrying every amino acid to the predetermined site and ensuring that there is no impairment in the process.

The molecular biologist Michael Denton notes this extraordinary organization:

If each target sequence used to label or address particular regions of the genome were not unambiguously unique, then chaos would inevitably ensue. The genome would resemble a filing cabinet with the same labels on different drawers.⁸⁶

These actions –requiring immaculate discipline, awareness and responsibility– are a sign that these unconscious molecules have submitted to Omniscient and Almighty Allah and that they behave under His control. In one verse of the Qur'an it is revealed that:

Say: "I seek refuge with the Lord of humanity, the King of humanity, the deity of humanity." (Surat an-Nas, 1-3)

An Evident Miracle: Proteins Perform Protein Synthesis

In the different stages of protein synthesis, hundreds of different proteins and enzymes are needed for the manufacture of a single protein molecule. In addition, a great many molecules and ions (electrically charged atoms) are ready and waiting. That being so, the question of how the first protein came into being represents one of the most severe difficulties facing evolutionists.

In an article published in *American Scientist* magazine, the evolutionist and biologist Carly P. Haskings expresses their predicament:

. . . the most sweeping evolutionary questions at the level of biochemical genetics are still unanswered. How the genetic code first appeared and then evolved and, earlier even than that, how life itself originated on earth remain for the future to resolve . . . Did the code and the means of translating it appear simultaneously in evolution? It seems almost incredible that any such coincidence could have occurred, given the extraordinary complexities of both sides and the requirement that they be coordinated accurately for survival. **By a pre-Darwinian (or a skeptic of evolution after Darwin), this puzzle would surely have been interpreted as the most powerful sort of evidence for special creation.**⁸⁷

As this scientist states, in order for protein synthesis to occur, all the systems in the cell need to be present at once. The absence of even one component of the system will mean that proteins cannot be manufactured and that therefore, life cannot continue. Evolutionists, however, claim that proteins first emerged as the result of chance, and that cells then formed as a result of random combinations of proteins. However, it is perfectly obvious that none of these components can form in the absence of the others.

This is clear proof that Allah has created all living things together with all their systems. His flawless creation is revealed in these terms in the Qur'an:

He is Allah-the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and Earth glorifies Him. He is the Almighty, the All-Wise. (Surat al-Hashr, 24)

Since the molecules in question are made up of unconscious atoms, how can a substance devoid of intellect or consciousness possess the abilities to regulate and control something else, and to intervene in processes? How can it send instructions, acting in a systematic manner in line with a specific objective? People who fall under the influence of Darwinist teachings claim that all these things are the work of blind coincidence. However, it is impossible for molecules, unaware of the presence of cells, to take upon themselves the responsibility of producing the needed proteins they need. It is quite impossible for unconscious atoms to accomplish the various tasks requiring the superior intelligence, knowledge and awareness. All they do is to flawlessly perform the task set

out for them, and have submitted to Allah, Who imposes this task on them and Who has created them as part of this system.

In one verse of the Qur'an it is revealed that:

[Moses said,] "Your deity is Allah alone, there is no deity but Him. He encompasses all things in His knowledge."" (Surah Ta Ha, 98)

CHAPTER 7

The World's Most Advanced Copying Technology

Throughout the day, without your ever being aware of it, your cells carry out countless processes with an extraordinary care and sense of responsibility, for you to continue living in a healthy state. One of these processes is cell division, which permits growth and tissue repair. DNA's ability to be copied enables damaged tissue to repair itself by means of cells dividing and multiplying, during the course of which the original genetic information is transmitted to every new cell.

Most of the cells in the human body divide and multiply. During the course of cell division, the replication of the DNA in the cell nucleus is carried out in such an astonishingly organized and disciplined way. Even when the human embryo is no more than a single cell, it divides into two, and progressively, from two to four, to eight . . . and an exact copy of the original DNA needs to be produced for the new cell. In fact, shortly before a cell divides, DNA replicates itself and transmits it to the new cell.

According to observations of the process, the cell has to reach a specific size before dividing. The moment this particular size is exceeded, the process of division begins in a programmed manner. The shape of the cell begins flattening out, and the DNA replicates itself.

The cell as a whole decides to divide, and the different components within it begin behaving in appropriately. Clear, however, cells by themselves are incapable of managing such a collective task. The process of division begins at Allah's command, and all the components of the cell, especially DNA, act accordingly.

The DNA molecule, with its data-bank of 3 billion letters, resembles a double spiral staircase. When the replication process begins, first an enzyme known as DNA helicase arrives and begins opening up the DNA helix, just like a zipper. As a result, the two strips of the helix, formerly wound around one another, separate. DNA helicase is always on duty at exactly the right time and performs its work flawlessly, never making a mistake that would cause any harm to the DNA.

Once the DNA molecule has assumed the form of two lengthy strips, the work is now handed over to the enzyme DNA polymerase, whose job is to make provide each separated arm of the DNA with a new strip. To do this, it finds and brings in the appropriate data comprising each of the DNA strips. An enzyme made up of atoms, devoid of any consciousness or intelligence, identifies the information needed to complete the two DNA halves, and installs them accordingly. During the course of all of this, it

makes not the slightest error, but completes and identifies all the 3 billion letters concerned one by one, with perfect accuracy.

At this point, another polymerase enzyme completes the other half of the DNA in exactly the same way. As all this takes place, **helix stabilizing enzymes** hold on to the ends of the DNA to prevent the two separate strips from winding around one another again.

In this way, the two missing halves of the DNA strip are completed, using materials already found in the surrounding cell, and two new DNA molecules are produced. Expert proteins known as enzymes, working just like highly advanced robots, act in every phase of the operation. During these stages, a great many highly complex intermediate processes occur, which would also provide the subject for a book.

The new DNA molecules that are copied are checked many times by supervising enzymes. Any error –and such errors could have lethal consequences– is immediately identified and corrected. The flawed code is extracted and the correct gene brought in and assembled.

James Watson and Francis Crick, the scientists who discovered the structure of DNA, reduced the replication process they described as a "perfect biological principle," to a very simple form. Today, however, we know that the way DNA copies itself is so complex as to amaze scientists. Twenty separate proteins and enzymes must be present for even the smallest strip of DNA to be replicated.⁸⁸

Prof. Werner Gitt describes the perfection inherent in this replication:

The DNA is structured in such a way that it can be replicated every time a cell divides in two. Each of the two daughter cells must have identically same genetic information after the division and copying process. This replication is so precise⁸⁹

One of the most miraculous aspects of DNA replication is that unconscious molecules carry out everything described here. Enzymes consisting of combinations of unconscious atoms identify the missing sections of the DNA helix, obtain the missing parts and install them in the right locations. No doubt, the way such minuscule structures with no consciousness or intelligence flawlessly perform processes requiring all these features exhibits the incomparable nature of Allah's creation. All these elements behave at Allah's command. With the ability bestowed on them by Him, they perform such a vitally important process for human life in the most immaculate way.

The organization in Allah's creation is revealed in these terms in the Qur'an:

Does man reckon he will be left to go on unchecked? Was he not a drop of ejaculated sperm, then a blood-clot which He created and shaped, making from it both sexes, male and female? (Surah al-Qiyama, 36-39)

The Matchless Speed in Replication

All the processes involved in the replication of DNA take place at such an astonishing pace that 3,000 nucleotide steps are produced in one minute. Fifty base pairs are copied in only a second.⁹⁰ Meanwhile, the enzymes responsible check all the steps many times over and make the necessary corrections.

For a better idea of the enormous speed at which the process of DNA replication occurs, the division of a cell lasts between 20 and 80 minutes, during which time the information in the DNA also must be copied and reproduced. All the 3 billion pieces of information in the DNA have to be able to be copied in between 20 and 80 minutes, with no errors, omissions or gaps. This is as miraculous as the copying an entire library of information, or 1,000 books, or a text of one million pages, in that same space of time - again with no errors or omissions.

Moreover, it is not highly advanced technological devices or highly developed photocopying machines that accomplish this, but enzymes consisting of combinations of various atoms.

Due to external factors, a great many errors may be made in the new DNA molecule produced at such a great speed. Ribosomes in the cell now begin manufacturing DNA-repair enzymes in the light of the instruction reaching them from DNA. This means that the DNA has taken the necessary steps to protect itself!

Like the human beings they constitute, cells are born, multiply and die. However, the lifespan of cells is very much shorter than that of the human beings. For example, the vast majority of the cells that made up your body six months ago are no longer alive. Yet since they gradually divided and were replaced by new ones, you remain alive and well today. That is why events such as cell multiplication and the replication of DNA are so vitally important to human life and offer no room for even the slightest error.

One astonishing aspect of all this is that the enzymes that ensure the production of DNA and also supervise its structure are proteins produced at the command of that same DNA, under the control of the information contained within it. It is absolutely impossible for it to have assumed this magnificently convoluted system as the result of gradual, random coincidences, because DNA has to exist for the enzyme to appear. But also, the enzyme must exist for DNA, and all the organelles in the cell must be present to permit the existence of both. As you can see from this summarized information, the elements in your body accomplish all their tasks successfully and completely.

Allah has placed countless atoms and molecules, from the very largest to the very smallest, at our service in order for us to be able to live healthy lives. In one verse He reveals that:

. . . Allah pours out His favor on humanity, but most people do not show thanks. (Surah Ghafir, 61)

To whom actually belongs the intelligence and knowledge that realizes that a replication of the DNA must be made during cell division, which carry out the replication process in such a flawless manner, and which establish such a magnificent system capable of immediately rectifying processing errors? It would be completely illogical to say that such a flawless organization developed as the result of chance. Even were you to combine all the atoms in the universe, providing all the necessary conditions you could still never produce a system that carries out DNA replication by chance. It is abundantly clear that Allah, Almighty and Omniscient, created such a flawless system and has continued to maintain it for millions of years.

This fact is also revealed in a verse from the Qur'an:

What is in the heavens and in the Earth belongs to Allah. Allah encompasses all things. (Surat an-Nisa', 126)

The Rectification of Copying Errors

When a cell divides, errors sometimes arise as the chromosomes replicate themselves. To prevent errors in the genetic data accumulating in subsequent generations, every living thing possesses a mechanism that identifies and corrects the great majority of these errors. Did this mechanism not exist, the genetic structure of living things would soon become impaired, and extinction would be the eventual result.

The cell also works as an editor to reduce the number of such errors, though one or two are an acceptable level. Thanks to this control mechanism, a very small level of error—between one in a billion and one in a hundred billion—remains. One error in 100 billion is the equivalent of one mistake in a text of 50 million pages. It would take 100 professional layout staff, working non-stop for their entire lives, to produce 50 million pages.⁹¹

The nuclear physicist Gerald L. Schroeder describes the intellect displayed in the quality control system in the cell:

The cleverness of the system is subtle. Not just how it learned to get a protein to open the helix, or how DNA-P is made and then knows to come on the scene, or how it finds and joins the correct base. Those acts in themselves are near wizardry and plead for explanation. The cleverness here is that each new strand winds helically with the parent from which it was, as a complement, copied. Brilliant! Now quality control proteins can check the new work directly against the original template, the parent strand. Had the two new strands wound about each other, new to new, and the two parent strands reformed their original helix, the quality control would have been a far more difficult and far less efficient task.⁹²

The astonishingly intelligent and precautionary events take place in DNA and in all the systems that work under its instructions cannot possibly be accounted for in terms of chance. These are programmed in an ordered manner that can be explained only by the

existence of a Creator, the possessor of the knowledge of all things and the Lord of all things. That Creator is Almighty Allah, Who endows us with life By His mercy, and Whose knowledge enfolds all things.

DNA Enzymes with Their Vital Tasks

When enzymes cause a reaction, an effect arises similar to the difference between rolling a ball uphill and downhill. Enzymes are able to accelerate biochemical reactions by up to 1,000 times.⁹³The human body contains more than 3,500 kinds of enzymes. In the event of the absence of even a few of them, the cell's internal activities would become completely confused. The result would impair the order existing within the cell, and the end of life. (For detailed information, see Harun Yahya's *The Miraculous Machine That Works For An Entire Lifetime: Enzyme*).

One of the most important jobs of DNA enzymes is to assist with the replication of the DNA molecule. The only difference between the molecule of an enzyme and other proteins is the former's three-dimensional shape. If enzymes did not possess this three-dimensional shape setting out their own characteristics, then processes inside the cell, information sent from the brain to various organs and internal regulation of the cell would not exist. A great many processes needed to keep the cell alive could not take place. Even the absence of the enzyme that corrects errors during DNA replication could lead to the genes losing their functionality, or to flawed production leading in turn to the development of cancer.

The enzymes involved in DNA replication include:

***DNA helicase, which opens up the DNA helix like a zipper.**

As you have seen, when the replication process begins, the enzyme known as DNA helicase is the first to arrive and begins opening up the DNA helix just like a zipper. As a result, the DNA's two entwined arms separate from one another. DNA helicase has the ability to open 1,000 nucleotide pairs a second.

As the DNA arms separate, helix stabilizing enzymes hold both arms to prevent them wrapping round each other once again.

As DNA helicase opens the zipper, it suddenly halts. The points where it stops set the two ends of the required information. Enzymes behave with enormous expertise, just as if they knew where the data began and ended.

***DNA polymerase, the maker of new DNA strips.**

It is now the turn of DNA polymerase whose job, as you saw earlier, is to complete the divided arms of the DNA with a second arm of each. It therefore locates and fetches information corresponding to that one arm of the DNA.

DNA polymerase produces new strips in a complete and flawless manner. Cytosine in the old strip is always combined with guanine in the new one. Adenine is always joined up with thymine, and vice versa. However, during this matching process that takes place at such high speed, a few errors are bound to arise. Opposite adenine in one location, for example, the DNA polymerase may install guanine instead of thymine. Errors of this kind can sometimes represent a lethal danger. For instance, if the sixth amino acid in the structure of hemoglobin is replaced by another known as valine, thread-like fibers will emerge in the protein and prevent erythrocytes from moving about freely, leading to the disease known as sickle cell anemia.⁹⁴

The chemical selectivity displayed during the matching of the bases is so powerful that only one error in 100,000 bases is permitted. DNA polymerase is very sensitive to errors. If a mistaken base matching occurs, it is immediately eliminated and the correct base brought in to replace it. Once DNA polymerase has finished its work, a separate enzyme checks whether any errors remain in the newly formed DNA strip.

***DNA nuclease, exceedingly sensitive to errors**

Just like an editor who corrects written texts, this enzyme identifies errors in the DNA and removes the wrong letter. However, this leaves a gap in the DNA helix. Another enzyme occupies itself with that problem.

*** DNA ligase, repairing breaks in the DNA**

When the DNA nuclease identifies the mistaken section and extracts it, the resulting gap in the DNA strip is repaired by an enzyme known as DNA ligase. Thanks to the perfection obtained in this very final stage, only one error in a billion nucleotides is permitted - a level of error many times superior to any data system under computer control. One error in a billion is the equivalent of making only one mistake while copying thousands of books.⁹⁵ This level shows what an extraordinary regulatory mechanism is compressed into a space too small to be seen with the naked eye.

*** Topoisomerase: enables DNA to be unraveled without knotting**

DNA strips are packed into tiny volumes many thousands of times smaller than their length. In functioning in this small space, DNA may encounter several problems because of its shape. For example, as the DNA helix is opened up so that the information in it may be read, the some parts the bottom become increasingly compacted and that pressure needs to be released. This is just like pulling the fibers that make up a thread, one

by one, which causes parts of the thread to become compacted. Immediately before the cell divides, an even larger problem may arise as the cell contains two copies of the DNA's 46 strips. Each one needs to be unraveled at once, and then separated and dispatched to the new cell.⁹⁶

The DNA enzymes known as topoisomerase overcome this major difficulty. One topoisomerase separates one strip of the DNA helix, thus causing the DNA to unravel and stretch out, thus relaxing the pressure from extreme compacting. This strip is subsequently recombined, reassuming its double helix form. By the mercy of Allah, all these systems carry out their functions to perfection, without us being aware of them, preserving the genetic information concealed in the DNA strips.

The Flawless Cooperation Between DNA and Enzymes

These processes are carried out an average of 20,000 times a day in every one of the 100 trillion cells in the human body.⁹⁷ Every enzyme knows where it must be and when, and at what stage it has to become involved. Every enzyme has its own place in the progression. Each adheres to the division of labor with immaculate co-ordination. There is not the slightest interruption, deficiency or delay in this system, or else DNA would be just a useless collection of molecules, leading to serious damage to the body.

DNA enzymes are one example that entirely demolishes evolutionist claims of gradual and chance formation, because these enzymes are vitally necessary for DNA to be copied. Yet the information constituting these enzymes is also concealed inside the DNA. Therefore, the presence of DNA is essential for enzymes to come into being; and for enzymes, the prior existence of DNA is essential. The fact that two complex structures have to emerge at exactly the same time is a major difficulty for the theory of evolution, which cannot account for the emergence of either one of them.

This predicament is admitted by the evolutionist scientists Fred Hoyle and Chandra Wickramasinghe:

. . . Life cannot have had a random beginning. Troops of monkeys thundering away at random on typewriters could not produce the works of Shakespeare, for the practical reason that the whole observable universe is not large enough to contain the necessary monkey hordes, the necessary typewriters, and certainly the waste paper baskets required for the deposition of wrong attempts.

The same is true for living material. The likelihood of the spontaneous formation of life from inanimate matter is one to a number with 40,000 noughts after it.. It is big enough to bury Darwin and the whole theory of evolution. **There was no primeval soup, neither on this planet nor on any other, and if the beginnings of life were not random, they must therefore have been the product of purposeful intelligence.**⁹⁸

The enzymes that accomplish such difficult tasks are not possessed of consciousness and intelligence. Yet how do these unconscious accumulations of

molecules perform actions that require conscious intelligence, such as making decisions, implementing those decisions, possessing foresight, preventing confusion, taking precautions within a flawless order, identifying and rectifying errors and carrying out repairs? The concept of chance, behind which evolutionists hide, loses all significance in the face of such a complex mechanism. Therefore, blind chance definitely constitutes no scientific answer to the question of the origin of life. Anyone of intelligence will agree that conscious, planned processes cannot be performed, one after the other, as the result of chance.

The resistance of those who deny the existence of Allah in the face of all the facts is revealed in these terms in the Qur'an:

They said, "No matter what kind of Sign you bring us to bewitch us, we will not believe in you." (Surat al-A'raf, 132)

It is apparent that all the flawless elements in this system must have come into being in a single moment. This means that they have been created. These processes, which human beings find difficult to comprehend even as they read about them, are tasks performed, by Allah's choosing, with enormous ease and success by unconscious atoms at every single moment.

In the Qur'an, Allah reveals:

He originates and regenerates. He is the Ever-Forgiving, the All-Loving, the Possessor of the Throne, the All-Glorious, the Doer of whatever He desires. (Surat al-Buruj, 13-16)

CHAPTER 8

The Building Plan Recorded in Human DNA

Before the construction of a house begins, an architectural plan is drawn up, and the materials to be used in construction must be determined and obtained. Different shapes and sizes of timber, nails, insulation materials, mortar, windows, doors, electrical wiring, pipes and many other materials are all prepared for specific purposes. These materials are not used haphazardly; nor does the construction crew act in the light of their own decisions and desires. On the contrary, everything proceeds in the light of a specific plan and is tightly regulated. Throughout the course of the project, there is no doubt what the construction workers will do first, how much of which materials they will use, and in what order. For example, the foundations must be laid before the doors and windows can be framed, and the wiring has to be put in before the walls. All these stages are parts of a comprehensive plan.

Now, suppose that this comprehensive plan has been encoded and concealed somewhere too small to be seen with the naked eye.

If we compare the human body to a structure, the DNA molecule represents the blueprint, complete right down to the smallest detail. DNA contains all the technical details, such as how the body and its materials are to be put together, how much will be used and where, what the finished anatomy will look like and what functions each part will serve.

A human being's growth in the womb and after birth takes place according to this predetermined plan. This flawless order in human development is expressed in the following terms in the Qur'an:

Does man reckon he will be left to go on unchecked? Was he not a drop of ejaculated sperm, then a blood-clot which He created and shaped? (Surat al-Qiyama, 36-38)

Allah determines all the characteristics that human beings will possess in the future while they are still newly fertilized eggs in their mothers' bodies, and He shapes them, installing all the required information inside the DNA. All of a person's characteristics--such as eye color, blood group, facial shape and bone structure are all predetermined and encoded nine months in advance, while the individual is still no more than a single cell.

From the moment an egg is first fertilized, all events concerning all the biochemical and physical developments that will give a human form to the growing embryo take place under the control of the blueprint in the DNA.

Prof. Phillip E. Johnson refers to the flawless nature of the system:

Instructions in the fertilized egg control embryonic development from the beginning and direct it to a specific outcome. This "full and complete set of instructions" employs the material processes of chemistry and physics but is not created by those processes. Similarly, the software in a computer employs natural processes to generate a word processing document, but the software has to be written by an intelligent agent.⁹⁹

In addition, the blueprint for a human being also includes the production of its materials, and the biochemical factories in which those materials will be manufactured. It is nearly impossible to compare the human body's blueprint to anything else, because whatever analogy we consider will still fall far short of the complexity in a single cell.

Gerald L. Schroeder describes the extraordinary nature of what lies hidden in that complexity:

The beauty and awe of life's genesis lies in the details. Skipping over the intricacies can lead a person to believe that milk just naturally comes in containers, and is not the end result of a process starting with sunlight shining on grass. What follows is just a sampling of the relevant steps in gestation, each revealing only a hint of the complexly ordered wisdom built into the process.¹⁰⁰

The inanimate, unconscious atoms that make up the cell cannot make a blueprint, lay out a project, write and decipher a code, take precautions at various stages, establish a system for the preservation of information and to perform many other such feats. Anyone able to think independently of materialist and Darwinist dogmas will appreciate that such an order cannot come into being spontaneously, but that on the contrary, it is the work of our Almighty Lord's sublime intellect. By the will of Allah, elements in the lifeless earth come together to give rise to a living human being, and perform the tasks entrusted to them with flawless co-ordination.

In the Qur'an, Allah reveals that:

He Who has created all things in the best possible way. He commenced the creation of man from clay. (Surat as-Sajda, 7)

Genetic Data Combine Together

The fertilization of an egg by a spermatozoon is the beginning of a new human life. When the sperm and egg encounter one another, they are biologically able to recognize one another thanks to the way that the molecules on their surfaces fit exactly into one another. These molecules lock on to one another, and various sperm cells bond to the soft shell of the egg and begin striving to enter.

But only one out of the many sperms is successful. Each one carries its own genetic package, and every sperm cell differs from all the others in many regards. Since the father's sperm carries the genetic message that determines the baby's gender, whichever sperm enters the egg first will be the one that determines the embryo's gender. Fertilization is the term for the moment that the successful sperm is embedded completely

in the egg, with its tail and all other parts. Each one of these stages takes place within the destiny set out by Allah, Who reveals this fact in verses:

We created you so why do you not confirm the truth? Have you thought about the sperm that you ejaculate? Is it you who create it, or are We the Creator? (Surat al-Waqi'a, 57-59)

When the sperm fertilizes the egg, the mother and father's genes combine to determine all the features of the as yet unborn child. Each of the thousands of inherited genes has very particular functions, determining the unborn baby's future hair and eye color, the shape of its face, its skeletal structure, and the countless details in its internal organs, brain, nerves and muscles.

The first copy of the DNA molecule that individuals will bear in every cell until the end of their lives forms inside the initial cell when the sperm and egg join together. The well-known chemist Prof. Wilder Smith emphasizes the perfection exhibited in the egg cell:

On paper using our alphabet system, this human genetic information on one human zygote would fill over 1,000 volumes each of 500 pages--a total of 500,000 printed pages. That is, one human egg the size of a pinhead holds 500,000 printed pages' worth of information and chemical instructions. The egg--and the cell in general--is a masterpiece of miniaturized information storage and retrieval.¹⁰¹

With the addition of a sperm cell's genetic information to an egg cell, a total of 1027 atoms assume an extraordinarily organized form.¹⁰² In his book *Our Molecular Nature*, David S. Goodsell describes the combining of these genetic data:

Parents each provide half of the set of 46 strands, so our cells contain two similar sets of 23 strands. The choice between reading the mother's or the father's version in each particular case provides the rich mixture of inherited traits seen in children. Features that may be traced to a single protein show very specific rules of heredity; if neither parent provides the recipe for tyrosinase, the child will be albino. Other personal features --shape of the nose and eyes, build of body, temperament-- may depend on the combined action of many regions of DNA, leading to subtle mixtures of recognizable traits from each parent.¹⁰³

The astonishing information contained in the DNA of all living things clearly reveals intelligence and the fact of creation. Every new individual will have an utterly unique genetic program. The moment that the combining of the genetic data from the mother and father is complete, the new cell is given the name zygote. That single cell then divides into two others, each identical to the original.

The Cell: Building Blocks of a Human is Being Formed

The structure resulting from an egg and a sperm combining together is given the name zygote and consists of a single cell. The first zygote has to multiply in order to assume human size and shape. The cell begins dividing as if following a computer program, with a high level of intention and purpose. In the zygote, the DNA replicates itself. Once the amount of DNA in the cell has been doubled, the cell immediately begins dividing. One of these doubled DNA strands goes to one cell, while the other is forwarded to the second. Now that the cell has been divided into two, division continues until a baby is fully formed inside the mother's body.

This process is repeated so many times that the cells must divide trillions of times before assuming the form of an embryo. Development of the complete embryo takes place in a coordinated manner by way of the messages that one cell receives from and sends to other cells. The way cells can work in harmony with one another arises from a continuous molecular dialogue among them, in the light of genetic instructions that form within the baby's genetic program from the first day that the germ cells from the parents come together.

After this, every time a cell divides and two new cells are formed, an exact copy of all the genes is produced, and this copy is transmitted to every new cell. For that reason, all the cells in your body possess exactly the same genes and contain the whole of the genetic program.¹⁰⁴

Although the cells in your body are in different locations (the kidneys, liver or arm, for example), they carry the same information. But different types of cell use different sections of the same data bank, performing different tasks in the light of those instructions. Just as in computers, the original of the program is not taken outside the main processing center--in this case, the DNA. Instead, new copies of the DNA is produced and are taken to wherever they are required.

Human cells vary greatly in their structure. For instance, in addition to having different shapes, liver cells, muscle cells and nerve cells also produce different proteins and carry out very different biochemical processes. But they all have just one single variety of DNA inherited from the original fertilized egg. Every cell uses different regions of the total information in that DNA. If cells did not use different parts of the identical genetic information and multiplied in the form of just one type of cell type, a human being might develop as a mass of bone or a collection of skin. However, as revealed by Allah, the Compassionate and Merciful, in the verse "**We created man in the finest mould**" (Surat at-Tin, 4), He has created us as living things with esthetic, symmetrical and superior features.

Cell Division Continues

During cell division, every cell possesses all the complex contents described earlier, including mRNA, tRNA, ribosomes, proteins, and enzymes. Some 5,000 of these are produced in one second.¹⁰⁵ In the words of Prof. Gerald Schroeder, "The miraculous nature of life is found in its details."¹⁰⁶ By the eighth week, all the embryo's major body parts have been formed, and it turns into a fetus.¹⁰⁷

And when the cell needs to divide, the entire tape [DNA] must be split apart, duplicated and repackaged for each daughter cell. No one knows exactly how cells solve this topological nightmare.¹⁰⁸

Predetermined solutions exist for all kinds of problems inside the cell, and these have been recorded inside the genetic information contained in the very first cell. Each of these features is evident proof of how human beings are created in a perfect manner. There are even more miracles of creation that could not possibly be covered in this book.

Another of the astonishing features in the cell is that not all the genetic program is constantly active. You might expect all the genetic information to be ready for use. But in that event, every cell would produce only copies of itself, resulting in masses of only one type of cell. The reason why there is such a variety of cells produced, all with different functions, is the genes' property of being switched on and off.

Genes are like sentences written in a chemical language. Each cell opens up only part of the genes in a chromosome and "reads" only that open section. The rest of the genes remain inert.

This turning on and off of genes is known as gene regulation, which occupies a very important place in human development. Different regions of the genes are switched on and off during the course of embryonic growth; thus a brain cell looks different from a liver or muscle cell and performs entirely different functions. As you now know, the type of cell is determined according to the varieties and quantity of proteins it produces. Cells become liver cells, stomach cells, skin or muscle cells because of the proteins they manufacture. And the genes tell the cells which proteins to produce. This production takes place as a result of some genes being switched on and others off. Liver cells, for example, produce different proteins with different properties by switching on different sets of genes than do skin cells.

Since the genes tell the cells which proteins to produce, any cell lacking genes could survive for only a short time, because it needs to be given instructions on what proteins to manufacture. Otherwise, the supply of fresh proteins would shortly come to an end, and the cell would be unable to perform vital functions. At certain times, for example, the genes instruct the cells to manufacture the special proteins that permit blood to clot. Flawed genes, however, cannot manage this, resulting in hemophilia, a disorder of the blood-clotting mechanism.

The human body needs to manufacture some proteins throughout its entire life, and others solely at times of need. For that reason, genes regulate every cell so that it produces

the correct amount of protein at the exact times required. In the developing embryo, for example, several proteins are necessary in a very short space of time. The proteins produced by any specific cell depend on where in the embryo it lies, are, the developmental age of the embryo, and the instructions it receives from its own genes and from other cells. But scientists cannot say how the cell knows when to ignore which part of the enormous blueprint it possesses, and when. How are the genetic "files" for every feature and organ opened or closed at exactly the right time? Who issues the instructions to suppressor genes and to other genes that halt that suppression? These are questions that scientists have yet to answer.

The scientific literature refers to this ability as regulation. To claim that this process originated in a chance manner is incompatible with scientific logic. Here we are confronted by the same glorious and rational plan, which belongs to the One and Only Allah, the Lord of the Worlds, to Whom the entire blueprint and this extraordinary system belong.

A miniature human being starts to form as a result of cells establishing communications with one another, grouping together and working as a team. It takes three weeks more for the embryo to develop its complete anatomy. On day 24, the embryo's arms still cannot be detected, although by day 26 they are visible as small buds on either side of the body. The upper and lower sections of the arms then develop in just 48 hours. A few days later, the legs begin to appear. The legs elongate over the following months, and eventually the fingers and toes emerge from them.¹⁰⁹

All these stages, which we can only sit back and observe, are all parts of the construction plan in DNA. Everything takes place in a highly controlled manner, with not the slightest confusion arising. It is of course irrational to speak of "coincidences" in reference to such flawless order. Moreover, even Darwinist scientists who suggest that living things are shaped as the result of chance factors refer to a surprising order in the series of precautions that have been taken by the cells: intelligent behavior, economical and efficient systems, and co-operation and harmony in the formation of a human embryo. The contradiction here is clear; there can be only chaos, irregularity and discord anywhere chance prevails.

The Miracle in Cell Differentiation

The way cells produce a variety of different proteins and develop different organs in a programmed manner, is referred to in medical language as differentiation or morphogenesis. Cells become differentiated as they divide, assuming different tasks and going to those regions in the body where they are needed. It is not a mere collection of tissue that grows from identical cells. Some cells go where they must in order to become eye cells, some enter the chest cavity and make up the heart, and others cover the entire body in the form of skin. All cells multiply to an extent required by the particular tissue

they are to comprise, and begin forming organs by combining with one another to construct the requisite structures.

During all these events, the cells function just like construction teams working closely together in a process calling for the greatest care and attention. Each "member" cell has a complete knowledge of the blueprint, letting them all work with communication and intense cooperation. How does such advanced order come about? How do cells know where to go, which organ they will develop and what to do at their destinations? At the same time, how do they manage to work in such harmony with other cells?

The Israeli biophysicist Dr. Lee Spetner asks about the miraculous creation involved here:

How does the development program work, and how is it so perfect? As we have seen, development starts with one cell, which divides into two. The two divide into four, and so on. At some point, the cells differentiate, which means they change their character. Eventually, some of the cells become one kind of tissue or organ, while other cells become other kinds. And it happens the same way nearly every time. How does it happen?

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The answer to these questions is evident: Living things have been created in a flawless manner, and the artistry and knowledge in that creation is that of Almighty Allah, the Lord of All. In one verse, we are told that:

He created the heavens and the Earth with truth and formed you, giving you the best of forms. And He is your final destination. (Surat at-Taghabun, 3)

On the other hand, different varieties of proteins are also produced for various cells. As an embryo develops inside the mother's body, the DNA in the cells that will constitute its eyes produces only proteins concerned with vision. In the same way, the DNA in the cells forming the embryo's brain produce only proteins concerned with the neurological functions.

The important point is that information to make up all of a human being's organs are contained in the DNA of cells in every part of the body, whether they be liver or kidney cells, or any other kind of cell. However, only the proteins to be produced for the organ in question actually emerge from all that genetic information. In other words, every cell contains information about the proteins of every organ in the human body, but does not manufacture them all. Only proteins concerning the organ to be formed are produced. In order for this to happen, the surface of the DNA is coated with a special protein known as histone that prevents the production of proteins that have nothing to do with that particular organ.

One of the greatest secrets that baffle scientists is how the histones in the cells know which genes to suppress and which to leave activated, because proteins are simply

molecules made up of inanimate atoms. Obviously, atoms devoid of consciousness and intelligence cannot give rise to such a magnificent marvel of creation.

The coordination in the cells during differentiation and construction is ensured by the DNA molecule. Yet DNA is not a chemist equipped with the latest technology, nor a super-computer capable of performing trillions of processes a second. DNA is a molecule consisting of atoms like carbon, phosphorus, nitrogen, hydrogen and oxygen. The trillions of cells in the human body emerge from one another by way of division, yet different genes in every cell go into action at different times, and so cell differentiation becomes possible.

Every cell resulting from the division and multiplication of the original cell contains all the genetic information with which to produce heart muscle, skin, blood cells and every other bodily tissue. Yet although every cell's DNA possesses a full description of the body, only certain genes are active at different phases of development and in different organs. For example, the codes for the kidneys' formation and function are present inside every cell; but only relevant genes become active in this organ, at specific times, during development. Similarly, specific enzymes such as glucose 6-phosphate are basically present in the liver, yet although all the cells of other organs possess the description of that same protein, they never actually manufacture it. A cell in the eye, for instance, does not produce this enzyme; it manufactures only those that are necessary for vision. Nerve cells specialize in carrying messages and instructions between the brain and the organs. Liver cells specialize in neutralizing toxins, while fat cells specialize in storing food for times of scarcity. They never commit any errors such as producing digestive enzymes concerned with the stomach. So who establishes this flawless division of labor? Who gives the order for cells to divide and subsequently specialize in such different tasks? Furthermore, how can all the body's cells possess an awareness, an obedience, and work in such a perfectly disciplined and organized way? Obviously, none of these actions came about by chance or are purely haphazard systems. They all take place by the leave of Almighty Allah, Who **"directs the whole affair from heaven to Earth"** (Surat as-Sajda, 5).

This perfection is not restricted to cells being in the right place at the right times and activating the proper genes. Cells must also be present at the right stage of life and in the correct quantities. In just about all cells, some maintenance genes work all the time. Other genes function in some cells for just a few hours, after which they are placed on standby, ready to function again in the future. Milk production, for example, is accelerated by genes during suckling. The existing genetic information is acted upon at the appropriate time and place, at the appropriate level. Such consciously planned, deliberately calculated and rational use of the billions of pieces of information contained within DNA can definitely not be explained by way of any evolutionist claims of chance. To stubbornly regard chance as the cause of such extraordinarily planned and organized events, taking place in such a microscopically small space, is a completely contrary to logic.

Even evolutionists admit that they are far from being able to account for this differentiation and immaculate division of labor in cells. The Turkish evolutionist and microbiologist Prof. Ali Demirsoy makes this admission:

In essence, the way that several cell groups with very different structures and functions comes into being from a fertilized egg has still not been satisfactorily explained.

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A National Geographic Society book, *The Incredible Machine*, refers to scientists' inability to account for human creation:

Its 100 nonspecialized cells must somehow multiply into trillions of cells that make up the most complex vertebrate on Earth--the human being. The phenomenon of differentiation--how cells assume their different forms--remains one of the most baffling questions of science. How are DNA's orders issued to the cells? Is the story of life written once, in the fertilized egg? Are its orders parceled out to offspring cells as it divides? . . . Now there are new mysteries. Today we know that all cells are derived from generalized cells, and each one contains the genetic code for the whole body. But how does a cell, supplied with the voluminous script for all of life, come to play its exact role in the development of a human? How does a cell that could turn into anything turn into something? How is a rod cell in the retina, for example, designated to obey only orders to manufacture a light-absorbing protein? How does a pancreas cell know to produce insulin? ¹¹²

Dr. Lee Spetner refers to the emergence of a thinking human being from a single cell:

The perfection of the eyes, the limbs, even the finger nails and the eyelashes. How did this perfect and complex organism develop from a single cell? What kind of program orchestrates this development? Eyes that see, ears that hear, a brain that can think and command the movement of complex organs, have all developed from a single cell? That each of us started as a single cell and developed into a functioning, thinking, human being is mind-boggling.¹¹³

Clearly, none of these extraordinary phenomena could be the work of chance or of the cells themselves. That being so, to whom does this intelligence belong, this power that directs all these events in the cell, creates them in line with a specific purpose, and compresses billions of pieces of information into a space too small to be seen with the naked eye? The only answer to that question is that our Almighty Lord has created, with His infinite mercy, human beings with their present orderly forms, and has bestowed their bodies' organization and the order of the surroundings as a blessing. It is revealed in one verse that:

He has given you everything you have asked Him for. If you tried to number Allah's blessings, you could never count them. Man is indeed wrongdoing, ungrateful. (Surah Ibrahim, 34)

How Genes Control Cell Division and Growth

One of the genes' most important tasks is controlling how embryos develop. Intensive adjustments during this process mean that the dividing cell's DNA is copied accurately, that any errors in the DNA are rectified and that every new-formed cell receives a full complement of chromosomes. In this process, some genes have various control points that ensure that errors are checked and that if anything goes wrong, the process is halted for repairs to be made.

If an irreparable error arises in a new cell's DNA, the pre-programmed cell death known as apoptosis takes place. By this widespread method, the body gets rid of cells it has no use for. The cells that self-destruct by apoptosis break apart and are recycled by a kind of white blood cells known as macrophages. Apoptosis helps protect the body against genetically impaired cells that might lead to cancer, which can arise when normal cell division is impaired. Division then takes place in an uncontrolled and irregular manner, and genetic impairments accumulate, leading to a cancerous tumor. Apoptosis also plays a very important role in embryonic development and the protection of adult tissues.

One of the most important discoveries made in molecular biology is that some genes have more influence than others. They are organized according to their degrees of empowerment. For example, some genes are responsible only for fixed tasks such as making hemoglobin, hair growth or producing digestion enzymes. These molecular workers have regulator genes, which operate and halt them. During fetal development, for example, they stop the hemoglobin gene from working setting it back in motion when necessary. Regulator genes act like supervisors of both the "worker" and "middle-management" genes. Their decisions affect dozens or even hundreds of lower units; and so vitally important is their work that if they are damaged during the embryonic stage, death in the womb can result.

Reflect that genes are mere molecules, made up of atoms. So how have these molecules established such an organization among themselves? How is it that a molecule decides to stop a human being from growing any taller and transmits this decision to others? How do they understand that decision and act on it? Who installed this discipline? Furthermore, trillions of genes have been performing these disciplined tasks with the same, obedience, intelligence and consciousness for millions of years. It is nonsensical to maintain that any such system came about by chance. No doubt it is Allah, Lord of All, Who programs genes in the most rational and flawless manner.

Say: "Who is the Lord of the heavens and the Earth?" Say: "Allah." Say: "So why have you taken protectors apart from Him who possess no power to help or harm themselves?" Say: "Are the blind and seeing equal? Or are darkness and light the same? Or have they assigned partners to Allah (Who create as He creates, so that all creating seems the same to them?" Say: "Allah is the Creator of everything. He is the One, the All-Conquering." (Surat ar-Ra'd, 16)

The Wisdom Behind Mitosis and Meiosis Division

Cell division takes place in two fundamental ways, and each occurs at just the right time and in just the right way. The first of these, **meiosis**, takes place during fertilization and is a form of division of the cells constituting the egg and sperm.

It is thanks to this division that human beings have the same number of chromosomes in every generation. The so-called germ cells in the ovaries and testes reduce the number of chromosomes from 46 to 23 in order to form the egg and sperm cells, respectively. When the sperm and egg combine during fertilization, the 46 chromosomes are thus completed in the embryo. But is it possible for cells themselves to make this flawless mathematical calculation? They possess such foresight and know what they must do to form a complete chromosome when they are combined.

It is Allah Almighty, Who causes them to act in this way and Who establishes this immaculate system. It is revealed in one verse of the Qur'an that:

. . . Allah always achieves His aim. Allah has appointed a measure for all things. (Surat at-Talaq, 3)

There is great wisdom behind our Lord's involving meiosis in the emergence of a human being. For instance, the new embryo took all its chromosomes from only the mother or only the father, every zygote would still have 46 chromosomes, just like a normal human being. But there would be no human diversity on Earth. Every newborn baby would be an exact cloned copy of its mother or father. From that point of view there is enormous wisdom behind meiosis, which has been operating in a regular, flawless manner since human beings were first created.

Genetic diversity is made possible by the process of DNA shuffling during germ cell division. There are so many possible combinations of DNA that the odds of two different fertilizations from the same two parents bringing two completely identical children into the world are infinitely small--approximately one in 70 trillion.¹¹⁴

Prof. Gerald L. Schroeder also notes the extraordinary nature of the emergence of a human being with no abnormalities and a highly regular and attractive appearance, during the combination of genetic data:

In excess of five million combinations are possible in the complete set of traits housed within the human genome. In addition to this multiplicity, while the pairs are aligned at the equator of the cell, prior to their being pulled to opposite sides, they swap gene pieces in a process termed crossing over. Each of the two new chromosome sets now contains pieces from the mother and from the father. . . by this stage, the number of possible combinations runs into the multiples of trillions. With this vast potential for variety, it is not surprising that no two humans are identical. With all this genetic promiscuity, it's amazing that the vast majority of births produce normal-looking kids.¹¹⁵

We have already mentioned the dangerous consequences of errors in the DNA helix. Bearing in mind, too, that very small rearrangements in genes can also have highly negative results, the way that flawless human beings emerge from a combination of such data banks is one of the proofs of Allah's infinite might. In one verse, our Almighty Lord states that:

He is Allah—the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and Earth glorifies Him. He is the Almighty, the All-Wise. (Surat al-Hashr, 24)

The second form of cell division is **mitosis**, during which, the cell copies all the information contained within it, including the chromosomes, and divides into two twin cells. This progeny makes it possible for new tissues to be constructed. Thousands of heart cells are needed for the formation of the heart, for example. Stomach or kidney cells cannot replace them, so it is essential for the heart cells to multiply in order to give rise to a functioning heart. Similarly, when you cut your finger, new skin cells at the site multiply to heal the cut. In the same way, mitosis makes a baby grow during infancy and childhood. By multiplying in an ordered manner, bone cells build first the child's skeleton and then the adult one.

So important is this process that various genes carefully control the stages of mitosis. The perfection here is very striking. Two flawless cells emerge from one other cell, fully equipped to produce new cells just like themselves. In addition, it is also most amazing that mitosis division should begin immediately after fertilization. In order for a new baby to form, cells begin dividing with an extraordinary capacity. They shape its organs, establish connections between them, and over the course of nine months, assume the appearance of a normal human being. The sublime consciousness manifested here, and each of the stages that takes place in the light of a specific aim, take place at Allah's command and under His inspiration.

In the Qur'an, our Lord tells us that:

Has man ever known a point of time when he was not something worth mentioning? We created man from a mingled drop to test him, and We made him hearing and seeing. We guided him on the Way, whether he is thankful or unthankful. (Surat al-Insan, 1-3)

Say: "It is He Who brought you into being and gave you hearing, sight and hearts. What little thanks you show!" (Surat al-Mulk, 23)

Genetic Diseases Reveal That in DNA, There Is No Room for Chance

The importance of the perfection and order inside the DNA molecule is revealed by genetic diseases. A single molecule's error could damage, or even kill, the human being concerned. But these molecules clearly behave at the command of a superior intellect and almost never make any errors in the work they do. The 100 trillion DNA molecules in your body, the nucleotides that constitute that DNA, the proteins that build the cell, the enzymes that so perfectly organize the traffic among those cells, the amino acids that make up the enzymes, and the 100 trillion cells that contain that DNA and make you, all are structures with a sublime organization and order.

Bear in mind the delicate order and balance in the information contained in DNA, and you can better see how impossible the idea of chance emergence truly is. As we have already shown in some detail, DNA's information is made up by the "letters" A, T, G and C laid out one after the other in a particular and meaningful way. In this sequence, however, there must not be a single mistake. In a whole encyclopedia, a spelling error or wrong letter may not be that important and may usually not even be noted. In contrast, a single error in any step in DNA –say, the faulty coding of letter number 1 billion, 719 million, 348 thousand and 632– could have lethal consequences for the cell, and therefore for the entire human being.

The minimum change in a genome creates a change in a nucleotide. Yet even here, a seemingly insignificant error can give rise to very serious consequences. The presence of A (adenine) instead of C (cytosine) in the pigment-coding gene known as rhodopsin in the human retina causes a disease leading to blindness.¹¹⁶

Inherited diseases that are almost impossible to treat can emerge as the result of an impairment arising in a single gene. Children born with the disease phenylketonuria, for instance, are unable to metabolize the amino acid phenylalanine, found in protein foods. As a result, the increasing phenylalanine and its waste products in the blood and other body fluids damages the growing child's brain, leading to serious mental impairment and various diseases of the nervous system. This disease is caused by a defective gene responsible for the manufacture of the enzyme hydroxylase. Gene defects of this kind are the causes of other diseases such as Mediterranean anemia, hemophilia, cystic fibrosis, familial Mediterranean fever (FMF) and congenital deafness.

Many other inherited diseases that give rise to very serious consequences are caused by various defects in genetic structure. The main reason for every one of these disorders is just a few of the billions of letters in the genetic code being in the wrong place. In the genetic disease known as Huntington's disease, patients appear healthy up until the age of 35. After that age, however, uncontrollable contractions suddenly take place in the arms, leg and face muscles. Since this fatal and incurable disease also affects the brain, the sufferer's memory and mental functions grow increasingly weaker.

All these diseases demonstrate that the genetic code has been balanced so flawlessly that the slightest alteration in the system can cause serious problems. Just one letter too few or too many can give rise to fatal diseases or serious handicaps that last throughout the sufferer's life. Therefore, it's impossible to claim that such a delicate order and regularity came about by chance and--as maintained by the theory of evolution--developed spontaneously through mutations.

That being so, how did the magnificent information contained in DNA come about? How was it coded? Evolutionists, who trace the origins of life to chance, have no answer to give. Those who claim that billions of pieces of data, were written by chance will of course have no answer to give. In the same way that a book has an author, so the information in DNA has a creator; and that Creator is our Lord, Almighty and Omniscient Allah.

Random effects only damage living things, because of the way the genetic code is encoded. Just about all known genes contain more than one piece of information about the organism. The molecular biologist Michael Denton describes this property of genes:

The effects of genes on development are often surprisingly diverse. In the house mouse, nearly every coat-colour gene has some effect on body size. Out of seventeen x-ray induced eye colour mutations in the fruit fly *Drosophila melanogaster*, fourteen affected the shape of the sex organs of the female, a characteristic that one would have thought was quite unrelated to eye colour. Almost every gene that has been studied in higher organisms has been found to effect more than one organ system. . . .¹¹⁷

Because of this feature in the genetic structure, any random change in any gene in the DNA will impact on more than one specific organ. The impairment will have wide-ranging destructive effects.

In short, health cannot emerge by chance. On the contrary, it is a blessing from our Lord, the Compassionate and Merciful, the result of a sublime creation. Allah shows us, with examples, that He can take back this blessing whenever He so chooses and can create a lethal disease in an unknown part of the body.

There is, of course, great wisdom behind these deficiencies. People need to give thanks to Allah, Who bestows their health upon them and "**formed them as a man**" (Surat al-Kahf, 37). When they fall ill, they must be aware that both health and sickness derive from Him and beg for help, as did the Prophet Abraham (pbuh). As he put it, "**and when I am ill, it is He Who heals me.**" (Surat ash-Shu'ara', 80)

CHAPTER 9

Darwinist-Materialist Errors Regarding the Human Genome Project

Genome is the name for the entirety of the genetic information possessed by a cell--and thus, by a living thing. Hundreds of scientists in some 20 laboratories have been working for more than a decade to analyze the genetic information in the DNA molecule in each one of the 100 trillion or so cells in the human body. The Human Genome Project, run by an international body consisting of 16 institutions, aims to describe the whole of the genetic data inside the human cell and to read all the DNA texts written in genetic language. The biologists, chemists, engineers, computer scientists, mathematicians and experts in a great many other fields formed part of this international project, working to produce a biological map setting out human beings' physical characteristics.

Yet despite all these efforts, the technology for recording the DNA sequence is still very slow, and recording the DNA sequence in a single human chromosome is a very expensive process--so expensive that some \$2.7 billion has already been spent on the Human Genome Project,¹¹⁸ far more than was spent on sending man to the Moon and back.

The draft of the human DNA sequence was completed in 2000. However, the project assumed its final form, with the correction of errors and completion of gaps, only in April 2003. The National Human Genome Research Institute, and the U.S. Departments of Energy and Health co-coordinated the 13-year Human Genome Project, some of whose objectives may be summarized:

- * To determine the 30,000 or so genes in the human genome and to produce a map of the human genes,
- * To determine the approximately 3 billion base pair sequences constituting DNA,
- * To preserve the information obtained in data banks for use in future research,
- * To develop methods and materials for the analysis of the data obtained,
- * To determine the links between genes and their functions,
- * To establish how genes work as a single unit in chromosomes, and
- * To determine the basis and causes of genetic diseases.

The gene mapping technique employed in the project is to clarify where genes are located in the chromosomes, thus revealing the anatomy of a person's genome. With the mapping of the relative positions of a great many genes and other genetic markers along a chromosome, it is possible to produce a whole genome map. The mathematical analysis of the genome and a series of complex statistical analyses are employed to determine the location of genes on chromosomes, needed for us to understand the basic functions of the

human body. One of the important objectives of the Human Genome Project is therefore the determination of the bases and causes of genetic diseases. It is hoped that with the data obtained from the project, an estimated 4,000 inherited diseases can be identified, and in the near future, therapy will be possible by means of the production of special drugs aimed at high-risk genetic diseases.

The Size of Genes Is No Measure of Their Complexity

It is very easy to misinterpret the enormous size of the human genome. The reason why human beings have 25 times more DNA than a fly is not because human beings are larger and more complex. There is no correlation in biological terms between the amount of genetic information and complexity. The single-celled organism *Paramecium caudatum*, for instance, has 8.6 billion nucleotides, which is more than twice as many as the human genome. With 670 billion nucleotides, the single-celled *Amoeba dubia* possesses the broadest known amount of genetic information.¹¹⁹

Scientists working on the Human Genome Project state that they are still only beginning to understand the functions of genes and the relationships among them, because the emerging results were by no means what they had expected. For example, even a mouse or a stalk of wheat has longer DNA than human beings.

This again shows that there is no direct correlation between DNA length and an organism's complexity. The biophysicist Dr. Lee Spetner refers to this:

The chromosomes of some organisms may have much more DNA than are in the chromosomes of others. You might then think the amount of DNA in the genome is a better way to measure organ complexity, but that's not entirely correct either. Although humans have 30 times the DNA of some insects, there are insects that have more than double the DNA in humans. The amount of DNA is not a reliable measure of complexity because not all the DNA may have to do with complexity. . . .¹²⁰

It also emerged that previous estimates of the number of human genes were also incorrect. When their research began, scientists estimated that human beings had between 50,000 and 140,000 genes, but the latest studies established only between 25,000 and 30,000. This came as a considerable surprise to scientific circles. Francis S. Collins, head of the Human Genome Project, explains:

Humans have more genes than expected. My definition of a gene here-- because different people use different terminology--is a stretch of DNA that codes for a particular protein. There are probably stretches of DNA that code for RNAs that do not go on to make proteins. That understanding is only now beginning to emerge and may be fairly complicated. But the standard definition of "a segment of DNA that codes for a protein" gives one a surprisingly small number of about 30,000 for the number of human genes. Considering that we have been talking about 100,000 genes for the last fifteen years (that's what most of the textbooks still say), this was a bit of a shock. In fact, some people took it

quite personally. I think they were particularly distressed because the gene count for some other simpler organisms had been previously determined. After all, a roundworm has 19,000 genes, and mustard weed has 25,000 genes, and we only have 30,000? Does that seem fair? Even worse, when they de-coded the genome of the rice [plant], it looks as if rice has about 55,000 genes. . . . What does that mean? Surely, an alien coming from outer space looking at a human being and looking at a rice plant would say the human being is biologically more complex. I don't think there's much doubt about that. So gene count must not be the whole story. So what is going on? ¹²¹

The difficulty here stems from Darwinist scientists constructing their claims on the assumption that humans are the most complex life form, for which reason they should have a greater number of genes. Since the human cell was a great deal more complex, it was expected to have a greater number of genes compared to the 6,000 in a yeast cell, 13,000 in the fruit fly, 18,000 in one species of worm and 26,000 in a plant species. However, the Human Genome Project invalidated the dogmatic logic that the more complex an organism, the larger its DNA and the number of its genes.

Neither gene numbers nor DNA size shows evidence of evolution, though evolutionists are trying to distort this latest development, which really does work against them, and to depict it as proof of their theory! Due to both a lack of information and their prejudiced attitude, some media organizations also imagine that the Human Genome Project is uncovering proof of evolution, or else they seek to give that impression. Yet all the genetic findings obtained from the project have closed the doors field in Darwinism's face, as has happened in other branches of science.

Evolutionists' Distortion of Genetic Similarity

With the production of the human gene map, the findings from the Human Genome Project are being distorted and used as a propaganda tool in some evolutionist publications, claiming that there is a 98% resemblance between human and chimpanzee genes, which is proposed as evidence for evolution. In fact, however, these claims give no support to evolution; on the contrary, they are false evidence based on distortions.

Even if there is a 98% resemblance between the chimpanzee and human genomes, it is illogical to infer that man is 98% chimpanzee. Human beings share specific genes with a great many other living things. For example, according to analyses carried in New Scientist magazine, a 75% resemblance has been determined between human DNA and that of nematode worms.¹²² However, this hardly means that human beings are 75% worm, or that there is only a 25% difference between them! Some evolutionists even see and speak of the illogicality of such inferences. Prof. Steven Jones issued a reminder if a 50% similarity is revealed between human beings and bananas, that will not mean that human beings are 50% banana. It is known that even if the genes in two life forms are the same, they can still work in entirely different ways. Moreover, genes are sometimes involved in

more than one function, and one function is controlled by more than one gene. This broadens the mathematical difference to a very considerable extent.

But analyses of various proteins show that human beings are very close related to very different life forms. In one study, researchers from Cambridge University compared the proteins of various terrestrial life forms. Astonishingly, in just about all the examples used, human beings and chickens turned out to be one another's closest relatives. Our next closest "relative" is the crocodile.¹²³

Another example that evolutionists use to claim genetic similarity between man and ape is the fact that humans have 46 chromosomes, and chimpanzees and gorillas have 48. Evolutionists regard similarity between chromosome numbers as an indication of an evolutionary relationship. Yet if their logic were correct, man would have another relative just as close as the chimpanzee: the potato!

The potato has exactly the same number of chromosomes as the chimpanzee and the gorilla: 48. On the other hand, the wild hare has exactly the same number of chromosomes as human beings: 46.¹²⁴ These examples show that similar numbers represent no evidence at all for the theory of evolution, because genetic similarities do not fit the scenario claimed, but actually produce completely opposite results to it.

The Darwinist media use information selectively, as propaganda tools. Since they claim that man and ape descended from a common ancestor, they emphasize the resemblance between the two species' DNA. Yet there are a number of studies –again carried out by evolutionists!– showing the invalidity of the "98% similarity" claimed by evolutionists for so many years. But these studies are deliberately not reported, or else given only very limited coverage.

A report titled "Humans, chimps more different than thought," carried on the CNN website on 25 September, 2002, reported the findings of this research:

There are more differences between a chimpanzee and a human being than once believed, according to a new genetic study. Biologists have long held that the genes of chimps and humans are about 98.5 percent identical. But Roy Britten, a biologist at the California Institute of Technology, said in a study published this week that a new way of comparing the genes shows that the human and chimp genetic similarity is only about 95 percent. Britten based this on a computer program that compared 780,000 of the 3 billion base pairs in the human DNA helix with those of the chimp. He found more mismatches than earlier researchers had, and concluded that at least 3.9 percent of the DNA bases were different. This led him to conclude that there is a fundamental genetic difference between the species of about 5 percent.¹²⁵

On 23 September, 2002, the website of the British magazine *New Scientist* reported on the same subject, under the caption "Human-Chimp DNA Difference Trebled":

We are more unique than previously thought, according to new comparisons of human and chimpanzee DNA. It has long been held that we share 98.5 per cent of our genetic material with our closest relatives. That now appears to be wrong. In fact, we

share less than 95 per cent of our genetic material, a three-fold increase in the variation between us and chimps.¹²⁶

In conclusion, the genome project has revealed no findings in favor of the theory of evolution. On the contrary, it shows that on the basis of DNA and gene structures, no evolutionary tree of life can be constructed between living things. This deals a severe blow to Darwinism. Living things' DNA codes clearly show that the tree of life, imposed as the truth ever since the 19th century, is actually specious. The real aim of those sections of society blindly devoted to Darwinism is not to publicize the facts, but merely to propagate Darwinism. However, all the foundations on which their propaganda is built are crumbling away with ongoing scientific discoveries. Confronted by this, increasing numbers of people are realizing that the theory of evolution was a deception perpetrated for ideological reasons. In its place, the fact of creation is spreading rapidly.

In the Qur'an, Allah reveals as follows:

Do not mix up truth with falsehood and knowingly hide the truth. (Surat al-Baqara, 42)

Rather We hurl the truth against falsehood and it cuts right through it and it vanishes clean away! Woe without end for you for what you portray! (Surat al-Anbiya', 18)

Scientists Still Have Insufficient Information

Although scientists across the world have been working on the human genome for decades, our knowledge of genetic structure is still very limited. Scientists working for the Celera company, using advanced laboratory technology and computer analysis techniques, identified 26,500 human genes and provided estimated locations for around 13,000 of them. Using a different method, the Human Genome Project estimated that there are 31,778 human genes. What these two methods agree on is that human beings have between 30,000 and 40,000 genes. Given the complex nature of human genes, it is presently impossible to provide an exact number.

According to Human Genome Project estimates, those sections of DNA concerned with instructions for the production of protein represent less than 5% of the DNA sequence. The remaining genetic information consists of genetic control regions regarding chromosomes and DNA segments that are not yet understood.¹²⁷ A great deal more research is needed before we can fully understand human genetic data.

As scientists seek to reveal how the genetic mechanism functions, they cannot explain how such a perfect system came to be. Under the caption "Messages from the Genome" in the December 2000 issue of *Harper's magazine*, Arthur Cody describes the operations within the genome as a series of "triggering processes" and then poses the following questions:

What triggers the triggerer? Nobody knows. More than that, nobody has any theoretical proposal to suggest 'Triggering' is an interesting biological event; it goes nowhere toward explaining construction. What kicks the homeotic gene [which regulates the embryo development] into action? No answer exists, factual or theoretical Not only does no one know, no one has the slightest idea how to look for an answer Everything truly essential about the process is utterly and even radically incomprehensible.¹²⁸

To the writer's questions, there is only one answer, of course: all these things take place under the inspiration of Almighty Allah. By the will of our Lord, billions of atoms combine together in such a way as to comprise all the functions of life. Indeed, with the conclusion of the Human Genome Project, the details of the genetic information that reveals the sublime creation with which Allah brings living things into being have been revealed for all to see. Today, anyone who examines the results of the project and discovers that in a single human cell is sufficient information to fill thousands of encyclopedia pages will see this as evidence of a magnificent creation.

One of those who express this fact is the physicist and geneticist Prof. Francis S. Collins, leader of the Human Genome Project and head of the National Human Genome Project Research Institute. In 2005, Prof. Collins was awarded the Allen Prize, regarded as the American Society of Human Genetics' most prestigious award, for his lifetime's study of human genetics. In a speech, Prof. Collins stated that his studies had deepened his faith in Allah:

From my perspective as director of the Human Genome Project, the scientific and religious world views are not only compatible but also inherently complementary. . . The elegance and complexity of the human genome is a source of profound wonder. **That wonder only strengthens my faith, as it provides glimpses of aspects of humanity, which God has known all along, but which we are just now beginning to discover.**¹²⁹

Any honest scientist will admit that faith and science are compatible with each other and that the universe is full of proofs of Allah. However, the dishonest approach adopted by the Darwinist-materialist media clearly demonstrates their selectivity. The words of this scientist, who headed the Human Genome Project and who confessed his amazement at the superior organization manifested in DNA--and how a single molecule strengthened his faith--appear nowhere in the press. However, the perfection in the order created by Allah is far too apparent to be concealed in any way.

In the Qur'an, Allah reveals the attitude of believers:

Those who have been given knowledge see that what has been sent down to you from your Lord is the truth and that it guides to the Path of [Allah], the Almighty, the Praiseworthy. (Surah Saba', 6)

There is an excellent example in them for you to follow that is for those whose hope is in Allah and the Last Day. But if anyone turns away, Allah is the Rich Beyond Need, the Praiseworthy. (Surat al-Mumtahana, 6)

The Successes of the Human Genome Project Are Part of the Destiny Created by Allah

In the wake of the conclusion of the Human Genome Project, certain publications began spreading misleading messages to cover up the impasse in which the theory of evolution found itself. One of the subjects brought up under different slogans and captions most frequently by the Darwinist-materialist press is the claim that the discovery of the gene map will supposedly be able to alter people's destinies.

It is a grave error to spread messages such as "Man will no longer be a victim of fate" together with information about the human gene map. In fact, the map's completion will definitely make no difference to human destiny, because the map itself is also part of that destiny. Allah reveals this fact in the Qur'an:

But you will not unless Allah wills. Allah is All-Knowing, All-Wise. (Surat al-Insan, 30)

Destiny is the way that Allah knows all things in the past and present in the form of a single moment. Allah knows beforehand all things that have not yet taken place. A great many people fail to understand how He knows events that have not yet taken place. But the destiny that a person has not yet encountered is simply an event that, for that person, has not yet taken place. All events described as of "unknown" result are unknown to us alone. Omniscient Allah is unfettered by time and space. For that reason, the past, present and future are all one for Him, for He is the One Who created time and place. In the Sight of Allah, everything we are experiencing at this moment and everything we will experience in the future are all already over and done with. When the time comes, all humans witness the destiny created for them by Him.

In the same way that someone who holds the CD of a film can perceive the film's beginning, middle and end as a single disk, so Allah is aware of everything to come for all the human beings He has created. He Who knows all things as a single moment, shows us the infinite nature of His might by creating limitless infinity of time in that single infinitely small instant. In the face of these scientific developments, believers must be aware that all knowledge belongs to Allah, its real and only owner, as is revealed in the Qur'an:

They said, "Glory be to You! We have no knowledge except what You have taught us. You are the All-Knowing, the All-Wise." (Surat al-Baqara, 32)

He creates the lives of all human beings who have ever lived, together with all the details thereof. All events that may appear positive or negative and that people will encounter from birth until the moment of their death take place with Allah's knowledge. In Surat al-An'am, we are informed that everything that happens in the world, both great and small, does so at Allah's choosing:

The keys of the Unseen are in His possession. No one knows them but Him. He knows everything in the land and sea. No leaf falls without His knowing it. There is no seed in the darkness of the Earth, and nothing moist or dry which is not in a Clear Book. (Surat al-An'am, 59)

This applies to everyone and everything. Nobody can intervene in the destiny created for them by Allah, nor make the slightest alteration in the course of events. For example, Allah has created everyone and everything with a specific life span; and the moment, place, time, and form of that death are already set out in His Sight. When a person falls ill, that too has been determined billions of years before they were ever born. Whether they will recover from that illness is also set out in their destiny. Everything that can play a part in their recovery--doctors, nurses, hospitals, drugs and therapies--have all been written down beforehand in His sight. Therefore, if a person recovers, that does not mean that they changed their destiny, but that recovery was ordained beforehand.

In the verses, Allah reveals:

Your Lord knows you best. If He wills, He will have mercy on you, and, if He wills, He will punish you. We did not send you to be their guardian. My Lord knows best everyone in the heavens and Earth. . . . (Surat al-Isra', 54-55)

One day in the future, if people's lives are extended through direct intervention in their genes, this does not mean that they interfered in their own destiny. What it means is that Allah created them with long life spans, and the production of the gene map is the means whereby their lives can be lengthened. The fact that the person is living at a time of technological advances in genetics, and the prolongation of life through medical means are all a part of destiny: Everything is determined in the sight of Allah long before the person even comes into the world.

Similarly, someone with a potentially fatal disease who is cured as a result of medical discoveries lives his destiny as well, because being cured is also in his destiny. The production of the human gene map and the means of intervening in humanity's genetic makeup do not oppose the destiny created by Allah. On the contrary, humanity is following the course created for it, using information created by Him. If, thanks to these scientific advances, someone lives to the age of 120, that is the age appointed beforehand by Allah, and that is how long the person will live.

In one verse, Allah reveals that everyone's life span is determined in a book in His Sight:

Allah created you from dust and then from a drop of sperm and then made you into pairs. No female becomes pregnant or gives birth except with His knowledge. And no living thing lives long or has its life cut short without that being in a Book. That is easy for Allah. (Surah Fatir, 11)

In short, such expressions such as "cheating fate" and "changing one's destiny" are inaccurate terms stemming from ignorance of the fact of destiny. Even the fact that someone will employ these expressions when they speak is determined beforehand in their destiny. It has already been determined in the sight of Allah where, when and under what circumstances a person will use them. Allah is aware of all things. He has revealed that all things are written in a book in His Sight. We live just what is written in that book, no more and no less.

. . . Whom not even the weight of the smallest particle eludes, either in the heavens or in the Earth; nor is there anything smaller or larger than that which is not in a Clear Book. (Surah Saba', 3)

Nothing occurs, either in the Earth or in yourselves, without its being in a Book before We make it happen. That is something easy for Allah. (Surat al-Hadid, 22)

Evolutionist Misconceptions About Genetic Engineering

Genetic engineering isolates genetic materials from one living thing, and transfers them into another organism. By this means, scientists are able to clone living things, develop plants resistant to disease and insects, and produce bacteria that digest industrial wastes. However, neither these biotechnological studies nor the genetic research they are based on support the theory of evolution. The main errors of those who claim otherwise can be summarized:

1) Biotechnological research proves that living things are not the result of random, unconscious events, but were intelligently created.

In all genetic studies, genes are worked on with great care. In other words, conscious intervention takes place. Scientists who manipulate genes in line with a specific purpose have learned about the functioning of the cell through many years of training. All the stages of the research are performed with enormous care, and are controlled by laboratories, using technological equipment, in specially regulated environments.

Despite being an evolutionist, Professor of Biology William D. Stansfield cites an example of cell synthesis in the laboratory to show that studies of this kind cannot represent proof of evolution:

Creationists have looked forward to the day when science may actually create a "living" thing from simple chemicals. They claim, and rightly so, that even if such a man-made life form could be created, this would not prove that natural life forms were developed by a similar chemical evolutionary process.¹³⁰

2) Genetic variations provides no support for the theory of evolution

Contrary to what is claimed in evolutionist publications, experiments resulting in genetic variation are no evidence for the theory of evolution. The theory of evolution maintains that there are mechanisms in nature that turn living things into more complex ones, by which means one species turns into another. In fact, experiments in the field of genetic engineering and biotechnology have demonstrated that it is impossible for genetic variation to give rise to any change of species. Some evolutionists ignore this, however, playing with words to make unrealistic claims that the theory of evolution has been proven in the laboratory.

3) Organisms developed using genetic engineering are no evidence for the theory of evolution.

Another error is the claim that new organisms developed through genetic engineering confirm the theory of evolution. The methods currently employed in the field of genetic engineering and biotechnology-particularly in such areas as the production of drugs or proteins such as insulin or altering the reaction speeds of various enzymes-are portrayed by evolutionists as evidence for the theory of evolution. In fact, it is impossible for these studies to constitute any such evidence.

Genetic engineering studies proceed through the development of *recombinant DNA* technology, which recombines various genes that already exist. That being so, evolutionists must first account for the origin of genes, the raw materials of their genetic engineering. (See Chapter X, "How Does the DNA Miracle Invalidate the Theory of Evolution?") Already facing a complete impasse on the subject of DNA's origin, evolutionists placed their hopes in research on genetic engineering. But since the theory of evolution claims that living species came into existence solely through chance mechanisms, evolutionist interpretations of genetic engineering are flawed from the outset. In their claims concerning genetic engineering, evolutionists exhibit a serious contradiction.

Attempts are made to use the fact that genes can be transferred between different organisms, or that genes can be recombined, as evidence of an evolutionary process. But as you have seen in previous sections, genes' highly complex structures are a most powerful proof that no such random process ever took place.

4) Genes show that living things share a common origin, not a common ancestor.

Another of the errors in the evolutionist propaganda regarding this research is that common genes that can be transferred between organisms prove the claim that living things are descended from a common ancestor. After describing how they are able to transfer genes between different species, Darwinist researchers then go on to claim that they can do so because the living things are descended from a common ancestor. People with a superficial knowledge of the subject are misled by the way analysis based on evolutionists' assumptions is portrayed as proof.

In fact, a common origin constitutes no evidence for a common ancestor. Nor does the fact that genes can be transferred among different organisms prove that biologic structures evolved by chance, through haphazard natural events. Objectively, the common genes in different organisms may be regarded as an indication of common origin-which clearly supports the fact of creation.

5) Genetic engineering provides no support for atheist propaganda:

Commentaries regarding genetic engineering suggest that this is actually creating. Materialists who deny the existence of Allah use genetic engineering research to support their atheist propaganda and interpret recombinant studies as creation. (Allah is beyond this.)

Atheists refuse to grasp that "creation" means bringing something into being from nothing. Creation belongs to Allah alone. In their genetic engineering studies, scientists make changes in genes that have been created by Allah, or else transfer these between living things also created by Him in the first place. The genetic information used to develop new "hybrids" in these studies already exists in the living world.

For example, scientists can make a zebra fish emit light by implanting a luminous jellyfish gene into it, or to bring about the production of spider silk in goat's milk by implanting spider DNA into a goat. But even though the resulting life forms may appear to possess various new characteristics, no new genetic information has been created; all that has happened is that existing information has changed places among living species.

Even if scientists one day manage to radically restructure a living creature, this will still apply. The molecular biologist Michael Denton expresses this fact:

In the future, if genetic engineers are ever able to radically redesign living systems from proteins to whole organisms, this will only be via intelligently directed changes which will almost certainly necessitate programmed simultaneous change in many of the basic subsystems.¹³¹

In conclusion, evolutionist statements about genetic engineering are invalid. On the contrary, research in this field with its planned and controlled environments and deliberate changes, reveals that living things have been created with a perfect organization.

Why Cloning Provides No Support for the Theory of Evolution

During the cloning process, DNA from a cell from the organism planned to be duplicated is placed under the microscope and implanted into an egg of another of the same species. The DNA of the organism whose copying is being planned is employed for this process. Immediately afterwards, an electric shock causes the egg cell to start dividing. The developing embryo is placed inside the womb of a female member of that particular species, and its growth and birth are then awaited.

First off, cloning and evolution are completely different concepts. The theory of evolution is based on the claim that life came into existence from inanimate matter as the result of chance (though there is absolutely no evidence to suggest that this claim might be true). Cloning, on the other hand, is the replication of a living thing by using genetic material from a living cell-a biological process repeated by artificial means in a laboratory environment. In other words, there is no chance process, nor of inanimate matter coming to life-on which the theory of evolution depends.

In fact, the replication process is manifest proof of a biological law that completely undermines evolution. That law is the principle that "Life arises from life" advanced in the late 19th century by the famous scientist Louis Pasteur. The depiction of cloning as evidence for evolution in the face of this evident fact is a major distortion perpetrated by certain sections of the media.

Advances in various scientific fields, particularly over the last 30 years, have shown that it is impossible to account for the emergence of living things in terms of chance. Evolutionists' scientific errors and biased analyses have been documented, and the theory of evolution has become indefensible within the requirements of science. This has propelled evolutionists to look for other solutions, which is the reason for the propaganda around such scientific advances as the "copying of life" and "test-tube babies" being portrayed as proofs of evolution.

Another misconception is the idea that cloning means creating a new life form. The fact is, cloning consists of an already existing reproductive mechanism being joined to previously existing genetic information. No new mechanisms or genetic data are produced during this procedure. Genetic information is extracted from an organism that already exists-a sheep, for example-and is then implanted into the womb of a female sheep. The lamb is thus a "younger twin" of the sheep from which the genetic information was extracted. This has nothing to do with theory of evolution, nor with the concept of creating a living thing from scratch.

Creating a human being or any other living thing-bringing them into existence from nothing-is unique to Allah alone. Scientific progress confirms this by showing that it is impossible for human beings to perform such creation.

In one verse it is stated that:

The Originator of the heavens and Earth. When He decides on something, He just says to it, "Be!" and it is. (Surat al-Baqara, 117)

Evolutionists are left with nothing scientific to say, but still attempt to keep their theory alive by hiding behind popular scientific ignorance, thus making that theory's lack of credibility crystal-clear. Like all other important scientific advances, cloning is a very illuminating development revealing that life was created.

CHAPTER 10

The Information in Living Structures and The End of Materialism

At the foundation of the theory of evolution lies materialist philosophy, based on the hypothesis that nothing exists apart from matter. This theory maintains that matter has existed and will continue to exist for all time. Materialists employ a logical process known as reductionism in order to back up these claims. Reductionism is the idea that, like matter itself, invisible forces can also be explained in terms of material agents.

To clarify this, consider the example of the human mind, something that cannot be touched or seen. What is more, there is no "mind center" in the human brain, which inevitably leads to the conclusion that the mind is beyond matter. The thinking, loving, passionate rejoicing, happy or suffering entity we refer to as "me" is not a material entity in the same sense that a table or a stone is.

Materialists, however, maintain that mind can be reduced to matter. According to this claim, our thinking, loving, rejoicing and all other mental activities basically consist of chemical reactions between the atoms in our brains. Our loving someone is a chemical reaction in various cells; the way we feel fear is another such reaction. The famous materialist philosopher Karl Vogt expressed this with irrational logic: "The brain secretes thought just as the liver secretes bile."¹³² The fact is, however, that bile is matter, but no evidence suggests that thought is matter, too.

Reductionism follows a logical course, but logical progressions may not always be based on sound foundations. What happens when reductionism, the fundamental logic of materialism, is compared against scientific facts?

Nineteenth-century scientists and thinkers imagined that they could easily answer that question by saying, "Science confirms reductionism." However, 20th -century science has revealed that the information existing in nature can never be reduced to matter.

DNA, Not Merely a String of Nucleic Acids, Also Contains Information

You have already seen that living things' DNA contains very wide-ranging information. A literal data bank that describes all the physical details of an organism's body is squeezed into a space just 1/100,000 of a millimeter. In addition, the living cell also possesses a system that reads and interprets this information and engages in production accordingly. In every living cell, the information inside DNA is read by various enzymes, and proteins produced according to that information. Every second, the manufacture of millions of proteins, of just the type required for the site concerned, takes

place inside our bodies. By means of this system, eye cells or blood cells that die are replaced by new ones.

Can the information inside DNA be reduced to matter, as materialists would have us believe? Or can DNA be regarded as only a collection of matter, with the information it contains emerging through random interactions of matter?

All the scientific research carried out in the 20th century, the results of all the experiments and observations, show that life definitely does not consist of matter alone. As the leading information theoretician and biophysicist Hubert Yockey puts it: "Like all messages, the life message is non-material but has an information content measurable in bits and bytes."¹³³

The scientist Dean Overman says that "information contained in the genetic code, like all information or messages, is not made of matter . . . The meaning is not a property of the arrangement of the symbols or alphabet of the code. The message or meaning in the genetic code is non-material and cannot be reduced to a physical or chemical property."¹³⁴

Prof. Phillip Johnson says:

First, life consist not just of matter (chemicals) but of matter and information. Second, information is not reducible to matter, but is a different kind of "stuff" altogether. A theory of life thus has to explain not just the origin of matter but also the independent origin of the information. Third complex, specified information of the kind found in a book or **a biological cell cannot be produced either by chance or at the direction of physical and chemical laws.**¹³⁵

In his book *In the Beginning Was Information*, the information theoretician Prof. Werner Gitt also states that life cannot be reduced to matter alone:

Matter and energy are basic prerequisites for life, but they cannot be used to distinguish between living and inanimate systems. The central characteristic of all living beings is the "information" they contain, and this information regulates all life processes and procreative functions. Transfer of information plays a fundamental role in all living organisms. When, for example, insects carry pollen from one flower to another, this is in the first place an information-carrying process (genetic information is transferred); the actual material employed is of no concern. Although information is essential for life, information alone does not at all comprise a complete description of life.¹³⁶

The fact that the genetic code contains non-material information shows that evolutionists' dreams regarding the genetic code are unfounded right from the outset. Their scenarios assume that matter somehow organized itself in order to give rise to the genetic code and genetic information. But since matter is unable to spontaneously produce that genetic code, all materialist explanations are totally meaningless. Furthermore, the arrangement of the genetic letters in DNA is of vital importance for life. Nucleotides are meaningless on their own, by coming together in particular sequence, they give rise to genes that carry meaningful information that significantly distinguishes DNA from other structures seen in nature.

Prof. Phillip Johnson refers to this property of DNA in these terms:

The important thing about DNA is not the chemicals but the information in the software, just as the important thing about a computer program or a book is the information content and not the physical medium in which that information is recorded. ... metabolism and reproduction cannot get started until an enormous amount of complex information is already in existence.¹³⁷

As Johnson states, the random combination of chemical substances cannot establish the necessary conditions for organisms to live and reproduce. Chemical substances must be assembled in such a way as to constitute the comprehensive and meaningful information in DNA. It is impossible to find such an intention in atoms and molecules. The source of this information is Omniscient and Almighty Allah, the Creator of all things on the Earth and in the sky.

The well-known theoretical physicist Paul Davies describes the value of genetic information from this perspective:

... [T]he distinctive feature of biological information is that it is replete with meaning. DNA stores the instructions needed to build a functioning organism; it is a blueprint or an algorithm [a logical step-by-step procedure] for a specified, predetermined product. Snowflakes don't code for, or symbolize, anything, whereas genes most definitely do. . . . It is the quality, not the mere existence, of information that is the real mystery here.¹³⁸

Paul Davies refers to the origin of genetic information as a "mystery" because no materialist account for the information inside DNA can be given. Materialism has once again collapsed in the face of the fact of creation.

The chemist Michael Polanyi, an eminent 20th century philosopher of science, states that there can be no materialist explanation for the transmission of the information in DNA:

The life process is essentially the development of a fertilized cell, as the result of information imparted by DNA. Transmission of this information is nonchemical and nonphysical, and is the controlling factor in the life process. The description of a living system therefore transcends the chemical and physical laws which govern its constituents.¹³⁹

In "Information in the Holographic Universe" an article published in *Scientific American* magazine, the theoretical physicist Prof. Jacob D. Bekenstein describes the importance of information:

Ask anybody what the physical world is made of, and you are likely to be told "matter and energy." Yet if we have learned anything from engineering, biology and physics, information is just as crucial an ingredient. The robot at the automobile factory is supplied with metal and plastic but can make nothing useful without copious instructions telling it which part to weld to what and so on. A ribosome in a cell in your body is supplied with amino acid building blocks and is powered by energy released by the

conversion of ATP to ADP, but it can synthesize no proteins without the information brought to it from the DNA in the cell's nucleus. Likewise, a century of developments in physics has taught us that information is a crucial player in physical systems and processes.¹⁴⁰

When you look at evolutionist writings, you can see that they sometimes admit that their theory is at a complete impasse in the face of the information in living things. One outspoken authority on this subject is the French zoologist Pierre-Paul Grassé. Despite being a materialist and an evolutionist, Grassé admits that the most important fact to invalidate Darwinism is the information constituting life:

Any living being possesses an enormous amount of "intelligence," very much more than is necessary to build the most magnificent of cathedrals. Today, this "intelligence" is called "information," but it is still the same thing. It is not programmed as in a computer, but rather it is condensed on a molecular scale in the chromosomal DNA or in that of any other organelle in each cell. This "intelligence" is the sine qua non of life. If absent, no living being is imaginable. Where does it come from? This is a problem which concerns both biologists and philosophers and, at present, science seems incapable of solving it.¹⁴¹

The reason why Grassé says "science seems incapable of solving it" is his unwillingness to regard any non-materialist explanation as scientific. In fact, however, that science itself refutes the assumptions of materialist philosophy and proves the existence of a Creator. Grassé and other materialist scientists close their eyes to this, or else say "Science is unable to explain." Because they are materialists first and scientists second, and they persist in believing in materialism, even if science proves the exact opposite.

This striking fact concerning DNA-the fact that genetic information cannot be accounted for in terms of matter and energy or natural laws-continues to represent an insuperable barrier in front of the theory of evolution. Prof. Werner Gitt, director of the German Federal Institute of Physics and Technology says this:

The fundamental quantity information is nonmaterial (mental) entity. It is not a property of matter, so that purely material processes are fundamentally precluded as sources of information...there is no known law of nature, no known process and no known sequence of events which can cause information to originate by itself in matter.¹⁴²

In another extract, Gitt states that information can only exist by being created:

Biological information . . . has a very high storage density and that it obviously employs extremely ingenious concepts. . . it is clear that the information present in living organisms requires an intelligent source. Man could not have been this source, so that the only remaining possibility is that there must have been a Creator.¹⁴³

Gitt's words are also the conclusions reached by the **Information Theory**, regarded as part of thermodynamics and developed over the last 20 to 30 years. Information theory investigates the structure and origin of the information in the universe. The conclusion reached thanks to lengthy research by information theoreticians is that information is

something different from matter. It can never be reduced to matter. The origins of information and matter must be investigated separately.

The origin of the information in DNA is a dilemma that materialists can never resolve. The origin of the information encoded in the DNA molecule can never be accounted for through any natural mechanism. All observations, experiments, and experience show that information can emanate only from a conscious entity. The information in DNA is the work of Almighty Allah, the Creator of all life.

In the Qur'an, our Lord's creative artistry and infinite power are described in these terms:

That is Allah, your Lord. There is no deity but Him, the Creator of everything. So worship Him. He is responsible for everything. Eyesight cannot perceive Him but He perceives eyesight. He is the All-Penetrating, the All-Aware. (Surat al-An'am, 102-103)

The Source of Information in Nature

When we apply this result revealed by science, we are confronted by a most important conclusion. Because, as in the case of DNA, nature is full of glorious information-and since this information cannot be reduced to matter-it must have a non-material source. George C. Williams accepts this fact that most materialists and evolutionists are unwilling to see. For many years, Williams supported materialism in a most dogmatic fashion. But in an article written in 1995, he expressed the error of the materialist (reductionist) approach that assumes that everything consists of matter:

Evolutionary biologists have failed to realize that they work with two more or less incommensurable domains: that of information and that of matter. . . . These two domains will never be brought together in any kind of the sense usually implied by the term "reductionism." . . . This dearth of shared descriptors makes matter and information two separate domains of existence, which have to be discussed separately, in their own terms. The gene is a package of information, not an object. . . . **In biology, when you're talking about things like genes and genotypes and gene pools, you're talking about information, not physical objective reality.**¹⁴⁴

Twentieth-century science revealed that the information in DNA cannot be reduced to matter, as materialists maintain. Therefore-and contrary to what materialists imagine-the origin of the information in nature cannot be matter itself. The source of information is not matter, but a supra-material Intelligence that existed before matter. Matter came into being, took shape and was arranged through it.

That Intelligence belongs to Allah, the Lord of all the worlds. While demolishing materialist philosophy, this extraordinary information in the origin of life also provides countless proofs of the manifest existence of Allah.

CHAPTER 11

Some of Darwinism's Errors on the Subject of DNA

Some scientists expend great time and energy with the aim of propping up the theory of evolution rather than contributing to scientific progress. Since they believe in Darwinism as a dogma right from the outset, they are led to false conclusions in the scientific studies they carry out. In the field of molecular biology, they put forward concepts and theses of absolutely no scientific value to provide evidence for the supposed theory of evolution. Although these concepts or theses are scientifically worthless, they find support in the Darwinist media and portray them as the truth.

However, advances in science and technology are revealing the irrational nature of these claims. Prejudiced analyses, distortions and biased reports based on a materialist world view have no power to conceal the knowledge, artistry and intelligence of Allah that pervade all places.

The superiority of the truth over superstition is revealed in many verses of the Qur'an, some of which read as follows:

Say: "My Lord hurls forth the Truth—the Knower of all unseen things." Say: "The Truth has come. Falsehood cannot originate or regenerate." (Surah Saba', 48-49)

. . . By His Words Allah wipes out the false and confirms the truth. He knows what the heart contains. (Surat ash-Shura, 24)

Allah confirms the Truth by His words, even though the evildoers hate it. (Surah Yunus, 82)

Next, here are the broad lines of a few of the inconclusive claims intended to support for the fictitious theory of evolution:

The "Junk DNA" Error: An Example of Evolutionist Ignorance

So far, the Human Genome Project has revealed only the sequence of the code in DNA. We still do not know, apart from a few genes, which functions in the human body these codes determine. Some 30,000 genes-only 3% of human DNA-encode the protein in

the DNA chain and work in a demonstrably active manner. We still do not know what purpose is served by the rest of the long DNA chain.

At this point, evolutionists place one-sided interpretations on that mystery. Darwinist scientists suggest that the genes in question have no purpose and consist merely of nonsensical or "junk" sequences. They claim that these genes have lost their functions over the course of an evolutionary process lasting millions of years. In fact, this preconception has been refuted by new scientific discoveries. Until five or six years ago, scientists gave the name "junk DNA" to large strings of genes whose functions were unknown-thus they couldn't describe them as genes.

Contrary to their claims, however, it has emerged that these actually direct vital functions are of critical importance in the repair of functioning gene segments.¹⁴⁵

In an article in the journal *Nature Genetics* on 13 May, 2002, Dr. John V. Moran and his team reported that the active parts of junk DNA were sections carrying out repair services for the genome.¹⁴⁶ These can produce copies of themselves in a manner similar to copying and pasting a section of text-an exceedingly useful function when the DNA's double helix begins to separate. The double helix can be damaged when chemicals reach the cell or when there is any outside pressure, which can lead to cell death. Those parts of DNA formerly claimed to be junk travel around inside the genome and identify such faulty separations; when they encounter such a phenomenon, they go into action and bring that region back together into alignment.¹⁴⁷

From time to time, evolutionist sources suggest that some organs in living things no longer have any function, having been inherited from these species' ancestors. For example, the appendix or the coccyx in the human body were for years regarded as *vestigial organs*, no longer of any use. However, recent scientific research has revealed that all these organs do actually have important functions. The list of organs that evolutionists at the beginning of the 20th century described as "vestigial" is now totally discredited.

In the words of the evolutionist writer S. R. Scadding, "As our knowledge has increased, the list of vestigial structures has decreased."¹⁴⁸ (For details, see Harun Yahya, *Darwinism Refuted*, Goodword Books, 2002.) In the same way, the claim put forward by evolutionists, that a large part of DNA serves no purpose, has also been discredited by recent discoveries.

The Human Genome Project and other genetic research have established that during the process of protein manufacture, genes constantly interact with one another. During this process, one gene does not act independently of other sections of DNA. As one gene works-particularly during the early stages of protein coding-sections of DNA that do not constitute genes regulate it. For that reason, no scientist who closely monitors such research any longer attaches any validity to the concept of junk DNA.

Even though evolutionists may not welcome the fact, those sections of DNA once claimed to be junk are actually in a constant state of activity and have various functions as

yet undiscovered has been around for some time. In *Science* magazine, a team of molecular biologists from the Harvard Medical Faculty and physicists from Boston University shed light on this subject in a 1994 report titled "Does nonsense DNA speak its own dialect?"¹⁴⁹ Based on their study of 37 DNA strips containing 50,000 base pairs, taken from various living things, they reported that so-called junk DNA, which occupies 90% of human DNA, is actually written in a special language. Their tests revealed that the DNA described as "junk" was by no means meaningless. An article titled "Hints of a language in junk DNA" reported studies by Boston University's Eugene Stanley demonstrating that DNA sequences had features resembling those of a human language.¹⁵⁰

Ignorance was without doubt one of the reasons why these 97% of DNA sequences were formerly described as serving no purpose. The Cleveland University evolutionist scientist Evan Eichler admits this:

The term "junk DNA" is a reflection of our ignorance.¹⁵¹

Ernst Mayr, himself an evolutionist, also refers to the inadequacy of our knowledge about genes:

A serious practical limit to science is the difficulty of exhaustively explaining the workings of a highly complex system. The same practical point can be made about the regulatory mechanisms of the genome, which are highly complex and which are still far from being understood.¹⁵²

An article titled "The Unseen Genome: Beyond DNA" in the November 2003 *Scientific American* magazine quotes John S. Mattick, director of the Molecular Bioscience Institute at Queensland University in Australia:

Indeed, what was damned as junk because it was not understood may, in fact, turn out to be the very basis of human complexity.¹⁵³

Prof. Mattick, a molecular biologist, refers to the importance of these strings known as *introns* that do not directly participate in protein production, and to erroneous interpretations made regarding them:

The failure to recognize the full implications of this . . . may well go down as one of the biggest mistakes in the history of molecular biology.¹⁵⁴

In *New Scientist* magazine published November 19, 2005, the importance of so called junk DNA is mentioned:

. . . remarkably, junk DNA may turn out to be as important as genes-if not more so. . . What's so special about junk DNA that ensures it is mothballed in this way? One clue comes from comparing genomes . . . it could encode vital information that scientists haven't yet unraveled-the more DNA, the higher the capacity to store information and produce complex organisms. One thing is clear. Now that we've mapped our genes, it's time to start exploring the junkyard.¹⁵⁵

Dr. Francis Collins, head of the Human Genome Project, also states that those parts of DNA referred to as so-called junk are in fact nothing of the sort:

I have been troubled for a long time about the way in which we dismissed about 95% of the genome as being junk because we didn't know what its function was. We did not think it had one because we had not discovered one yet. I found it quite gratifying to discover that when you have the whole genome in front of you, it is pretty clear that a lot of the stuff we call "junk" has the fingerprints of being a DNA sequence that is actually doing something, at least, judging by the way evolution has treated it. So I think we should probably remove the term "junk" from the genome.¹⁵⁶

Evolutionist geneticists wished to portray those DNA sections they described as junk as compelling evidence for their theories. For years, their way of dismissing these sections as unimportant and their adherence to dogmatic beliefs in evolution prevented scientists from investigating those "junk" components, as was described in the journal *Science*:

Although catchy, the term "junk DNA" for many years repelled mainstream researchers from studying noncoding DNA. Who, except a small number of genomic clochards, would like to dig through genomic garbage? However, in science as in normal life, there are some clochards who, at the risk of being ridiculed, explore unpopular territories. Because of them, the view of junk DNA, especially repetitive elements, began to change in the early 1990s.¹⁵⁷

Dr. Paul Nelson revealed the scientific dilemmas facing the theory of evolution in several studies. He provides an account of the concept of junk DNA in an article titled "The Junk Dealer Ain't Selling That No More":

In one of his later books, written with his wife Ann Druyan (*Shadows of Forgotten Ancestors*, Ballantine, 1992), the late Carl Sagan argued that "genetic junk," the "redundancies, stutters, [and] untranscribable nonsense" in DNA, proved that there are "deep imperfections at the heart of life." Such comments are commonplace in the biological literature-although perhaps less common than they were a few years ago. The reason? Geneticists are discovering functions for what used to be apparent genetic debris.¹⁵⁸

In an article titled "'Junk' DNA reveals vital role: Inscrutable genetic sequences seem indispensable," Helen Pearson reports that:

Scientists are puzzling over a collection of mystery DNA segments that seem to be essential to the survival of virtually all vertebrates. But their function is completely unknown.

The segments . . . lie in the large parts of the genome that do not code for any protein. Their presence adds to growing evidence that the importance of these areas, often dismissed as junk DNA, could be much more fundamental than anyone suspected.¹⁵⁹

Dr. Kelly A. Frazer, who investigated those sections of DNA claimed to be junk for the Perlegan Sciences company, says, "People will be intrigued by this [finding]. It is the kind of stuff that blows people away." while the Cambridge Broad Institute geneticist Kerstin Lindblad-Toh describes these studies as "the tip of the iceberg."¹⁶⁰

But despite these findings, most evolutionists continued to advocate the concept of junk DNA right to the bitter end, since it suited their own purposes. Finally, however, intense research into DNA proved that the DNA sections in question were vitally important, and were therefore beneficial DNA segments. Thus another Darwinist gaffe went down in the pages of history.

The Invalidity of the "Mitochondrial Eve" Thesis

The mitochondria consisting of protein inside the cell produce the energy needed by the cell. In these plants, chemical energy obtained from foodstuffs is converted into energy packets known as ATPs which the cell can use. All the events permitting life inside the cell take place thanks to these ready-to-use energy packets. In addition to being present in the cell nucleus, DNA is also found in these energy-producing mitochondria.

Mitochondria contain mitochondrial DNA (mtDNA). Evolutionists interpret the inherited variation in mitochondrial DNA as a form of evolution and combine that hypothesis with another which they refer to as the "molecular clock." This hypothesis, launched in 1965, suggested that regular changes would take place in the nucleotide and protein sequences. On that basis, it was further assumed that living things could be analyzed in terms of mtDNA changes to determine at what time they separated from a common ancestor.

However, it is unclear what kind of clock mechanism in mtDNA can bring about regular changes in living things. Fossilized bones cannot harbor DNA molecules, since these decay very quickly. Therefore, there can be no question on investigating natural history on the basis of the DNA molecule. These analyses are evolutionists' efforts to force the history of life to square with their own hypotheses.

Based on that preconception, evolutionists tried to establish when and where the human family tree began. Since the widest variety of mitochondrial DNA was observed in Africans, they decided that these must be the oldest "branch" of family tree and claimed that all human races living today were descended from a woman who lived in Africa 130,000 years ago, and that she had appeared by way of evolution as the first representative of *Homo sapiens*.

Since the estimates regarding this woman were based on mitochondrial DNA analyses, she is known as the "mitochondrial Eve." But when examined with an unbiased scientific eye, the method employed in this research can easily be seen as incapable of determining either the dating or geographical location of the earliest humans. Evolutionists rely on claims and hypotheses that cannot be proven, nor documented with experiment and observation. Indeed, many scientists who support the theory of evolution admit that this thesis has no scientific value.

Henry Gee, a member of the editorial board of *Nature* magazine, described the results of mitochondrial DNA research as "garbage" in an article titled "Statistical Cloud over African Eden."¹⁶¹ In his article dealing with 136 existing mtDNA series, Gee

reported that the number of family trees drawn up exceeded 1 billion. In other words, around 1 billion alternative family trees were ignored in this research, and only the single tree was chosen that matched the hypothesis of a supposed evolutionary transition between chimpanzees and human beings.

First off, none of these hypotheses constitute any scientific evidence for the theory of evolution. For example, any evolutionist claiming, on the basis of molecular clock analysis, that humans and chimpanzees separated from one another 10 million years ago has already started out assuming an evolutionary relationship between these two species. Such people are thinking in a logical vicious circle. Studies of this kind, built on such assumptions, are a waste of time.

The Washington University geneticist Alan Templeton states that it is impossible to determine a date for the origin of humanity on the basis of DNA series, because strains of DNA have become exceedingly mixed up among human communities.¹⁶² Viewed in mathematical terms, this makes it impossible to distinguish the mtDNA belonging to any single human in the family tree.

The most striking admission came from the authors of the thesis themselves. Mark Stoneking from Pennsylvania State University, who repeated the study in 1992, admitted in a letter to *Science* magazine that the "African Eve" thesis was invalid.¹⁶³

In addition, mitochondrial DNA analyses were performed on the assumption that mitochondria are passed on only by the mother, and that changes in mitochondrial DNA components can thus be traced back through the matriarchal line, right back to the very earliest ancestor. But in fact, the idea that mitochondria are passed on only by females is now no more than a myth, because scientific discoveries have shown that mitochondria can also be handed down from the father. "Mitochondria can be inherited from both parents," a report in *New Scientist* magazine, described how Danish patients had received around 90% of their mitochondria from their fathers. This meant that all mtDNA studies supporting evolutionary scenarios were completely meaningless.

This state of affairs is described in *New Scientist* magazine:

Evolutionary biologists often date the divergence of species by the differences in genetic sequences in mitochondrial DNA. Even if paternal DNA is inherited very rarely, it could invalidate many of their findings.¹⁶⁴

Despite being a well-known evolutionist publication, the magazine *Nature* admitted that these findings disproved the hypotheses of mitochondrial DNA:

The assumption that mitochondrial DNA . . . is inherited purely through the maternal line is a lynchpin of studies tracking human evolutionary history and the movements of human populations in the prehistoric past.¹⁶⁵

Finally, an article in the journal *Annals of Human Genetics* reported that more than half of all the mitochondrial DNA analyses published to date had been found to be flawed.¹⁶⁶ According to the report, the mitochondrial DNA data banks used by

evolutionists were based on incorrectly processed data. This state of affairs, revealed by the researcher Peter Forster, was reported in *Nature* magazine:

The mistakes may be so extensive that geneticists could be drawing incorrect conclusions in studies of human populations. . .¹⁶⁷

This analysis of Forster's further confirmed the unreliable nature of the statistical data used by evolutionists in their studies. As you've seen, genetic analysis that examine the genes of human beings living today are carried out using flawed methodology and interpreted solely in the light of evolutionist preconceptions. Concrete scientific findings proving the invalidity of mitochondrial DNA analyses refute evolutionist claims. Since no evolutionary process ever actually took place, everyone constructs his own personal scenario, and the mitochondrial Eve thesis is just one of those endeavors to prop up the theory of evolution-which is about to be consigned to history because of the heavy blows it's been dealt.

The Invalidity of the "Selfish Gene" and "Conscious Gene" Claims

Another of Darwinists' fictitious claims is the theory of the selfish gene (or gene selection) theory, according to which, specific types of gene increase their likelihood of perpetuating themselves by developing individuals with a better ability to survive and reproduce. Thus, those gene types that are better able to pass on their genetic information to subsequent generations and produce plants and animals will supposedly be dominant in the world.¹⁶⁸

Before considering why this theory is invalid, let's examine the way it was proposed. Gene selectivity is an example of the logic that philosophers describe as reductionism-the claim that everything, even including the human mind, can be reduced to matter. However, as you saw in detail earlier, the claim that life consists solely of matter is clearly deceptive.

The claims made by Richard Dawkins-a dyed-in-the-wool advocate of the theory of evolution who applied this theory to human beings-are therefore false, even ridiculous. According to Dawkins, "We are survival machines-robot vehicles blindly programmed to preserve the selfish molecules [of DNA] known as genes."¹⁶⁹In his book *The Selfish Gene*, Dawkins suggests that all living things contain genes that only seek to maintain their existence by duplicating themselves; and that the only aim of life is the survival of DNA. In fact, however, this claim rests on the exceedingly irrational assumption that genes possess conscious intent. This indicates just how far astray modern materialist reductionism can lead.

The better to see how ridiculous this assumption is, recall what genes actually are: parts of DNA added on to one another and compressed by means of folding and packaging. As you read in detail in preceding chapters, the giant DNA molecule consists of elements added to one another according to a specific code. It's of course impossible for

a molecule consisting of blind, and unconscious atoms to be selfish, or to have any other conscious objective such as to multiply itself by way of sexual reproduction.

No atom possesses consciousness or intelligence, and certainly not selfishness. For that reason, Dawkins' thesis is unscientific, an irrational fairy tale.

The Australian scientist Lucy G. Sullivan has criticized Dawkins for "a proliferation of pseudo-theories, whose claim on our attention lies more in the realm of literature than of science."¹⁷⁰ The Harvard University evolutionary geneticist Richard Lewontin includes Dawkins among those authors who make unconfirmed claims, or claims that conflict with the facts in the tales they advocate:

As to assertions without adequate evidence, the literature of science is filled with them, especially the literature of popular science writing. Carl Sagan's list of the "best contemporary science-popularizers" includes E.O. Wilson, Lewis Thomas, and Richard Dawkins, each of whom has put unsubstantiated assertions or counterfactual claims at the very center of the stories they have retailed in the market.¹⁷¹

Even Dawkins himself revealed that all this was put forward for propaganda purposes by admitting that his actions were biased and that his thesis was not a scientific one. On the first page of his book *The Extended Phenotype*, he wrote:

This is a work of unabashed advocacy. I want to argue in favor of a particular way of looking at animals and plants, and a particular way of wondering why they do the things that they do. What I am advocating is not a new theory, not a hypothesis which can be verified or falsified, not a model which can be judged by its predictions.¹⁷²

Since evolutionists are unwilling to admit the existence of the soul, they regard human beings as assemblages of matter and try to ascribe consciousness to that matter in some way. Their making such invalid claims as ascribing consciousness to genes is an indication of the very awkward position in which they find themselves. Today's evolutionists, who imagine that there is intelligence and consciousness in molecules and in the inanimate atoms that comprise those molecules have taken the place of the pagans of centuries ago who thought that there was intelligent consciousness in their idols crafted of stone or wood.

As a result of their superstitious belief, they claim that phenomena such as violence, rape, sexual harassment, aggression and jealousy have been bequeathed to human beings by their alleged animal forebears, and that such behavior is a natural result of evolution. At the root of this claim there lies the evolutionist idea that a human being is a machine made of genes, and that genes' sole aim is to evolve and survive, as if they were conscious entities.

In the same way that it is impossible for a book to aim at increasing its numbers by way of reproduction, to be selfish, or to possess consciousness in any way, so it is impossible for DNA—a chain of molecules consisting of unconscious and inanimate atoms, and no molecule possesses intelligence and awareness.

In addition, the Israeli scientist Gerald L. Schroeder notes that the way that a cell passes on a strand of its DNA by dividing is actually altruistic behavior, rather than selfishness:

One of the puzzles of meiosis is the altruistic nature of the cell. Why should a cell willingly give up half of its chromosomal information, and thereby essentially guarantee that its progeny will not be an identical copy of itself? I would have thought that altruism stops at self-destruction. A parent's mixing its chromosomes with those of another is, in a sense, self destruction, since the parent will not be reproduced in the child. Not a very selfish way for a potentially selfish gene to act.¹⁷³

Therefore, the idea of the selfish gene has nothing to do with the true facts, and the claim is no more than a fantasy. Darwinist thinking-which describes human beings as animals and regards them as mere robots that carry genes and are responsible for passing those genes on to the next generation-is mainly responsible for the acts of violence, genocide, oppression and moral degeneration that increased enormously during the 20th century. Such a perspective endows all oppression, aggression and immorality with apparent scientific legitimacy. Even Hitler, who perpetrated the worst slaughter of the 20th century, regarded Darwinism as supporting him. It was Darwinism that justified his oppression and aggression. Hitler regarded all races other than the alleged Master Race as unworthy of living and regarded their slaughter as no more reprehensible than killing an animal.

Darwinism, maintaining that human beings are genetically aggressive, ruthless, competitive, selfish and potential murderers, is nonsense used to justify crimes of all kinds. All human beings bear the souls breathed into them by Allah, and they are all responsible to our Lord, Who created them out of nothing.

In the Qur'an, Allah reveals the creation of those who imagine themselves to be unfettered, and that they will be resurrected after death:

Does man reckon he will be left to go on unchecked? Was he not a drop of ejaculated sperm, then a blood-clot which He created and shaped,making from it both sexes, male and female? Is He Who does this not able to bring the dead to life? (Surat al-Qiyama, 36-40)

Conclusion

Science that frees itself from ideological concerns and works independently of evolutionists' biased interpretations will doubtless develop rapidly. If the true facts revealed by logic, reason and science are taken into account; and if the origin of life is investigated without turning towards the nonsensical explanation of chance, then a clear and rapid answer can be obtained to the question of how life and the universe emerged.

Thus the road ahead of true science will be opened up, and scientific advances will accelerate. Energy, time and money will not be wasted on presenting false evidence, and science will be freed from such pointless aims as advocating illogical and contradictory concepts such as chance.

In one verse, our Lord tells us:

[Say: "It has been revealed to me that a band of the jinn listened and said,] 'Some of us are Muslims and some are deviators. Those who have become Muslim are those who sought right guidance.' " (Surat al-Jinn, 14)

CHAPTER 12

How the Miracle of DNA Invalidates the Theory of Evolution

The theory of evolution faces a major impasse at the molecular level. With evidence from such fields as paleontology, geology and anthropology, the origin of life is a major problem for the theory of evolution. The insuperable problem facing its adherents is not limited to the building blocks of life, such as protein. There is also the extraordinary complexity of the living cell-which is not a mass of amino acid-based proteins, but one of the most complex systems that science has yet encountered.

Darwinists' predicament stems from the assumptions they rely on. According to their theory of evolution, life must have appeared spontaneously, when the right chemicals combined together. Thus the first living cell must have been exceedingly primitive. These erroneous beliefs have forced Darwinists to believe that volcanic gasses and lightning gave rise to DNA, and afterwards to life! According to Darwinists, millions of living cells-the like of which cannot be produced through even the most sophisticated laboratory technology, after centuries of accumulated knowledge-came together by chance to form organs with vitally important responsibilities. Moreover, by working together in flawless co-ordination, these organs came from the human body and acquire the responsibility of keeping it alive.

Not only does this Darwinist myth lack any scientific backing, it also violates logic and reason. The French scientist Pierre Paul Grasse, himself an evolutionist, notes the predicament in which they find themselves: ". . . some people, owing to their sectarianism, purposely overlook reality and refuse to acknowledge the inadequacies and falsity of their beliefs."¹⁷⁴

In his book *How Life Began*, L. R. Croft of England's Salford University refers to the way in which evolutionists underestimate their dilemma:

The fundamental problem-the origin of life-is the cornerstone of all evolutionary enquiry. Yet surprisingly, it is rarely given the attention it merits. . . the nature of the origin of life remained neglected. . . Darwin himself was dismissive on the issue.¹⁷⁵

Darwinists have been unable to prove any of the so-called evolutionary developments that they claim, took place at the molecular level. Rather than helping evolutionists answer such questions, scientific progress has made them even more complex and insoluble.. The following pages will show statements by scientists and even admissions from evolutionists themselves of how illogical it is to maintain that any DNA molecule, with its unique structure and properties, came into being by chance, as evolutionists would have you believe.

The Origin of Genetic Information Is Still Unknown to Scientists

The most comprehensive part of the cell's complex structure is DNA, which determines genetic structure. Despite many years of research and great sums of money expended, scientists are only now obtaining any valuable information concerning the structure and coding of DNA. However, the perfection of the cell's genetic structure still remains a mystery. DNA's complex structure and the essential data stored in it inflict complete despair on those who wish to ascribe the origin of life to chance.

One eminent evolutionist, the biochemist Leslie Orgel, expresses his thoughts on the subject:

We do not yet understand even the general features of the origin of genetic code. The origin of the genetic code is the most baffling aspect of the problem of the origins of life. . . .¹⁷⁶

The nuclear physicist Prof. Gerald Schroeder refers to ignorance of how the coding in DNA takes place:

And yet if the fossil record is correct, the endowed wisdom of DNA seems to have been present from the very earliest stages of life on earth. How the coding that drives all life sprang into existence remains mystery. The scale of the mystery is best realized by the complexity of its product.¹⁷⁷

Jon Cohen, a writer for the well-known journal *Science*, refers to the perfection of the cell's organized structure:

Why do the sugar molecules in DNA and RNA twist to the right in all known organisms? Similarly, all of the amino acids from which proteins are formed twist to the left. The reason these molecules have such uniform handedness, or 'chirality,' is not known, but there is no shortage of theories on the subject. And, as was clear at a recent meeting on the topic in Los Angeles, there is also no shortage of passion, which is understandable, because the question of homochirality speaks to the mother of all scientific mysteries: the origin of life.¹⁷⁸

In an article titled "The Origin of Life: More Questions Than Answers," Prof. Klaus Dose, head of the Gutenberg University Biochemistry Institute, is just one of those evolutionists who confesses despair:

Moreover, we do not actually know where the genetic information of all living cells originates, how the first replicable polynucleotides [nucleic acids] evolved, or how the extremely complex structure-function relationships in modern cells came into existence.¹⁷⁹

John Maddox, a former editor of the evolutionist publication *Nature*, says, "So it is disappointing that the origin of the genetic code is still as obscure as the origin of life itself."¹⁸⁰ But actually, far from being uncertain, the origin of the genetic code is perfectly obvious. It is just one of the examples that exhibit the perfection in Allah's creation, as revealed in the Qur'an:

He Who created the seven heavens in layers. You will not find any flaw in the creation of the All-Merciful. Look again-do you see any gaps? Then look again and again. Your sight will return to you dazzled and exhausted! (Surat al-Mulk, 3-4)

The Origin of Genetic Information Cannot Be Ascribed to Chance

Evolutionist accounts try to explain every perfection as the work of chance. The cell's magnificently complex structure is the result of a successfully accurate selection. Darwinists regard chance as the creator of all things, without thinking about what chance really is. Thus they assume that disorder gave rise to the first cell, upon which they base all their theories. However, not even the cell itself, let alone the simplest organism, can assemble itself by chance, in the manner assumed by evolutionists.

The University of London cell biologist Dr. Ambrose expresses the impossibility of this:

When we come to examine the simplest known organism capable of independent existence, the situation becomes even more fantastic. In the DNA chain of the chromosome of the bacterium *E. coli*, a favourite organism used by molecular biologists, the [DNA] helix consists of 3-4 million base pairs. These are all arranged in a sequence that is 'meaningful' in the sense that it gives rise to enzyme molecules which fit the various metabolites and products used by the cell. This unique sequence represents a choice of one out of 102,000,000 alternative ways of arranging the bases! We are compelled to conclude that the origin of the first life was a unique event, which cannot be discussed in terms of probability.¹⁸¹

Mathematics proves that in the writing of the information in DNA. The chances of a single one of the 30,000 genes that make up DNA-let alone of the DNA molecule itself with its millions of rungs-forming by chance are less than impossible.

Frank B. Salisbury, an evolutionist biologist, has this to say:

A medium protein might include about 300 amino acids. The DNA gene controlling this would have about 1,000 nucleotides in its chain. Since there are four kinds of nucleotides in a DNA chain, one consisting of 1,000 links could exist in 41,000 forms. Using a little algebra we can see that $41,000 = 10^6$. Ten multiplied by itself 600 times gives the figure 1 followed by 600 zeros! This number is completely beyond our comprehension.¹⁸²

Therefore, even assuming that all the requisite nucleotides were present in the environment and that all the complex molecules and binding enzymes were ready for them to attach themselves to one another, the likelihood of these nucleotides assuming the desired sequence is just 1 in 10^{600} . In short, the odds of the DNA code of an average protein in the human body emerging spontaneously is 1 in 10 followed by 600 zeros. This number goes far beyond astronomical. I. L. Cohen, author of the book *Darwin Was*

Wrong: A Study in Probabilities, states that genetic information cannot possibly have emerged by chance:

Mathematicians agree that any requisite number beyond 1050 has, statistically, a zero probability of occurrence. Any species known to us, including the smallest single-cell bacteria, have enormously larger number of nucleotides than 100 or 1,000. In fact, single cell bacteria display about 3,000,000 nucleotides, aligned in a very specific sequence. This means that there is no mathematical probability whatever for any known species to have been the product of a random occurrence-random mutations (to use the evolutionist's favorite expression).¹⁸³

The impossibility of nucleotides combining in a chance manner to give rise to RNA and DNA is set out by the evolutionist French scientist Paul Auger:

We have to sharply distinguish the two stages in the chance formation of complex molecules such as nucleotides by chemical events. The production of nucleotides one by one-which is possible-and the combination of these within very special sequences. The second is absolutely impossible.¹⁸⁴

Think of this impossibility in terms of a very simplified analogy. Obviously that a work of literature, with all its pages properly bound, cannot emerge as the result of an explosion in a library. If anyone claims that it came into existence spontaneously, you will harbor doubts about his sanity. What evolutionists maintain was achieved by chance goes far beyond this analogy, yet despite all the illogic and impossibility of claims of chance, those who remain blindly loyal to Darwin's legacy still say, "But chance accomplished it."

The well-known molecular biologist Michael Denton wrote the book *Evolution: A Theory in Crisis*, which describes the invalidity of the theory. He expresses his amazement at those who ascribe this matchless perfection to chance:

It is an understatement to say that the probability of generating by chance even one grammatical text of just a few hundred words is vanishingly small. Any such string implies intelligence . . . Is it really credible that random processes could have constructed a reality, the smallest element of which-a functional protein or gene-is complex beyond . . . anything produced by the intelligence of man?¹⁸⁵

Elsewhere, Prof. Denton describes this irrational belief held by Darwinists:

To the skeptic, the proposition that the genetic programmes of higher organisms, consisting of something close to a thousand million bits of information, equivalent to the sequence of letters in a small library of 1,000 volumes, containing in encoded form countless thousands of intricate algorithms controlling, specifying, and ordering the growth and development of billions and billions of cells into the form of a complex organism, were composed by a purely random process is simply an affront to reason. But to the Darwinist, the idea is accepted without a ripple of doubt-the paradigm takes precedence.¹⁸⁶

Dr. Stephen C. Meyer the philosopher of University of Cambridge says that no credence can be attached to statements ascribing the origin of life to chance:

While many outside origin-of-life biology may still invoke "chance" as a casual explanation for the origin of biological information, few serious researchers still do. Since molecular biologists began to appreciate the sequence specificity of proteins and nucleic acids in the 1950s and 1960s, many calculations have been made to determine the probability of formulating functional proteins and nucleic acids. Even assuming extremely favorable prebiotic conditions (whether realistic or not) and theoretically maximal reaction rates, such calculations have invariably shown that the probability of obtaining functionally sequenced biomacromolecules at random is, in Ilya Prigogine's words, "vanishingly small . . . even on the scale of billions of years. . ." ¹⁸⁷

Despite being well aware of these impossibilities, evolutionists still hold out in the face of the facts. The truth is that the complexity and perfection in DNA's structure can be explained only by the existence of a Creator possessed of sublime knowledge and intellect-our Almighty Lord.

One verse of the Qur'an states:

Do not mix up truth with falsehood and knowingly hide the truth. (Surat al-Baqara, 42)

On Its Own, the Existence of DNA Serves No Purpose

The genetic system does not consist of DNA alone. The enzymes to read the DNA code, the messenger RNA to be produced by this reading, the ribosome to which the messenger RNA travels and bonds with, the transporter RNA that carries the amino acids to be used in that production to the ribosome, and the highly complex enzymes that permit countless other secondary functions-all must be present in the same environment. Moreover, such an environment can only be a cell, where all the requisite raw materials and energy are isolated, available, and completely controlled in all respects. An organic substance can reproduce itself only in a fully formed cell together with all its various organelles. This means that the first cell with its all extraordinarily complex structures must have come into being in a single moment.

In his book *Chance and Necessity*, the Nobel Prize-winning French biologist Jacques Monod elaborates:

The code is meaningless unless translated. The modern cell's translating machinery consists of at least 50 macromolecular components, which are themselves coded in DNA: the code cannot be translated otherwise than by products of translation themselves. It is the modern expression of *omne vivum ex ovo* [All life comes from an egg]. When and how did this circle become closed? It is exceedingly difficult to imagine. ¹⁸⁸

Another Nobel Prize winner, the French scientist Andre Lwoff, states that every molecule inside the cell is a component of an interconnected whole:

An organism is a system of interdependent structures and functions. It consists of cells, and the cells are made of molecules which have to cooperate smoothly. Every molecule must know what the others are doing. It must be able to receive messages and act on them.¹⁸⁹

Probability calculations show that complex molecules such as proteins and nucleic acids (RNA and DNA) cannot form one by one as the result of chance. For evolutionists, however, an even greater problem is that these molecules need to be present all together, and at one and the same time, for a cell to function and life to exist. This places the theory of evolution in a completely hopeless position, as is admitted from time to time by evolutionists.

One of these is Douglas R. Hofstadter from Indiana University, a professor in a number of fields:

"How did the Genetic Code, along with the mechanisms for its translation (ribosomes and RNA molecules), originate?" For the moment, we will have to content ourselves with a sense of wonder and awe, rather than with an answer.¹⁹⁰

The same truth is also admitted by Prof. Karl Raimund Popper, a 20th century philosopher of science with evolutionist views, who describes this dilemma:

What makes the origin of life and of the genetic code a disturbing riddle is this: the genetic code is without any biological function unless it is translated; that is, unless it leads to the synthesis of the proteins whose structure is laid down by the code. But... the machinery by which the cell translates the code consists of at least fifty macromolecular components which are themselves coded in the DNA. Thus the code cannot be translated except by using certain products of its translation. This constitutes a baffling circle; a really vicious circle, it seems, for any attempt to form a model or theory of the genesis of the genetic code.¹⁹¹

As Prof. Popper stresses, all the building blocks of the cell and the information belonging to its organelles are recorded in DNA. However, in order for the information in DNA to be used, those building blocks and organelles must already be in existence. This clearly refutes the theory of evolution's claims of gradual development: Organelles cannot exist without the coded information in DNA, just as the coded information in DNA cannot be used without those organelles. Both need to be present at the same time. Therefore, the claim of a transition from simple cells to complex ones is a myth. Despite holding evolutionist views, the zoologist David E. Green and the biochemist Prof. Robert F. Goldberger have this to say in a paper in a scientific journal:

The popular conception of primitive cells as the starting point for the origin of the species is really erroneous. There was nothing functionally primitive about such cells. They contained basically the same biochemical equipment as do their modern counterparts. How, then, did the precursor cell arise? The only unequivocal rejoinder to this question is that we do not know.¹⁹²

The theory of evolution seeks to account for all of life in terms of chance, but can never explain the origin of the extraordinary information carefully and flawlessly encoded in DNA. The question, therefore, is not how the DNA chain emerged, because as you have seen, the DNA chain and its extraordinary data capacity would serve no purpose on its own. There must be enzymes to read and replicate the DNA chain, and produce proteins in the light of these copies. In order for life to exist, the data bank of DNA and the systems to reading that data must both exist together. This most important property of the cell is referred to as irreducible complexity.

As Prof. Frank B Salisbury says,

Now we know that the cell itself is far more complex than we had imagined. It includes thousands of functioning enzymes, each one of them a complex machine itself. Furthermore, each enzyme comes into being in response to a gene, a strand of DNA. The information content of the gene-its complexity-must be as great as that of the enzyme it controls.¹⁹³

The absence of even one organelle from a cell, every part of which consists of interconnected systems, will mean that cell fails to function. The cell cannot wait for such a vital deficiency to be rectified gradually, through any supposed process of evolution. It is therefore impossible for a living cell to emerge by random coincidences assembling tiny components over a span of millions of years. The cell's complete unity is too complex for its components to have emerged in stages. In order to survive, the cell must exist as a complete with all its components, right from the very outset. This is another dilemma that the theory of evolution cannot explain away.

Which Came First: Proteins or DNA?

The enzymes that read DNA and engage in production accordingly are also produced according to the codes inside that same DNA. Inside each cell exists a factory that produces a wide range of products and also the structures to produce them. How could this system-a deficiency at any single point of which would render it non-functioning-have emerged on its own? That question is sufficient to demolish the theory of evolution.

The fact that DNA can be copied only with the assistance of a number of enzymes in the protein structure, and that the synthesis of these same enzymes takes place only in line with the information encoded inside the DNA, shows that the protein and DNA are mutually dependent. For that reason, they both must be present right from the outset if the DNA is to be copied itself. The science writer John Horgan clarifies this equation:

DNA cannot do its work, including forming more DNA without the help of catalytic proteins, or enzymes. In short, proteins cannot form without DNA, but neither can DNA form without proteins.¹⁹⁴

According to the molecular biologist Michael Denton: "At the heart of the problem lay a seeming paradox-proteins can do many things, but they cannot perform the function of storing and transmitting information for their own construction. On the other hand, DNA can store information, but cannot manufacture anything nor duplicate itself. So DNA needs proteins and proteins need DNA. A seemingly unbreakable cycle-the ultimate chicken-and-egg problem."¹⁹⁵ Andrew Scott describes the way that proteins and the genetic code cannot be considered separately in an article in *New Scientist* magazine:

We are grappling here with a classic "chicken and egg" dilemma. Nucleic acids are required to make proteins, whereas proteins are needed to make nucleic acids and also to allow them to direct the process of protein manufacture itself . . . The emergence of the gene-protein link, an absolutely vital stage on the way up from lifeless atoms to ourselves, is still shrouded in almost complete mystery.¹⁹⁶

This situation once again refutes the scenario of life emerging by chance. The American chemist Prof. Homer Jacobson has this to say:

Directions for the reproduction of plans, for energy and the extraction of parts from the current environment, for the growth sequence, and for the effector mechanism translating instructions into growth-all had to be simultaneously present at that moment [when life began]. This combination of events has seemed an incredibly unlikely happenstance. . . .¹⁹⁷

Prof. Jacobson wrote these statements two years after James Watson and Francis Crick discovered the structure of DNA. However, despite all the scientific advances that have been made, this problem still remains insoluble for evolutionists. The Turkish evolutionist biologist Prof. Ali Demirsoy was forced to make this admission regarding the probability of protein and DNA coming into being together:

The probability of a protein and nucleic acid (DNA-RNA) is one far exceeding probability estimates. The chances of a specific protein chain emerging are so small as to be astronomical.¹⁹⁸

The probability Demirsoy referred is in practice zero. In a 1994 article, the evolutionist Dr. Leslie Orgel said this in the face of that:

It is extremely improbable that proteins and nucleic acids, both of which are structurally complex, arose spontaneously in the same place at the same time. Yet it also seems impossible to have one without the other. And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means.¹⁹⁹

To say that "it is extremely improbable for life to originate by chemical means" means that *it is impossible for life to emerge spontaneously*. This is proof that life was created in a single moment. However, evolutionists are reluctant to accept this fact, whose proof they can clearly see, for ideological reasons. They advocate nonsensical scenarios, which they themselves know to be impossible, in order not to have to admit the existence of Allah.

Another evolutionist, Caryl P. Haskins, expresses the impossibility of the DNA code forming by chance and sees this as a powerful evidence for creation:

But the most sweeping evolutionary questions at the level of biochemical genetics are still unanswered. How the genetic code first appeared and then evolved and, earlier even than that, how life itself originated on earth remain for the future to resolve. . . . Did the code and the means of translating it appear simultaneously in evolution? It seems almost incredible that any such coincidence could have occurred, given the extraordinary complexities of both sides and the requirement that they be coordinated accurately for survival. By a pre-Darwinian (or a skeptic of evolution after Darwin), this puzzle would surely have been interpreted as the most powerful sort of evidence for special creation.²⁰⁰

Even a single-celled organism has a complexity far exceeding scientists' comprehension. This minute entity contains a genetic code with the stunning capacity capable of forming a copy of the organism all by itself. This code has a structure requiring not just organization, but also written information. Furthermore, it is not enough for this DNA code merely to be written correctly. The rest of the cell must also be able to read the code and follow its instructions. In fact, all living things possess flawless structures that carry out highly organized activities in the light of the directives they receive.

It is certainly impossible for unconscious cell organelles to learn the language of these codes by themselves, or to unravel them as the result of chance. The existence of the code, its decipherment, the transmission of the information it contains, the accurate use made of it—every stage requires consciousness and intelligence. But how can enzymes and ribosomes in the cell know how to perform these activities? Even if we assume that they do know, how can they decipher the codes in a structure of which they are ignorant, without making any mistakes? Such questions not only emphasize the insoluble dilemma facing evolutionists, but also display the infinite intellect and knowledge in creation.

In the Qur'an it is stated that:

Your Lord creates and chooses whatever He wills. The choice is not theirs. Glory be to Allah! He is exalted above anything they associate with Him! Your Lord knows what their hearts conceal and what they divulge. He is Allah. There is no deity but Him. Praise be to Him in this world and the Hereafter. Judgment belongs to Him. You will be returned to Him. (Surat al-Qasas, 68-70)

The Invalidity of the "Chemical Evolution" Claim

Darwin maintained that if certain chemicals representing the raw material of life were present in a warm lake, proteins could form, and would multiply and combine to give rise to a cell.²⁰¹ Thousands of scientists attempting to make Darwin's hypothesis a reality and to provide an evolutionary explanation for the origin of life have ventured down that same dead-end road.

In the 1920s, the Russian biochemist Alexander Oparin and the British geneticist J. B. S. Haldane put forward their theory known as "chemical evolution." They maintained what Darwin had imagined—that with the addition of energy, the molecules comprising the raw material, life could develop spontaneously and form a living cell. However, no evolutionist, Oparin included, was able to come up with any evidence to back up the claims of chemical evolution. On the contrary, every new discovery made in the 20th century showed that life was far too complex to have come about by chance. The well-known evolutionist Leslie Orgel makes this confession: " . . . at first glance, one might have to conclude that life could never, in fact, have originated by chemical means."²⁰²

Leaving aside the cell for a moment, it is impossible for the nucleotides in DNA's basic structure to have emerged by chance and maintained their chemical properties under the conditions of the primeval Earth. The magazine *Scientific American*, which follows a pro-evolution line, expresses evolutionist admissions on the subject:

Even the simpler molecules are produced only in small amounts in realistic experiments simulating possible primitive earth conditions. What is worse, these molecules are generally minor constituents of tars: It remains problematical how they could have been separated and purified through geochemical processes whose normal effects are to make organic mixtures more and more of a jumble. With somewhat more complex molecules, these difficulties rapidly increase.²⁰³

The German scientists Reinhard Junker and Siegfried Scherer note that the synthesis of the molecules essential for life require very different conditions. This, according to them, shows that there is no possibility of the many different substances necessary for life combining together:

Until now, no experiment is known in which we can obtain all the molecules necessary for chemical evolution. Therefore, it is essential to produce various molecules in different places under very suitable conditions and then to carry them to another place for reaction by protecting them from harmful elements like hydrolysis and photolysis. This combination of events has seemed an incredibly unlikely happenstance, and has often been ascribed to divine intervention.²⁰⁴

In his book *The Origin of Life*, Dr. John Keosian admits the despairing position in which evolutionists find themselves:

Claims of chemical evolution are unreal. We are asked to believe that biochemical compounds, biochemical reactions and mechanisms, energy metabolism, and storage, specific polymerizations, codes, transcription and translation apparatus, and more, appeared in probiotic [inaudible word], with a function they would have, in a living thing, before there were living things. Chemical evolution has become an end in itself. In many cases it represents contrived or ingenious laboratory syntheses which have no counterpart in abiotic organic chemical synthesis in an acceptable range of probiotic conditions . . . there has been an good deal of uncritical acceptance of experiments, results and conclusions which we are all too ready to acknowledge because they support

preconceived convictions. . . All present approaches to a solution of the problem of the origin of life are either irrelevant or lead into a blind alley. Therein lies the crisis.²⁰⁵

The structure of the DNA molecule also confirms the impossibility of the chemical evolution scenario because when left to itself, the DNA molecule loses its stability. External factors can easily impair the molecule's structure. To a large extent, DNA is stable inside the cell because that it is monitored and repaired by specialized enzymes.

It is impossible for the DNA molecule to remain stable and preserve its structure outside the cell, while swimming in the primeval oceans, as evolutionists claim. On the contrary, in the supposed primeval ocean, the molecule would be impaired far more quickly than the rate at which it was synthesized.²⁰⁶ Thaxton, Dr. Roger L. Olsen and Prof. Walter L. Bradley mention how the substances essential for life could not preserve their stability: "It seems probable that in an oceanic chemical soup, the synthesis of RNA and other essential biomolecules would have been short-circuited at nearly every turn by many cross-reactions."²⁰⁷

In fact, when biochemists separate DNA from the cell or synthesizes it in the laboratory, they do not leave it in water-which would cause it to dissolve-or in a jar on the bench at room temperature. In all probability, they store it in a tube with a tightly closed stopper, and in liquid nitrogen in a deep freeze. Yet even under these conditions, the chemical bonds inside the molecule gradually fall apart, and biological effectiveness is gradually lost.²⁰⁸

Evolutionists totally ignore the fact that DNA, RNA and protein molecules would soon be eliminated under natural conditions in the supposed primeval ocean. In his book *The Origins of Prebiological Systems*, Dr. Carl Sagan admits that the existing scenarios regarding the origin of life are unsatisfactory:

The problem we're discussing is a very general one. We use energy sources to make organic molecules. It is found that the same energy sources can destroy these organic molecules. The organic chemist has an understandable preference for removing the reaction products from the energy source before they are destroyed. But when we talk of the origin of life, I think we should not neglect the fact that degradation occurs as well as synthesis, and that the course of reaction may be different if the products are not preferentially removed. In reconstructing the origin of life, we have to imagine reasonable scenarios which somehow avoid this difficulty.²⁰⁹

In the absence of a cell with the mechanism to read the information in DNA-and to act on those instructions and manufacture protein-the information in DNA will be meaningless. Even if we assume the completely impossible, that the DNA molecule did form spontaneously under the primitive world conditions suggested by evolutionists, the existence of DNA by itself would be meaningless.

Despite being evolutionists, Prof. David E. Green and Prof. Robert F. Goldberger express the invalidity of the idea that the cell emerged gradually and spontaneously:

. . . the macromolecule-to-cell transition is a jump of fantastic dimensions, which lies beyond the range of testable hypothesis. In this area, all is conjecture. The available facts do not provide a basis for postulating that cells arose on this planet.²¹⁰

In an article titled "Life's Origins Get Murkier and Messier," published in *The New York Times* in June 2000, the science writer Nicholas Wade wrote, "Everything about the origin of life on earth is a mystery, and it seems the more that is known, the more acute the puzzles get."²¹¹ The biochemist Prof. Michael J. Behe summarizes the position of science in terms of the evolutionary scenario:

In private, many scientists admit that science has no explanation for the beginning of life. On the other hand, many scientists think that given the origin of life, its subsequent evolution is easy to envision, despite the major difficulties outlined in this book. The reason for this peculiar circumstance is that while chemists try to test origin-of-life scenarios by experiment or calculation, evolutionary biologists make no attempt to test evolutionary scenarios at the molecular level by experiment or calculation. As a result, evolutionary biology is stuck in the same frame of mind that dominated origin-of-life studies in the early fifties before most experiments had been done: imagination running wild. Biochemistry has, in fact, revealed a molecular world that stoutly resists explanation by the same theory so long applied at the level of the whole organism. Neither of Darwin's black boxes-the origin of life or the origin of vision or other complex biochemical systems-has been accounted for by his theory. Darwin never imagined the exquisitely profound complexity that exists even at the most basic levels of life.²¹²

The point that evolutionists seem determined not to acknowledge is that Darwin was an amateur scientist whose knowledge was too superficial to foresee the molecular complexity of life, and whose analyses were based solely upon observation. Many scientists blindly attached to the theory of evolution are in the same state of ignorance today. Since they lack the courage to tell the truth, out of a fear of losing their prestige, and since they are also unwilling to admit the existence of Allah, they have become part of a mass deception. However, the facts are so evident that apart from a few admissions, evolutionists are left quite speechless.

Despite being an evolutionist, the contemporary biochemist Klaus Dose admits the impossibility of life forming spontaneously in the so-called primeval environment:

A further puzzle remains, namely the question of the origin of biological information, i.e., the information residing in our genes today. . . not even the physical building blocks required for the storage of the information can construct themselves: The spontaneous formation of simple nucleotides or even of polynucleotides which were able to be replicated on the pre-biotic earth should now be regarded as improbable in the light of the very many unsuccessful experiments in this regard.²¹³

Saying that it is "improbable" for life to have emerged by chemical means is tantamount to saying that it is impossible for life to have emerged by chance. Therefore, the theory of evolution, which seeks to account for the origin of life in terms of chance,

collapses right at the outset. Since chance cannot represent the origin of life, science clearly demonstrates that life has been created in a flawless manner. Not only the earliest organisms, but all the different living classes on Earth were created individually.

Indeed, the fossil record confirms that all species on Earth emerged in a single moment and with all their own particular structures, and without undergoing any previous process of evolution.

Consciously Directed Experiments Cannot Represent Evidence for Evolution

Whenever experiments regarding the origin of life are mentioned, the first one to come to mind is the Miller Experiment. In evolutionist sources, this is portrayed as supposed evidence that allegedly sheds light on the origin of life. Yet the details of the experiment-conditions that do not reflect the true facts-are generally neglected. The American chemist Stanley Miller carried out the experiment under artificial conditions he established himself, and which bore no relation to the primeval Earth's atmosphere. Since his synthesis of amino acid was carried out on the basis of a contrived environment, it cannot provide any scientific findings.

Moreover, Miller was able to synthesize amino acid in this experiment only. Yet the emergence of amino acids under any condition whatsoever does not argue for the formation of life. Amino acids are building blocks of proteins, the body's basic building materials. Hundreds of amino acids are combined in a specific sequence inside the cell, and thus a given protein results. Cells consist of an average of several *thousand* different types of protein. In contrast, amino acids are the simplest and smallest components of living things.

The invalidity of Miller's experiment was the subject of a great many scientific papers in later years.²¹⁴ (For more details, see *The Evolution Deceit*, Ta-Ha Publishers, United Kingdom, 1999.)

With the Miller Experiment, evolutionists unwittingly demolished evolution, because the experiment proved that amino acids can only be obtained by means of conscious intervention under laboratory environment in which all the conditions are strictly controlled. In other words, what produces life is creation, not unconscious coincidences.

Evolutionists are reluctant to accept this evident truth since they cling to a number of prejudices that fly in the face of science. Indeed, Harold Urey and his student Stanley Miller, who organized the experiment together with him, made the following admission:

All of us who study the origin of life find that the more we look into it, the more we feel it is too complex to have evolved anywhere. We all believe as an article of faith that life evolved from dead matter on this planet. It is just that its complexity is so great, it is hard for us to imagine that it did.²¹⁵

None of the other experiments which evolutionists claim to duplicate the origin of life bears any relation to the facts. While seeking to account for the origin of life in terms of random, unplanned events, evolutionists perform their experiments under highly planned controls. Nothing in the laboratory environments they create is left to chance. On the contrary, all experiments conducted to bring an evolutionary explanation are carried out by intelligent, knowledgeable scientists with the use of advanced laboratory technology. In such a controlled environment, it is obvious that chance effects bear no relation at all to such stages as the splitting of genes from DNA using various special enzymes, the subsequent replacement of these inside the cell and then the selection of the most advantageous ones. For that reason, evolutionists once again demonstrate that there must have been intelligence, consciousness and information behind the origin of life.

In his book *Darwin's Black Box*, the molecular biologist Michael Behe has this to say:

The big problem is that each nucleotide "building block" is itself built up from several components and the processes that form the components are chemically incompatible. Although a chemist can make nucleotides with ease in a laboratory by synthesizing the components separately, purifying them, and then recombining the components to react with each other, undirected chemical reactions overwhelmingly produce undesired products and shapeless goop on the bottom of the test tube.²¹⁶

All the experiment carried out prove that during every stage involved in the formation of life, conscious control is needed. Prof. Werner Gitt says this about the Miller experiments, portrayed as evidence of evolution:

No protein has ever been synthesized in such an experiment; they refer to proteinoids and not proteins as such. Even if they succeed in obtaining a true protein with a long amino acid chain and the correct optical rotation, it would still not be the start of evolution. There must be a coding system to store information about this protein so that it can be replicated at a later stage. A coding system can never originate in matter. The Miller experiments thus do not contribute to an explanation of the origin of life.²¹⁷

The well-known physicist Prof. Paul Davies refers to the approach adopted in the experiments performed being flawed right from the very beginning:

The living cell is best thought of as a supercomputer-an information processing and replicating system of astonishing complexity. DNA is not a special life-giving molecule, but a genetic databank that transmits its information using a mathematical code. Most of the workings of the cell are best described, not in terms of material stuff-hardware-but as information, or software. Trying to make life by mixing chemicals in a test tube is like soldering switches and wires in an attempt to produce Windows 98. It won't work because it addresses the problem at the wrong conceptual level.²¹⁸

This all goes to show that everything in the cell must be present in complete and perfect form, and in just the right place, from the very first moment. The slightest deficiency or change will spell the death of the entire cell. It is impossible for the kind of

trial-and-error process posited by the theory of evolution to give rise to a living cell, even if the process lasted not for just billions of years, but for trillions upon trillions. There is absolutely no possibility that unconscious natural phenomena gave rise to the irreducibly complex structures and systems inside the cell, in one single event. The way that some still ascribe divine status to chance, despite seeing these clear scientific facts, is an empty deception.

Allah reveals the superstitious beliefs of such people in the Qur'an:

He to Whom the kingdom of the heavens and the Earth belongs. He does not have a son and He has no partner in the Kingdom. He created everything and determined it most exactly. But they have adopted deities apart from Him which do not create anything but are themselves created. They have no power to harm or help themselves. They have no power over death or life or resurrection. (Surat al-Furqan, 2-3)

DNA's Complexity Cannot Be Adjusted Spontaneously

The Second Law of Thermodynamics states that left to themselves and under normal conditions, all systems in the universe will tend towards disorder, confusion and impairment in direct relation to the passage of time. Everything, living or not, is gradually eroded, impaired, decayed, broken down and fragmented. Sooner or later, this is the inevitable process awaiting all things and, according to the Second Law, there is no return from that inevitable end.

The Sydney University biologist Prof. Michael G. Pittman says this:

Time is no help. Bio-molecules outside a living system tend to degrade with time, not build up. In most cases, a few days is all they would last. Time decomposes complex systems. If a large 'word' (a protein) or even a paragraph is generated by chance, time will operate to degrade it. The more time you allow, the less chance there is that fragmentary 'sense' will survive the chemical maelstrom of matter.²¹⁹

In order to be able to reconcile the Second Law of Thermodynamics with evolution, Darwinists try to show that a particular order can emerge in so-called *open systems*, in which there is a constant flow of matter and energy. But evolutionists employ deceptive methods by deliberately confusing two different key concepts: *ordered* and *organized*.

For example, when a breeze enters a courtyard, it may gather up all the dry leaves that had previously been spread out at random and deposit them into one corner. This, in thermodynamic terms, is a more ordered environment than its predecessor, but the leaves can never organize themselves with the energy from the wind in such a way as to form a perfect outline of a human being on the floor. In short, complex organized systems can never come into being through natural processes. Although, simple arrangements like that cited above may occur from time to time, they can never progress beyond specific bounds.

Evolutionists, however, depict these spontaneous self-ordering phenomena by means of natural events as important evidence for evolution. They seek to portray them as supposed examples of self-organization. As a result of this conceptual confusion, they suggest that living beings can arise spontaneously as a result of natural events and chemical reactions. Yet as you saw earlier, *organized systems* and *ordered systems* display completely different structures. Ordered systems contain simple sequences and repetitions, while organized systems contain highly complex, interconnected structures and processes.

The difference between the two is best described by the evolutionist scientist Jeffrey Wicken:

'Organized' systems are to be carefully distinguished from 'ordered' systems. Neither kind of system is 'random,' but whereas ordered systems are generated according to simple algorithms and therefore lack complexity, organized systems must be assembled element by element according to an external 'wiring diagram' with a high information content. . . . Organization, then, is functional complexity and carries information.²²⁰

The dilemmas facing any self-ordering scenario can easily be seen when the structure of the DNA molecule is examined. Studies in biochemistry and molecular biology cannot explain the special arrangement of the DNA and RNA macro-molecules that contain such broad information. Robert Shapiro—a professor of chemistry of University of New York and an expert on DNA—sets out the evolutionist belief in the self-organization of matter and the materialist dogma underlying it:

Another evolutionary principle is therefore needed to take us across the gap from mixtures of simple natural chemicals to the first effective replicator. This principle has not yet been described in detail or demonstrated, but it is anticipated, and given names such as chemical evolution and self-organization of matter. The existence of the principle is taken for granted in the philosophy of dialectical materialism, as applied to the origin of life by Alexander Oparin.²²¹

With the concept of self-organization, evolutionists claim that inanimate matter can organize itself in such a way as to give rise to a complex living entity. This belief flies in the face of science, because all experiments and observations show that matter has no such ability. So why do evolutionists still believe in such unscientific scenarios? Why are they so determined to deny the proofs of creation that are so evident in living things?

The answer lies in the basic foundation of the theory of evolution: materialist philosophy. By accepting only the existence of matter, it must provide some explanation for living things that is also based on matter alone. The theory of evolution was born from that requirement and, no matter how grossly it may violate science, that's why it is still being propagated today.

The only explanation for life is creation. Evolutionists admit the possibility of all kinds of impossibilities and resort to all kinds of stratagems to deny the existence of

Allah. Yet no matter how much they avoid facing facts, they still find themselves confronted by the proofs of our Lord's existence and the sublimity in His creation.

The situation of the deniers is described in the Qur'an:

But the actions of those who do not believe are like a mirage in the desert. A thirsty man thinks it is water, but when he reaches it, he finds it to be nothing at all, but he finds Allah there. He will pay him his account in full. Allah is swift at reckoning. (Surat an-Nur, 39)

Neo-Darwinism Is No Solution to the Impasse Facing Evolution

Neo-Darwinism attempts to prop up Darwin's theory by adapting it to scientific advances, and combining it with the genetic inheritance laws of the Austrian biologist Gregor Mendel. Also known as "the modern synthesis," neo-Darwinism actually makes Darwin's ignorance clear for all to see. Darwin sought to account for the variety in species through natural selection, but he was not aware that living things pass on their characteristics to subsequent generations by way of genetic inheritance. This new version of the theory of evolution results from an attempt to cover up that ignorance. But no matter how much neo-Darwinists may attempt to modernize their theory, they have never been able to succeed, since the theory is built on unsound foundations from the outset. Like Darwin himself, neo-Darwinists maintain that the variety in life came into being spontaneously, by chance.²²² In addition to this flawed logic, they depicted mutations – random genetic changes – as the origin of life. Since the errors arising during the replication of DNA were the smallest mutations possible, neo-Darwinists imagined that they could base their theories on that.²²³

But even the smallest replicaton error-a change in a single nucleotide-gives rise to extremely serious consequences.

Neo-Darwinists said that small changes in genetic information take place first in one site, then in another.²²⁴ However, the biophysicist Dr. Lee Spetner emphasizes that the theory is not true: "The NDT says that large changes will eventually result. It's like becoming a millionaire by saving enough pennies."²²⁵

Prof. Marcel-Paul Schützenberger-a member of the French Academy of Sciences and a mathematician, biologist and doctor of medicine from Paris University-has refuted neo-Darwinism with mathematical proofs. In his book *Mathematical Challenges in the Neo-Darwinian Interpretation of Evolution*, he reaches this conclusion:

We believe that there is a considerable gap in the neo-Darwinian theory of evolution, and we believe this gap to be of such a nature that it cannot be bridged within the current conception of biology.²²⁶

According to neo-Darwinism, random genetic mutations represent the raw material of evolution. But as many scientists today agree, the level of complexity in life cannot be

acquired through the processes of trial and error hypothesized by neo-Darwinism. Dr. Lee Spetner sets out the impossibility of this: "But if their variations are random, they too cannot account for a build up of genetic information. The chances are almost nil . . . you cannot expect to get a large adaptive genetic rearrangement by chance." ²²⁷.

All the explanations that evolutionists put forward for the origin of life are irrational and unscientific. One of the outspoken eminent authorities who admit as much the French zoologist Pierre Grassé, former head of the French Academy of Sciences. Though an evolutionist, Grassé nevertheless maintains that Darwinian theory cannot account for life, and says this regarding the logic of chance that forms the basis of Darwinism:

The opportune appearance of mutations permitting animals and plants to meet their needs seems hard to believe. Yet the Darwinian theory is even more demanding: A single plant, a single animal would require thousands and thousands of lucky, appropriate events. Thus, miracles would become the rule: events with an infinitesimal probability could not fail to occur. . . There is no law against daydreaming, but science must not indulge in it. ²²⁸.

In addition, the mutations that they allege increased the information in DNA over the course of time, leading to variation, is no solution to the predicament in which Darwinists find themselves. Mutations are harmful breaks and changes of place of genes in the living DNA molecule, resulting from radiation or chemical effects. Since mutations damage the nucleotides or cause them to change places, they generally lead to damage too great for the cell to repair. For example, X-rays penetrate deeply in the body and cause major DNA damage. When DNA starts to be wrongly replicated, such faulty replication can manifest itself in the body as cancer. The mutagenic energy in sunlight can cause skin cancer, and various substances in cigarettes causes lung cancer. Incorrect replication in the 21st chromosome in the reproductive cell, for instance, leads to Down syndrome.

In order for the theory of evolution to account for the origin of life on Earth, it must point to some mechanism that adds new, useful characteristics, not damaging and destructive ones. How can a living thing acquire a new characteristic? The only answer evolutionists have is "By mutation."

They maintain that all species emerged through random mutations acting on the DNA of a single germ cell-either egg or sperm. Yet mutations-the foundation of evolutionists' claims-do not cause living things to become more developed and perfect. Therefore, mutations are not the kind of mechanism as is needed by the theory of evolution, nor can they produce new characteristics.

We shall consider only the broad outlines of how mutations do not, and cannot contribute to a species' evolution (For detailed information, see Harun Yahya's *Darwinism Refuted*, Goodword Books, 2002; and *The Evolution Deceit*, Ta-Ha Publishers, United Kingdom, 1999.)

*** Mutations Are Harmful.**

Since they occur in a random manner, mutations almost always damage the organism concerned. Any random intervention in a complex structure will damage it rather than improve it. Indeed, there is not one single valid example of a beneficial random mutation of the kind proposed as an evolutionary mechanism.²²⁹ The changes brought about by mutations are only like those suffered by the residents of Hiroshima, Nagasaki and Chernobyl: death, genetic handicaps, and disease.

Prof. Walter L. Starkey from Ohio University makes clear the invalidity of claims regarding useful mutations:

Do you think it would be wise for you to spend hours near X-ray machine, or inside of a nuclear power plant? Would it be wise for you to go to Chernobyl, in Russia, where a nuclear power plant exploded? Should we actively try to destroy the ozone layer that shields us from radiation? If such radiations are likely to cause you to evolve, and develop new beneficial futures, then you should seek to be bombarded as much as possible by these sources of radiation. Maybe you could get a new eye in the back of your head. In reality, if you are smart, you will avoid such radiations, because they are much more likely to damage you than to improve you.²³⁰

All the mutations observed in human beings are harmful. All the mental and physical defects described in medical textbooks as examples of mutation such as Down syndrome, albinism or dwarfism, or diseases such as cancer, reveal mutations' destructive effects. Obviously, any process that handicaps people or causes them to become ill cannot be a mechanism that develops living things. DNA has a very complex order, and so any random effects in this molecule can only damage the organism.

Prof. Starkey says this about these damaging effects of mutations:

Being bombarded by mutation-causing radiation, would be like shooting a new car with a 30-caliber rifle. Let's assume that it would be beneficial if the ballast resistor in your ignition system were located inside the interior of your car, under the dashboard, rather than out near the hot engine . . . mutations caused by DNA copying errors would have a similar result. . . mutations are harmful by a ratio of at least 10,000 to one.²³¹

*** Mutations Cannot Add New Information to DNA**

As a result of mutation, the components that make up genetic information are detached from their locations, damaged, or else transported to different regions of the DNA. They can never endow an organism with a new organ or a new attribute by adding new genetic information to its DNA. All they cause are abnormalities of existing characteristics, such as an extra leg sticking out of the pelvis, or an ear out of the stomach.

Prof. Werner Gitt answers the question "Can new information emerge as the result of mutations?"

This idea is central in representations of evolution, but mutations can only cause changes in existing information. There can be no increase in information, and in general

the results are injurious. New blueprints for new functions or new organs cannot arise; mutations cannot be source of new (creative) information.²³²

On the same subject, Prof. Phillip Johnson has this to say:

Spetner told them that the adaptive mutations cited by Darwinists are not information-creating. When a mutation makes a bacterium resistant to antibiotics, for example, it does so by disabling its capacity to metabolize a certain chemical. There is a net loss of information and of fitness in a general sense... one can sometimes "fix" a sputtering radio by hitting its case if the rough motion happens to reseal a loose wire or open a short circuit. But no one would expect to build a better radio, much less a television set, by accumulating such changes.²³³

The well-known evolutionist Stephen Jay Gould admits the facts regarding mutations:

You don't make new species by mutating the species . . . A mutation is not the cause of evolutionary change.²³⁴

There is yet another proof that mutations do not add new characteristics of the kind required by the theory of evolution. To produce new characteristics or new species, several atoms must be added to the organism's DNA.²³⁵ In human DNA, there are up to 204 billion atoms-3,000 times more atoms than in the DNA of the bacterium *E. coli*.²³⁶ For that reason, in order for a single-celled organism to develop into a human being, more than 200 billion atoms of carbon, hydrogen, nitrogen and phosphorus would have to be added to its DNA.²³⁷ As you know, carbon and nitrogen can be obtained from the air, hydrogen and oxygen from water, and phosphorus from soil. But the real problem is the extraction and relocation of these atoms in exactly the right place in the DNA molecule. Atoms would have to arrange themselves so as to contain sugar groups, phosphate groups and nitrogen bases with extraordinary complexity, and be located in just the right part of the double helix in order for a DNA molecule to function.²³⁸

Prof. Phillip Johnson explains how, just as in encyclopedias and computer programs, there is a very specific order in DNA, and that there must be a mechanism that produces genetic information. He also describes how random mutations have a negative impact on the information and regularity in DNA:

Random mutation is not such a mechanism, nor is natural selection, nor is any physical or chemical law. Laws produce simple repetitive order, and chance produces meaningless disorder. When combined, law and chance work against each other to prevent the emergence of a meaningful sequence. In all human experience, only intelligent agency can write an encyclopedia or computer program, or produce complex specified aperiodic information in any form. Therefore, the information necessarily present in organisms points to the conclusion that they are products of intelligent design.²³⁹

*** Mutations Are Disordered.**

Mutations do alter already existing structures, but in a completely disordered manner. Mutations have no complementary properties and have no cumulative effects toward any particular objective. Pierre Paul Grassé, former president of the French Academy of Sciences, says this about mutations' effects:

As soon as some disorder, even slight, appears in an organized being, sickness, then death follow. There is no possible compromise between the phenomenon of life and anarchy.²⁴⁰

*** In Order for a Mutation to Influence Subsequent Generations, it Must Arise Inside the Reproductive Cell:**

No change arising in any cell or organ of the body can be passed on to the next generation. For example, a person's arm may be exposed to radiation assume a form very different from its original appearance. But these changes cannot be passed on unless they take place in the DNA molecule in some reproductive cell. This precondition –that in order to affect future generations, the mutation must take place in only one reproductive cell, out of all the trillions of cells in the body– makes evolutionist expectations totally impossible.

*** Mutations Are Rare:**

Mutations occur only very rarely. As a cell's DNA is being replicated, enzymes perform a regulatory function. Therefore, as you have seen in some detail, errors that survive the replication process are very rare. Calculations show that only one living thing in a million will be exposed to mutation.²⁴¹

The molecular biologist Prof. Gerald L. Schroeder criticizes fictitious claims based on mutations:

The insights of molecular biology have revealed a complexity at every stage of life's processes such that, if we were forced to rely on random mutation to produce them step by step, in the words of Nobel laureate de Duve, "eternity would not suffice."²⁴²

Thus, in the words of Pierre Paul Grassé, "No matter how numerous they may be, mutations do not produce any kind of evolution."²⁴³

*** Mutations Cannot Bring about Changes of Species:**

Experiments on fruit flies have been going on for many years. Many fruit flies exposed to radiation have given rise to mutant forms, such as flies with very large wings, extra wings or no wings at all. Yet no matter how deformed, they have still remained fruit flies and have not developed into any new species. The slightest change in location or absence in the sequences in the genes can easily give rise to fatal consequences. It is impossible for random mutations to occur in such a delicate sequence as to cause one organism to evolve into another by adding to its genetic information. Indeed, in the

laboratory, all animal embryos subjected to mutation in order to prove evolutionists' theories are born either deformed or dead.

All this goes to show that contrary to what evolutionists maintain, random mutations cannot account for the origin of living things. Not even the most advanced technology and intense work by the most skilled scientists can produce a new species. As you have seen, mutations can in no way cause the diversity in living things. The flawless sequence in DNA is solely the result of a very special creation. That creation belongs to Almighty Allah, Whose impeccable creation is described in the Qur'an:

It is Allah Who made the Earth a stable home for you and the sky a dome, and formed you, giving you the best of forms, and provided you with good and wholesome things. That is Allah, your Lord. Blessed be Allah, the Lord of all the worlds. He is the Living-there is no deity but Him-so call on Him, making your religion sincerely His. Praise be to Allah, the Lord of all the worlds. (Surah Ghafir, 64-65)

The theory of evolution, which maintains that inanimate substances spontaneously came together to form living things with such glorious features as DNA, is a fantasy that violates both science and reason. Since life has a blueprint (DNA) and all living things are made in the light of that blueprint, the one manifest conclusion is that a sublime Creator has produced that blueprint. All living things come into being through the creation of Almighty and Omniscient Allah, Who reveals this in the Qur'an:

He is Allah-the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and Earth glorifies Him. He is the Almighty, the All-Wise. (Surat al-Hashr, 24)

It Is Almighty Allah Who Bestows Life on the Cell

For a moment, forget all the impossibilities described so far. Assume that a protein molecule did form under the primeval Earth's most unsuitable conditions.

The formation of a single protein will not be enough. It will have to wait for other proteins, just like itself, to emerge by chance in this uncontrolled environment, until millions of the appropriate proteins needed for producing the cell all form alongside one another, in the same place. Those that form first must wait patiently, suffering no damage from ultraviolet rays or mechanical abrasion, until the others appear, also by chance. Then these proteins, in the right quantities in the same place, must combine in meaningful forms to give rise to the cell's organelles. Meanwhile, no foreign substances, harmful molecules or functionless proteins must infiltrate themselves.

And even if these organelles did manage to combine in an exceedingly ordered, harmonious and interconnected way, absorbing all the necessary enzymes and being enclosed in a membrane-and if that membrane's interior were filled with a special fluid that constitutes the ideal environment-could that collection of molecules then come to life?

No, because as research shows, in order for life to begin, it's not enough for all the needed substances to be present together. Even if you place all the proteins necessary for life in a test tube, still you cannot obtain a living cell. All the experiments in this area have failed; all experiments and observations show that life comes only from life. The claim that life emerged by chance from inanimate substances is a myth that conflicts with all observations and experiments, and which exists only in evolutionists' dreams.

Chandra Wickramasinghe, Professor of Applied Mathematics and Astronomy at Cardiff University, spent decades convinced that life was born by chance:

From my earliest training as a scientist, I was very strongly brainwashed to believe that science cannot be consistent with any kind of deliberate creation. That notion has had to be painfully shed. At the moment, I can't find any rational argument to knock down the view which argues for conversion to God. We used to have an open mind; now we realize that the only logical answer to life is creation-and not accidental random shuffling.²⁴⁴

In that case, the first life on Earth can only have come from the creation of Allah, the Lord of Life. Life begins, continues and comes to an end only through His willing it. Evolution, on the other hand, cannot explain how the materials necessary for life formed and combined with one another, let alone to explain how life itself began.

In the Qur'an, our Lord asks:

Is He Who creates like him who does not create? So will you not pay heed? If you tried to number Allah's blessings, you could never count them. Allah is Ever-Forgiving, Most Merciful. Allah knows what you keep secret and what you make public. Those you call on besides Allah do not create anything. They are themselves created. (Surat an-Nahl, 17-20)

CONCLUSION:

DNA is An Example of Our Almighty Lord's Creative Artistry

Consider the activities of DNA and what goes on inside the cell, which have been discussed throughout this book. The molecules that comprise the cell have no intelligence, yet they combine to make accurate decisions, implement strategies accordingly, and guard against possible dangers. They have no memory, but still they identify friends and foes, distinguish between the necessary and the unnecessary, the useful and the useless, and act accordingly.

While performing their functions they permit no waste or pollution, but act in efficiently, cleaning up behind themselves. In constant communication, they work together as a harmonious team. They are able to take on joint decisions, know where they must go and when, and how to resolve problems. They establish order inside the cell, store information and use it as necessary, copy and translate it. They perform all this at great speed, without sleep or rest. In a highly efficient manner and displaying a superior intelligence, they perform functions that you never could. Unconscious molecules, made up of atoms such as those in the air, soil and water, do all these things. These atoms combine only in a particular order in such a way as to give rise to life by Allah's so choosing, and exhibit conscious behavior under our Lord's direction.

Steeped in the ignorance of 19th century, Charles Darwin held a simplistic vision of the origin of life: "From so simple a beginning, endless forms most beautiful and most wonderful have been, and are being evolved."²⁴⁵ In his private correspondence, Darwin also suggested that life emerged spontaneously in a small, warm lake containing ammoniac and phosphorus salts, with the help of light, heat, and electricity.²⁴⁶ Darwin's view of the origin of life was that simple.

However, those who came after Darwin were unable to obtain even the smallest component of life, despite applying that formula, and even more advanced forms of it, a great many times. No matter how often Darwinists repeat that formula, with whatever materials they may choose, the result will still always be the same. They can never obtain any other conclusion than Allah created life. Had Darwin known about DNA, doubtless he would never have signed his name to such a terrible scientific gaffe.

Yet many scientists follow blindly in Darwin's footsteps, continuing to look at the origin of life in an entirely unrealistic way. Their dreams of course condemn them to disappointment on every occasion, because Darwinism has never been scientific, only a philosophy based solely upon preconceptions and fabrications.

Everyone of intelligence and good conscience will appreciate that the body's perfect systems could not arise spontaneously from unconscious atoms. There can be no question of any molecular component in a single human cell acting, let alone of a human being speaking or walking, without the permission and knowledge of Allah. The systems that operate uninterruptedly in each of the human body's trillions of cells reveal the infinite intellect, knowledge and power of Allah, and the boundless perfection in His creation.

Proofs of the existence of our Lord's infinite mercy exist not just in the tiny DNA molecule, but in every point in the universe. In one verse of the Qur'an, it is revealed:

Say: "Who is the Lord of the heavens and the Earth?" Say: "Allah." Say: "So why have you taken protectors apart from Him who possess no power to help or harm themselves?" Say: "Are the blind and seeing equal? Or are darkness and light the same? Or have they assigned partners to Allah who create as He creates, so that all creating seems the same to them?" Say: "Allah is the Creator of everything. He is the One, the All-Conquering." (Surat ar-Ra'd, 16)

APPENDIX

THE DECEPTION OF EVOLUTION

Darwinism, in other words the theory of evolution, was put forward with the aim of denying the fact of creation, but is in truth nothing but failed, unscientific nonsense. This theory, which claims that life emerged by chance from inanimate matter, was invalidated by the scientific evidence of miraculous order in the universe and in living things. In this way, science confirmed the fact that Allah created the universe and the living things in it. The propaganda carried out today in order to keep the theory of evolution alive is based solely on the distortion of the scientific facts, biased interpretation, and lies and falsehoods disguised as science.

Yet this propaganda cannot conceal the truth. The fact that the theory of evolution is the greatest deception in the history of science has been expressed more and more in the scientific world over the last 20-30 years. Research carried out after the 1980s in particular has revealed that the claims of Darwinism are totally unfounded, something that has been stated by a large number of scientists. In the United States in particular, many scientists from such different fields as biology, biochemistry and paleontology recognize the invalidity of Darwinism and employ the fact of creation to account for the origin of life.

We have examined the collapse of the theory of evolution and the proofs of creation in great scientific detail in many of our works, and are still continuing to do so. Given the enormous importance of this subject, it will be of great benefit to summarize it here.

The Scientific Collapse of Darwinism

Although this doctrine goes back as far as ancient Greece, the theory of evolution was advanced extensively in the nineteenth century. The most important development that made it the top topic of the world of science was Charles Darwin's *The Origin of Species*, published in 1859. In this book, he denied that Allah created different living species on Earth separately, for he claimed that all living beings had a common ancestor and had diversified over time through small changes. Darwin's theory was not based on any concrete scientific finding; as he also accepted, it was just an "assumption." Moreover, as Darwin confessed in the long chapter of his book titled "Difficulties on Theory," the theory failed in the face of many critical questions.

Darwin invested all of his hopes in new scientific discoveries, which he expected to solve these difficulties. However, contrary to his expectations, scientific findings expanded the dimensions of these difficulties. The defeat of Darwinism in the face of science can be reviewed under three basic topics:

- 1) The theory cannot explain how life originated on Earth.

2) No scientific finding shows that the "evolutionary mechanisms" proposed by the theory have any evolutionary power at all.

3) The fossil record proves the exact opposite of what the theory suggests.

In this section, we will examine these three basic points in general outlines:

The First Insurmountable Step: The Origin of Life

The theory of evolution posits that all living species evolved from a single living cell that emerged on the primitive Earth 3.8 billion years ago. How a single cell could generate millions of complex living species and, if such an evolution really occurred, why traces of it cannot be observed in the fossil record are some of the questions that the theory cannot answer. However, first and foremost, we need to ask: How did this "first cell" originate?

Since the theory of evolution denies creation and any kind of supernatural intervention, it maintains that the "first cell" originated coincidentally within the laws of nature, without any design, plan or arrangement. According to the theory, inanimate matter must have produced a living cell as a result of coincidences. Such a claim, however, is inconsistent with the most unassailable rules of biology.

"Life Comes From Life"

In his book, Darwin never referred to the origin of life. The primitive understanding of science in his time rested on the assumption that living beings had a very simple structure. Since medieval times, spontaneous generation, which asserts that non-living materials came together to form living organisms, had been widely accepted. It was commonly believed that insects came into being from food leftovers, and mice from wheat. Interesting experiments were conducted to prove this theory. Some wheat was placed on a dirty piece of cloth, and it was believed that mice would originate from it after a while.

Similarly, maggots developing in rotting meat was assumed to be evidence of spontaneous generation. However, it was later understood that worms did not appear on meat spontaneously, but were carried there by flies in the form of larvae, invisible to the naked eye.

Even when Darwin wrote *The Origin of Species*, the belief that bacteria could come into existence from non-living matter was widely accepted in the world of science.

However, five years after the publication of Darwin's book, Louis Pasteur announced his results after long studies and experiments, that disproved spontaneous generation, a cornerstone of Darwin's theory. In his triumphal lecture at the Sorbonne in 1864, Pasteur said: "Never will the doctrine of spontaneous generation recover from the mortal blow struck by this simple experiment."²⁴⁷

For a long time, advocates of the theory of evolution resisted these findings. However, as the development of science unraveled the complex structure of the cell of a

living being, the idea that life could come into being coincidentally faced an even greater impasse.

Inconclusive Efforts of the Twentieth Century

The first evolutionist who took up the subject of the origin of life in the twentieth century was the renowned Russian biologist Alexander Oparin. With various theses he advanced in the 1930s, he tried to prove that a living cell could originate by coincidence. These studies, however, were doomed to failure, and Oparin had to make the following confession:

Unfortunately, however, the problem of the origin of the cell is perhaps the most obscure point in the whole study of the evolution of organisms.²⁴⁸

Evolutionist followers of Oparin tried to carry out experiments to solve this problem. The best known experiment was carried out by the American chemist Stanley Miller in 1953. Combining the gases he alleged to have existed in the primordial Earth's atmosphere in an experiment set-up, and adding energy to the mixture, Miller synthesized several organic molecules (amino acids) present in the structure of proteins.

Barely a few years had passed before it was revealed that this experiment, which was then presented as an important step in the name of evolution, was invalid, for the atmosphere used in the experiment was very different from the real Earth conditions.²⁴⁹

After a long silence, Miller confessed that the atmosphere medium he used was unrealistic.²⁵⁰

All the evolutionists' efforts throughout the twentieth century to explain the origin of life ended in failure. The geochemist Jeffrey Bada, from the San Diego Scripps Institute accepts this fact in an article published in *Earth* magazine in 1998:

Today as we leave the twentieth century, we still face the biggest unsolved problem that we had when we entered the twentieth century: How did life originate on Earth?²⁵¹

The Complex Structure of Life

The primary reason why the theory of evolution ended up in such a great impasse regarding the origin of life is that even those living organisms deemed to be the simplest have incredibly complex structures. The cell of a living thing is more complex than all of our man-made technological products. Today, even in the most developed laboratories of the world, a living cell cannot be produced by bringing organic chemicals together.

The conditions required for the formation of a cell are too great in quantity to be explained away by coincidences. The probability of proteins, the building blocks of a cell, being synthesized coincidentally, is 1 in 10^{950} for an average protein made up of 500 amino acids. In mathematics, a probability smaller than 1 over 10^{50} is considered to be impossible in practical terms.

The DNA molecule, which is located in the nucleus of a cell and which stores genetic information, is an incredible databank. If the information coded in DNA were writ-

ten down, it would make a giant library consisting of an estimated 900 volumes of encyclopedias consisting of 500 pages each.

A very interesting dilemma emerges at this point: DNA can replicate itself only with the help of some specialized proteins (enzymes). However, the synthesis of these enzymes can be realized only by the information coded in DNA. As they both depend on each other, they have to exist at the same time for replication. This brings the scenario that life originated by itself to a deadlock. Prof. Leslie Orgel, an evolutionist of repute from the University of San Diego, California, confesses this fact in the September 1994 issue of the *Scientific American* magazine:

It is extremely improbable that proteins and nucleic acids, both of which are structurally complex, arose spontaneously in the same place at the same time. Yet it also seems impossible to have one without the other. And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means.²⁵²

No doubt, if it is impossible for life to have originated from natural causes, then it has to be accepted that life was "created" in a supernatural way. This fact explicitly invalidates the theory of evolution, whose main purpose is to deny creation.

Imaginary Mechanism of Evolution

The second important point that negates Darwin's theory is that both concepts put forward by the theory as "evolutionary mechanisms" were understood to have, in reality, no evolutionary power.

Darwin based his evolution allegation entirely on the mechanism of "natural selection." The importance he placed on this mechanism was evident in the name of his book: *The Origin of Species, By Means of Natural Selection...*

Natural selection holds that those living things that are stronger and more suited to the natural conditions of their habitats will survive in the struggle for life. For example, in a deer herd under the threat of attack by wild animals, those that can run faster will survive. Therefore, the deer herd will be comprised of faster and stronger individuals. However, unquestionably, this mechanism will not cause deer to evolve and transform themselves into another living species, for instance, horses.

Therefore, the mechanism of natural selection has no evolutionary power. Darwin was also aware of this fact and had to state this in his book *The Origin of Species*:

Natural selection can do nothing until favourable individual differences or variations occur.²⁵³

Lamarck's Impact

So, how could these "favorable variations" occur? Darwin tried to answer this question from the standpoint of the primitive understanding of science at that time. According to the French biologist Chevalier de Lamarck (1744-1829), who lived before Darwin, living creatures passed on the traits they acquired during their lifetime to the next generation.

He asserted that these traits, which accumulated from one generation to another, caused new species to be formed. For instance, he claimed that giraffes evolved from antelopes; as they struggled to eat the leaves of high trees, their necks were extended from generation to generation.

Darwin also gave similar examples. In his book *The Origin of Species*, for instance, he said that some bears going into water to find food transformed themselves into whales over time.²⁵⁴

However, the laws of inheritance discovered by Gregor Mendel (1822-84) and verified by the science of genetics, which flourished in the twentieth century, utterly demolished the legend that acquired traits were passed on to subsequent generations. Thus, natural selection fell out of favor as an evolutionary mechanism.

Neo-Darwinism and Mutations

In order to find a solution, Darwinists advanced the "Modern Synthetic Theory," or as it is more commonly known, Neo-Darwinism, at the end of the 1930s. Neo-Darwinism added mutations, which are distortions formed in the genes of living beings due to such external factors as radiation or replication errors, as the "cause of favorable variations" in addition to natural mutation.

Today, the model that stands for evolution in the world is Neo-Darwinism. The theory maintains that millions of living beings formed as a result of a process whereby numerous complex organs of these organisms (e.g., ears, eyes, lungs, and wings) underwent "mutations," that is, genetic disorders. Yet, there is an outright scientific fact that totally undermines this theory: **Mutations do not cause living beings to develop; on the contrary, they are always harmful.**

The reason for this is very simple: DNA has a very complex structure, and random effects can only harm it. The American geneticist B. G. Ranganathan explains this as follows:

First, genuine mutations are very rare in nature. Secondly, most mutations are harmful since they are random, rather than orderly changes in the structure of genes; any random change in a highly ordered system will be for the worse, not for the better. For example, if an earthquake were to shake a highly ordered structure such as a building, there would be a random change in the framework of the building which, in all probability, would not be an improvement.²⁵⁵

Not surprisingly, no mutation example, which is useful, that is, which is observed to develop the genetic code, has been observed so far. All mutations have proved to be harmful. It was understood that mutation, which is presented as an "evolutionary mechanism," is actually a genetic occurrence that harms living things, and leaves them disabled. (The most common effect of mutation on human beings is cancer.) Of course, a destructive mechanism cannot be an "evolutionary mechanism." Natural selection, on the other hand, "can do nothing by itself," as Darwin also accepted. This fact shows us that there is no

"evolutionary mechanism" in nature. Since no evolutionary mechanism exists, no such any imaginary process called "evolution" could have taken place.

The Fossil Record: No Sign of Intermediate Forms

The clearest evidence that the scenario suggested by the theory of evolution did not take place is the fossil record.

According to this theory, every living species has sprung from a predecessor. A previously existing species turned into something else over time and all species have come into being in this way. In other words, this transformation proceeds gradually over millions of years.

Had this been the case, numerous intermediary species should have existed and lived within this long transformation period.

For instance, some half-fish/half-reptiles should have lived in the past which had acquired some reptilian traits in addition to the fish traits they already had. Or there should have existed some reptile-birds, which acquired some bird traits in addition to the reptilian traits they already had. Since these would be in a transitional phase, they should be disabled, defective, crippled living beings. Evolutionists refer to these imaginary creatures, which they believe to have lived in the past, as "transitional forms."

If such animals ever really existed, there should be millions and even billions of them in number and variety. More importantly, the remains of these strange creatures should be present in the fossil record. In *The Origin of Species*, Darwin explained:

If my theory be true, numberless intermediate varieties, linking most closely all of the species of the same group together must assuredly have existed... Consequently, evidence of their former existence could be found only amongst fossil remains.²⁵⁶

Darwin's Hopes Shattered

However, although evolutionists have been making strenuous efforts to find fossils since the middle of the nineteenth century all over the world, no transitional forms have yet been uncovered. All of the fossils, contrary to the evolutionists' expectations, show that life appeared on Earth all of a sudden and fully-formed.

One famous British paleontologist, Derek V. Ager, admits this fact, even though he is an evolutionist:

The point emerges that if we examine the fossil record in detail, whether at the level of orders or of species, we find - over and over again - not gradual evolution, but the sudden explosion of one group at the expense of another.²⁵⁷

This means that in the fossil record, all living species suddenly emerge as fully formed, without any intermediate forms in between. This is just the opposite of Darwin's assumptions. Also, this is very strong evidence that all living things are created. The only explanation of a living species emerging suddenly and complete in every detail without

any evolutionary ancestor is that it was created. This fact is admitted also by the widely known evolutionist biologist Douglas Futuyma:

Creation and evolution, between them, exhaust the possible explanations for the origin of living things. Organisms either appeared on the earth fully developed or they did not. If they did not, they must have developed from pre-existing species by some process of modification. If they did appear in a fully developed state, they must indeed have been created by some omnipotent intelligence.²⁵⁸

Fossils show that living beings emerged fully developed and in a perfect state on the Earth. That means that **"the origin of species," contrary to Darwin's supposition, is not evolution, but creation.**

The Tale of Human Evolution

The subject most often brought up by advocates of the theory of evolution is the subject of the origin of man. The Darwinist claim holds that modern man evolved from ape-like creatures. During this alleged evolutionary process, which is supposed to have started 4-5 million years ago, some "transitional forms" between modern man and his ancestors are supposed to have existed. According to this completely imaginary scenario, four basic "categories" are listed:

1. *Australopithecus*
2. *Homo habilis*
3. *Homo erectus*
4. *Homo sapiens*

Evolutionists call man's so-called first ape-like ancestors *Australopithecus*, which means "South African ape." These living beings are actually nothing but an old ape species that has become extinct. Extensive research done on various *Australopithecus* specimens by two world famous anatomists from England and the USA, namely, Lord Solly Zuckerman and Prof. Charles Oxnard, shows that these apes belonged to an ordinary ape species that became extinct and bore no resemblance to humans.²⁵⁹

Evolutionists classify the next stage of human evolution as "homo," that is "man." According to their claim, the living beings in the Homo series are more developed than *Australopithecus*. Evolutionists devise a fanciful evolution scheme by arranging different fossils of these creatures in a particular order. This scheme is imaginary because it has never been proved that there is an evolutionary relation between these different classes. Ernst Mayr, one of the twentieth century's most important evolutionists, contends in his book *One Long Argument* that "particularly historical [puzzles] such as the origin of life or of *Homo sapiens*, are extremely difficult and may even resist a final, satisfying explanation."²⁶⁰

By outlining the link chain as *Australopithecus* > *Homo habilis* > *Homo erectus* > *Homo sapiens*, evolutionists imply that each of these species is one another's ancestor.

However, recent findings of paleoanthropologists have revealed that *Australopithecus*, *Homo habilis*, and *Homo erectus* lived at different parts of the world at the same time.²⁶¹

Moreover, a certain segment of humans classified as *Homo erectus* have lived up until very modern times. *Homo sapiens neanderthalensis* and *Homo sapiens sapiens* (modern-day man) co-existed in the same region.²⁶²

This situation apparently indicates the invalidity of the claim that they are ancestors of one another. Stephen Jay Gould explained this deadlock of the theory of evolution although he was himself one of the leading advocates of evolution in the twentieth century:

What has become of our ladder if there are three coexisting lineages of hominids (*A. africanus*, the robust australopithecines, and *H. habilis*), none clearly derived from another? Moreover, none of the three display any evolutionary trends during their tenure on earth.²⁶³

Put briefly, the scenario of human evolution, which is "upheld" with the help of various drawings of some "half ape, half human" creatures appearing in the media and course books, that is, frankly, by means of propaganda, is nothing but a tale with no scientific foundation.

Lord Solly Zuckerman, one of the most famous and respected scientists in the U.K., who carried out research on this subject for years and studied *Australopithecus* fossils for 15 years, finally concluded, despite being an evolutionist himself, that there is, in fact, no such family tree branching out from ape-like creatures to man.

Zuckerman also made an interesting "spectrum of science" ranging from those he considered scientific to those he considered unscientific. According to Zuckerman's spectrum, the most "scientific"-that is, depending on concrete data-fields of science are chemistry and physics. After them come the biological sciences and then the social sciences. At the far end of the spectrum, which is the part considered to be most "unscientific," are "extra-sensory perception"-concepts such as telepathy and sixth sense-and finally "human evolution." Zuckerman explains his reasoning:

We then move right off the register of objective truth into those fields of presumed biological science, like extrasensory perception or the interpretation of man's fossil history, where to the faithful [evolutionist] anything is possible - and where the ardent believer [in evolution] is sometimes able to believe several contradictory things at the same time.²⁶⁴

The tale of human evolution boils down to nothing but the prejudiced interpretations of some fossils unearthed by certain people, who blindly adhere to their theory.

Darwinian Formula!

Besides all the technical evidence we have dealt with so far, let us now for once, examine what kind of a superstition the evolutionists have with an example so simple as to be understood even by children:

The theory of evolution asserts that life is formed by chance. According to this claim, lifeless and unconscious atoms came together to form the cell and then they some-

how formed other living things, including man. Let us think about that. When we bring together the elements that are the building-blocks of life such as carbon, phosphorus, nitrogen and potassium, only a heap is formed. No matter what treatments it undergoes, this atomic heap cannot form even a single living being. If you like, let us formulate an "experiment" on this subject and let us examine on the behalf of evolutionists what they really claim without pronouncing loudly under the name "Darwinian formula":

Let evolutionists put plenty of materials present in the composition of living things such as phosphorus, nitrogen, carbon, oxygen, iron, and magnesium into big barrels. Moreover, let them add in these barrels any material that does not exist under normal conditions, but they think as necessary. Let them add in this mixture as many amino acids and as many proteins-a single one of which has a formation probability of 10^{-950} -as they like. Let them expose these mixtures to as much heat and moisture as they like. Let them stir these with whatever technologically developed device they like. Let them put the foremost scientists beside these barrels. Let these experts wait in turn beside these barrels for billions, and even trillions of years. Let them be free to use all kinds of conditions they believe to be necessary for a human's formation. No matter what they do, they cannot produce from these barrels a human, say a professor that examines his cell structure under the electron microscope. They cannot produce giraffes, lions, bees, canaries, horses, dolphins, roses, orchids, lilies, carnations, bananas, oranges, apples, dates, tomatoes, melons, watermelons, figs, olives, grapes, peaches, peafowls, pheasants, multicoloured butterflies, or millions of other living beings such as these. Indeed, they could not obtain even a single cell of any one of them.

Briefly, unconscious atoms cannot form the cell by coming together. They cannot take a new decision and divide this cell into two, then take other decisions and create the professors who first invent the electron microscope and then examine their own cell structure under that microscope. Matter is an unconscious, lifeless heap, and it comes to life with Allah's superior creation.

The theory of evolution, which claims the opposite, is a total fallacy completely contrary to reason. Thinking even a little bit on the claims of evolutionists discloses this reality, just as in the above example.

Technology in the Eye and the Ear

Another subject that remains unanswered by evolutionary theory is the excellent quality of perception in the eye and the ear.

Before passing on to the subject of the eye, let us briefly answer the question of how we see. Light rays coming from an object fall oppositely on the eye's retina. Here, these light rays are transmitted into electric signals by cells and reach a tiny spot at the back of the brain, the "center of vision." These electric signals are perceived in this center as an image after a series of processes. With this technical background, let us do some thinking.

The brain is insulated from light. That means that its inside is completely dark, and that no light reaches the place where it is located. Thus, the "center of vision" is never touched by light and may even be the darkest place you have ever known. However, you observe a luminous, bright world in this pitch darkness.

The image formed in the eye is so sharp and distinct that even the technology of the twentieth century has not been able to attain it. For instance, look at the book you are reading, your hands with which you are holding it, and then lift your head and look around you. Have you ever seen such a sharp and distinct image as this one at any other place? Even the most developed television screen produced by the greatest television producer in the world cannot provide such a sharp image for you. This is a three-dimensional, colored, and extremely sharp image. For more than 100 years, thousands of engineers have been trying to achieve this sharpness. Factories, huge premises were established, much research has been done, plans and designs have been made for this purpose. Again, look at a TV screen and the book you hold in your hands. You will see that there is a big difference in sharpness and distinction. Moreover, the TV screen shows you a two-dimensional image, whereas with your eyes, you watch a three-dimensional perspective with depth.

For many years, tens of thousands of engineers have tried to make a three-dimensional TV and achieve the vision quality of the eye. Yes, they have made a three-dimensional television system, but it is not possible to watch it without putting on special 3-D glasses; moreover, it is only an artificial three-dimension. The background is more blurred, the foreground appears like a paper setting. Never has it been possible to produce a sharp and distinct vision like that of the eye. In both the camera and the television, there is a loss of image quality.

Evolutionists claim that the mechanism producing this sharp and distinct image has been formed by chance. Now, if somebody told you that the television in your room was formed as a result of chance, that all of its atoms just happened to come together and make up this device that produces an image, what would you think? How can atoms do what thousands of people cannot?

If a device producing a more primitive image than the eye could not have been formed by chance, then it is very evident that the eye and the image seen by the eye could not have been formed by chance. The same situation applies to the ear. The outer ear picks up the available sounds by the auricle and directs them to the middle ear, the middle ear transmits the sound vibrations by intensifying them, and the inner ear sends these vibrations to the brain by translating them into electric signals. Just as with the eye, the act of hearing finalizes in the center of hearing in the brain.

The situation in the eye is also true for the ear. That is, the brain is insulated from sound just as it is from light. It does not let any sound in. Therefore, no matter how noisy is the outside, the inside of the brain is completely silent. Nevertheless, the sharpest sounds are perceived in the brain. In your completely silent brain, you listen to symphonies, and hear all of the noises in a crowded place. However, were the sound level in your

brain measured by a precise device at that moment, complete silence would be found to be prevailing there.

As is the case with imagery, decades of effort have been spent in trying to generate and reproduce sound that is faithful to the original. The results of these efforts are sound recorders, high-fidelity systems, and systems for sensing sound. Despite all of this technology and the thousands of engineers and experts who have been working on this endeavor, no sound has yet been obtained that has the same sharpness and clarity as the sound perceived by the ear. Think of the highest-quality hi-fi systems produced by the largest company in the music industry. Even in these devices, when sound is recorded some of it is lost; or when you turn on a hi-fi you always hear a hissing sound before the music starts. However, the sounds that are the products of the human body's technology are extremely sharp and clear. A human ear never perceives a sound accompanied by a hissing sound or with atmospherics as does a hi-fi; rather, it perceives sound exactly as it is, sharp and clear. This is the way it has been since the creation of man.

So far, no man-made visual or recording apparatus has been as sensitive and successful in perceiving sensory data as are the eye and the ear. However, as far as seeing and hearing are concerned, a far greater truth lies beyond all this.

To Whom Does the Consciousness that Sees and Hears within the Brain Belong?

Who watches an alluring world in the brain, listens to symphonies and the twittering of birds, and smells the rose?

The stimulations coming from a person's eyes, ears, and nose travel to the brain as electro-chemical nerve impulses. In biology, physiology, and biochemistry books, you can find many details about how this image forms in the brain. However, you will never come across the most important fact: Who perceives these electro-chemical nerve impulses as images, sounds, odors, and sensory events in the brain? There is a consciousness in the brain that perceives all this without feeling any need for an eye, an ear, and a nose. To whom does this consciousness belong? Of course it does not belong to the nerves, the fat layer, and neurons comprising the brain. This is why Darwinist-materialists, who believe that everything is comprised of matter, cannot answer these questions.

For this consciousness is the spirit created by Allah, which needs neither the eye to watch the images nor the ear to hear the sounds. Furthermore, it does not need the brain to think.

Everyone who reads this explicit and scientific fact should ponder on Almighty Allah, and fear and seek refuge in Him, for He squeezes the entire universe in a pitch-dark place of a few cubic centimeters in a three-dimensional, colored, shadowy, and luminous form.

A Materialist Faith

The information we have presented so far shows us that the theory of evolution is incompatible with scientific findings. The theory's claim regarding the origin of life is inconsistent with science, the evolutionary mechanisms it proposes have no evolutionary power, and fossils demonstrate that the required intermediate forms have never existed. So, it certainly follows that the theory of evolution should be pushed aside as an unscientific idea. This is how many ideas, such as the Earth-centered universe model, have been taken out of the agenda of science throughout history.

However, the theory of evolution is kept on the agenda of science. Some people even try to represent criticisms directed against it as an "attack on science." Why?

The reason is that this theory is an indispensable dogmatic belief for some circles. These circles are blindly devoted to materialist philosophy and adopt Darwinism because it is the only materialist explanation that can be put forward to explain the workings of nature.

Interestingly enough, they also confess this fact from time to time. A well-known geneticist and an outspoken evolutionist, Richard C. Lewontin from Harvard University, confesses that he is "first and foremost a materialist and then a scientist":

It is not that the methods and institutions of science somehow compel us accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, so we cannot allow a Divine [intervention]...²⁶⁵

These are explicit statements that Darwinism is a dogma kept alive just for the sake of adherence to materialism. This dogma maintains that there is no being save matter. Therefore, it argues that inanimate, unconscious matter created life. It insists that millions of different living species (e.g., birds, fish, giraffes, tigers, insects, trees, flowers, whales, and human beings) originated as a result of the interactions between matter such as pouring rain, lightning flashes, and so on, out of inanimate matter. This is a precept contrary both to reason and science. Yet Darwinists continue to defend it just so as "not to allow a Divine intervention."

Anyone who does not look at the origin of living beings with a materialist prejudice will see this evident truth: All living beings are works of a Creator, Who is All-Powerful, All-Wise, and All-Knowing. This Creator is Allah, Who created the whole universe from non-existence, designed it in the most perfect form, and fashioned all living beings.

The Theory of Evolution: The Most Potent Spell in the World

Anyone free of prejudice and the influence of any particular ideology, who uses only his or her reason and logic, will clearly understand that belief in the theory of evolution,

which brings to mind the superstitions of societies with no knowledge of science or civilization, is quite impossible.

As explained above, those who believe in the theory of evolution think that a few atoms and molecules thrown into a huge vat could produce thinking, reasoning professors and university students; such scientists as Einstein and Galileo; such artists as Humphrey Bogart, Frank Sinatra and Luciano Pavarotti; as well as antelopes, lemon trees, and carnations. Moreover, as the scientists and professors who believe in this nonsense are educated people, it is quite justifiable to speak of this theory as "the most potent spell in history." Never before has any other belief or idea so taken away peoples' powers of reason, refused to allow them to think intelligently and logically, and hidden the truth from them as if they had been blindfolded. This is an even worse and unbelievable blindness than the totem worship in some parts of Africa, the people of Saba worshipping the Sun, the tribe of Prophet Ibrahim (as) worshipping idols they had made with their own hands, or the people of Prophet Musa (as) worshipping the Golden Calf.

In fact, Allah has pointed to this lack of reason in the Qur'an. In many verses, He reveals that some peoples' minds will be closed and that they will be powerless to see the truth. Some of these verses are as follows:

As for those who do not believe, it makes no difference to them whether you warn them or do not warn them, they will not believe. Allah has sealed up their hearts and hearing and over their eyes is a blindfold. They will have a terrible punishment. (Surat al-Baqara, 6-7)

... They have hearts with which they do not understand. They have eyes with which they do not see. They have ears with which they do not hear. Such people are like cattle. No, they are even further astray! They are the unaware. (Surat al-A'raf, 179)

Even if We opened up to them a door into heaven, and they spent the day ascending through it, they would only say: "Our eyesight is befuddled! Or rather we have been put under a spell!" (Surat al-Hijr, 14-15)

Words cannot express just how astonishing it is that this spell should hold such a wide community in thrall, keep people from the truth, and not be broken for 150 years. It is understandable that one or a few people might believe in impossible scenarios and claims full of stupidity and illogicality. However, "magic" is the only possible explanation for people from all over the world believing that unconscious and lifeless atoms suddenly decided to come together and form a universe that functions with a flawless system of organization, discipline, reason, and consciousness; a planet named Earth with all of its features so perfectly suited to life; and living things full of countless complex systems.

In fact, the Qur'an relates the incident of Prophet Musa (as) and Pharaoh to show that some people who support atheistic philosophies actually influence others by magic. When Pharaoh was told about the true religion, he told Prophet Musa (as) to meet with his own magicians. When Musa (as) did so, he told them to demonstrate their abilities first. The verses continue:

He said: "You throw." And when they threw, they cast a spell on the people's eyes and caused them to feel great fear of them. They produced an extremely powerful magic. (Surat al-A'raf, 116)

As we have seen, Pharaoh's magicians were able to deceive everyone, apart from Musa (as) and those who believed in him. However, his evidence broke the spell, or "swallowed up what they had forged," as the verse puts it:

We revealed to Musa: "Throw down your staff." And it immediately swallowed up what they had forged. So the Truth took place and what they did was shown to be false. (Surat al-A'raf, 117-8)

As we can see, when people realized that a spell had been cast upon them and that what they saw was just an illusion, Pharaoh's magicians lost all credibility. In the present day too, unless those who, under the influence of a similar spell, believe in these ridiculous claims under their scientific disguise and spend their lives defending them, abandon their superstitious beliefs, they also will be humiliated when the full truth emerges and the spell is broken. In fact, world-renowned British writer and philosopher Malcolm Muggeridge, who was an atheist defending evolution for some 60 years, but who subsequently realized the truth, reveals the position in which the theory of evolution would find itself in the near future in these terms:

I myself am convinced that the theory of evolution, especially the extent to which it's been applied, will be one of the great jokes in the history books in the future. Posterity will marvel that so very flimsy and dubious an hypothesis could be accepted with the incredible credulity that it has.²⁶⁶

That future is not far off: On the contrary, people will soon see that "chance" is not a deity, and will look back on the theory of evolution as the worst deceit and the most terrible spell in the world. That spell is already rapidly beginning to be lifted from the shoulders of people all over the world. Many people who see its true face are wondering with amazement how they could ever have been taken in by it.

WHO SEES?

From the moment a person is born, he becomes subject to the steady indoctrination of the society. Part of this indoctrination, possibly the most persuasive, holds that reality is

what the hands can touch and the eyes can see. This understanding, which is quite influential in the majority of the society, is carried without question from one generation to another.

But without being subjected to any indoctrination, a moment of objective thought would make one realize an astonishing fact:

Everything we confront from the moment we come into existence-human beings, animals, flowers, their colors, odors, fruits, tastes of fruits, planets, stars, mountains, stones, buildings, space-are perceptions presented to us by our five senses. To further clarify this, it will help to examine the senses, the agents that provide us with information about the exterior world.

All of man's sensory faculties-sight, hearing, smell, taste and touch-function in the same way. Stimuli (lights, sounds, smells, tastes, textures) from objects in the external world are carried through nerves to the sensory centers in the brain. All these stimuli that reach the brain consist of electric signals. For example, during the process of vision, light rays (or photons) radiating from sources in the exterior world reach the retina at the back of the eye and, through a series of processes, are transformed into electric signals. These signals are transferred along nerves to the brain's vision center. There, a colorful, bright and three-dimensional world is perceived within the space of a few cubic centimeters.

The same system applies to other senses as well. Cells on the surface of the tongue transform chemical traces into electric signals that become tastes. Odors are transformed into electric signals by cells in the epithelium of the nose. Special sensors lodged beneath the skin transform impulses of touch (such as the sensations of hardness or softness) into electric signals, and a special mechanism in the ear does the same with sound. All these signals are sent to appropriate centers in the brain, where they are perceived.

To clarify the point, assume that you're drinking a glass of lemonade. The hard, cool surface of the glass you're holding is transformed into electric signals by special receptors under your skin and sent to the brain. Simultaneously, the smell of the lemonade, its taste, and yellowish color all become signals that reach the brain. Likewise, the clink you hear when the glass touches the table is perceived by the ear and transmitted to the brain as an electric signal. All these perceptions are interpreted in the brain's relevant centers, which work harmoniously with one another. As a cumulative result of these impulses, you sense that you are drinking a glass of lemonade.

Concerning this important fact, consider the thoughts of B. Russell and L. J. J. Wittgenstein, two famous philosophers:

For instance, whether a lemon truly exists or not and how it came to exist cannot be questioned and investigated. A lemon consists merely of a taste sensed by the tongue, an odor sensed by the nose, a color and shape sensed by the eye; and only these features of it can be subject to examination and assessment. Science can never know the physical world.²⁶⁷

In other words, it is impossible for us to reach the physical world. All objects we're in contact with are actually collection of perceptions such as sight, hearing, and touch. Throughout our lives, while processing the data in the sensory centers, we confront not the "originals" of the matter existing outside us, but rather copies inside our brain. At this point, we are misled to assume that these copies are instances of real matter outside us.

This obvious fact has been proven by science today. Any scientist would tell you how this system works, and that the world we live in is really an aggregate of perceptions formed in our brains. The English physicist John Gribbin states that our senses are an interpretation of stimulations coming from the external world-as if there were a tree in the garden. He goes on to say that our brain perceives the stimulations that are filtered through our senses, and that the tree is only a stimulation. So, he then asks, which tree is real? The one formed by our senses, or the tree in the garden?²⁶⁸

No doubt, this reality requires profound reflection. As a result of these physical facts, we come to the following indisputable conclusion: Everything we see, touch, hear, and call "matter," "the world" or "the universe" is nothing more than electrical signals interpreted in our brain. We can never reach the original of the matter outside our brain. We merely taste, hear and see an image of the external world formed in our brain.

In fact, someone eating an apple confronts not the actual fruit, but its perceptions in the brain. What that person considers to be an apple actually consists of his brain's perception of the electrical information concerning the fruit's shape, taste, smell, and texture. If the optic nerve to the brain were suddenly severed, the image of the fruit would instantly disappear. Any disconnection in the olfactory nerve traveling from receptors in the nose to the brain would interrupt the sense of smell completely. Simply put, that apple is nothing but the interpretation of electrical signals by the brain.

Also consider the sense of distance. The empty space between you and this page is only a sense of emptiness formed in your brain. Objects that appear distant in your view also exist in the brain. For instance, someone watching the stars at night assumes that they are millions of light-years away, yet the stars are within himself, in his vision center. While you read these lines, actually you are not inside the room you assume you're in; on the contrary, the room is inside you. Perceiving your body makes you think that you're inside it. However, your body, too, is a set of images formed inside your brain.

Millions of Colors in a Pitch-Black Location

Considering this subject in greater detail reveals some even more extraordinary truths. Our sense centers are located in the brain, a three-pound piece of tissue. And this organ is protected inside an array of bones called the skull, which neither light, nor sound, nor odors can penetrate. The inside of the skull is a dark, silent place where all smells are absent.

But in this place of complete darkness occur millions of color shades and sound tones, as well countless different tastes and smells.

So how does this happen?

What makes you perceive light in a location without light, odors in a place without smell, sounds in total silence and the objects of all other senses? Who created all of this for you?

In every moment of your life, a variety of miracles take place. As mentioned earlier, anything your senses can detect in this room you're in, are sent as electrical signals to your brain, where they then combine. Your brain interprets them as a view of a room. Put another way, while you assume that you are sitting in this room, that room is actually inside you, in your brain. The "place" where the room is assembled and perceived is small, dark, and soundless. And yet a whole room or a whole landscape, regardless of its size, can fit into it. Both a narrow closet and a wide vista of the sea are perceived in the exact same place.

Our brains interpret and attribute meaning to the signals relating to the "external world." As an example, consider the sense of hearing. It's our brain that in fact interprets and transforms the sound waves into a symphony. That is to say, music is yet another perception created by our brain. In the same manner, when we perceive colors, what reaches our eyes is merely light of different wavelengths. Again, it's our brain that transforms these signals into colors. There are no colors in the "external world"; neither is an apple red, nor the sky blue, nor the leaves green. They appear as they do simply because we perceive them to be so.

Even a slight defect in the eye's retina can cause color blindness. Some sufferers perceive blue and green as the same, some red as blue. At this point, it does not matter whether or not the outside object is colored.

The prominent thinker George Berkeley also addresses this fact:

At the beginning, it was believed that colors, odors, etc., "really exist," but subsequently such views were renounced, and it was seen that they only exist in dependence on our sensations.²⁶⁹

In conclusion, the reason we see objects in colors is not because they are actually colored or have a material existence in the outer world. The truth, rather, is that the qualities we ascribe to objects are all inside us.

And this, perhaps, is a truth you have never considered before.

Mankind's Limited Knowledge

One implication of the facts described so far is that actually, man's knowledge of the external world is exceedingly limited.

That knowledge is limited to our five senses, and there is no proof that the world we perceive by means of those senses is identical to the "real" world.

It may, therefore, be very different from what we perceive. There may be a great many dimensions and other beings of which we remain unaware. Even if we reach the furthest extremities of the universe, our knowledge will always remain limited.

Almighty Allah, the Creator of all, has complete and flawless knowledge of all beings who, having been created by Allah, can possess only the knowledge that He allows them. This fact is related in the Qur'an thus:

Allah, there is no deity but Him, the Living, the Self-Sustaining. He is not subject to drowsiness or sleep. Everything in the heavens and the earth belongs to Him. Who can intercede with Him except by His permission? He knows what is before them and what is behind them but they cannot grasp any of His knowledge save what He wills. His Footstool encompasses the heavens and the Earth and their preservation does not tire Him. He is the Most High, the Magnificent. (Surat al-Baqara: 255)

Who Is the Perceiver?

In order to perceive, no external world is necessary. Given the right kind of stimulation to the brain, sensations of touch, sight, and sounds, can be recreated in the brain. The best example of this process is dreams.

During dreams, your body typically remains still and motionless in a dark and quiet bedroom, and your eyes remain shut. Neither light nor sound nor any other stimuli from the exterior world is reaching your brain for it to perceive. Yet in your dreams, you still perceive experiences very similar to real life. In your dreams you also get up and go to work, or go on vacation and enjoy the warmth of the sun.

Furthermore, in dreams you never feel doubts about the reality of what you experience. Only after you wake up you realize your experiences were only dreams. You not only experience such feelings as fear, anxiety, joy and sadness but also see different images, hear sounds and feel matter. Yet there is no physical source producing these sensations and perceptions; you lie motionless inside a dark and quiet room.

René Descartes, the renowned philosopher, offered the following reasoning on this surprising truth about dreams:

In my dreams I see that I do various things, I go to many places; when I wake up, however, I see that I have not done anything or gone anywhere and that I lie peacefully in my bed. Who can guarantee to me that I do not also dream at the present time, further, that my whole life is not a dream?²⁷⁰

We are therefore looking at a manifest truth: There is no justification for our claiming that we establish direct contact with the original of the world that we claim to exist and to be living in.

Is Our Brain Distinct from the Outside World?

If everything we know as the outside world is only perceptions produced internally, what about the brain which we think does the seeing and hearing? Isn't it composed of atoms and molecules like everything else? The brain, too, is a piece of tissue that we per-

ceive through our senses. This being so, what is it, if not the brain, that perceives everything—that sees, hears, touches, smells and tastes?

At this point, we face the obvious fact: that man, a being of consciousness who can see, feel, think and exercise reason, is much more than a mere assemblage of atoms and molecules. What defines a human being is the "soul" granted to him by Allah. Otherwise, it would be highly unreasonable to attribute his consciousness and other faculties to a three-pound piece of flesh:

He Who has created all things in the best possible way. He commenced the creation of man from clay; then produced his seed from an extract of base fluid; then formed him and breathed His Spirit into him and gave you hearing, sight and hearts. What little thanks you show! (Surat as-Sajda 7-9)

The Being Nearest to Us Is Allah

Since a human being is not merely a lump of matter but a "soul," then who makes that soul feel the sum of perceptions which we call the external world? Who continues to create all these perceptions, ceaselessly?

The answer is obvious. Allah, Who breathed into man His spirit, is the Creator of all things. He is also the real source of all perceptions. The existence of anything is possible only through Allah's creation. Allah informs us that He creates continuously and that whenever He stops creating, everything will disappear:

Allah keeps a firm hold on the heavens and the Earth, preventing them from vanishing away. And if they vanished no one could then keep hold of them. Certainly He is Most Forbearing, Ever-Forgiving. (Surah Fatir: 41)

This verse is describing how the material universe is maintained under the might of Allah. Allah created the universe, the Earth, mountains, and all living and non-living things, and maintains all these under His power at every moment. Allah manifests His name al-Khaliq in this material universe. Allah is *al-Khaliq*, in other words, the Creator of all things, the Creator from nothing. This shows that there is a material universe, outside our brains, consisting of entities created by Allah. However, as a miracle and manifestation of the superior nature of His creation and His omniscience, Allah shows us this material universe in the form of an "illusion," "shadow," or "image." As a consequence of the perfection in His creation, human beings can never reach the world outside their brains. Only Allah knows this real material universe.

Another interpretation of the above verse is that Allah constantly maintains the images of the material universe that people see. (Allah knows the truth.) If Allah wished not to show us the image of the world in our minds, the entire universe would disappear for us, and we could never again make contact with it.

Faced with such facts, one must conclude that the only absolute being is Allah, Who encompasses everything in the heavens and the Earth:

What! Are they in doubt about the meeting with their Lord? What! Does He not encompass all things! (Surah Fussilat: 54)

Both East and West belong to Allah, so wherever you turn, the Face of Allah is there. Allah is All-Encompassing, All-Knowing. (Surat al-Baqara: 115)

What is in the heavens and in the Earth belongs to Allah. Allah encompasses all things. (Surat an-Nisa': 126)

When We said to you, "Surely your Lord encompasses the people with His knowledge"... (Surat al-Isra': 60)

... His Footstool encompasses the heavens and the Earth and their preservation does not tire Him. He is the Most High, the Magnificent. (Surat al-Baqara: 255)

Allah's knowledge and ability surrounds us from the front and back, from right and left-that is to say, He encompasses us completely. He observes us everywhere, at every moment. He holds absolute control over us, from inside and outside. He, the Owner of infinite might, is closer to all of us than our own jugular veins.

Conclusion

It is of the utmost importance to understand correctly the secret beyond matter explained in this chapter. Mountains, plains, flowers, people, seas--briefly everything we see and everything that Allah informs us in the Qur'an that exists and that He created out of nothing is created and does indeed exist. However, people cannot see, feel or hear the real nature of these beings through their sense organs. What they see and feel are only their copies that appear in their brains. This is a scientific fact taught at all schools of medicine. The same applies to the book you are reading now; you can not see nor touch the real nature of it. The light coming from the original book is converted by some cells in your eyes into electrical signals, which are then conveyed to the visual center in the back of your brain. This is where the view of this book is created. In other words, you are not reading a book which is before your eyes through your eyes; in fact, this book is created in the visual center in the back of your brain. The book you are reading right now is a "copy of the book" within your brain. The original book is seen by Allah.

It should be remembered, however, that the fact that the matter is an illusion formed in our brains does not "reject" the matter, but provides us information about the real nature of the matter: that no person can have connection with its original. Moreover, the

matter outside is seen not just by us, but by other beings too. The angels Allah delegated to be watchers witness this world as well:

And the two recording angels are recording, sitting on the right and on the left. He does not utter a single word, without a watcher by him, pen in hand! (Surah Qaf: 17-18)

Most importantly, Allah sees everything. He created this world with all its details and sees it in all its states. As He informs us in the Qur'an:

... Heed Allah and know that Allah sees what you do. (Surat al-Baqara: 233)

Say: "Allah is a sufficient witness between me and you. He is certainly aware of and sees His servants." (Surat al-Isra': 96)

It must not be forgotten that Allah keeps the records of everything in the book called *Lawh Mahfuz* (Preserved Tablet). Even if we don't see all things, they are in the *Lawh Mahfuz*. Allah reveals that He keeps everything's record in the "Mother of the Book" called *Lawh Mahfuz* with the following verses:

It is in the Source Book with Us, high-exalted, full of wisdom. (Qur'an, 43: 4)

... We possess an all-preserving Book. (Surah Qaf: 4)

Certainly there is no hidden thing in either heaven or Earth which is not in a Clear Book. (Surat an-Naml: 75)

GLOSSARY

Adenine: A type of base of the *purine* group that contributes to the structure of DNA and RNA.

Amino acid: The building block of *proteins*. A large number of amino acids give rise to proteins by binding with *peptide bonds*.

Anti-codon: A sequence of three nucleotides in a transfer RNA molecule. Completes bases in the *codon* and is compatible with the *amino acids* transported by transfer RNA.

Apoptosis: Programmed cell death and represents DNA breakdown.

Acid: A chemical substance releasing a hydrogen ion.

ATP: Energy packets resulting from chemical energy obtained from nutrients being converted into a form capable of being used by the cell.

Autosome: A *chromosome* with no role in the determination of gender.

Base: One of the four chemical building block of DNA, known as *adenine*, *cytosine*, *guanine* and *thymine*.

Biotechnology: The general name for biological techniques, especially those dealing with *DNA* and the cell.

Catalytic effect: The effect of a substance that permits a reaction to take place or accelerates it without undergoing any change itself.

Centromere: Region that divides the *chromosome* into two arms and facilitates the determination of *gene* location.

Clones: Living things that are genetically identical.

Cloning: Making an exact copy of a living thing.

Codon: Triple base groups, each corresponding to an *amino acid* on *messenger RNA*.

Covalent bond: A form of tight bond that represents the backbone of the *DNA* molecule and binds carbon atoms together.

Chromatid: One of the *chromosome* pairs bonded to one another with *centromeres* during *mitosis* or *meiosis*.

Chromosome: *DNA* found in the cell *nucleus*, containing all information permitting the cell to make an exact copy of itself.

Cytoplasm: A living fluid that fills the space between the cell membrane and the *nucleus*. It contains specialized structures known as *organelles* that assume various different tasks.

Cytosine: A type of base that matches with *guanine* and is found in the structure of DNA and RNA.

DNA (deoxyribonucleic acid): A molecule with a double helix form that contains genetic information and is found in the cell *nucleus*.

Exon: A gene region in messenger RNA.

Embryo: The first state of the living thing that develops after the fertilization of the egg.

Enzyme: Proteins produced inside the cell that initiate and accelerate vital functions.

Ester bond: A powerful type of bond that joins *sugar* and *phosphate* groups together in the DNA molecule.

Eukaryotic cell: A cell with a *nucleus* and *organelles* surrounded by a membrane. Eukaryotic cells constitute the tissues of plants and animals.

Fetus: The developing entity in the mother's womb, from the third month of pregnancy until birth.

Gene: A component in the DNA molecule bearing any of the organism's inherited characteristics.

Gene expression: The emergence of a *protein* by using inherited information; the sum total of transcription and translation events.

Gene mapping: The determination of the position of *genes* in a DNA molecule. Such mapping establishes the relative location of genes and what lies between them.

Gene pool: The limits of variation of genetic information within a given living species.

Gene regulation: The switching on and off of genes that permit cells to perform different functions.

Gene therapy: The implantation of healthy DNA directly into diseased cells to cure inherited disorders.

Genetics: The branch of science that studies inherited characteristics.

Genetic code: The nucleotides found in triple groups all along messenger RNA and which determine the sequences of the amino acids manufactured during protein synthesis.

Genome: The total of the genetic codes in an organism's chromosomes.

Genome project: Research aimed towards determining and mapping the sequence of the genetic codes in human beings or other living things.

Genotype: All of an individual's inherited characteristics.

Guanine: A purine base contributing to the structure of DNA and RNA.

Helicase: The enzyme that opens up the DNA helix like a zipper during DNA copying.

Hydrogen bond: An extremely weak type of bond that is easily separated and that binds together nucleotides in DNA.

Histone: Proteins that surround the DNA helix in the cell nucleus.

Intron: Sections of genes that do not encode proteins.

Ligase: An enzyme that enables a molecule to be broken down or which distances a group from a molecule.

Meiosis: The form of cell division that occurs in reproductive cells, permitting diversity in living things and their acquisition of different characteristics.

Messenger RNA (mRNA): The molecule that carries the genetic information coded on DNA to the protein synthesis molecule.

Micron: One-thousandth of a millimeter (1 micron = 1/1000 mm).

Mitochondria: The cell's power plant.

Mitosis: The form of cell division that enables one single cell to divide and become two new cells with the same characteristics, thus enabling the body's cells to multiply during growth and development.

Molecule: A structure consisting of two or more atoms.

Monomer: The repetition of the same structure in a chemical molecule.

Morphogenesis: Differentiation of a cell whose protein is manufactured.

Mutant: A living thing with a change (mutation) in its DNA.

Mutation: Breakages and changes of location arising in the DNA molecule that carries genetic information as a result of radiation or chemical effects. These lead to permanent diseases in living things by damaging the nucleotides that comprise DNA, or by changing their places.

Nuclease: The general name for the enzyme group that divides and severs nucleic acids.

Nucleic acid: Compounds with a complex structure made up of combinations of nucleotides found in the cell nucleus.

Nucleotide: The basic structural units of nucleic acids (DNA and RNA). A single DNA strip made up of two sugar, one purine and one pyrimidine base.

Nucleoside: A nucleotide not bonded to phosphate.

Nucleosome: DNA strip packaged around the histone proteins in the chromosome.

Nucleus: That part of the cell containing genetic materials.

Organelle: Structure specialized in order to perform a specific task inside the cell and surrounded by a membrane, such as the nucleus, mitochondria and chloroplasts.

pH: The value showing the acidity or alkalinity level of a liquid.

Phenotype: The observable physical or biochemical characteristics of an organism, as determined by both genetic makeup and environmental influences.

Polymer: A chemical structure made up of different molecules.

Polymerase: An enzyme that facilitates and accelerates the formation of a DNA or RNA molecule.

Polypeptide: Part of the amino acid chains in the structure of the protein molecule.

Prebiotic period: The period before living things, before life emerged on Earth.

Prokaryotic cell: Cell surrounded by a membrane, but lacking organelles and a nucleus; organisms in the Monera Kingdom, which includes bacteria and algae.

Proteins: Basic molecules containing elements such as carbon, hydrogen, oxygen and nitrogen in their structures. These building blocks permit the formation of cells, tissues and organs and consist of amino acids attached by peptide bonds.

Purine: A nitrogen-containing compound with a complex structure.

Pyrimidine: An organic compound constituting the main element of certain bases (cytosine, thymine, guanine) necessary for the synthesis of DNA and RNA.

Recombinant DNA: The structure emerging from the combination of DNA molecules obtained from different organisms.

Recombination: The combination of existing genes in such a way as to give rise to new genotypes.

Replication: DNA self-matching; the formation of a copy of genetic information in the DNA molecule for transmission to subsequent generations.

Ribosomes: Places where proteins are synthesized in the cell.

Ribosomal RNA (rRNA): A molecule that accelerates protein synthesis by joining the structure of the ribosomes.

RNA (ribonucleic acid): A molecule with a chemical little different from that of DNA, found in cellular fluid and the nucleus. It plays a most important role in chemical activities inside the cell, especially in protein synthesis.

Spliceosome: An enzyme that splices and removes those parts that do not encode proteins in messenger RNA.

Thymine: A pyrimidine base found in the structure of DNA, but not in RNA.

Topoisomerase: An enzyme that permits DNA to unravel and stretch out by separating one strip of the DNA helix.

Transcription: RNA synthesis, the transmission of genetic information in the DNA strip to messenger RNA.

Transfer RNA (tRNA): A molecule also known as transporter RNA (tRNA) responsible for carrying amino acids to the ribosome during protein synthesis.

Translation: The process by which genetic information copied to RNA is read and turned into a protein molecule.

Uracil: A base found only in the chemical structure of RNA.

Variation: Differences observed in specific characters depending on basic species type.

Zygote: Fertilized egg cell.

NOTES

1. [http://quotes.prolix.nu/Authors/? Albert Einstein](http://quotes.prolix.nu/Authors/?Albert+Einstein)
2. Francis Crick, *Life Itself: Its Origin and Nature*, Simon & Schuster, New York, 1982, p. 88
3. Richard Dawkins, *The Blind Watchmaker*, W. W. Norton & Co. New York, 1996, pp. 2-3, 115-116.
4. [http:// en.wikipedia.org/ wiki /Compact disc](http://en.wikipedia.org/wiki/Compact_disc)
5. Stephen C. Meyer, *DNA and Other Designs, From First Things* 102, April 1, 2000
6. Phillip E. Johnson, *Defeating Darwinism By Opening Minds*, InterVarsity Press, Illionis, 1997, p. 81
7. Gerald L. Schroeder, *The Hidden face of God*, Free press, 2002, p.49
8. Carl Sagan, "Life" in Encyclopedia Britannica: Macropaedia, 1974, pp. 893-894
9. David S. Goodsell, *The Machinery of Life*, Springer-Verlag, New York Inc., 1993, p. 45
10. Werner Gitt, *In the Beginning was Information*, Master Books, 2006, p. 243.
11. Howard Peth, *Blind Faith: Evolution Exposed*, Amazing Facts Inc., USA, 1990, p. 77
12. Werner Gitt, *The Wonder of Man*, Christliche Literatur-Verbreitung e.V., Germany, 1999, p. 76
13. Phillip E. Johnson, *Defeating Darwinism by Opening Minds*, InterVarsity Press, Illionis, 1997, p. 73
14. Walter L. Starkey, *The Cambrian Explosion*, WLS Publishing, Ohio, 1999, p. 155
15. Michael J. Denton, *Nature's Destiny*, Free Press, New York, 1998, p. 149
16. Walter L. Starkey, *The Cambrian Explosion*, p. 41.
17. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, The Judaica Press Inc., 1997, p. 213
18. *The Incredible Machine*, National Geographic Society, Washington DC., 1986, p. 43
19. Walter L. Starkey, *The Cambrian Explosion*, p.41
20. Ibid.
21. Richard Milton, *Shattering the Myths of Darwinism*, Park Street Press, Rochester, USA, 1997, p. 170.
22. David S. Goodsell, *Our Molecular Nature*, Springer-Verlag, New York, 1996, p. 39
23. Ibid. p.15
24. Gerald L. Schroeder, *The Hidden Face of God*, p.190
25. *The Incredible Machine*, National Geographic Society, p. 15
26. James D. Watson, *The Double Helix*, Touchstone, 2001, p.52-54
27. Michael J. Denton, *Nature's Destiny*, Free Press, New York, 1998, p. 152.
28. Daniel C. Dennett, *Darwin's Dangerous Idea*, Touchstone, New York, 1996, pp. 112-113
29. Werner Gitt, *In the Beginning was Information*, p. 90.

30. <http://genetikbilimi.com/genbilim/dnanedir.html>
31. *The Incredible Machine*, National Geographic Society, p. 43
32. Werner Gitt, *In the Beginning was Information*, p. 96
33. <http://library.thinkquest.org/20465/DNAstruct.html>
34. Michael J. Denton, *Nature's Destiny*, pp. 151,152 (emphasis added)
35. Ibid., p. 153
36. Ibid., p. 406
37. Ibid.
38. John Whitfield, "Physicists Plunder Life's Tool Chest", *Nature*, 24 April 2003
39. Carl Wieland, "The Marvellous 'Message Molecule'", *Creation*, September 1995, Vol. 17, no. 4, pp. 10-13; [New Scientist, 26 November 1994, p. 17.]
40. Werner Gitt, *The Wonder of Man*, p. 75
41. Michael Denton, *Evolution: A Theory in Crisis*, Burnett Books, London, 1985, p. 334; [G. G. Simpson, "The History of Life", *Evolution of Life*, University of Chicago Press, Chicago, 1960, p. 135.]
42. John Whitfield, "Physicists Plunder Life's Tool Chest", *Nature*, 24 April 2003
43. Michael Pitman, *Adam and Evolution*, River Publishing, London, 1984, pp. 26-27
44. <http://www.ntvmsnbc.com/news/13800.asp>
45. Dr. Jerry Bergman, "Divine Engineering: Unraveling DNA's Design", *Koinonia House Online*; <http://www.khouse.org/articles/technical/19971201-143.html>
46. Michael J. Denton, *Nature's Destiny*, pp. 212-213
47. Ibid., p. 154
48. Ibid.
49. Francis S. Collins, "Faith and the Human Genome Project", *Perspectives on Science and Christian Faith*, Vol. 55, no. 3, September 2003, pp. 145-146
50. Michael J. Denton, *Nature's Destiny*, p. 381
51. Ibid., p.154
52. Werner Gitt, *The Wonder of Man*, p. 75
53. Billl Gates, *The Road Ahead*, Penguin, London, 1996, p. 188.
54. Daniel C. Dennett, *Darwin's Dangerous Idea*, Touchstone, New York, 1996, p. 151
55. David S. Goodsell, *The Machinery of Life*, Springer-Verlag, New York Inc., 1993, p. 14
56. Werner Gitt, *The Wonder of Man*, p. 65
57. Ibid.
58. Ibid.
59. Ibid.
60. Carl Wieland, "The Marvellous 'Message Molecule'", *Creation*, September 1995, Vol. 17, no. 4, pp. 10-13.
61. <http://www.ntvmsnbc.com/news/13800.asp>
62. Lee Spetner, *Not By Chance, Shattering the Modern Theory of Evolution*, p. 30

63. Carl Wieland, "The Marvellous 'Message Molecule'", *Creation*, [Jérôme Lejeune, Anthropotes (Revista di studi sulla persona e la famiglia), Istituto Giovanni Paolo II, Rome, 1989, pp. 269-270.]
64. Werner Gitt, *The Wonder of Man*, p. 75
65. Tom Abate, "Human Genome Map Has Scientists Talking About the Divine Surprisingly Low Number of Genes Raises Big Questions", *San Francisco Chronicle*, 19 February 2001.
66. David S. Goodsell, *Our Molecular Nature*, Springer-Verlag, New York, 1996, p. 36
67. Denyse O'Leary, *By Design or By Chance?*, Castle Ovary Books, Canada, 2004, p. 173.
68. A. E. Wilder-Smith, *The Natural Sciences: Know Nothing of Evolution*, T. W. F. T. Publishers, ABD, pp. 78-79.
69. Richard Milton, *Shattering the Myths of Darwinism*, Park Street Press, Rochester, USA, 1997, p. 170.
70. M. Eden, "Inadequacies of Neo-Darwinian Evolution as a Scientific Theory," *Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution*, Wistar Institute Press, Philadelphia, 1967, p. 11
71. A. E. Wilder-Smith, *The Natural Sciences: Know Nothing of Evolution*, p. 97
72. Denyse O'Leary, *By Design or By Chance?*, p. 55
73. Gerald L. Schroeder, *The Hidden Face of God*, p. 189
74. Michael J. Denton, *Nature's Destiny*, p. 172
75. Gerald L. Schroeder, *The Hidden Face of God*, p. 189
76. Ibid., p. 216
77. Albert L. Lehninger, David L. Nelson, Michael M. Cox, *Principles of Biochemistry*, 2nd Edition, Worth Publishers, New York, 1993, p. 892
78. David S. Goodsell, *The Machinery of Life*, p. 45. (emphasis added)
79. Albert L. Lehninger, David L. Nelson, Michael M. Cox, *Principles of Biochemistry* p. 892
80. David S. Goodsell, *The Machinery of Life*, p. 17
81. Michael J. Denton, *Nature's Destiny*, p. 158
82. Ibid., p. 157.
83. Ibid.
84. Ibid., p. 159.
85. Gerald L. Schroeder, *The Hidden Face of God*, pp. 67-68.
86. Michael J. Denton, *Nature's Destiny*, p. 417.
87. Carly P. Haskings, "Advances and Challenges in Science", *American Scientist*, Vol. 59, 1971, p. 298 (emphasis added)
88. L. R. Croft, *How Life Began*, Evangelical Press, England, 1988, p. 37.
89. Werner Gitt, *In the Beginning was Information*, p. 93
90. <http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/D/DNAReplication.html>

91. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, pp. 38-39
92. Gerald L. Schroeder, *The Hidden Face of God*, p. 206
93. <http://en.wikipedia.org/wiki/Enzyme>
94. David S. Goodsell, *Our Molecular Nature*, pp. 40-41
95. Ibid., p.42
96. Ibid. pp.39-40
97. <http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/D/DNArepair.html>
98. Fred Hoyle, Chandra Wickramasinghe, *Evolution from Space*, Simon & Schuster, New York, 1984, s. 148.
99. Phillip E. Johnson, *The Wedge of Truth: Splitting the Foundations of Naturalism*, InterVarsity Press, USA, p. 134.
100. Gerald L. Schroeder, *The Hidden Face of God*, pp. 79-80.
101. A. E. Wilder-Smith, *The Natural Sciences: Know Nothing of Evolution*, T. W. F. T. Publishers, USA, p. 82.
102. Gerald L. Schroeder, *The Hidden Face of God*, p. 49.
103. David S. Goodsell, *Our Molecular Nature*, p. 37.
104. Geraldine Lux Flanagan, *Beginning Life*, Dorling Kindersley, London, 1996, p. 42.
105. Gerald L. Schroeder, *The Hidden Face of God*, p. 112
106. Ibid.
107. Ibid.
108. Nicholas Wade, "How Cells Unwind Tangled Skein of Life", *The New York Times*, October 21, 1997, Tuesday, s. F1.
109. Geraldine Lux Flanagan, *Beginning Life*, p. 43
110. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, p. 234
111. Ali Demirsoy, *Kalıtım ve Evrim (Heritage and Evolution)*, Meteksan Publishing, Ankara, 1984, p.158
112. *The Incredible Machine*, National Geographic Society, p. 29.
113. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, pp. 233-234
114. *The Incredible Machine*, National Geographic Society, p. 15
115. Gerald L. Schroeder, *The Hidden Face of God*, p. 72
116. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, p. 45
117. Michael Denton, *Evolution: A Theory in Crisis*, Adler&Adler, Publishers, Inc. USA, 1986 p. 149.
118. <http://www.genome.gov/11006943>
119. W.-H. Li, D. Graur, *Fundamentals of Molecular Evolution*, Sinauer Associates, Inc., Sunderland, 1991, p. 209
120. Lee Spetner, *Not By Chance, Shattering the Modern Theory of Evolution*, p. 28.

121. Francis S. Collins, "Faith and the Human Genome Project", *Perspectives on Science and Christian Faith*, <http://www.asa3.org/ASA/PSCF/2003/PSCF9-03Collins.pdf>
122. Karen Hopkin, "The Greatest Apes", *New Scientist*, 15 May 1999, no. 2186, p. 26
123. *New Scientist*, Vol. 103, 16 August 1984, p. 19
124. http://en.wikipedia.org/wiki/List_of_number_of_chromosomes_of_various_organisms
125. "Human, Chimps More Different Than Thought", *The Associated Press*, 24 September 2002, <http://lists.ibiblio.org/pipermail/monkeywire/2002-September/000250.html>
126. Andy Coghlan, "Human-chimp DNA Difference Trebled", *New Scientist*, 23 September 2002; <http://www.newscientist.com/news/news.jsp?id=ns99992833>
127. J. C. Venter, et. al., "The Sequence of the Human Genome," *Science*, Vol. 291, 2001, pp. 1304-1351.
128. Wayne Jackson, "Mapping the Human Genome: Does It Prove Evolution?", *Christian Courier*, 1 April 2001; <http://www.christiancourier.com/feature/april2001.htm>
129. Francis S. Collins, "Faith and the Human Genome Project", *Perspectives on Science and Christian Faith*, <http://www.asa3.org/ASA/PSCF/2003/PSCF9-03Collins.pdf> (emphasis added)
130. William D. Stansfield, *The Science of Evolution*, Macmillan, New York, 1983, 8th Edition, pp. 10-11
131. Michael Denton, *Nature's Destiny*, Free Press, 1998, p. 321
132. *Encyclopædia Britannica*, "Modern Materialism"
133. Hubert Yockey, "Information in Bits and Bytes", *BioEssays*, 1995, Vol. 17, p. 85
134. Dean L. Overman, *A Case Against Accident and Self-Organization*, Rowman & Littlefield Publishers, 1997, p. 37.
135. Phillip E. Johnson, *Defeating Darwinism by Opening Minds*, InterVarsity Press, Illionis, 1997, p. 75
136. Werner Gitt, *In the Beginning was Information*, p. 89
137. Phillip E. Johnson, *The Wedge of Truth*, p. 53.
138. Paul Davies, *The Fifth Miracle: The Search for the Origin and Meaning of Life*, Simon & Schuster, 1999, p. 60
139. Michael Polanyi, "Life Transcending Physics and Chemistry", *Chemical & Engineering News*, Vol 45, no. 35, 21 August 1967, p. 56
140. Jacob D. Bekenstein, "Information in the Holographic Universe", *Scientific American*, 14 July 2003, p. 59
141. Pierre P. Grassé, *The Evolution of Living Organisms*, 1977, p. 2
142. Werner Gitt, *In the Beginning was Information*, pp. 47, 107.
143. *Ibid.*, p. 97.
144. George C. Williams, "A Package of Information," in *The Third Culture: Beyond the Scientific Revolution*, ed. J. Brockman, Simon & Schuster, New York, 1996, p. 43.

145. http://www.eurekalert.org/pub_releases/2002-05/uomh-pop051002.php
146. Denyse O'Leary, *By Design or By Chance?*, p. 235
147. Ibid.
148. S. R. Scadding, "Do Vestigial Organs Provide Evidence for Evolution?", *Evolutionary Theory*, Vol. 5, May 1981, p. 175
149. Elizabeth Pennisi, "Does Nonsense DNA Speak Its Own Dialect?", *Science News*, Vol 164 , 10 December 1994
150. Michael J. Denton, *Nature's Destiny*, p. 290; ["Mining Treasures form Junk DNA", *Science*, 4 February 1994; "Hints of a Language in Junk DNA", *Science*, 25 November 1994].
151. Gretchen Vogel, " Objection #2: Why Sequence the Junk?", *Science*, vol. 291, no. 5507, 16 February 2001, p. 1184.
152. Ernst Mayr, *This is Biology, The Science of the Living World*, The Belknap Press of Harvard University Press, 7th edition, USA, 1999, P. 105
153. W. Wayt Gibbs, "The Unseen Genome," *Scientific American*, November 2003, p. 53
154. Ibid.
155. "The Word: Junk DNA", *New Scientist*, 19 November 2005
156. Francis S. Collins, "Faith and the Human Genome Project", *Perspectives on Science and Christian Faith*, p. 147
157. Wojciech Makalowski, "Not Junk After All", *Science*, 23 May 2003, Vol 300, no. 5623, pp. 1246-1247.
158. Paul Nelson, "The Junk Dealer Ain't Selling That No More", 1997; <http://www.arn.org/docs/odesign/od182/ls182.htm#anchor569108>
159. Helen Pearson, "'Junk' DNA reveals vital role: Inscrutable genetic sequences seem indispensable", 7 May 2004; <http://www.bioedonline.org/news/news.cfm?art=956>
160. Ibid.
161. Henry Gee, "Statistical Cloud over African Eden", *Nature*, 13 February 1992, Vol. 355, p. 583.
162. Marcia Barinaga, "'African Eve' Backers Beat a Retreat", *Science*, 7 February 1992, Vol. 255, p. 687.
163. S. Blair Hedges, Sudhir Kumar, Koichiro Tamura, Mark Stoneking, "Human Origins and Analysis of Mitochondrial DNA Sequences", *Science*, 7 February 1992, Vol. 255, pp. 737-739
164. Danny Penman, "Mitochondria Can Be Inherited From Both Parents", *New Scientist*, 23 August 2002; <http://www.newscientist.com/news/news.jsp?id=ns99992716>
165. Eleanor Lawrence, "Fathers Can Be Influential Too", 18 March 1999: <http://www.nature.com/nsu/990318/990318-5.html>
166. P.M. Forster, "To Err is Human", *Annals of Human Genetics*, January 2003, Vol. 67, no. 1. pp. 2-4.

167. Carina Dennis, "Error Reports Threaten to Unravel Databases of Mitochondrial DNA", *Nature*, 20 February 2003, Vol. 421, pp. 773-774
168. Phillip E. Johnson, *Defeating Darwinism by Opening Minds*, p. 69
169. Ibid. pp.69-70.
170. <http://www.arn.org/docs/odesign/od171/l171.htm>
171. Richard Lewontin, "Billions and Billions of Demons", review of "The Demon-Haunted World: Science as a Candle in the Dark" by Carl Sagan, *New York Review*, 9 January 1997, pp. 28-32.
172. Richard Dawkins, *The Extended Phenotype*, W. W. Norton, New York, p. 1.
173. Gerald L. Schroeder, *The Hidden Face of God*, pp. 72-73.
174. Pierre-Paul de Grasse, *Evolution of Living Organisms*, 1977, p. 8
175. L. R. Croft, *How Life Began*, p. 34
176. Leslie E. Orgel, "Darwinism at the Very Beginning of Life", *New Scientist*, Vol. 94, 15 April 1982, p. 151.
177. Gerald L. Schroeder, *The Hidden Face of God*, p.191.
178. Jon Cohen, "Getting All turned Around Over the Origins of Life on Earth", *Science*, vol. 267, 3 March 1995, p. 1265.
179. Klaus Dose, "The Origin of Life: More Questions Than Answers", *InterDisciplinary Science Reviews*, Vol. 13, no. 4, 1988, p. 348
180. John Maddox, "The Genesis Code by Numbers", *Nature*, Vol. 367, 13 January 1994, p. 111
181. Wendell R. Bird, *The Origin of Species Revisited*, Nashville, Thomas Nelson Co., 1991, pp. 302, 303
182. Frank B. Salisbury, "Doubts About The Modern Synthetic Theory of Evolution", *American Biology Teacher*, Vol. 33, September 1971, p. 336
183. I. L. Cohen, *Darwin was Wrong*, 1984, p. 205
184. Paul Auger, *De La Physique Théorique à la Biologie*, 1970, p. 118
185. John W. Oller, "A Theory In Crisis", Institute for Creation Research, Impact no: 180, July 1988
186. Michael Denton, *Evolution: A Theory in Crisis*, p. 351
187. William A. Dembski, James M. Kushiner, *Signs of Intelligence*, Brazoss Press, USA, 2001, p. 109
188. Michael J. Denton, *Nature's Destiny*, p. 293
189. Werner Gitt, *In the Beginning was Information*, p. 106.
190. Douglas R. Hofstadter, Gödel, Escher, Bach: *An Eternal Golden Braid*, Vintage Books, New York, 1980, ps. 548
191. K.R. Popper, 1974, "Scientific Reduction and the Essential Incompleteness of All Science," In F. Ayala and T. Dobzhansky, eds., *Studies in the Philosophy of Biology*, University of California Press, Berkeley, p. 270.

192. Green, David E., Robert F. Goldberger, *Molecular Insights into the Living Process*, Academic Press, New York, 1967, p. 403.
193. Frank B. Salisbury, "Doubts about the Modern Synthetic Theory of Evolution," *American Biology Teacher*, Vol. 73, September 1971, p. 336.
194. John Horgan, "In the Beginning", *Scientific American*, Vol. 264, February 1991, p. 119.
195. Michael J. Denton, *Nature's Destiny*, p. 293.
196. Andrew Scott, "Update on Genesis", *New Scientist*, Vol. 106, 2 May 1985, pp. 31, 32.
197. Homer Jacobson, "Information, Reproduction and the Origin of Life", *American Scientist*, January 1955, p. 125.
198. Ali Demirsoy, *Kalıtım ve Evrim*, p. 39.
199. Leslie E. Orgel, "The Origin of Life on Earth", *Scientific American* Vol, October 1994, p. 78.
200. Caryl P. Haskins, "Advances and Challenges in Science in 1970", *American Scientist*, Vol 59, May-June 1971, p. 305.
201. <http://ibiblio.org/gutenberg/etext00/2llcd10.txt>; [Charles Darwin to J.D. Hooker, Down, 29 March 1863]
202. Leslie E. Orgel, "The Origin of Life on Earth", *Scientific American*, p. 78.
203. Alexander G. Cairns-Smith, "The First Organisms", *Scientific American*, June 1985, Vol. 252, p. 90.
204. Reinhard Junker, Siegfried Scherer, *Entstehung und Geschichte Der Lebewesen*, Weyel Verlag, 1986, p. 89.
205. Duane T. Gish, *Creation Scientists Answer Their Critics*, Institute for Creation Research, USA, 1993, p. 262
206. Ibid., p. 270.
207. Charles B. Thaxton, Walter L. Bradley, Roger L. Olsen, *The Mystery of Life's Origin*, Reassessing Current Theories, Lewis and Stanley, Texas, 2nd edition, 1992, p. 57.
208. Duane T. Gish, *Creation Scientists Answer Their Critics*, Institute for Creation Research, 1993, USA, P. 270
209. Charles B. Thaxton, Walter L. Bradley, Roger L. Olsen, *The Mystery of Life's Origin*, p. 103.
210. Duane T. Gish, *Creation Scientists Answer Their Critics*, p. 275.
211. Nicholas Wade, "Life's Origins Get Murkier and Messier; Genetic Analysis Yields Intimations of a Primordial Commune", *New York Times*, 13 June 2000
212. Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, The Free Press, New York, 1996, pp. 172-173.
213. Werner Gitt, *In the Beginning was Information*
214. Peter Radetsky, "The Crucible of Life", *Earth*, February 1998, pp. 34-41.

215. W. R. Bird, *The Origin of Species Revisited*, Thomas Nelson Co., Nashville, 1991, p. 325.
216. Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, p. 171.
217. Werner Gitt, *In the Beginning was Information* pp. 126-127.
218. Paul Davies, "How We Could Create Life", *Guardian*, 11 December 2002; <http://www.guardian.co.uk/comment/story/0,3604,857635,00.html>
219. Michael Pitman, *Adam and Evolution*, 1984, p. 233.
220. Jeffrey S. Wicken, "The Generation of Complexity in Evolution: A Thermodynamic and Information-Theoretical Discussion", *Journal of Theoretical Biology*, April 1979, Vol. 77, p. 349.
221. Robert Shapiro, *Origins: A Sceptics Guide to the Creation of Life on Earth*, Summit Books, New York, 1986. p. 207.
222. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, p. 50.
223. Ibid., p. 60.
224. Ibid.
225. Ibid., p. 57.
226. M. P. Schutzenberger, *Mathematical Challenges in the Neo-Darwinian Interpretation of Evolution*, 1967, pp. 73-75.
227. Lee M. Spetner, *Not By Chance, Shattering The Modern Theory of Evolution*, p. 180.
228. Pierre-P Grassé, *Evolution of Living Organisms*, p. 103.
229. Walter L. Starkey, *The Cambrian Explosion*, p. 157.
230. Ibid., p.158.
231. Ibid.
232. Werner Gitt, *In the Beginning was Information*, p. 127.
233. Phillip E. Johnson, *The Wedge of Truth*, pp. 46-47.
234. Stephen Jay Gould, "Is a New and General Theory of Evolution Emerging?", Lecture at Hobart & William Smith Colleges, 4 February 1980
235. Walter L. Starkey, *The Cambrian Explosion*, p. 159.
236. Ibid.
237. Ibid.
238. Ibid.
239. Phillip E. Johnson, *The Wedge of Truth*, p. 127.
240. Pierre-Paul Grassé, *Evolution of Living Organisms*, p. 97.
241. Walter L. Starkey, *The Cambrian Explosion*, p. 157.
242. Gerald L. Schroeder, *The Hidden Face of God*, p. 99.
243. Pierre-Paul Grassé, *Evolution of Living Organisms*, p. 88.
244. Chandra Wickramasinghe, Interview in *London Daily Express*, 14 August 1981
245. Leslie Orgel, "The Origin of Life on the Earth", *Scientific American*, October 1994, p. 77.

246. Ibid.
247. Sidney Fox, Klaus Dose, *Molecular Evolution and The Origin of Life*, W. H. Freeman and Company, San Francisco, 1972, p. 4.
248. Alexander I. Oparin, *Origin of Life*, Dover Publications, New York, 1936, 1953 (reprint), p. 196.
249. "New Evidence on Evolution of Early Atmosphere and Life," *Bulletin of the American Meteorological Society*, vol 63, November 1982, 1328-1330.
250. Stanley Miller, *Molecular Evolution of Life: Current Status of the Prebiotic Synthesis of Small Molecules*, 1986, p. 7.
251. Jeffrey Bada, *Earth*, February 1998, p. 40.
252. Leslie E. Orgel, "The Origin of Life on Earth," *Scientific American*, vol. 271, October 1994, p. 78.
253. Charles Darwin, *The Origin of Species by Means of Natural Selection*, The Modern Library, New York, p. 127.
254. Charles Darwin, *The Origin of Species: A Facsimile of the First Edition*, Harvard University Press, 1964, p. 184.
255. B. G. Ranganathan, *Origins?*, Pennsylvania: The Banner of Truth Trust, 1988, p. 7.
256. Charles Darwin, *The Origin of Species: A Facsimile of the First Edition*, p. 179.
257. Derek A. Ager, "The Nature of the Fossil Record," *Proceedings of the British Geological Association*, vol 87, 1976, p. 133.
258. Douglas J. Futuyma, *Science on Trial*, Pantheon Books, New York, 1983, p. 197.
259. Solly Zuckerman, *Beyond The Ivory Tower*, Toplinger Publications, New York, 1970, 75-14; Charles E. Oxnard, "The Place of Australopithecines in Human Evolution: Grounds for Doubt", *Nature*, vol 258, 389.
260. "Could science be brought to an end by scientists' belief that they have final answers or by society's reluctance to pay the bills?" *Scientific American*, December 1992, p. 20.
261. Alan Walker, *Science*, vol. 207, 7 March 1980, p. 1103; A. J. Kelso, *Physical Antropology*, 1st ed., J. B. Lipincott Co., New York, 1970, p. 221; M. D. Leakey, *Olduvai Gorge*, vol. 3, Cambridge University Press, Cambridge, 1971, p. 272.
262. Jeffrey Kluger, "Not So Extinct After All: The Primitive Homo Erectus May Have Survived Long Enough To Coexist With Modern Humans," *Time*, 23 December 1996.
263. S. J. Gould, *Natural History*, vol. 85, 1976, p. 30.
264. Solly Zuckerman, *Beyond The Ivory Tower*, p. 19.
265. Richard Lewontin, "The Demon-Haunted World," *The New York Review of Books*, January 9, 1997, p. 28.
266. Malcolm Muggeridge, *The End of Christendom*, Grand Rapids: Eerdmans, 1980, p. 43.
267. Orhan Hancerlioglu, *Dusunce Tarihi* (The History of Thought), (Istanbul: Remzi Bookstore, 6th edition, 1995) p. 447.

268. John Gribbin, *In the Search of the Big Bang*; Ta?k>n Tuna, *Uzay>n Otesi* (Far Beyond the Universe), p. 194
269. *Treaties Concerning the Principle of Human Knowledge*, 1710, Works of George Berkeley, vol.1, ed. A. Fraser, Oxford, 1871
270. Macit Gökberk, *Felsefe Tarihi* (History of Philosophy), p. 263