# THE MIRACLE OF PROTEIN

## ADNAN OKTAR (HARUN YAHYA)

# 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 fine 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 73 different languages, constitute a collection of more than 65,000 pages with 40,000 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 (pbuh), last of the prophets. Under the guidance of the Qur'an and the Sunnah (teachings of the Prophet [pbuh]), the author makes it his purpose to disprove each fundamental tenet of irreligious ideologies and to have the "last word," to completely silence the objections raised against religion. He uses the seal of the last Prophet (pbuh), who attained ultimate wisdom and moral perfection, as a sign of this intention to offer the last word.

All of Harun Yahya's works share the same goals: to convey the Qur'an's message, encourage readers to consider basic faith-related issues such as God's existence and unity and the Hereafter; and to expose irreligious systems' shaky foundations and misguided 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, Russian, Bosnian, Serbian, Croatian, 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 God and gaining deeper insights into their faith. His books' wisdom and sincerity, together with a distinctive 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 misguided ideology or materialistic philosophy, since these books are characterized by rapid effectiveness, definite results, and irrefutability. Even if a reader continues to advocate for these beliefs, 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 God'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 God, 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 confusion, and that clearly fail in removing the doubts in people's hearts, as has been 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 become 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. These ordeals 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 to provide such service, the books of Harun Yahya assume a leading role. By the will of God, 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.

# 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, God's existence—over the last 150 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 opportunity 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 the light of Qur'anic verses, and invite readers to learn God's words and to live by them. All the subjects concerning God'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 every one 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, giving them an opportunity to 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 God. The author's books are all extremely convincing. For this reason, to communicate true religion to others, one of the most effective methods is to encourage them to read these books.

• We hope the reader will look through the reviews of the author's 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.

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# Foreword

People who lack sufficient information on a given subject—or who do not think about it much—may arrive at a number of mistaken ideas, or may be deliberately led astray by others. For example, for those with little interest in how a television (TV) works and who have no idea of what components the mechanism consists, the television set is simply a means of watching films or news programs. Those people will be unable to appreciate the marvelous technology in the TV apparatus if they remain unaware of how the video and audio signals reach the television, and do not consider how the image appears on the TV screen. How satellite connections are established, how images originating from another country are first sent into outer space to a satellite and then, without encountering any obstruction reach the television in their home with full sound and color, what function its components serve, what materials are used to manufacture it, and the logic behind the remote-control device—none of that matters! They view a television as merely an electrical device for watching selected programs.

What, you may wonder, is this analogy doing in the introduction to a book about proteins? The reason is to emphasize that lacking information on any particular subject may lead to serious errors or superficiality. When people fail to consider certain issues, they may remain unaware of the most vital matters. True, not understanding how a television set works or not giving the subject much thought, may not represent too much of a loss. Yet not considering the question of how life on Earth began and persisted—and blindly believing in unrealistic "answers" by Darwinism to that question—may cause people to make serious errors and suffer serious losses. Therefore, everyone urgently needs to reflect on the question on the origins of life.

How did life begin? By describing various features of proteins—the basic building blocks of life—this book provides the only valid answer: that life originated through creation by God, the Most High and Almighty Creator.

God calls in the Qur'an to those who are unaware of this truth:

**Does not man recall that We created him before when he was not anything? (Qur’an, 19:67)**

# Introduction:
# The True Origin Of Life

Back in the 19th century, the cell could be examined only under a light microscope, and so scientists saw the fundamental unit of life as little more than a circular blot. Some imagined that the interior of the cell was filled with only a plasma-like fluid; others that it contained a jelly-like substance. Based on the images seen under the light microscope—widely used at the time, but now regarded as rather primitive compared with present-day instruments—19th-century scientists imagined the cell to be a very simple structure, and proposed a theory that the cell had developed spontaneously and by chance.

Charles Darwin first publically brought up the theory of evolution in his 1859 book *On the Origin of Species*. He claimed that under the conditions on the so-called primordial Earth, blind coincidence combined unconscious and inanimate atoms, gave rise to a cell possessed of all the many features necessary for life. These same blind coincidences then somehow caused that first cell to allegedly evolve. According to this claim, primitive life forms developed from single cells—again by evolving by chance spontaneously, eventually giving rise to humans, some of whom became computer engineers, professors, artists and geniuses.

Most scientists were unaware of the complex, detailed and superior creation of the cell and its organelles. And so, a majority of them blindly believed in the theory of evolution, despite its illogical and ignorant claims. One reason for their support was that the theory provided important support for materialist philosophies, which were growing stronger in the 19th century, denying the existence of a Creator.

However, in the second half of the 20th century, science and technology made especially rapid strides, bringing them to the realization that Darwin's theory of evolution was a deception that completely clashed with scientific findings. It had pulled through a deception consisting of an imaginary scenario, reminiscent of primitive mythologies of antiquity philosophers. But some—including scientists, were unable to break away from this materialist theory and those who denied the existence of a Creator—continued, with great conservatism, to devotedly defend the theory of evolution and to indoctrinate young people into the idea that it was the only scientific explanation able to account for the origin of life.

Evolutionists took advantage of the fact that the great majority of people possess little detailed knowledge of scientific matters. In the course of their busy lives, people do not have much opportunity to think about such topics, and, as a result, were in a sense ‘hypnotized’ by the evolutionists. Proponents of evolution employed irrational claims, unbelievable theories, fraudulent proofs, and so-called "scientific" papers and books—widely adorned with Latin terminology, but actually hollow—to make the public believe that evolution was an established fact.

Today, as a result, most people imagine that evolution theory is indeed scientifically proven. They remain unaware of just how illogical and irrational the theory of evolution actually is. Yet for anyone who learns the complex and exquisite biochemical making of not just a single cell, let alone of any one of the protein molecules that comprise it, the theory of evolution is nothing more than imaginary nonsense. It is even more ridiculous when one thinks of the hundreds of concurrent conditions and the coexistence of hundreds of molecules and enzymes that are required for a single protein to exist. As will be emphasized in this book, detailed and finely calculated planning is required in every single cell where hundreds of preconditions must be met at once and the same time, and that hundreds of molecules and enzymes must all be present together, for life to maintain itself. Moreover, it is mathematically impossible for even a single protein molecule to come into existence by chance. Every protein molecule possesses a flawless structure that could be built only by a power possessing intelligent consciousness, information and will.

How is it, you may justifiably wonder, that scientists—who know far more about proteins than most of us—still support the theory of evolution? As already indicated, many Darwinists defend the theory of evolution not because it is scientific, but because it denies the existence of a Creator and offers support for materialistic philosophies. What's more, Darwinists themselves often admit as much. For example, the evolutionist anthropologist Dr. Michael Walker of the University of Sydney, says:

> *One is forced to conclude that many scientists and technologists pay lip-service to Darwinian theory only because it supposedly excludes a Creator.*[1]

Fred Hoyle, another world-famous evolutionist, admits the impossibility of life having begun by chance:

> *Once we see, however, that the probability of life originating at random is so utterly minuscule as to make it absurd...*[2]

As these prominent Darwinist scientists admitted, it's illogical to maintain that life began spontaneously by chance. These scientists persist in their claims solely in order to deny the existence of a Creator.

The information you are about to read represents only a very small sampling of the data concerning proteins, the building blocks of life. However, even part of this information is enough to show just how truly illogical and unbelievable is the evolution deceit that has persisted for the last 160 years.

Every protein molecule is impeccably created. Each one's structure is exceedingly complex. An extraordinarily organized and well-designed method is used in the manufacture of protein. The distribution of functions among the proteins and the flawless harmony among those different functions all show evidence of such a superior creation that not even their smallest components could have come into being by chance. Everything in the entire universe—from the particles making up the simplest atoms to the largest galaxies—is the product of a superior creation and infinite intellect and power. The Lord of all these works is Almighty God, Who created us all from nothing.

The way that some people, even though they are intelligent and educated, deny this and ignore such an evident truth is a miracle all by itself. God addresses such people in the Qur'an as follows:

# The Flawless Creation
# That Turns Inanimate Atoms Into Proteins

All living things are known to be made up of cells. The human body, for instance, is composed of some 50 to 100 trillion cells depending on the person's weight. Every one of them constantly produces substances that the living organism will require throughout its life. If you compare the cells of living things to factories equipped with advanced technology, then the proteins that are this book's subject matter are factories' machinery, walls, floors, stairs, and even bolts and screws. In short, proteins provide the building materials of cells and also their very complicated machinery. That's why proteins, which assume such very different functions, are often referred to as the building blocks of life.

For example, one protein is **keratin**, the substance that forms the hard structure in hair, nails and feathers. Other proteins form a strong, nylon-like substance in the tendons that bind the bones to the muscles. Yet another protein, **collagen**, gives the skin its smooth elasticity and the bones their strength. Still another protein constitutes the elastic rubber-like tissue that surrounds the arteries. When light falls on the eye's retina, the protein **rhodopsin** initiates the process of vision. Other proteins make up the eye's transparent lens. Special gates and transport proteins serve to help molecules enter and leave the cells. Without proteins, the DNA molecule—which encodes the data for all life—cannot be copied or preserve its information. In other words, proteins perform various tasks both within the structures of cells, the smallest life unit, and also in innumerable functions throughout the bodies of living things. Certain other proteins act as catalysts to speed up intracellular chemical reactions by up to billions of times. By working as a chemical team, they construct all the structural components of the cell. In addition to their construction abilities, they also break down large molecules in the cells into simpler compounds that the cells are able to utilize. They permit the reactions to occur that provide the cells with energy. Also, special proteins in the muscle cells are necessary for the muscles to contract.

The listing above represents just a few of the thousands of varieties of protein. Even as you read these lines, every variety of protein in your body continues to work ceaselessly for you to enjoy a healthy life. Many needs, from your ability to read this book to being able to digest, and from the development of your body to your resistance to disease, are met through the proteins working constantly in your cells. The essential activities in all living things—not in human beings alone, but also in plants and all animal species down to the simplest bacteria, are based entirely on proteins.

As will be emphasized throughout this book, these miraculous molecules, the result of atoms combining in specific numbers and ways, work together in total harmony to fulfill its astonishing responsibilities by demonstrating the result of enormous intellect and consciousness. Every subject that we will consider in this book prompts an important question that every rational person of good conscience needs to ask: How are protein molecules—that arise from combinations of inanimate atoms, and which we might expect to lack any knowledge or competence—able to perform all these activities and display miraculous intelligence, organizational ability and a sense of responsibility? Everyone who reflects with true sincerity will understand that they are the flawless creations of Almighty and All-Knowing God, and that all entities in the universe—from the greatest to the smallest—are under God's control and command. His dominion over all things is revealed in a verse from the Qur'an:

> **I have put my trust in God, my Lord and your Lord. There is no creature He does not hold by the forelock. My Lord is on a Straight Path. (Qur'an, 11:56)**

## Talented Proteins Built by Unconscious Atoms

The diagram on the next page shows the atomic structure of the protein known as cytochrome-c. Just 5 millionth of a millimeter in size, this protein consists of approximately 1,000 atoms. As shown in the illustration, the organization and binding among these atoms is extremely sophisticated and complex.

Darwinists claim that these 1,000 atoms ultimately came together by chance and are bound to one another in the way shown in the illustration. They also state that the protein cytochrome-c, with its vital functions for life, came into being as both a result of these accidental combinations and natural selection. Consider too that these 1,000 atoms include many different elements such as iron, carbon and nitrogen atoms. In other words, in order to function the different atoms necessary to constitute cytochrome-c must be present all at once in a specific number and a specific place—and must then, as shown in the diagram, attach to one another by means of very different but appropriate chemical bonds. According to evolutionists' utterly illogical claims, all of this happened by chance, time, and natural selection; and a protein of the very greatest importance to life must have come into being in that amazing manner.

Furthermore, Darwinists also offer the same explanation for the origin of all the other thousands of proteins necessary for life. It is a violation of reason and logic to maintain that, by combining in specific proportions and structures of inanimate atoms such as carbon, nitrogen, iron and phosphorus, devoid of any awareness of anything, gave rise to not just cytochrome-c but to all of the proteins essential for life.

When you consider the tasks undertaken in the living body by these minute structures just 5 millionths of a millimeter in size, you can appreciate just how illogical and irrational it is to claim that unconscious atoms assembled such important structures by chance.

Some proteins, for example, combine to form a substance that constitutes hair, nails and animal fur. Others comprise the tendons that connect muscle to bone by chance, time, and natural selection. Moreover, proteins also carry the messages reaching the cells, and which receive and evaluate them. The "gates" and "pumping systems" that regulate entry into and departure from the cell are also proteins. Proteins also accelerate chemical reactions. The protein hemoglobin in red blood cells carries the oxygen to the tissues. The protein transferrin carries iron in the blood. Immunoglobulins are proteins that protect the body against bacteria and virus pathogens. Fibrinogen and thrombin permit the blood to clot. Insulin is yet another variety of protein that regulates sugar metabolism in the body.

Other proteins are of great importance in the bodies of other living creatures besides human beings. The "antifreeze" protein in the blood of some fish prevents ice crystals from forming in their tissues. The protein resilin possesses perfect elasticity and thus permits the movement of insect wings. It's quite extraordinary how these molecules, which consist of only 20 amino acids—in other words, the combination of a few hundred atoms—can possess such different properties. It is impossible for unconscious atoms to accidentally combine and by chance produce structures that can perform such important tasks, display intent, are able to organize and make the right decisions in the right place.

One matter to reflect on, is how proteins consisting of more or less the same atoms can possess a wide variety of tasks and functions. When proteins' generally similar atoms are set out in different numbers and sequences, they endow a given protein molecule with different tasks and functions. It is impossible to account for this in terms of coincidence—a fact that Darwinists admit. About the formation of cytochrome-c, for instance, the prominent Turkish evolutionist Professor Ali Demirsoy has this to say:

> *In essence, the probability of the formation of a cytochrome-C sequence is zero... Otherwise, some metaphysical powers beyond our definition must have acted to form it, but to accept the latter explanation is not appropriately scientific. We thus must look into the first hypothesis.*[3]

In another chapter of his book, Demirsoy refers to the probability of cytochrome-c—an essential protein for life—forming coincidentally is *"as unlikely as the possibility of a monkey writing the history of humanity on a typewriter without making any mistakes."*[4]

Since a monkey cannot type without making a mistake, the cytochrome-c protein cannot be formed by chance. However, as Demirsoy states in his first quotation, for Darwinists to accept the existence of supernatural forces is inappropriate. In other words, since the "scientific" objectives of evolutionist scientists are to deny the existence of God and support materialism, they are forced to accept the idea that cytochrome-c, in the end, came into being by chance. This claim is so illogical that even a little reflection lets you see the terrible error into which Darwinists have fallen. For instance, if someone claimed that powerful winds had turned a collection of stones in Trafalgar Square into a magnificent statue of a human being; or if someone said that powerful waves striking a cliff had produced the architectural facades in the red rock of Petra, Jordan, what would you think about that person's sincerity? As you have seen, Darwinists are in such a logical impasse that out of all these impossibilities, they prefer the most unlikely of all. They close their eyes to evident truths, closing the door to their understanding and comprehension. It is plain for all to see that protein molecules were made for life by God, the Lord of Boundless Intellect, Knowledge and Power.

## Flawless Systems in Line with Proteins' Duties

It is the order of the atoms that gives substances their characteristic features. The atoms comprising every substance, organic or otherwise, are arranged in specific groups known as *molecules*. The atoms in the molecules that make up the structures and systems of living things are specially arranged to allow life. This is an extremely important point. It is because from the book in your hand to the chair you are sitting in, from your body to trees outside the window, everything is made up of atoms. However, animate and inanimate objects are differentiated from one another in the way their atoms are grouped and organized.

Proteins are described as *"by far the most structurally complex and functionally sophisticated molecules known"* in the Molecular Biology of the Cell, which is one of the most celebrated books on the subject.[5] Proteins are one of the four main groups of molecules that make up the living beings. Half of the dry weight of a person is proteins, and the remaining are nucleic acids, lipids and carbohydrates. Again, the atoms in each molecular group are sequenced differently. In this way, they acquire different properties and, accordingly, undertake different functions.

Proteins have duties almost everywhere: for example, the cell membrane becomes functional by means of proteins. The DNA, where the information on constructing the proteins is kept, can be functional only by the help of those proteins carrying out control and maintenance duties.

The order of the atoms inside the molecules is so sensitive and crucial that if the atoms of a single protein fail to align themselves properly, this can cause irreparable damage to the body in a matter of seconds. As an example, consider the phenomenon of vision. In the eye, which has a far superior technology than even the most advanced cameras, many proteins are involved in its ability to see. Just as in a camera, a number of components are responsible for the image to form. A defect in any one of a camera's components will lead to either a defective image forming, or none at all. In the same way, if even one of the proteins in the eye fails to possess its correct molecular structure, vision may suddenly be impaired. For example, the protein rhodopsin permits the eye to react to light. The slightest defect in the structure of rhodopsin will impair this process. Similarly, defects in the structure of proteins in the retina's cone cells (which enable the perception of color) will prevent the sufferer from being able to see in color. Another example is a medical condition named cataract, which develops when the protein melanin is unable to protect the eye from the harmful effects of ultraviolet rays.

As you can see from these examples, proteins must possess the most appropriate molecular structures if they are to perform their essential duties. Therefore, it is equally essential that the amino acid molecules composing the proteins should also be in their ideal forms. Just as with proteins, detailed systems and flawless functions prevail in the structure of these amino acids.

# The Order in Amino Acids

Proteins consist of molecules known as amino acids. Although smaller than proteins, amino acids still exhibit rather complex structures. The atoms comprising amino acids fall into three separate categories: the *amino* group, the *carboxyl* group and the side *chain* or *radical* group.

The amino and carboxyl groups are the same in all amino acids. The only thing that differentiates one amino acid from the other ones is the side chain group that binds to the molecule from one side. These different side chain groups in every amino acid give them their distinct features.

In the same way that various materials are used to produce a machine, there must be certain components with different properties in the protein "machines" if they are to perform their exceedingly complex functions in the body. In the side chain amino acids, the form, number and sequence of atoms, their electrical charges and diverse hydrogen binding capacities all endow the amino acids with considerable variety. And from this widely diverse material are produced a great variety of proteins. For instance, whether amino acids can dissolve in water or not depends on if the side chain groups have a positive (+) or negative (-) electrical charge, or no charge at all.

Amino acids with distinct properties line up alongside one another in different sequences, permitting the proteins that result to perform an astonishing range of functions in the body. However, the amino acids present in living things are very special. Although more than 200 types of amino acids can be used in living beings, only 20 of them are used in protein synthesis.

## Why Proteins Constituted Only 20 of the 200 Amino Acids

More than 200 amino acids are used in various biochemical reactions in living beings. In theory, one would expect the number of amino acids to be far more than 200. Even in the human body, many amino acids not used in proteins are used in the body's metabolic functions. Why do proteins use only 20 amino acids when so many are more available?

We can answer this question by examining proteins' functions and structures. In order to perform their functions, the proteins essential to life must possess specific features, and amino acids are one of the main elements that give them those properties. For instance, it is essential that some amino acids possess hydrophobic (or water-repellent) side chains. Furthermore, these side chains cannot be very large, or it will be impossible to pack and install them inside the proteins.

The side chains of some amino acids must also possess two features known as helix and layered formations. It is only as a result of these features, that a protein can assume its three-dimensional form, which is crucial for the protein to work properly.

Research has shown that of the 20 amino acids used in proteins, most have hydrophobic side chains and half possess a-helix properties and the other half, b-layer properties.

Examining the properties of these 20 amino acids one by one will make us understand why they have been specially selected for proteins. For instance, even glycine—the smallest and simplest amino acid—has a very important role to play in collagen, one of the most important proteins. In the three amino acids that comprise collagen, one is glycine. Its small dimension plays an important role in the structure of collagen by permitting the chains comprising the protein to bind tightly together, which increases the tensile strength of the collagen fibers. Collagen fibers are known to have greater tensile strength than steel. If a longer side-chain amino acid were used in place of glycine, the resulting collagen fibers would not possess the same level of tensile strength. At the same time, were it not for glycine, the collagen fibers would also lack enough strength to bind cells to one another.

As you can see from this brief description, there is consciousness and planning behind the selection of these 20 specific amino acids from among the 200 available. Had this selection taken place at random, then the proteins necessary for life could never have formed. If only a single amino acid were any different from how it needs to be, a vital function would collapse, and life would become impossible.

As we have seen, conscious systems, rational selection, and order exists in every phase of life.

## Proteins in Living Structures Are Formed from Left-Handed Amino Acids Only

As research has shown, it is not enough for the selected 20 amino acids out of over 200, to combine in different numbers and sequences to form proteins. All these amino acids *must* also be *left-handed*.

Of every amino acid found in nature, there are two different types: right-handed and left-handed. Each type is an opposite mirror image of the other, though all their atoms are the same, just like right- and left-hand gloves.

The reason for this is that in one of the twin amino acids, a carbon atom binds to the amino group from the left and in the other one, from the right, which explains why the twin amino acids are called right-handed and left-handed. Both types of amino acid can just as easily form various compounds by entering into chemical reactions. In short, the only difference between the two lies in their different symmetry.

However, scientists discovered that the proteins in living things consisted only of left-handed amino acids. Not a single right-handed amino acid was used in any living structure.

More detailed studies revealed the important reason why the amino acids, except a few bacteria, constituting proteins are all left-handed. Just like their left-handed counterparts, right-handed amino acids can combine with one another to form amino acid chains, but they prevent the resulting protein from assuming a three-dimensional shape. Yet—as you will see in due course—in order for a protein to discharge its functions in living things, it absolutely must assume the correct three-dimensional form. It was realized that this being so, all amino acids had to be among left-handed ones in order for a useful protein to emerge. The inclusion of even one right-handed amino acid often prevents the formation of a functional protein.

The revelation that only left-handed amino acids form the proteins in living things poses another major difficulty for Darwinists. As you have seen, in order for proteins to form, a conscious arrangement has to take place. First of all, the 20 correct amino acids need to be accurately established, from the more than 200 varieties in existence. Furthermore, these 20 amino acids must be all left-handed. A single incorrect amino acid becoming involved in the process—or a single correct but right-handed one—will make the protein functionless and redundant.

The *Britannica Science Encyclopedia* explains how the selection of only left-handed amino acids for the proteins is a dilemma for evolution. The Encyclopedia claims that it is impossible to understand why molecules become left-handed or right-handed, and that this choice is fascinatingly related to the origin of life on Earth.[6]

Britannica Encyclopedia's statement *'… this choice is fascinatingly related to the origin of life on Earth'* merits further attention. Since Darwinists maintain that ultimately time and chance constitutes the origin of life, they cannot understand how random events should make such obviously conscious and well-directed choices. In fact, however, not blind chance but Almighty God, makes these conscious choices. In order to reject the fact of creation, evolutionists make irrational and illogical claims, suggesting that this selection is the work of "coincidences." According to their claim, the amino acids that comprise proteins—and the atoms that give rise to them—all accidently combined in the most appropriate manner to produce the proteins indispensable for life. Such a claim exceeds the bounds of both reason and science.

The well-known scientist, MIT trained Walter T. Brown, summarizes the impossibility of left-handed amino acids randomly combining to form a single protein:

> *Each type of amino acid, when found in nonliving material or when synthesized in the laboratory, comes in two chemically equivalent forms. Half are right-handed, and half are left-handed—mirror images of each other. However, amino acids in life, including plants, animals, bacteria, molds, and even viruses, are essentially all left-handed. No known natural process can isolate either the left-handed or right-handed variety. The mathematical probability that chance processes could produce merely one tiny protein molecule with only left-handed amino acids is virtually zero.*[7]

The point here is the fact that a conscious selection is taking place. Therefore, a conscious Being, possessing reason and information, must be carrying out the "selection." It's plain to see that this selection is performed by God, Who creates all living things within a given order, right down to their sub-atomic building blocks, and Who possesses a superior intellect, consciousness, knowledge and might. As God informs us in the Qur'an:

> **He directs the whole affair from heaven to earth... (Qur'an, 32:5)**

## The Plan in the Amino Acid Sequences

Fulfilling all the conditions described so far is still not sufficient for the formation of proteins. For every protein, a particular amino acid sequence is required.

Amino acids combine together like the links in a chain. As soon as the chain is complete, they assume a different shape and enable the protein to assume a three-dimensional form. As shall be seen in detail later on, in order for proteins to fulfill their responsibilities, they must have a three-dimensional structure. But for this to be so, the amino acid set cannot be deficient in any way or exchange its place in the sequence with a different amino acid. The absence or impairment of a single critical component will ruin the harmony of the whole and make the protein's structure inoperable.

This is like changing a single letter in a word, thus changing its entire meaning or rendering it completely meaningless. For example, the word "grand" written with a t instead of d will produce the word "grant," which has a completely different meaning. If the letter “a” is omitted from "grand," then the meaningless "grnd" results. The same applies to proteins. A single amino acid changing its position will usually impair the protein’s "meaning" and make it unable to function. In fact, the protein thus altered will become an entirely different molecule, because every amino acid endows the protein with a particular property, just as a change of letter adds a different significance to a word. With its shape, electrical charge, and manner of entering into chemical reactions, every amino acid resembles a different letter.

Mediterranean anemia, a genetic form of cancer, is an example of the kind of damage caused by the faulty or deficient writing of an amino acid. It is known that erythrocytes in the blood carry oxygen to all the cells in our bodies. The oxygen molecules are transported by the protein called hemoglobin, which is found in erythrocytes and consists of 574 amino acids. A difference in just one amino acid in the structure of hemoglobin—if the amino acid known as *glutamic acid* is replaced by one called *valine*—gives rise to Mediterranean anemia. This one incorrect amino acid makes the hemoglobin protein unable to carry oxygen. When a mistake occurs in just one amino acid out of 574, in this case serious disease results.

But according to the theory of evolution, all these amino acids came together and arranged themselves by chance. As a result, various types of proteins emerged with thousands of beneficial and superior features and functions. Moreover, every one of these proteins "happens" to fulfill its duties accurately, without being redundant, and in coordination with all the others. It is clearly impossible for coincidences to establish any system that works with such immaculate order and displays such magnificent planning and programming. Coincidences can only give rise to disorder and confusion. They can never produce

machines, products of advanced technology and a superior genius. Clearly, the fact that varieties of amino acid must be set out in a specific number and in a specific order in order to form useful proteins makes the Darwinist claim of ‘randomly combining amino acids giving rise to proteins’ completely untenable.

This order belongs to God alone, Who created the atoms and molecules together with all the living things on Earth.

### SPECIAL BONDS CONNECTING AMINO ACIDS

There are various chemical bonds that hold atoms and molecules together. There are three types of bonds: ionic bonds, covalent bonds and weak bonds. Covalent bonds hold the atoms within the amino acids, the building blocks of proteins. Weak bonds keep the amino acid chain stable in its folded special three dimensional form. In other words, in the absence of weak bonds, it would be impossible for the proteins, which come into existence from amino acids, to take their three-dimensional functional forms. In an environment where proteins are absent, it would not be possible to speak of life.

Both covalent bonds and weak bonds need a certain heat range. Miraculously, this is just the heat range that exists in the world. However the structures of weak bonds and covalent bonds and their features are totally different. There is no natural cause whatsoever that necessitates their need for the same heat.

Despite this, both of the chemical bonds can be formed in a narrow heat range. If covalent bonds and weak bonds functioned in different heat bonds, the protein formation in living beings would still be impossible. In other words, the heat range in which the covalent bonds that form the acid sequence can be formed were not proper for weak bonds, protein could not take its final three dimensional form, and it would remain as an ineffective and meaningless chain. Similarly, if covalent bonds could not be formed in a heat where weak bonds could be formed, even a protein chain would not appear, for amino acids would not connect.

## The Bridge that Joins the Amino Acids Together: The Peptide Bond

Another precondition must be met for proteins to form: In addition to their correct amino acids being in the proper sequence, they must be correctly bound to one another. The bond between amino acids is literally like a bridge. For each individual protein, the angles at which amino acids will be bound to one another on this bridge, their directions, and the variety and number of atoms within them have all been specially calculated. For example, if two amino acids are joined at an angle different than what it should be, this will prevent the completion of the bridge, and thus hinder the formation of the protein. These special bridges between amino acids are known as *peptide bonds*.

Scientists studying the biochemistry knew that almost all the atoms in the molecules in the structure of living things were connected by what's known as a *covalent bond*. However, researches revealed that amino acids combining to form proteins formed a special bond previously undescribed. This is an unchanging rule for all proteins.

In 1902, Hofmeister and Fisher first uncovered the importance of these bonds in the formation of proteins. These two researchers performed a test named the ‘biuret’ in order to study this special bond.[8] As a result of this research, they determined the existence of a special bond occurring in proteins. The most important characteristic distinguishing peptide bonds is that when heated, they do not dissolve quickly.

Peptide bonds can dissolve only at high temperatures when exposed to strong acids or bases for a long period. These peptide bonds allow proteins to be strong and resilient.

In order for this special bond to be established, a carboxyl group in the amino acid (COOH, in other words a compound containing carbon, oxygen and hydrogen atoms) must combine with the amino group in another amino acid ($-NH_2$, a special molecule containing nitrogen and hydrogen atoms). This establishes an important equilibrium at the connection points along the protein chain. During the formation of these bonds that constitute up to 80% of protein molecules, water is released.

The basic claim of the theory of evolution with regards to the origin of life is that the first proteins came into existence in water. However, this is a baseless claim because, as explained above, water is *released* when amino acids combine. A reaction that releases water cannot take place in water. Let's explain this with an analogy: if such a reaction had been possible, it would also have been possible to immerse a damp cloth in water and then remove it and see it was completely dry. In real world, it will not happen. On the contrary, the cloth will get completely wet and absorb as much water as it can.

For this reason, when the proteins are synthesized inside the cell, amino acids are processed in a special chamber inside the ribosome. This special 'hydrophobic' environment, in other words, is dry. Amino acids can join together only in such an environment. In nature, it is impossible for such a reaction to take place outside of this environment.

## PROTEINS CANNOT FORM WITHOUT THE HELP OF OTHER PROTEINS

Now, based on what we have seen so far, let's understand why in order for a single protein to form, the help of many other proteins is needed. First let's summarize what features the amino acid chains in the proteins need to have:

**1.** Of the more than 200 varieties of amino acid in living structures, only 20 (some use 22) can be used for protein synthesis. The ones necessary for the protein need to be selected out of 200 amino acids available.

**2.** The selected amino acids must *all* be left-handed, not right-handed. Only left-handed amino acids can be used for the protein synthesis in living things.

**3.** The amino acids must be arranged in a particular sequence.

**4.** Proteins are required to copy the relevant information about the protein inside the DNA and to carry out all other subsequent processes. Therefore, proteins must already be present in the same environment, ready to carry out those tasks.

**5.** A ribosome –an organelle of the cell- is required to carry out the synthesis using the copied data. However, the ribosome itself is made up of ribosomal proteins and rRNA (ribosomal RNA); in other words, in order for the ribosome to exist, other proteins must have existed previously.

**6.** Inside the ribosome, there is a hydrophobic area (water-repellent) called 'peptidyl transferase' that allows amino acids to bind together. This structure, which is an enzyme itself, pushes the water away, and then with its catalytic features allows peptide bonds to form.

Clearly, it is impossible for the above conditions to gradually and randomly come into existence and give rise to a protein. Since even one functional protein cannot come into existence by chance in nature, it is impossible for life to have emerged by chance.

Many examples of research carried out by molecular biologists have clearly demonstrated that it is impossible for proteins to form by chance. Many famous scientists like Harold Morowitz, Fred Hoyle, Ilya

Prigogine, Hubert Yockey and Robert Sauer -although evolutionists themselves-, have reached the conclusion that there is no possibility of proteins to come into existence spontaneously.

Every stage of protein formation reveals the presence of consciousness, information, will, intellect, power and planning. These features belong to our Creator, our Lord the High-Exalted. Those who believe in the creative powers of other entities apart from God—or of chance, which is helpless and lacks the power to create anything—make a terrible error and have gone badly astray.

In one verse God reveals:

> **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 gods 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. (Qur'an, 25:2-3)**

## The Architecture of the Proteins

Let's examine the structure of the proteins, as they are synthesized. These forms will reveal the extreme significance of the architectural structure the proteins must possess to be active.

Proteins have four different structures. These are:

1. Primary,
2. Secondary,
3. Tertiary
4. And quaternary structures.

A *primary structure* emerges from straight amino acid chains. A protein in a primary structure is not functional, but when added to one of secondary, tertiary or quaternary structures, it may play a role in bodily processes.

The *secondary structure* forms with the long amino acid assuming a spiral form. Proteins such as actin, myosin, fibrinogen, keratin and b-keratin all exhibit a secondary structure.

Proteins with a *tertiary structure* emerge within the amino acid chain, fold and bend, resulting in a structure reminiscent of a ball of wool. This structure can have almost an infinite number of variations; but there is only one correct shape for the protein to be active and the amino acids must fold in that exact way to build that specific structure.

The *quaternary structure* emerges from two or more amino acid chains of equal or different length.

Detailing the features of these different structures and the functions they bestow on proteins, can help you see the superior creation with which these molecules were brought into being.

Similar information about protein structure is found in any biology or biochemistry text. The reason why these topics are elaborated here is to show how complex and interrelated the structures, activities and systems that give rise to proteins are. Darwinists describe the 'spontaneous' formation of proteins as if the process were very simple and quite able to accommodate coincidences. Only by concealing the exceedingly complex structure in proteins do they hope to make the chance myth convincing. In describing the structure of proteins, therefore, they imply that proteins can easily be formed by amino acids binding to one another like beads on a necklace. In fact, however, as is clear from this account so far, it is not sufficient for only amino acids to combine with one another at random, since a number of other conditions must first be fulfilled. In the event that these are not present, proteins cannot form.

Therefore, when you read the information that follows, recall that coincidences cannot make fine planning or calculations, much less bind amino acids to one another to produce functional structures.

## Proteins' Primary Structure: Amino Acid Sequence

The most important determinant of proteins' forms, which are critical for life, is the amino acid sequence that constitute them. Abnormalities in amino acid sequences are the cause of many genetic diseases. From that perspective, the correct sequence of amino acids is of the greatest importance.

The amino acid sequence serves like a ‘backbone’ for proteins, and the backbone, or sequence, of each variety of protein has been created especially for it. Just as the backbone determines the shape of a vertebrate's body, so the sequence of proteins determines their shape. Every amino acid is analogous to a vertebra in that backbone. Just as every vertebra must be in a specific place in order for the body to function, so every amino acid must be in a specific position for proteins to display certain properties.

Though the functions carried out by the ‘spine’ in proteins are similar to those in our bodies, there is one important difference: Protein backbones operate in an area of just one millionth of a millimeter. No doubt, a structure able to operate an exceedingly important mechanism in such a small space is most miraculous.

Just like the spine and vertebrae in your own body, proteins and amino acids have been specially created to attach to one another in the required manner. Their flawless attachment is just as important to proteins as it is to the body. If one amino acid does not bind to the next in an appropriate sequence, then the entire protein loses its function. Reflect a little on this, and you will discern the delicate and consciously designed creation here.

In an area of one -thousandth of a millimeter inside the cell, too small to be seen with the naked eye, miraculous events are taking place. Thousands of proteins comprising the cell, and the hundreds of amino acids that form these proteins, all must be in exactly the right positions, without a single error. That applies to each of the trillions of the cells of every one of billions of human beings on Earth. Contrary to what Darwinists claim, this extraordinary phenomenon is not the work of chance. In addition, never forget that amino acids are not conscious entities with sensory organs and the ability to think, but tiny molecules made up of specific combinations of unconscious atoms. That being so, who decides how the proteins necessary for life will come about, and which amino acid is to bind where? Could the various atoms have come to a joint decision one day and said "Let us combine in a particular order and make up an amino acid. Then let us agree with other atoms comprising other amino acids to arrange ourselves in a particular sequence to produce a protein"? Of course, such a claim would be utterly illogical.

Just as unconscious atoms possess no such ability, neither can proteins nor the amino acids that compose them possess any such decision-making mechanism. God locates all these entities in the appropriate positions, brings the building blocks of living cells into being, and creates life—flawless and of infinite variety—by means of these cells. God is Lord of all the worlds, from atoms to giant galaxies.

## Proteins' Secondary Structure: Helix and Layered Structure

Let’s start with how hydrogen bonds function: When a hydrogen molecule attached to an electronegative atom such as oxygen, nitrogen or fluorine forms a bond with the electronegative atom of the same or another molecule, as a result it gains a partial positive charge, a hydrogen bond is formed.

After the amino acids necessary for a protein line up alongside one another, other miraculous events take place. Along with the peptide bond that every amino acid forms with the amino acid next to it, hydrogen bonds also form. How these bonds form determines the shape and position that amino acids will assume along the sequence. Under some circumstances—for instance, when hydrogen bonds form within

the chain—the amino acid forms a spiral structure. When amino acids establish weak bonds with an amino acid outside that chain, then layered structures form that are reminiscent of the steps on a staircase.

Proteins whose chains assume a spiral form resemble the springs in mattress or automobile seat and, just like them they twist around a central axis. The proteins in hair, and myosin, a protein in muscles, possess this spiral structure and, as a result, are elastic because hydrogen bonds can easily break and reform just as easily.

The discovery of the effects of hydrogen bonds on body proteins has resulted in various applications in daily life. For example, to straighten curly hair or put curls into straight hair, the hydrogen bonds between the amino acids in hair proteins must be broken and reconstituted.[9]

Proteins in layered form with a secondary staircase structure are not as flexible as those arranged in a spiral structure. They do, however, permit the formation of structures that bend, one very important requirement of living things. For example, proteins like the silk fibers in cocoons and spider webs are set out in parallel and form chains bound to one another with hydrogen bonds. Because the silk atoms are bound perpendicularly to the protein chain, the spine of these proteins bends up and down like a strand of yarn.[10] For this reason, the proteins with this model display flat and pliant features. In living things, the folds in proteins are always exactly where they need to be. If fibroins, the proteins in spider webs, lacked the ability to bend, then the webs would serve no purpose. But this protein's structure provides the spider web with a resilience that keeps prey from escaping. Indeed, the silk that spiders produce is five times stronger than steel of the same thickness (1/1,000$^{th}$ of a millimeter in diameter).[11]

As you see, proteins' structures have been created flawlessly and incomparably for sustaining living things, right down to the finest detail. Even if all the atoms in the universe were placed at its disposal, blind coincidence could never operate with such foresight and perform such impeccable calculations. No chain of atoms that comes into being by chance can possess the information, intellect or ability to organize every atom in such a way that the spider web becomes most efficient. Claiming otherwise is serious irrationality.

## The Tertiary Structure of Proteins

After assuming their forms in their secondary structures, proteins begin to assume new shapes with the amino acids coming together, drawing apart, bending, folding, and sometimes making sudden turns; all with the help of proteins in charge of the folding process. In this way, three-dimensional forms of the proteins that are of great functionality emerge. This bending and folding is enabled by the interaction between amino acids' side chains. So how does this folding process, the result of these mutual effects, occur?

The side chains of amino acids in proteins attract or repel one another as a result of various forces. Five major agents play a role in this repulsion and attraction: hydrogen bonds, disulphide bonds, ionic bonds, Van der Waals forces (short-lived attraction forces form between the positive end of one molecule and the negative end of another. The bonds that form between the molecules with the effect of these forces are called Van der Waals forces) and other polar and non-polar effects of the side chains.

By means of these bonds, some sections of amino acids draw closer to one another. The amino acid chain can even fold over itself. Proteins bend at the appropriate sites and angles. The three-dimensional form of the protein is stabilized and kept from dissolving in the extracellular environment.

Experiments have shown these bonds to be of crucial importance. Every one of them permits the protein molecule to bend in exactly the desired manner in various sites along its length. For example, disulphide bonds form only in specific regions of the protein molecule, but permit a particular bending in those regions to the exact extent required. In a similar way, other forces act on amino acid regions to cause certain sections of the chain to approach one another, or to move away. The absence of any one of these necessary folds and curves will render the protein useless.

## The Quaternary Structure of Proteins: Combined Proteins

Imagine a desk with several telephones on it, whose cords all become tangled up with one another. At first sight, it appears impossible to determine which cord belongs to which phone. Proteins, too, also intertwine with one another in similar very complex ways.

Many proteins become able to perform their functions only after combining with one another. However, in order for proteins to combine into giant molecules, very delicate balances have to be established. For two proteins to combine, their shapes must be as suited to one another as a hand to a glove. Otherwise, protein molecules cannot merge. Think of jigsaw puzzles as an example of this essential compatibility. If the curves and extensions of one single piece do not match the next, then completing the picture will be impossible. The same applies to proteins. If the shape of the bond of just one protein is not correct, the giant combined molecule will not function.[12]

Furthermore, if combined proteins are to discharge their functions, it is also essential that they come together in the right way and numbers. The hormone insulin is an example. This protein organizes to store excess sugar in the bloodstream by the combination of more than one amino acid chain. Any flaw in the insulin molecule's structure will make it useless and cause the individual to suffer from diabetes. When insulin fails to function, the sugars that enter the bloodstream are excreted without being fully metabolized or stored for future needs. As a result, there can be insufficient sugar in the blood, and the cells' energy requirements are not met. In such a situation, even death is inevitable.

Similarly, there must not be a single error in the structure or form of any single protein in any of the 200 or so cell types in your body. Such a formation is only possible through a highly superior creation. Every stage of this formation is planned and acted upon according to the last stage in it, in other words, the target information. Only when the hormone adrenalin—a protein secreted by the adrenal glands—has the correct structure can the heart and muscle cells recognize it and be stimulated into action, to protect the body against physical and psychological stress. Likewise, the enzymes in our bodies can carry out their functions —such as cell division, energy production, molecule transport and a great many more—only by means of the shape they possess.

## The Bond Strength Must Be Ideal

The bonds essential to protein formation are different from other known powerful bonds. Proteins' folded three-dimensional structures cannot be built with other chemical forces because the strength of the bond would bring the molecules a little too close and thus cause the protein to lose its properties. Therefore, these bonds, of which features and strengths have been specially established, are at the ideal strength level so that the proteins can bend properly.

These bonds also allow for the speed of the proteins’ processes. As the well-known biologist James D. Watson explains:

> *Enzyme-substrate complexes can be both made and broken apart rapidly as a result of random thermal movement. This fact explains why enzymes can function so quickly, sometimes as fast as 106 times per second. If enzymes were bound to their substrates by more powerful bonds, they would act much more slowly.*[13]

# The Incomparable Production In The Cell: Protein Synthesis

Proteins, which are of vital importance to living things for sustaining life, are produced by a complex organization in the cell, whose complexity and order cannot be compared with any other production system in the world.

In this complex production system, no room exists for the slightest error. Various control and repair mechanisms are in place to correct any flaw that might arise. In this way, the proteins that permit the living organism to remain alive are manufactured in exactly the right forms and locations, with no disruptions arising.

Protein production takes place at a miraculous speed. For example, the E. coli bacterium synthesizes a protein molecule of 100 amino acids in only 5 seconds. No factory on Earth is able to complete a flawless production process so rapidly. This speed is of great importance, because, for life to be maintained, the cells constantly require new proteins.[14]

## NUMBER OF PROTEINS USED IN THE CELL:

Proteins with different abilities are used in every stage of the protein synthesis. As you will read in the following pages, in order for a single protein to become functional, it will be processed by thousands of other proteins and after completion of the synthesis, will be transferred to its place of duty. The astonishing number of proteins involved include:

FOR DNA REPLICATION AND REPAIR: 900 different proteins,

FOR DNA TRANSCRIPTION AND TRANSLATION: 3,200 different proteins,

FOR PROTEIN MODIFICATION: 850 different proteins,

TOTAL: 4,950 different proteins.[15]

When we examine these molecules' structure, we find amino acids—smaller molecules—and the unconscious, inanimate atoms that comprise them. With an intellect and consciousness, one would never expect from them, these combinations of atoms such as carbon, oxygen and nitrogen carry out processes far beyond the capacities of human beings.

But what causes unconscious atoms carry out conscious actions? What causes these atoms more efficient than chemistry professors? This achievement, explained in the following pages, is due to inanimate atoms and unconscious molecules behaving under the commandment and power of God, Who has dominion over all things from the Heavens to the Earth.

## Production Begins: The First Signal

Whenever the body needs any protein, a message expressing that need is transmitted to the DNA molecule in the nucleus of cells that will carry out that protein's production. One point is particularly important here: whenever need for any protein arises in the body, various messengers, which are proteins themselves, can locate the exact place where they have to go inside the darkness of the body and can transmit the message to the exact correct place and in the right form. The protein that establishes that communication reaches its location without getting lost and without causing any harm to any part of the

body. Clearly every component shows a great awareness of its responsibilities. Detailed examples of this miraculous talent will be given in the section about the cell signalization processes.

When the message arrives at the cell's nucleus, it turns into a protein following a series of complex organized processes. The protein request reaches the correct cells among the 100 trillion or so in the body. The cells receiving the message understand what is required and immediately go to work. Eventually, a flawless protein is obtained— all astonishing, because we are discussing not a community of conscious, intelligent human beings possessed of free will, but rather minute entities consisting of such substances as phosphorus, carbon and lipids. These molecules themselves do not possess the power and free will to send messages, understand or identify them on their own. But, just like all molecules, they display such conscious behavior by acting in accord with the inspiration with which God endows them.

Once the order has been received, the information regarding the protein to be produced should be obtained from the DNA.

## The Production Data Arrives

The entirety of the data concerning all of the proteins that function in our body is stored in the DNA molecule within the cell nucleus. When a protein is to be synthesized, the information regarding that protein is taken from DNA. However, the DNA must correctly understand the data concerning that required protein and also the correct location of its information. Just like when chemists want to produce a compound, they submit a verbal or written request to the relevant department for all the raw materials.

The data for the proteins is encoded in the DNA that requires a language which consists of four letters, four different nucleotides, arranged in different sequences. These nucleotides are referred to by the initials of their base molecules; A (adenine), G (guanine), C (cytosine) and T (thymine). The sequence of these molecules establishes the structures of all the proteins used by living things. In other words, in every human being's DNA the information regarding the proteins that determine his own characteristics—so much information that it could fill a library of encyclopedias—is written in a four-letter alphabet.

That information, enough to fill hundreds of encyclopedias, is encoded in a nanometric world smaller than one millionth of a millimeter is truly extraordinary. Written out, this information would fill one thousand 500-page encyclopedia volumes. This is nearly 20 times as long as the *Encyclopedia Britannica.*[16] The protein data in the DNA molecule has been encoded in a manner incomparably superior to any technology yet produced. It is capable of encoding maximum amount of data in the area it covers.[17] Claiming that such flawless data storage came into existence by evolution is the result of a complete collapse of reason and logic. For life to continue, the processes inside the cell must not be disrupted and its needs must be accurately met, with the correct proteins being produced. Therefore, after the message is received concerning which protein needs to be synthesized, the correct information must be selected and copied from the DNA. But who makes that selection?

The enzyme RNA polymerase, another protein with a perfect structure, carries out this essential selection. This enzyme performs an exceptionally difficult job. First, it must select the required letters for the required protein that must be produced from among the 3 billion DNA base pairs in the DNA molecule. The method that the polymerase enzyme extracts a few lines of information from inside the DNA molecule's 3 billion letters is analogous to finding a few lines of information hidden in a 1,000-volume encyclopedia.

Think about this detail for a while. In the international Human Genome Project, hundreds of the world's most eminent scientists, in laboratories equipped with the most advanced technology have worked for years to be able to read part of the information in human DNA. However, research is still underway to decipher the meaning of these parts. In other words, which letters correspond to which proteins or genes, and their duties, are still yet to be uncovered. Nonetheless, at every moment inside our trillions of cells trillions of RNA polymerase enzymes are able to read the information in DNA from the beginning to the end

and, moreover, to extract it in an error-free manner. Astonishingly, Darwinists claim that such a system came into being by coincidence, under the effects of lightning on primordial tide pools.

After the polymerase enzyme has located the DNA molecule information for the protein to be produced, it must now exhibit another sign of consciousness and ability: It has to copy this information to be dispatched to the production site.

## Copying the Production Order: Transcription

The process of copying the information from the DNA code for the required protein is called **transcription**. We can draw an analogy between this production and the production in a factory based on a requisition. It is crucial that the production order, in other words, the information extracted from the DNA, is copied accurately. All the information to be used during the course of producing the protein is read from that requisition, and even the slightest error in a single letter during copying, could cause serious diseases, and even prove fatal. For example, if only one of the 574 amino acids that make up the hemoglobin, changes place, hemoglobin will lose its three-dimensional form and consequently will lose its ability to carry out its needed task. As a result of this defective shape, hemoglobin can no longer carry oxygen in the blood to the tissues, and the fatal disease known as Mediterranean anemia ensues.

RNA polymerase (RNAP) is built of the combination of various complex proteins. Researchers established that in E. Coli, RNAP possessed 100 sub-units (different proteins) for these tasks.[18] In other words, the mere existence of RNAP and the fact that the protein synthesis cannot begin without it is enough to demonstrate the fallacy of the theory of evolution. Because RNAP can work only when 100 different proteins combine. If 99 proteins unite with 1 missing; diseases and problems will arise. Therefore, the fact that 100 proteins need to be present at the same place, at the same time, completely demolishes the evolutionary claim that ‘life emerged gradually over millions of years’. For the transcription process to start, one major hurdle must also be overcome. The strands of DNA twine around one another like a spiral zipper and must be separated before the copying process can begin. During this process, the RNA polymerase enzyme again goes into action. First, the RNA polymerase binds to 35 letters prior to the beginning of the gene to be coded, and opens up the relevant steps of the DNA helix just like a zipper. This unwinding process takes place so very quickly that there is a danger of the DNA heating up because of friction. Yet, as a result of a system of finely regulated precautions, even this danger has been eliminated: A special enzyme attaches to the two ends of the opened DNA helix and prevents friction from occurring. Again, other special proteins prevent the DNA from entangling during the opening process. Were it not for these proteins, the order requisition known as *messenger* RNA could not be copied. Because otherwise, with the start of transcription process, the arms of the DNA helix would wind around one another, and friction would damage the DNA structure. As you have seen, dozens of proteins and enzymes are involved in every stage of the operation, and all perform their functions flawlessly in the greatest harmony.

Never forget proteins that accomplish these are unconscious molecules made up of specific quantities of atoms. Every one of these molecules discharges its own functions in line with superior knowledge and a sense of responsibility.

After these special precautions are taken, a few more obstacles still exist to be overcome. For one thing, information regarding the amino acid sequence of the requested protein may be located in any region of the long DNA molecule. How will the polymerase enzyme copy codes in *different* areas of the amino acid string? It cannot cut the DNA or jump over the unwanted sections. If it continues along the same path, it will end up copying unwanted data and the desired protein will not form.

To resolve this difficulty, an extraordinarily conscious appearing phenomenon now occurs. As if the DNA were aware that it had to assist the copying process, it bends to make sure that the region containing the unwanted information is now out of the way. As a result, codes that need to be read consecutively, but

previously had other codes in between, are joined together. The codes to be copied thus form a single line, so that the polymerase enzyme can easily copy the order for the protein to be produced.

With the copying of the relevant letters on the DNA strand, the mRNA (messenger RNA) sequence is made. This strand functions as a copy of the DNA to carry the data of the protein to be produced.

Sometimes, during the transcription process, the RNA polymerase enzyme copies the entire gene from beginning to end, including the unnecessary codes for this specific gene called introns. Then, the protein complex called spliceosome enzymes arrive to bend the unnecessary codes in a ring form and cut the introns off. To make this happen, these protein complexes have to compare the prescription they carry with the information copied from the DNA and by this means identify these elements. If you were given two long lists of letters and asked to identify the superfluous ones, you would have to examine both lists very carefully and check one against the other, line by line. To do this, you have to recognize the letters, understand the wanted data, and be conscious of why you are doing what. For that reason, you should not be deceived by reading the giant combined molecule it selects," "vends," or "ejects" in any biology textbook or documentary. What is actually doing the comparing, identifying, examining, distinguishing, selecting, bending and ejecting are unconscious substances that consist of inanimate materials, such as carbon, nitrogen and phosphate, under the command of God.

This is by no means the end of the amazing and extraordinary events that take place during the copying for the DNA requisition. The copying process has to be halted, or else the polymerase enzyme will copy the DNA from beginning to end. At the end of the protein encoding gene is a codon that indicates its end. (Every three letters making up the code in DNA is known as one codon.) When the RNA polymerase comes to a codon (UAA, UAG or UGA), it understands that it has to cease copying and separates the DNA from the messenger RNA carrying the necessary message to construct the protein. At this point, however, it has to act with the greatest care. The messenger RNA must now leave the cell nucleus and travel to the ribosome where production will take place. In this process, the message it carries must not be harmed. Therefore, it emerges from the cell nucleus protected of certain special molecules.

### MISCOPYING IS A CAUSE OF CANCER

In recent years researchers working on cancer found out that misproduction of proteins within the cell has an important role in the formation of cancer. During the copying of the DNA, miscopied genes cause the production of wrong proteins. This discovery first came out during the bladder cancer researches. It was discovered that the miscoding of a single digit of a special 5000-digit gene existing in the DNA of the cells of this region damaged the cell.[19] The proteins that will be produced by these flawed genes do harm to the cell rather than benefitting it.

## The Copied Information Reaches the Production Center

Once the necessary information for protein synthesis has been found and copied from the DNA inside the cell nucleus, that copied information must now reach the factory, the ribosomes, where the protein will be produced. Ribosomes are outside the nucleus, in the fluid-filled area called cytoplasm. These organelles called **ribosomes** are present in every cell. They are located at a comparatively long distance from the DNA and distributed throughout all the cytoplasm. The production orders must be rushed to these factories in a flawless manner. Messenger RNA (mRNA) heads straight for the ribosome without losing its way among the many organelles and molecules in the cell. When it finds the ribosome, the mRNA settles in a line on its outer surface. In this way, information regarding the amino acid sequences of the protein to be

manufactured, reaches the production center in the correct form. The mRNA, in addition to the data of the protein to be produced, also carries information about what it must do both to start and finish the gene. Therefore, when these instructions reach the ribosome, messages begin to be sent to other regions of the cell to bring the amino acids, in other words the raw materials necessary for the protein's manufacture to the ribosome.[20] Special molecules called tRNAs (transfer RNA) carry out this transportation task.

## Translation of the Messenger RNA

Data and raw material required for the protein to be synthesized are now ready. The production order has been transmitted to all the machines along the production line, but another problem now needs to be resolved. The production data is written down in the special language of the DNA, which is an alphabet of four letters A, T, G, and C. However, the language of the proteins is another language that consists of twenty letters (since twenty amino acids make up the proteins). The conversion of the message in DNA's language into the language of the protein is called 'translation'.

This translation takes place inside the miraculous cell organelle already mentioned, the ribosome. Inside the ribosome, a very special transformation system between the two languages has been created. Known as the codon-anticodon method, this system works just like a translator that is specialized in two languages, in a manner far superior to the most advanced present-day computers. In a very short amount of time, it determines which amino acids correspond to the four-letter strings written in the special DNA language and produces the translation in the protein language. As a result, the desired protein emerges in its correct form. The accuracy and precision in this translation process, whose details we shall examine, is most noteworthy. There is no room for errors in the production of thousands of proteins that the cell, and consequently, the living structures require every moment for to you survive. The translation has to be almost perfect, and without any flaws.

The key to the translation process (the conversion of the DNA data into protein) is the tRNA molecule. More than 20 different tRNA molecules transfer the 20 types of amino acids. However, in order for the tRNAs to transport the amino acids, special enzymes called **aminoacyl tRNA synthetase** are required. These enzymes have the task of attaching the tRNAs to the amino acids they are responsible for, and can have various shapes. Each tRNA translates a certain amino acid. When a tRNA reaches the ribosome, it carries a unique amino acid at one end, and its respective three-nucleotide sequence (anticodon) at the other end. This part of the tRNA joins with the three-base sequence on the mRNA known as the 'codon' and matches the bases. Let's say that mRNA's codon is GGC. In this case, the codon will be translated as glycine amino acid. And the tRNA carrying the CCG anticodon on one end, and glycine on the other end, will be carried to, and attach to, the codon with a hydrogen bond. In other words, if GGC codon comes up while the mRNA molecule slides along the ribosome during the translation process, glycine will be added to the polypeptide chain. In this way, the amino acids brought by the tRNAs in the specified order will be added to the amino acid chain, translating the genetic message into the language of the proteins.

A tRNA consists of a single 80 nucleotide long RNA chain. Like the proteins, tRNA also folds. Due to the existence of the complementary counterparts of the nucleotide bases they carry (the letters on the tRNA) which can form hydrogen bonds with other letters, this single chain can fold over itself and build a three-dimensional molecule that looks like a cloverleaf.[21] Due to this special shape, it can carefully enter into the ribosome with nanometric (one nanometer is one millionth of a millimeter) precision. In all tRNAs, amino acids attach to the 3' end of the cloverleaf model. There is a unique anti-codon triplet for each tRNA type. For this complex system to function properly, everything needs to be fully intact. For instance, if everything was complete except for a single tRNA matching a certain amino acid, a protein would still be produced, but the end product would be completely useless. This clearly proves that God creates life as a whole unit.

In order for a genetic message to be translated correctly, the tRNA attaching to the mRNA codon describing a specific amino acid, must bring only that amino acid to the ribosome. Moreover, every amino acid brought to the ribosome by the tRNA must be processed in the exact location in the production line as is designated by the mRNA.

If a single amino acid is processed in the wrong order during the synthesis, protein likely will be completely useless. However, this process normally takes place flawlessly in all the body's cells. Every amino acid brought by every tRNA is taken into the ribosome in the specified order. And the production order, as mentioned previously, is preserved according to the mRNA code. The flawless distribution of tasks, incredible discipline, conscious and knowledgeable actions visible in these unconscious molecules clearly demonstrate the fact that each of them surrender to All Knowing and All Powerful Almighty God, and that they are acting under His control.

## The Codon-Anticodon or "Lock and Key" Method

The mRNA with the production order, and which had already entered the combining center of the ribosome, comes together with the tRNA that carries amino acid on one of its ends, and together display a perfect lock-key harmony. Every set of three letters in the mRNA are regarded as a codon. The other end of the tRNA, the anticodon —the key capable of opening the mRNA lock—is brought opposite the codon. Through this extraordinary identification and control system within the translation system used by the ribosome, proteins are produced as a flawless chain of amino acids. Ribosome uses more than one hundred helper molecules, which operate in perfect coordination to ensure that the translation system works flawlessly. These molecules are special RNAs sent to the production center and most of them are specialized proteins.[22] The most important of these is ribosomal RNA, which allows information brought to the ribosome by the messenger RNA to be understood and read in a different language by the transfer RNA. During the error-free translation process, each one of these prepared mechanisms must work in a flawless manner for the correct protein to emerge.

## Amino Acid Chain Formed Step by Step in the Factory

During production, doubtless the most important process is the flawless combining of amino acids and, as explained, this combining takes place in the ribosome.

Ribosomes exist in all living cells except viruses. With diameters of only 120 - 200 Å (angstrom is one hundred millionth of a centimeter) they are located in the cytoplasm or are attached to the endoplasmic reticulum. 65% of the ribosome consists of ribosomal RNA and the remaining 35% consists of ribosomal proteins.

The number of ribosomes in a cell can be as many as a million or more. This machine that translates RNA into a protein, is made up of two large proteins and subunits, including a combination of RNAs as well as hundreds of different cofactors.[23] Research on this nano molecule, which fascinates the scientists with its details and features, is still underway.

## Striking Speed of Transfer RNA in the Ribosome

Experiments showed the ribosome can read 20 codons in only 1 second.[24] When we look at what the word 'reading' means in this process, we see that multiple processes take place at the same time in a mind-blowing fashion. The raw material that comes with the transfer RNA is selected correctly, taken inside, for codon-anticodon matching, the incoming amino acid is added to the forming amino acid chain through peptide bonds, and the tRNA that has done its duty exits. Since there are three tRNAs currently

inside the ribosome at one time, all these processes must take place simultaneously without flaws or interruptions. According to research published in *Proceedings of National Academy of Sciences* in 2005, the time that passes during the first stage, which is tRNA entering the ribosome and ribosome checking to insure it is the right tRNA, is only 1,6 ns (1 nano second= 1/1.000.000.000 sec), while the second stage which is the tRNA being moved to the peptidyl transferase area takes only 0.292 ns.

The third stage from the time the amino acid is recognized takes only 0.65 ns and the final stage, the separation of the amino acid and the tRNA. takes only 2.2 ns.[25] In other words, it takes the ribosome only 4.74 ns to recognize the incoming tRNA and attach the correct amino acid to the chain – in other words, only four billionths of a second, a time frame we cannot even comprehend. The fact that such detailed processes are carried out with extreme precision in an impossibly short amount of time by molecules which have no brains, consciousness or eyes, is one of the countless proofs of Almighty God's infinite power and art of creation.

## Special Sites for tRNA

Inside the ribosome, there are special sites for the transfer RNA called E, P and A sites. There exists a very complex corridor inside the ribosome that enables tRNA to insert itself into these areas and move from one to the other. The tRNAs carrying the amino acids that to be joined together are kept in sections P and A. The site close to the transit out from the unit is section.

Site A is where the tRNA is recognized by the ribosome and taken inside. After the codon-anticodon matching is completed, the tRNA slides one-step forward, similar to the movement of a typewriter, until it reaches site P. Here, the amino acid attached to the tRNA is cleaved and released, then attached to the new amino acid in the section where peptide bonds are made. In this way, amino acid chain grows one more link. After this point, the tRNAs in the sections P and A are moved one step to the side, so that the process can continue.

Finally, tRNA which has delivered its valuable cargo -the amino acids- to the ribosome, moves one step along with others and exits from site E. Owing to the shape of the ribosome and the perfect coordination of its components, this complex process takes place both very rapidly and accurately. The smallest error here will mean the end of life. Indeed, many antibiotics work by halting protein synthesis in the bacteria ribosome, thus kills the bacteria, effectively curing bacteria caused disease. All these processes that take place during the protein synthesis are carried out extremely rapidly. For example, in many situations, while the mRNA thread removes the copy from the DNA still attached to it, the translation process on the other end begins.[26] And hundreds of ribosomes can simultaneously carry out its production based on the same mRNA strand. In the same way, RNA polymerase can copy genes for proteins in more than one region of the DNA.[27] This can be compared to a number of people reading the different pages of the same book at the same time. Performing this exceedingly complex multi-stage process in several places simultaneously without a single mistake requires enormous care and competence. How many tasks can a rational, conscious human handle at the same time? How many products can he supervise concurrently? Answer these questions, and you can more clearly understand the abilities possessed by a mRNA molecule.

## Additional Structures that the Ribosome Needs

We have already seen that the ribosomes are like factories. However, in order for the production in this factory to continue accurately and swiftly, other proteins are needed. After the mRNA that carries the code of the amino acids attaches to the small subunit of the ribosome, the tRNAs carrying the corresponding amino acids attach to site A of the ribosome with the help of a molecule called **Ef-Tu**. Following various control processes, a bond will be formed with the amino acid on the tRNA in site P. If an error is detected in these processes, the faulty amino acid will be discarded. With the help of another protein called **Ef-G**, the

upper part of the ribosome will be moved one step further, followed by the lower part also moving one step further. In this way, tRNAs in the sections P and A will be moved to sections E and P. As a result, space will be cleared both for the next amino acid specified by the mRNA, and the tRNA that carries that specific amino acid.

The sizes of the tRNAs that reach site A are not all the same. In order for them to move inside the ribosome, they require paths in varying sizes. It was discovered that the ribosome, just like a machine, can change its shape, depending on the size of the tRNA. This is the reason why the ribosome is created with two different units, the bottom and top, at the location where the mRNA attaches for the protein synthesis.[28]

## Every Detail in the Ribosome Points To Creation

The ribosome consists of tens of proteins, plus rRNA and additional molecules. Every detail in the ribosome requires intelligence. It is one of the most complex engines in the world. It is a perfect robot molecule in many ways, including its speed, accuracy, precision, and efficiency. Every protein in it has a special task. There are special sections for the codes, special compartments for raw materials and transit sites. Every detail, for example those relating to the structure of the proteins and selection of amino acids, are crucial. This energy-intensive factory works only when necessary. At other times, it waits in standby mode. Furthermore, if the protein level needed increases, the number of these factories will be increased as well. This astonishing intelligence is manifested in every part of the system. All molecules work like extremely skilled and knowledgeable chemists. To avoid confusions or mix-ups, there exists constant harmony and cooperation. For instance, tRNAs carrying the raw material and depositing the cargo in the right place requires superior intelligence. Every detail demolishes the theory of evolution. They clearly demonstrate God’s supreme art, knowledge and power.

## PROTEIN FOLDING

Previously, we have briefly mentioned about the protein folding issue, and now let’s delve deeper into the details.

## Three-Dimensional Protein Structure is the Product of a Flawless Design

The importance of the structure, timing, location, direction and angle of the way the proteins are folded is critical. An analogy is the famous Japanese art of origami, where two dimensional sheets or clothes are folded in a certain order to obtain a three-dimensional form. By following the paper folding guidelines that were previously prepared in detail, you can build a ship or bird model. In the same way, in order for a protein to fold into a three-dimensional structure, the amino acid chain must bend in certain locations and times, in certain angles and directions. It is impossible to attain the intended shape except by folding. In the art of origami, experts plan which part should be folded in what order, how much and where it should be and this plan is unique to each shape. If only one folding is done in the wrong order, in the wrong direction, or the wrong manner, the final result will be defective or completely useless. For example, if you are trying to build a plane, but forget one folding, or do it in the wrong direction, the wings won’t form. For proteins, the situation is much more complex. If a single amino acid is joined in the wrong order or in the wrong direction, protein will assume a defected form and rendered useless. For example, if the globe shape of myoglobin protein -responsible for storing the oxygen in muscles- is compromised, its length will be 20 times longer than its width, and thus will not be able to carry out its functions.[29] Naturally, such a situation will be fatal for us. The amino acids that leave the ribosome as a straight chain is not a functional protein. A

wonderful system inside the cell called the polypeptide chain will help these molecules obtain their correct three-dimensional structures. Highly specialized folding proteins are assigned for this duty.

## Chaperone Proteins

Molecules that play a part in folding are called chaperone proteins. In order for the proteins to be active in the cells, they require the correct three-dimensional structure. When the amino acids fold onto themselves, the proteins attain their 3D structure. However, even the slightest mistake in this three-dimensional structure will make the protein lose its functions.

Researchers previously thought that proteins folded correctly by themselves, due to their amino acid sequences. However, it was later revealed that chaperone proteins were responsible.

The reference text book *Genetic Concepts* summarizes this interesting detail about the proteins:

> *"In order for a protein to obtain its unique function, the aforementioned post-translation changes (the phase after the protein is produced in ribosome) are very important. Since the three-dimensional structures of the proteins determine their functions, how the polypeptides fold to assume their final conformation is critical. For years, researchers believed that protein folding was a spontaneous action that would ensure maximum thermo-dynamical resistance and that it depended on the sum of the chemical qualities of the amino acids in the polypeptide chain. However, research have shown that elements of the ubiquitin family (a protein family that can be found in every cell), named chaperones played a major role in the folding of many proteins. The mechanisms of chaperones aren't fully uncovered yet. These molecules emerge from their reactions without any change, just like enzymes. Chaperones were first discovered in drosophila and were originally named heat-shock proteins. Later, it was found that they were also present in various organisms including bacteria, animals and plants."*[30]

It is crucial that the proteins are folded correctly. In case of an error in protein folding, diseases like Alzheimer's, Parkinson's, mad cow diseases, and cystic fibrosis ensue.

These are chaperone molecules called GroEL-GroES complexes and are responsible for the protein folding. It is a breathtaking miracle that a molecule can act so consciously.

## The Significance of Sugar in Protein Folding

In the folding of certain proteins, sugar molecules are required. Sugar is added to and removed from the protein, during the folding process. If the protein hasn't yet reached the final stage in its folding process, one enzyme will recognize this and add sugar to it. Sugar added to proteins will be recognized and folded by special chaperone proteins.[31] The use of sugar molecules in the folding process of a protein, and the way that sugar is added and removed by other proteins, is an astonishing miracle of creation. How can a protein know if another protein is folded the right way or not? Why would it bother to try to make it right? Which atom thought of using the sugar molecules as a marker? All these details point to the excellence of the intelligence and information visible in the cell. It is apparent that the owner of this infinite intelligence and knowledge is Almighty God.

The diagram on the previous page shows the folding stages of some proteins. The single sugar molecule attached to the proteins is recognized by proteins called calnexin. After the sugar molecule is recognized, the protein is folded. Another enzyme later comes and removes the sugar molecule from the now folded protein. If the protein is not yet fully folded, another enzyme will recognize this and add another sugar molecule to the protein in the correct location. The protein with sugar will be recognized by calnexin

again and folding will continue. Then the protein will again be released. This process will continue until the protein attains its final form.

## Evolutionary Dilemma in the Face of Chaperones and Proteins

It is clear that life cannot emerge by chance. Countless proteins, enzymes and nucleic acids like DNA and RNA work together in a coordination way in our cells. Indeed, it is a mathematical fact that not even a single protein could come into being by evolution.

However, there is another interesting dilemma the theory of evolution faces. Proteins and DNAs are created completely interdependently. One cannot exist without the other. The famous evolutionist, Dr. Leslie Orgel, admits this fact in his1994 article :

> *"It is extremely unlikely that highly complex enzymes and nucleic acids (RNA and DNA) have come into being by chance at the same time and in the same place. And it is not possible to obtain one of these without the other. Therefore, one cannot reach any conclusion other than that life cannot emerge through chemical means."*[32]

## Proteins and aesthetics:

The quaternary structure of the proteins, which emerge when the proteins fold, have also important roles in ensuring aesthetics. For instance, strands of hair and beard in men are both made up of the same protein called 'keratin'. Nevertheless, they have minute chemical differences which make major differences in their outer appearance. For instance, beard strands have more aspartic acid, lyisin and tryosin amino acids compared to hair strands, and valin and serin are found less. As a result, beard strands have fewer 'disulfite' bonds in keratin compared to those of the hair and the number of folds in proteins reduce. This makes beard thicker and flatter, and the hair thinner and wavier. This structure, allows hair to be combed and shaped, while it is very difficult to comb or shape the beard. Although both are found in the same area of the body, God created the hair and beard to look their best.[33] Amino acids, which do not have any function alone or when randomly joined together, gain special purposes with these bendings and folds, and assume vital duties inside the body. Just like a flat sheet of paper being folded according to a deliberate, conscious plan to assume the shape of a vessel or a plane, or just like a steel sheet used as the hood of a car.

It should be noted that the structure of protein is incomparably more complex and organized than a sheet of paper that is deliberately folded and shaped. Moreover, a protein molecule is so small that it cannot be seen even with a light microscope. The atoms that are made to fit inside such a small space, first line up according to a plan and design and then bend and fold according to this plan and design. All these are extraordinary miracles that cannot be compared to any human design.

Needless to say, it is impossible for such a flawless, complicated, layered and multi-component order to come into existence by evolution. Furthermore, what we have explained so far, is a mere summary of the countless details of protein structures. More detailed examinations of proteins reveal far more complex features of the molecules and there are still many details yet to be discovered. All these point to the fact that there is no room for any suggestions of coincidence and evolution even in the creation of the smallest building blocks of life.

> **He is God – 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. (Qur'an, 59:24)**

# ENZYME-SUBSTRATE COMPLEX

The protein, now having assumed its final form, can actively function in the body. Enzymes, are proteins that carry out many important functions in the body. After they obtain their final form through folding, an area called 'active site' appears. This can be compared to the tip of a screwdriver, or the mouth of the wrench or the place where the key enters in a lock. The ultimate goal behind these folding is to ensure that the enzyme's shape matches the three-dimensional shape of the molecule (substrate) they will bind to. For example, vitamins and minerals in the food we consume or the various hormones in our bodies all have three-dimensional shapes. Proteins recognize these molecules and join them in a key-lock system in a very precise manner. This combination is called the 'enzyme-substrate complex'. As a result, very crucial functions can be carried out.

## What if the proteins are folded erroneously?

As can be seen, in order for the proteins to be active, countless processes have to occur without any error. If errors occur during these processes and the protein fails to obtain its three-dimensional shape, many diseases can result. For instance, the biggest problem for Parkinson and Alzheimer diseases, are the accumulation of proteins with faulty shapes. Another defective protein resulting from incorrect folding is prions, which tends to spread. They are linked to many diseases like mad cow disease, which causes serious brain damage.[34]

## Using Quantum Computers to Calculate the Right Way To Fold

Correct folding and unfolding of proteins is one of the most complicated processes known to mankind. Identifying the correct way to fold the protein among countless other possibilities requires high processing power. Every atom in the amino acids in a protein chain can have almost countless different electron interactions with other atoms, and also can have tendencies to make hydrogen or disulfide bonds. These possibilities increase as the amino acid chain becomes longer. To solve these problems giant 'quantum computers' were developed. D WAVE, the computer in the picture on the previous page, can carry out a very large number of processes simultaneously, and can solve problems 3,600 times faster than a standard desktop computer.[35] The processors often overheat from use and must be chilled close to absolute zero ($-273^0$C) so that they can continue to operate. They are also shielded to 50,000 times less than Earth's magnetic field, in a high vacuum where the pressure is one out of 10 billion times lower than atmospheric pressure.[36]

However, this huge computer can find only the correct way to fold only for one protein at a time. Despite that, it was able to find the most accurate form of the protein only in 13 out of 10,000 processes.[37] In other words, we can get the correct solution only after painstaking effort using giant computers. However, every protein inside every cell has known the correct way to fold since the first protein was created. Clearly, it is not the talent of the lifeless molecules that enables them to know the correct shape, something that cannot be achieved by very expensive, very advanced machines. This situation clearly demonstrates the existence of the All-Encompassing, All-Knowing God, Who has infinite knowledge.

Every new piece of information obtained about these molecules continues to amaze the biochemists that carry out these high technology researches on the molecules of life. Their works demonstrate this wonderful creation and the irrationality of evolution. The way the evolutionists claim that such complex structures with mind-blowing designs came into being as a result of coincidences and lots of time, and the way that they believe in the power of these forces like they believe in a Creator, is a sign of a serious flaw in their logic. Only those with sincerity, wisdom and conscience can see the facts. The Holy Quran explains this fact as follows:

**Your God is One God. There is no god but Him, the All-Merciful, the Most Merciful. (Qur'an, 2:163)**

## Quality Control Of the Newly Produced Proteins

The quality control system in the proteins is an example of God's sublime art of creation. After multiple detailed processes, the synthesized proteins must be checked to ensure that they are suitable for the body.

Researchers only recently discovered this quality control system, which is another miracle. The existence of a quality control system in a factory denotes the existence of conscious and educated people. Similarly, the existence of a quality control system in the cell points to sublime wisdom and consciousness.

The system works as follows: Ubiquitin is a small protein made up of 76 amino acids. Its duty is finding and tagging damaged, degraded or expired proteins. A protein with this tag attached to it means that it has to be destroyed. Tagged proteins are taken to a molecule called 'proteasome', which is another miracle structure. Proteasomes cut the proteins into smaller pieces and neither the parts obtained as a result of this cutting, nor the remaining amino acid chains are wasted. They are recycled for re-use. In this way, undamaged amino acids will be used again. In other words, there exists not only a quality control system, but a very effective recycling system as well. Three scientists won the Nobel Prize for chemistry in 2004, for discovering this incredible mechanism.[38]

## Details of the System

Proteins that are not folded in the correct three-dimensional manner, are tagged with ubiquitin. Ubiquitin is by no means, alone in this task. E1, E2 and R3 enzymes that it works with are also used in this process. E1 enzyme delivers the ubiquitin to the E2-E3 complex. E3 is the enzyme that identifies faulty proteins. There are many E3 enzymes in the cell and each are responsible for determining if the proteins in their area are folded correctly. When the body determines that there is a defective protein, E2-E3 complex attaches the tag molecule to the faulty protein. After that, the tags of ubiquitin are serially attached to that distorted protein. The protein that is tagged by the ubiquitins is now ready for destruction.[39]

## Absence of Proteasome Causes Cell's Death

Proteasome is a smart recycling machine. This wonderful structure is made up of many sub-units that function to destroy tagged proteins, in other words faulty proteins. However, it will not harm the tag, which is also a protein.

Proteasomes have many sub units and act like conscious recycling machines. They break proteins down to their amino acids, which is a crucial task. For instance, researchers discovered that when the proteasomes are prevented from breaking down the proteins working in cell cycle, cancer could result.[40] Many different molecules collaborate in the quality control system. They join forces for a common purpose. All these systems beg an important question: how can one protein know if another protein needs to be recycled? How did it develop a technique to tag it once it determines that it has been damaged? How can it forward the tagged protein to the destruction machine? How can the destruction machine break it down to its tiniest parts, except for the tag? The answer to all these questions is the fact that God, with infinite power, creates at every moment. These examples make it clear that God's artistry has no limit and all manifest God's infinite power. The theory of evolution that idolizes coincidences, cannot explain the collaboration, the organization between the molecules and how they work for the same goal. Coincidence is nothing but an empty, feeble attempt at an explanation, and fails every time.

## THE JOURNEY OF THE PROTEINS STARTS AT CELL SIGNALIZATION

After all the required processes are completed, the proteins are now ready for use. These valuable protein molecules must be transported to the location without suffering any damage. But how? The answer to that question is not yet fully understood. From what is known of the process, it is astonishingly complex.[41]

Proteins produced inside the cell do not remain where they are produced. Otherwise, it would lead to a system that constantly produces products that go to waste. On the contrary, just as in all other living systems, there is a flawless perfection in the production of proteins. Every new protein produced is carried by special means to where it will either be used or stored. For example, proteins to be dispatched outside of the cell, those to be used in the mitochondria -the organelle in charge of producing energy- and those to be used in the nuclear membrane or cytoplasmic membrane—are all carried to their destinations by different mechanisms. These special mechanisms and routes responsible for transportation of proteins to relevant destinations are known as protein targeting systems.[42] These systems' knowledge of which protein is to go where is a miracle by itself. The determination of the means of transport according to the destination, packaging, and the support from enzymes to keep the protein from damage en route—all are feats that create utter amazement.

Günter Blobel and David Sabatini spent many years researching this subject, and were rewarded with a Nobel Prize in 1999. They were amazed to discover that to be able to reach their destinations the newly produced proteins used a special amino acid 'signal sequence', and that once they arrive at their destination, they are separated from this signal.[43]

The protein, setting out with the aid of this signal, needs help on its journey. Proteins assigned to this task deliver the newly synthesized proteins to their proper destinations. Endoplasmic reticulum and Golgi bodies are examples of the important organelles that direct the protein where it needs to go. For example, after the protein **garbagease** is manufactured, it travels a distance of about ten-thousandth of an inch (0.00025 of a centimeter). On this journey from the cytoplasm to the lysosome, dozens of different proteins are needed to ensure its security.[44] While you sit reading this book, all of the cells in your body are very busy performing all these tasks! You feel no movement, hear no noise, even though trillions of cells in your body carry out these productions, each one using hundreds of mechanisms.

Moreover, this entire production, whose general lines have taken many pages to describe, occurs in only 10 seconds, or a few minutes at most. Since it is clearly understood now that proteins cannot come into being by chance mutations, Darwinist scientists know that the concept of chance doesn't work in the face of such a vast and complex creation that we see around us. This is the reason why many evolutionists like Richard Dawkins has resorted to the argument that life might have been planted by aliens.

The evolutionist, biologist Professor Muammer Bilge, describes the Darwinist despair in the face of this system that works too perfectly to leave any room for chance, writing:

> *The protein synthesis process is carried out with an organizational perfection and flawless foresight inside the cell, which is able to produce these outcomes when necessary, creates no danger or damage to itself, and never goes down a one-way street . . . Everything in the cell happens like this. But how is it managed? How is it achieved? We are still unable to understand. We merely see the results and have only been able to distinguish a few points of this perfect organization that yields them.*[45]

In the face of the extraordinary systems they encounter during their observations and research, Darwinist scientists invariably employ similar expressions, such as "a flawless foresight" or "organizational perfection." Yet their own theory cannot account for this flawless perfection. They themselves are well aware of this, which is why they express their despair by saying they are "still unable to understand" how

these extraordinary events take place. Clearly, however, unconscious atoms themselves cannot create and maintain such a perfect organization. Every atom behaves under the inspiration, intellect, and might of God.

## Address System in the Cell

Just like logistic companies that deliver cargoes to their destinations using various vehicles, our cells use the most talented logistics officers in the world.

We have mentioned how proteins carried a specific signal sequence. These amino acid sequences specify the locations of the organelles and the nucleus. This addressing mechanism is so incredibly detailed that it is able to distinguish even sections that are inside of the same organelle.

The three letters in the table on the previous page are abbreviations for amino acids. The first column has the addresses that correspond to the sequences. Every organelle inside the cell has address regions and receptors that recognize these signal sequences. After the receptors take delivery of the proteins, they deliver them to their final destination and return to their posts. Furthermore, special enzymes called **signal peptidase** cleave the address region on the proteins.

Inside the cell, there exists a digestive system called the **lysosome**. We can compare this organelle to the stomach of our bodies. It contains a large amount of digestive enzymes. However, some of these enzymes are dispatched to the lysosome organelle using a very special technique. With the help of two enzymes, a sugar molecule called mannose and one phosphate molecule, that are attached to molecules which should go to the cell's stomach.[46] Now, the enzyme is carrying the address information. This can be compared to writing address on the envelope of your letter that you deliver to a post office. This sugar molecule will be later recognized by special receptors on the endoplasmic reticulum and enzymes that are dispatched to the lysosome as a package. In other words, various methods are used to specify addresses. However, address tags will work only if they can be recognized. Address tags are equipped with receptor and carrier proteins that recognize the package in its intended destination. If the address proteins hadn't been recognized in their destination, none of these stages would have meant anything and the protein would be useless despite all the painstaking effort. As in thousands of other examples, this situation clearly proves that all of the units must have been created concurrently; that a gradual coming into being does not work, but sudden creation in one moment, with God's command 'Be,' does.

## Preventing Unwanted Folding of Proteins During Sensitive Deliveries

As explained, in order for the proteins to fold and carry out their duties, they need to assume their three dimensional forms. However, every stage of this process is kept under strict control. Other proteins escort proteins during their long journeys to their posts. One of those proteins is HSP70. This protein prevents the molecule from being folded in an uncontrolled manner. This way, it is kept in the proper form so that it can later pass through the organelle membrane because three dimensional forms, cannot pass through certain membranes such as the rough endoplasmic reticulum. There is no room for trial and error in keeping the proteins in the right form so that they can go through the membrane. Because if excessive proteins are not immediately removed from the cell, the cell will die due to toxicity. However, this does not happen because proteins and cells are created to work in perfect synchronization and harmony. This is another proof of the cooperation, meticulous engineering, and foresight in the cell. Clearly, these cannot be the result of coincidences and obviously unconscious atoms cannot design such systems. The wisdom in every detail of the cells is the infinite wisdom of God.

The curvy structure in the picture on the previous page represents the protein and the yellow area shows the membrane of the organelle it is headed to. In order for the protein to pass through this

membrane, it cannot be allowed to fold. For this purpose, proteins named HSP70 shown in pink bind to the unfolded protein to prevent it from being folded. This is crucial as the protein can pass through the gates only when unfolded.

## Proteins and Endoplasmic Reticulum

After the proteins are produced, most of them are directed to the endoplasmic reticulum, from where they transverse the membrane to go inside of the organelle. Even at this stage, there are incredible mechanisms in play.

Receptors called SRPs continue to circle the cytoplasm around the membrane of the endoplasmic reticulum. Its duty is recognizing the proteins that need to be directed to the endoplasmic reticulum and consists of an RNA molecule and six proteins.[47] After recognizing through its signal sequence, it grabs the protein and carries it to the endoplasmic reticulum. As a result, protein is either inserted into the membrane or taken inside the organelle. For these processes to take place, requires a receptor complex, one protein to enable passage through the membrane and another for its insertion. After these stages are completed, the SRP molecule returns to cytoplasm and begins carrying new proteins.

## Passing the Protein Through the Membranes

Compared to most all proteins, the cell is a very large structure and incorporates a myriad of special regions called organelles. Organelles are surrounded by lipid bilayers. We can compare these lipid bilayers to the exterior sidings of buildings that are so sturdy that some won't allow the passage of a single hydrogen ion. The fact that proteins, which are like skyscrapers in the world of molecules, can pass under these stringent circumstances is a marvel of engineering. To enable this, special proteins called translocators are created in the membranes. These translocators are charged with passing proteins through the membranes, and they had to have existed since the first moment of life, because without them, the cell would immediately die due to the lack of proteins that couldn't be taken to their places of duty.

For instance, there are special gates on the nuclear membrane called 'pores' consisting of 3000-4000 proteins of 50 different types that are used to construct the pores. The diameter of one pore in the nucleus is 9 nanometers, in other words, if 100 million were bound together, they would be only 1 m long.[48] At this point, scientists have discovered a marvelous mechanism. The pores (gates) on the nuclear membrane that are responsible for the passage of the materials, use a special code of amino acid sequences, which is 'lysine- lysine- lysine – arginine - lysine'. The pores can only recognize the code, and cannot identify either the size nor the structure of the protein. However, when the protein with the relevant code approaches the pore, the pore opens up just large enough so that the protein can fit and close right after it passes! How the pores can discern the code, and how they determine the size of the incoming proteins, are one of the many unsolved mysteries of the science world.[49]

The way molecules agree with each other on a code they all recognize, the way they identify and interpret it, the way they open the door of the nucleus just enough for the relevant protein to fit, is one of the countless of examples of God's art of creation.

## Transportation with Vesicles (Carrying in Bags)

Protein traffic, the direction of the proteins to the correct addresses, is a miraculous event. The topic is so complex, that scientists knew that new discoveries in this area would be a surefire way to a Nobel prize. Indeed, in 2013, three scientists; James E. Rothman, Randy W. Schekman and Thomas C. Südhof were

awarded with Nobel Prize for their discovery of another transportation method that the proteins use called: 'transportation with vesicles'.[50]

The transportation of proteins must be as precise as their synthesis. These scientists found out that, one method placed the proteins inside a package called a 'vesicle' and then tagged it with various signal proteins. The vesicular transportation system that particularly makes up the backbone of both the extra-cellular hormonal system and nervous system is frequently used. This way, proteins and other materials, if any, are delivered to their destinations without being harmed.

## An Important Truth Revealed by Protein Synthesis

The stages of the protein synthesis also reveal one important truth: the manufacture of a single protein molecule requires hundreds of different proteins and enzymes. In addition to these, many molecules and ions stand ready and waiting to do their part. In other words, proteins cannot come into being without the presence of many other proteins. That being so, how could the very first protein have come into being?

This is the point where the theory of evolution collapses. Evolutionist biologist Carly P. Haskins described this deadlock of evolution in an article in *American Scientist*:

> *... 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... The fact that in all organisms living today, the processes both of replication of the DNA and of the effective translation of its code require highly precise enzymes and that, at the same time the molecular structures of those same enzymes are precisely specified by the DNA itself, poses a remarkable evolutionary mystery... 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.***[51]

As this scientist states, for protein synthesis to happen, all the systems inside the cell have to exist simultaneously. In the absence of just one component in this system, proteins cannot be produced, and life cannot continue. Evolutionists claim that first proteins emerged, and later with the combination of these proteins, cells came into being. However, it is clear that no one part can emerge in the absence of another. This is a clear evidence that God has created all living things together with all their systems. He reveals His flawless creation in the Qur'an as thus:

> **He is God—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. (Qur'an, 59:24)**

# Proteins:
# The Body’s Tireless Engines

So far, we have described protein molecules' special structures and how they are manufactured in the cell. When we examine proteins' functions, we again encounter many other of miracles of creation.

## Hemoglobin: Oxygen-Hunting Protein in the Blood

One feature of blood that makes it indispensable for life is the proteins it contains. The bloodstream is the ideal place where special proteins can discharge their duties because blood transmits its contents wherever they are required by means of the circulatory network of tubes reaching all points of the body. Every day, for example, the hemoglobin protein in the red blood cells carries 600 liters of oxygen to the 100 trillion or so body cells.[52] Hemoglobin, a rather large protein, covers a volume of up to 90% of the red blood cell. Under normal conditions, such a sizable protein molecule would be unable to fit into the cell. However, just as if the red blood cell knew it must make room for the hemoglobin molecule it will have to carry, before entering the bloodstream, the red blood cell ejects its nucleus, mitochondria, ribosomes and other organelles. These ejected components are immediately destroyed by the body's cleansers—the white blood corpuscles, or leucocytes. In this way, no waste or unnecessary products remain in the body. Red blood cells do not need to produce any new protein, thus they expel their organelles, because the red blood cells' essential task is to transport hemoglobin and carry oxygen to wherever it is needed.

Hemoglobin's most important feature is its ability to capture oxygen molecules. This molecule selects and grabs oxygen molecules among the millions of molecules in the bloodstream. Because any molecule that attaches randomly to an oxygen molecule will oxidize and become non-functional, trapping oxygen molecules calls for a particular talent. Therefore, hemoglobin captures its prey as if it was holding it with tongs without actually touching it. Hemoglobin's unique creation endows it with this property.

Hemoglobin emerges from a combination of four different proteins, containing special structures known as *heme groups* that carry iron atoms. These iron atoms are the ‘tongs’ by which the hemoglobin holds oxygen molecules. Each heme group can hold one oxygen molecule.[53] Special folds and angles inside the molecule allow the heme groups to capture oxygen without coming into contact with it, to hold it to, and later deposit it in the tissues. The binding angle changes at specific rates during the binding process.[54] After the first heme group catches the oxygen, changes that occur in the structure of the hemoglobin facilitate the capture of oxygen by the other heme groups.[55] During this process, if the hemoglobin combines directly with the oxygen—in other words, if it becomes oxidized—the result is *methemoglobinemia*,[56] a disease that causes the skin to lose its color and turn blue. The victim suffers shortness of breath and a weakening of the mucous membranes.

Every detail of this flawless structure is proof of a previously determined plan. The way the red blood cells eject the organelles inside them to make room for hemoglobin, how these expelled substances are immediately cleaned up by functionaries standing by, and the features that both keep hemoglobin from being harmed by the oxygen and allow it to deposit the oxygen into the tissues, are all features of a flawless planning. It is clearly impossible for unconscious, inanimate atoms to organize such a perfect system as a result of evolutionary forces. Furthermore, very important details are required for the establishment of such a system. Hemoglobin takes precautionary measures and transports oxygen as if it were fully able to calculate how oxygen could damage it and, later, transports the oxygen to exactly where it needs to go. The way that hemoglobin recognizes and selects oxygen molecules is a miraculous system,

impossible to have come into being by chance. In addition, this established system has been constructed in a form that is completely compatible with the entire human body.

In his book *Nature's Destiny*, the famous microbiologist, Michael Denton, refers to the flawless structure of hemoglobin:

> *As the efficient transport of oxygen is essential to the viability of any large active organism with a high metabolic rate, a molecule with the properties of hemoglobin would seem to be essential. Might there be any alternatives to hemoglobin? None of the many other oxygen-carrying molecules which occur in the blood of invertebrates, such as the copper-containing proteins of the mollusks, come close to the efficiency of hemoglobin in transporting oxygen in blood. As Ernest Baldwin commented, "Mammalian hemoglobin is far and away the most successful of the respiratory pigments from this point of view"... The evidence is consistent with the possibility that hemoglobin is the ideal and unique respiratory pigment for metabolically active air-breathing organisms such as ourselves.*[57]

The way that a collection of molecules can make this distinction in a pitch-black environment unbelievably larger than itself, distinguishing between oxygen and other molecules, and able to bind to oxygen in the most appropriate way reveals the existence of a superior wisdom and design.

## Proteins That Allow Cells to Travel Within The Body

The movement of some cells in the body is of great importance to the continuity of metabolism. As is true of all vital bodily functions, it is proteins that allow this process. These particular proteins, known as *tubulin*, form minute hairs that permit the cell to float in bodily fluids. These hairs come in two varieties. As the cell moves itself, either by using these tiny hairs, resembling eyelashes, in much the same way as oars propel a rowboat; or else it moves forward by thrashing the hairs like whips (flagellum will be covered in more detail in the following pages).

These minute hairs are also used by cells that remain fixed rather than mobile, whose objective is to move other cells in the fluid. The cell with these hairs remain among other cells and their constantly moving hairs splash the fluid onto the surface of the relevant cell to help propel it further.

For example, every one of the stationary cells along the respiratory passage possesses several hundred minute hairs, most of which are uniformly in motion. Their appearance closely resembles the oars moving in unison that propel racing sculls. By this motion, the hairs propel water over the mucus and up through the throat. In this way, they prevent fluids from flowing into the windpipe with each breath. This motion is very rational and conscious and has been planned beforehand. The cells around were equipped with the necessary means to prevent the damage mucus might cause.

In addition, these proteins take joint decisions, acting as one to propel a free-floating cell in a particular direction. There is an amazing flawless harmony and order amongst them. Anyone who reflects without prejudice will clearly see that such an organized harmony and ordered activity could not have arisen by chance.

Examination of the micro hairs reveals an exceedingly complex structure that is the product of a superior creation. Such perfectly interconnected mechanisms have been squeezed into these tiny hairs—which can be seen only under an electron microscope—that it is impossible to claim that they came into being as the result of some chance phenomena.

## The Detailed System in Minute Hairs

A micro hair consists of membrane-covered fibers. The hair's membrane is an extension of the cell membrane, for which reason the interior end of the hair is in contact with the interior of the cell. If you sectioned a hair in cross section and examine it under an electron microscope, then you will see nine rod-like structures. These tiny hairs are incomparably smaller than the hairs on your head. It might appear impossible for a visible human hair to contain nine tiny separate rods, but there are indeed nine protein rods in each of the hundreds of minute hairs at the end of a cell, itself too small to be seen with the naked eye.

These rods are known as *microtubules*, each of which consists of two interconnected rings. And detailed research has shown that each of these rings is made up of 13 separate strands!

But that is by no means the end of the details. The second ring, attached to the first, consists of 10 separate strands. The nine microtubules comprising the tiny hairs are made up of the proteins known as tubulin, molecules set out like bricks laid atop one another to form a cylindrical shape.

In books and journals about biology, biochemistry, and genetics, and similar subjects, one will frequently come across sentences like "protein molecules come together in specific ways to give rise to particular shapes." Such statements avoid stating that protein molecules are merely assemblages of unconscious atoms. In some way, these entities—devoid of consciousness, information or free will, with no brain or ability to plan or reason—manage to locate one another and then to act in a regulated manner to form a cylindrical shape. Who commands them to join together with other tubulin molecules and then set themselves out in cylindrical form? How can they take this order, understand and implement it? In addition, the tubulin molecules are laid out, not in a random sequence, but in an order compatible with their pattern and purpose.

Under normal conditions (that is, normal calcium levels and specific temperature have been established within the cell), the tubulin proteins that serve as bricks come together automatically to form microtubules. The surfaces of tubulin molecules are such that one side fits the back of a second tubulin molecule. A third tubulin molecule attaches itself to the back of the second, a fourth molecule then attaches to the back of the third, and so forth. To make a comparison, this system resembles a stack of tin cans of the same brand, one on top of the other, each one arranged to fit perfectly into the top of the can below it. In this order of alignment, where the top of the second can fit properly to the bottom of the third, there is no risk of toppling. However, since the tops and bottoms of cans of different brands will not fit perfectly together, if piled atop one another, they will collapse at the slightest movement. And cans of the same brand will still topple over if you do not properly align them. The top of the first can will not fit the top of the next one, and so they will topple over. The order within the assembly of the tubulin proteins is much more exact, in that the front of one fits exactly into the other one’s back.[58]

So, who created this arrangement? Could the cells that produce the tubulin proteins have determined how to assemble them in the most efficient manner? Assuming that the proteins were produced with these features in some way, who told them to arrange themselves back to front, and not back to back? Moreover, how did the proteins understand this command and then arrange themselves without mistakes? In your school days you may remember it takes a great deal of patience to line up just 20 students in one particular direction without disorder ensuing. This requires some effort, even from human beings possessed of consciousness and intelligence, as well as the ability to act towards a specific end goal. How do protein molecules consisting of substances like carbon, oxygen, and nitrogen manage to do this regularly, without making a single error?

Tubulin molecules select other molecules of their own kind from among all the millions of molecules around them, move alongside them and immediately assume their places. Tubulins can easily contact with microtubules, but microtubules need the help of other proteins to combine with one another. The nine rods that make up the microhair must combine together, but need other proteins to do so, and for a very good

reason: microtubules are proteins with very different functions within the body. In order to be able to carry out their duties, they need to be separate and independent to function. For that reason, they rove independently until binding to another protein. But in order for tubulins to form, these helper proteins come and select free and independently traveling microtubules and bind them to one another. This process requires a conscious and purposeful organization. Certain proteins determine that the cell's minute hairs should be constructed, know what is needed for their formation of these, and gather up and combine these materials.

Electron microscope photographs of these tiny hairs show that different kinds of connectors bind the microtubules to one another. There exist one protein at two centers in the middle of the microtubules that binds them together in the form of a bridge. There is also an extension from the microtubules to the center of the tiny hairs. A protein known as *nexin* binds each microtubule to the one beside it, ensuring that they do not break away and disperse. There are also two different protrusions on every microtubule, known as the inner arm and the outer arm. Biochemical analyses have revealed that each contains a protein called dynein. Among the functions of *dynein*, include to operate like an engine and set up a mechanical force within the cell.

Once again, reflect on this structure of a great many parts, every one of which complements the others in an exceedingly rational way. With enormous expertise, millions of atoms combine to form very different structures inside a volume itself too small to be seen with the naked eye. They then assemble these structures with the assistance of other molecules. The result is an exceedingly complex machine, whose workings we shall briefly summarize.

All the complex machines you know consist of a number of parts. Open a computer, for example, and you'll see a number of circuits, cables and pieces of metal all combined together in complex ways. To one who does not know much about computers these may not mean much, but a computer engineer will know what purpose each complicated connection serves. He will know, for instance, that if a wire is attached to the wrong place, the computer will be unable to function properly. Every component inside is, therefore, of the greatest importance for the computer to run properly. In a similar way, every component making up the cell's minute hairs is of vital importance if the system is to function properly. The absence of any one structure will mean that, either the hair cannot move the cell and the substances around it, or else the hair will fail to develop in the first place.

Biochemists have performed many experiments to determine what happens to these hairs in the absence of any of their components. For example, if the dynein protein arms separate, the hairs will not move. In the absence of the protein nexin, which serves as a bridge between the microtubules, the microtubules will disintegrate and their synchronization will be impaired, which will lead to deformation in the tiny hair’s structure. In an area incomprehensibly small for us, a very complex system exists and not one part of it can be dispensed with. Every part of this system has been arranged for the continuation of life and for cellular functions, and detailed examination of the operation of this system will reveal in more detail the significance of the design in every component.

## The Microhairs' Movement System

The movement of these tiny hairs can be compared to a boat floating on the water. The microtubules making contact with the water function like oars. The nine interconnected rods can slide like a single oar through the bonds between them. The arms of the protein dynein act like engines, and lend strength to the propulsion system. The nexin arms are the connecting tubes, passing the power of the engine from one microtubule to another. Whether a boat or a cell is being propelled, for this motion to be provided, a great many components must be bound to one another and operate together in great harmony. If not all are placed in the right positions, the components will serve no purpose.

As you have seen, intelligence and consciousness are necessary for every component to exist. In the same way, intelligence, consciousness, planning and purpose are required to produce useful protein structures. Even if we assume that proteins did happen to form in some way, when injected into a cell, we still cannot expect them to build such flawlessly functioning structures as microhairs. An intelligent Being is required to organize and combine these in an appropriate manner.

The theory of evolution is absolutely unable to account for the formation of proteins and how they combine to form structures such as machines, engines, data banks and factories, in which every single component is indispensable. Coincidences cannot possibly give rise to such complex and impeccably well designed systems. Moreover, to form even the smallest systems, such as the microhairs in the cell, hundreds of proteins, enzymes and molecules must combine at the same time. Indeed, biochemists have determined that cell motion is supported by up to another 200 other proteins not mentioned here. The absence of just one out of hundreds of proteins will cause the others to become useless.

The theory of evolution, which maintains that life emerged gradually and through minute changes, is thus unable to account for the formation of the microhairs. The biochemist Michael Behe's book, *Darwin's Black Box*, contains powerful criticisms of the theory of evolution. It devotes considerable space to proteins and the hairs in cells, and describes the theory of evolution's inadequacy in trying to explain them:

> *As biochemists have begun to examine apparently simple structures like cilia and flagella, they have discovered staggering complexity, with dozens or even hundreds of precisely tailored parts. It is very likely that many of the parts we have not considered here are required for any cilium to function in a cell. As the number of required parts increases, the difficulty of gradually putting the system together skyrockets, and the likelihood of indirect scenarios plummets. Darwin looks more and more forlorn. New research on the roles of the auxiliary proteins cannot simplify the irreducibly complex system. The intransigence of the problem cannot be alleviated; it will only get worse. Darwinian theory has given no explanation for the cilium or flagellum. The overwhelming complexity of the swimming systems push us to think it may never give an explanation... Cilia and flagella are far from the only problems for Darwinism.*[59]

As Behe states, the minute hairs that propel the cells are just one of the facts that refute Darwinism. Life has been equipped with countless such miracles, each of which introduces us to the infinite might, intelligence, knowledge, and incomparable creative artistry of our Almighty Lord. On seeing these proofs, anyone of intelligence and a good conscience will comprehend that God is the Lord of everything:

> **He said, "The Lord of the East and the West and everything between them if you used your intellect." (Qur'an, 26:28)**

## Enzymes: Special Accelerators for Life

In a single second, more processes than can possibly be counted take place in the bodies of living things. These processes are so detailed that super regulators must intervene to establish order and accelerate events. These super regulators are enzymes.

Inside every living cell there are thousands of enzymes which assist in the copying of DNA, breaking down nutrients, producing energy from foodstuffs, and permitting large molecules to form from simple ones.

In order to accelerate the chemical processes that need to take place inside the cell, either a hotter, cooler, or a more acidic or a more alkaline environment is required. The correct environment is crucial for the necessary chemical processes to take place to keep the cell alive. On the other hand, if it is too alkaline, acidic or hotter than ideal, the proteins inside the cell will break down immediately.

Were it not for the enzymes, then no functions of your cells, from the simplest to the most complex, would be possible, or else their activity would slow practically to a halt. In either case, the result would be the same. You would be unable to breathe, eat anything, digest, see or speak; in short, you would die.

Enzymes are used extensively and life without them is impossible. Enzymes catalyze more than 4000 biochemical reactions in human body.[60] Enzymes know what is required so that chemical reactions can take place, of which, most of us don't even know the names of. One of enzymes most important functions is to initiate, halt and accelerate a series of chemical reactions in the body. As your cells fulfill their functions, the chemicals within them must enter into reactions. A certain level of heat is needed for chemical reactions to begin. However, higher temperatures also pose a threat to cells and if too high is lethal. Enzymes resolve this difficulty. They initiate or accelerate chemical reactions without the need for high temperatures, but do not enter into such reactions themselves. To cite one instance from daily life as an example of how enzymes accelerate events in our cells: As you breathe, carbon dioxide is cleansed from your blood through an enzyme known as anhydrase. This enzyme speeds the process by up to 10 million times and prevents asphyxiation.[61] With similar speeds, enzymes possess the capacity to effect changes in 36 million molecules a minute.

Another example is the bacteria that serve the plants. Plants are the first living things that remove the nitrogen from the air. However, they are not able to use the nitrogen ($N_2$) found in the atmosphere in its gas form. Therefore, nitrite bacteria convert nitrogen to nitrite ($NO_2$), and nitrite in turn is converted to nitrate ($NO^-_3$) by nitrate bacteria. Now the plants can use it. If it hadn't been for these conversions, the plants wouldn't be able to synthesize proteins, and there would be no life on earth. The enzyme 'nitrogenase' catalyzes this transformation and allows nitrogen to be presented to the plants as a ready-to-use fertilizer. In order to do the same thing in a factory, a temperature of 400°C and an atmospheric pressure of $200^{-350}$ bar would be required. Factories spend large sums of money to fix 27 million tons of nitrogen to produce fertilizer every year. However, bacteria with nitrogenase enzyme can fix 90 million tons of nitrogen in normal temperature and pressure conditions in a few weeks. In other words, the technology the bacteria use is much more advanced than human's technology.

Various bacteria play a role in the transformation of nitrogen ($N_2$) into ammonia ($NH_3$). Azotobacter, Beijerinckia, Klebsiella, cyanobacteria, clostridium, desulfovibrio, purple sulphur bacteria, purple nonsulphur bacteria, green sulphur bacteria, rhizobium frankia, azospirillium and many others carry out the same reaction with the same information and program in the most flawless manner, although they operate in different locations and with different structures. If, as humans, we cannot do what these bacteria do, know what they know, but instead learn from them; then it wouldn't be scientific to call unicellular organisms primitive. Below, is the chemical formula of nitrogen fixation:

$$N_2 + 8H^+ + 8e^- + 16\ ATP = 2NH_3 + H_2 + 16ADP + 16\ P_i$$

Enzymes enable vital reactions to take place at the greatest speed possible and to also use the body's energy in the most efficient way. If you compare the human body to a factory, and enzymes to that factory's means of production, then no source of energy can be sufficient to power it. The energy requirements of trillions of 'machines' with 2,000 different varieties of protein, working flawlessly at maximum speed will be enormous. In order to replicate a simple reaction that occurs within the cell under laboratory conditions, very high levels of heat and energy are required.[62] If similar levels of energy and heat were used inside the cell, the cell would break down immediately. However, silently working enzymes perform all their many functions using the heat and nutrients they take from the body. These properties alone are enough to show that enzymes are talented elements especially made to cause every reaction to occur in the body error-free and effective. As you read these words, a great many enzymes are controlling reactions throughout your body, and raising them to a speed that ensures the sustaining of your cells. Although you are largely unaware of what is going on in your body, enzymes are aware of these processes and make important and accurate interventions. In addition, every enzyme accelerates specific chemical reactions in the body. No

enzyme can perform the task of any other, because each one has been created to perform its own particular reaction.

For instance, a large number of enzymes can be effective in neutral-state liquid environments, while the enzymes charged with digesting foodstuffs in the stomach can operate only under acidic conditions. The enzyme amylase in saliva breaks starch down into maltose and accompanies food down the esophagus. When the food arrives in the stomach, the acid environment there neutralizes it. And it's for a very good reason because the enzyme's work is now finished and can damage the stomach.

Enzymes' shapes are fully compatible with the substances they will combine with and operate on, working like a lock and key in a complicated three-dimensional geometry. The way that enzymes locate corresponding substances in the body and then attach to them shows what looks like particularly conscious behavior. Furthermore, like hunters who wait for prey to pass by, enzymes are all found just in the right locations in the body, in accordance with their structures and properties. They avoid environments where they might come to harm or lose their effectiveness. They assume responsibility for initiating and accelerating all reactions, but requiring the absence of any agent to stop them, enzymes would keep initiating reactions throughout the body, causing overproduction of specific proteins or the impairment of particular biochemical balances. Control mechanisms in enzymes completely demolish the theory of evolution that relies heavily on random selection. Enzymes are activated or suppressed through highly conscious choices, which means the quantity of enzymes needed for the cell should be 'known'. The fact that molecules in the cells, made up of inanimate atoms, are made to act as if they possess such knowledge, is a proof that they are controlled and guided by God.

Another example to such "conscious" systems is as follows: Most of the time, enzymes operate as a chain. Their structure is so marvelously created, as the enzymes work and begin to produce a surplus of materials, these surplus enzyme products attach to control regulates of the producer enzymes and suppress them. If the activity of an enzyme is unnecessary or harmful, its activity is suppressed, sometimes only by removing or adding a small substance like phosphorus.

When a cell decides that the time has come to stop the enzyme from functioning, it distracts the enzyme with extraordinary planning, dispatching a substance similar to the one with which the enzyme normally combines. The enzyme attaches to this 'imitation', which prevents unnecessary activity by temporarily immobilizing the enzyme. In order to immobilize enzymes, however, this imitation has to compete with substances that block it permanently. Obstruction of enzymes in this manner is known as *competitive inhibition*. This distraction method halts enzyme activities until the product emerging as a result of that enzyme's reaction falls below a specific level.

What is told above is not some information to pass by. Recall that we are not talking about educated, responsible human beings who are able to make decisions and conscious calculations, and put these plans into action, but proteins, fats, carbohydrates and vitamins composed of unconscious atoms. The cell determines the quantities of the substance produced, like an inventory controller, and when it decides that enough of the enzyme product has been manufactured, implements a clever plan to temporarily suspend production. This is another clear display of God's supreme art of creation and it is evident that all these beings act on the orders of God.

As more details regarding enzymes, proteins and similar structures emerge, the more the theory of evolution is confirmed to be invalid. The structures in this micro world force them to admit the flawless creation in life. One such scientist is the microbiologist Malcolm Dixon:

> *Enzyme systems are doing every minute what battalions of full-time chemists cannot... Can anyone seriously imagine that naturally occurring enzymes realized themselves, along with hundreds of specific friends, by chance? Enzymes and enzyme systems, like the genetic mechanisms whence they originate, are masterpieces of sophistication. Further research reveals ever finer details of design...*[63]

Clearly, a cell lacking enzymes cannot live because it cannot perform most required reactions. However, the *other* enzymes in the cell are essential for those enzymes to be produced. That being so, how did the first enzyme emerge when there were no other enzymes around? Darwinists cannot answer that question.

Yet this is by no means the end of Darwinists' difficulties. If the proper conditions are not preserved when enzymes emerge, they may soon disappear or lose their ability to function.[64] Consequently, for a single enzyme to be in a functional state, all the other enzymes, and the systems and structures of the cell itself must also be ready and present. So how did the first enzyme come into being? The plain answer is that God created every living thing together with all its molecules, cells, enzymes and proteins.

# USAGE AREAS OF PROTEINS IN THE BODY

## Electrolyte Miracle and Proteins

Astronomers have to live in physical conditions that are very different from those on earth. Therefore, they need to be protected with special clothing and devices. An astronomer without special protection would die in a short amount of time. Our cells also have to endure various physical conditions present in their environment. For example, high or low temperatures, salinity, hydric levels are extremely crucial for the cell to remain alive. There definitely has to be an inspection and maintenance system that is always active. We, on the other hand, continue our daily lives unaware of all these requirements or how they are met. The electrolytes that we will be discussing now are part of this flawless system created by God.

## What are Electrolytes?

A very important system in the cells is based on the interaction of sodium, potassium and chlorine ions. The cells are equipped with an electrical system built to work with these ions. Sodium (Na) and chlorine (Cl) are the elements that make up the table salt we use everyday (NaCl - sodium chloride). While it is found abundantly in seawater, much less exists in fresh water. The cell membranes are usually closed to the passage of these ions. These levels are always kept in a certain range to ensure a certain electrical voltage in the cell. In this system, the potassium level inside the cell is kept higher than that outside. Sodium and chlorine, on the other hand, are higher outside the cell. In other words, the levels of ions inside and outside the cell are always kept at certain levels. Even the smallest variation in these levels will cause diseases. Since these ions build weak bonds with organic matters[65], their fundamental duty is arranging the electricity and water pressure and these systems are crucial for the continuation of life. However, in order for the system to function properly, once again proteins are required. These proteins build special channels for the entry/exit of these electrolytes into and from the cell while others act as engines.

Potassium levels are higher outside the cell, but lower inside the cell. Sodium, on the other hand, is lower inside the cell, and higher outside the cell. This ratio is crucial for energy needs. A very special pump uses energy to pump the sodium atoms outside and potassium ions inside. This ensures different levels of electrolytes on either side of the cell membrane.

Most of the cellular fuel is devoted to these pumps and their pumping activity. There is a display of amazing consciousness here. If these sensitive levels are not preserved, the cell will die. But who makes these precise measurements and constantly ensures the maintenance of these levels in a very conscious manner?

## Why Does The Cell Need Electrolytes?

## For Osmosis Balance

Cells can exist in a number of external environments. One of the most basic conditions for the sustaining of the cell is its resilience in different levels of viscosity, variations which cause the cell to either lose or takes in water, depending on the concentration of the environment. If this movement of water in and out of the cell is not kept under control, the cell might either dry up or swell. One of the most important duties of electrolytes is protecting the cell from this danger. As a result, the ion entries and exits are kept under control according to the changing environmental concentration. At the same time, protective measures are taken inside the cell to match the new conditions.

## Maintaining the Electrical Balance Inside the Cell

The basic materials inside the cell, like DNA, RNA and lipids, are negatively charged and potassium, and certain amounts of magnesium and to a lesser extent, sodium help to balance this negative charge in the cell.[66]

Sodium ions are constantly pumped outside the cell by special pumps to keep the sodium level high on the cell surface. However, keeping the electrolytes at certain levels in certain regions, most notably the sodium, is a job that requires extensive consciousness. There exists a lipid barrier between the cell and the external environment. In order to allow the materials that are required inside the cell to pass through these barriers, sodium that had been previously pumped out side is used. For this purpose, a special protein specific for the sodium and the relevant substance is located in the cell's membrane and sodium ions help to move these substances, like sugar and amino acids, through these gates.

## Transportation By Walking Proteins

Our body is home to constant syntheses every moment. Newly produced molecules are taken to their respective regions and carry out their duties there. These transportations take place sometimes through the blood stream and sometimes with the help of the proteins in the blood. The way they help is very interesting; some proteins are put in molecular packages that walk to the place of delivery with their cargoes. These proteins are called motor proteins.

Motor proteins, also known as molecular motors, have the potential of converting the chemical energy obtained by the food we consume, into kinetic energy. In other words, they operate just like the fueled gasoline engines we are so familiar with. The work uses the following principle:

Motor proteins assume new forms by using the energy released after the last phosphate bond of the ATP molecule (adenosine triphosphate) is cleaved. This energy-dependent form change also helps to transform the position and shapes of different structures inside the cell that are bound to these proteins. In other words, phosphate changes, due to the protein's unique structure, creates propelling power for the protein.

No motor produced with today's state of the art technology can be either as small or as efficient as these protein motors. Motor proteins are of different types, depending on their structures, the molecules they bind to, and the tasks they assume.

Microtubules -the highways of the cell city- are hollow cylinders made up of tubulin proteins. Motor proteins that are attached to the microtubules and walk on them are called *kinesin.* Kinesins are proteins that use chemical energy to move (a mechanochemical property), and play a role in converting the chemical energy in ATP into kinetic energy. Kinesins, the motor proteins with their 100 different types, are

made up of around 340-350 amino acids. The kinesins, which were first discovered in the large nerve cells of cuttlefish, walks to the (+) end of the microtubules to transport the organelles and other substances inside the cell. Every kinesin molecule has two legs and can walk for 8 nm for every ATP that is hydrolyzed.[67]

## Dinein

Another molecule capable of walking on the microtubules is the motor protein dynein. One of the largest proteins known, they walk to the (-) end of the microtubules which is in opposite direction to kinesins. In other words, kinesin, myosin V and dynein molecules that are in charge of transporting intracellular organelles and materials, take steps with their legs just like a human gait and carry their cargo from the cell membrane towards the center. Using a very precise camera that can take 1000 pictures a second, scientists discovered the following: Although kinesin and dynesins carry their cargo in opposite directions, they do not block each other's movement and, on the contrary, they cooperate. This is because the cargo is handed over between the kinesin and dynein motor proteins in certain intervals. No one yet knows how this cooperation occurs, and how these molecules, which are seemingly the opposite of each other, are informed of the location of each other, and contact.

## Myosin family

Myosins are proteins programmed to walk on the actin filaments. If we think of the microtubules as the highways of the cell city, the actins can be compared to the byways. Although actins are thinner and shorter compared to microtubules, they are widely dispersed across the cell. Actin filaments also have (+) and (-) end. The first member of the myosin family was discovered in muscle cells. Thousands of myosin II proteins in the muscular cells come together and begin to walk at the same time in the same direction. This molecular gait enables your muscular cells to contract and relax, in other words, enable you to move. As you read this, your eyes move from one word to another. During this time billions of myosin II molecules simultaneously move in the same direction along actin rails in incredibly short times.

It was discovered that myosin V molecule, which works with kinesin and dynein motor proteins in the intracellular and extracellular transport of organelles and vesicles (bags for carrying substances around) also has two legs and move by walking. Researchers revealed that in its every step by exerting energy (ATP) the myosin V covers a distance that is 4 to 5 times longer (37 nm) than kinesin. This tiny molecule is able to heave organelles that are 1000 times heavier than itself, and take hundreds of steps. The long strides of myosin V compared to other motor proteins, made it quite popular research topic among scientists.[68] Another example can be found in the digestive system. As you know, the digestion process starts in the mouth. Every bite in our mouth is subjected to a very comprehensive digestion process, with billions of smooth muscle cells in play in a system that is out of our control. Myosins ensure the movement of smooth muscles in steps of the digestions, which is a clear display of intelligence and will that don't belong to us. Almighty God, with His infinite power and knowledge, programmed inside every myosin molecule how to act, a program that continues without any interruption.

## What Makes Myosin V So Important?

For years, scientists were fascinated with the question 'how does the molecular motor myosin V walk?' To understand this, they worked extensively on the subject to find a satisfying answer. A group of bio-physicists consisting mostly of Japanese researchers, claimed that myosin V's legs worked in an asymmetrical manner and that one leg was always slightly ahead and the other followed behind. The steps of myosin V can be likened to the steps of a limping person. American scientists on the other hand, claimed

that myosin V walked just like human beings. According to their model, both legs could step in the same manner and the leg behind will be in the front in the next step.

Every year, thousands of new articles, thesis and project applications are penned regarding the molecular motor proteins. In order to continue all of this research, billions of dollars are spent by science and research centers on an annual basis. This point merits serious consideration: even if the tiniest of the countless parts of the flawlessly working human system can be the topic of interest and extensive research for hundreds of people, the superior and infinite power of the Almighty Creator, Who builds and manages that system like an orchestra, is undebatable.

## Multi-Level Surveillance Cameras Outside the Cell

Researches on bacteria revealed very surprising results. Bacteria release receptor molecules to their environment, each of which sounds their alarm in varying acidic and alkaline levels when they detect changing conditions. These triggered receptors in turn trigger other molecules and this information is communicated to the cell and its neighbors.[69] This is indeed a very interesting phenomenon. The cell sending out messenger molecules to be informed of the changes in the environment, and the fact that each are precisely tuned to different environmental values and that the obtained information is sent back to the cell as a result of an molecular chain reaction, is an example of superior creation.

Different acid levels are shown with different colors. It is miracle that there are molecules in charge of letting the cells know of the acid levels in the environment. This surprising art in the bacteria is the creation of God.

## Acid-Base Homeostasis in the Cell

Cell organelles work like a production facility, with numerous engineers and workers in a production facility. These staff members are called enzymes. However, in order for every enzyme to work, the environment has to have a certain acid-base homeostasis. The researchers showed that different organelles needed different acid-base balances for their operations.[70] For example, lysosome, the stomach of the cell, needs a pH level (acidity level) of 5. This value is crucial for the operation of digestive enzymes.[71]

The acid-base difference in the organelles is definitely not a product of chances. On the contrary, countless molecules cooperate in an impressive organization to ensure these differences exist. They use a very advanced system to make it possible, of which details are still thoroughly investigated. Still, the researchers were able to uncover very surprising details. For instance, V-ATPase, which is a regulator enzyme with a central role in the cell, is one of the most advanced pieces of technology the humans have ever encountered. V-ATPase is used for the regulation of the pH of the cellular organelles. These enzymes play roles in the processing and maturing of the secretion proteins, neurotransmitter production and release that ensures data exchange between neurons and also in the cells that break down bone cells osteoclasts.[72] Now let’s take a closer look at these marvelous structures.

## An excellent motor: V-ATPase

One of the most important factors affect the acid-base level are the protons in the environment ($H^+$ hydrogen ion). The number of $H^+$ must be increased to raise the acidity of the environment. V-ATPase enzymes are charged with this duty, and work like a perpetual circulation motor on an atomic level. The V-ATPase consists of mechanic parts.

V-ATPase enzyme, a motor with fascinating features, is made up two main sections and 14 different parts.[73] All pumps need energy to work and these enzyme motors use the energy stored in the molecule named ATP. What fuel is for cars, ATP is for organic molecules. With the use of the energy in ATP, the moving parts of the ATPase motor rotates, and this motion moves the bottom part shaped like a cogwheel. This rotation pumps protons ($H^+$) into the region of the membrane where they are needed. Thus, the pH of the environment is ensured.

## Molecular Motors Debunk Evolution

The existence of this motor made up of protein single-handedly debunks the theory of evolution. However, with surprising demagogy skills, evolutionary books claim that V-ATPase evolved from another molecular motor in the cell. This is an empty claim completely devoid of any scientific basis. V-ATPase was created at once with all its unique features and is created over and over again in the cell.

## Constant Creation of the Motor in the Cell

The production of this motor inside the cell is another miracle of its own. Because not only these motors, but also production facilities producing these proton pumps are also created in the cell. In other words, other than this motor itself, a production facility exclusive to it exists and this facility, full of miracles, works continuously. Numerous molecules cooperate for the production of the V-ATPase motor and discharge their duties in line with an order. There are many sub-units in the production of this motor. Scientists have discovered that in the assembly of these sub-units, proteins named Vma12, Vma21, Vma22 and Pkr1 function just like workers.[74]

Nothing is by chance in life. Neither can a sports car can come into being by chance, nor the factory that manufactures it. In the same way, the V-ATPase motor and its production facility do not come into being by chance. God creates all of these as a whole.

## Secret Communication System in the Motor

What do you think when you look at the door numbers, or the address lines on the mail you receive? You would never doubt that intelligent, and conscious human beings wrote these numbers. In the same way, use of a common marking system to specify various locations, requires consciousness. Scientists working on V-ATPase discovered that these motors also possessed a similar addressing system. V-ATPase proton pumps are found in various organelles and the membranes of some cells. One of the parts constituting V-ATPase, has the address of the destination.[75] Thus, V-ATPase enzymes are differentiated based on their places of duty.

One of the parts of the V-ATPase carries the address of the destination for the motor. The way that addresses are written in the molecular motors is a clear miracle of creation.

## Motor Control

If the proton pump works continuously, the pH level of the environment will increase constantly, which could impair the cell's functions. In other words, the motor itself could have a detrimental effect. However, the studies showed that V-ATPase is kept under very strict control. This proton pump consists of two special units so it can be stopped when necessary. These two parts can be separated to stop the motor and rejoined together to resume the pumps' working. Needless to say, many different proteins come into play to carry out these tasks.[76]

V-ATPase can be divided into two parts only by the control molecules responsible and can be rejoined only by them. This way, the acidity of the environment is kept under control to ensure the persistence of the cell. The fact that proteins function like assembly experts is another marvelous fact of creation.

Fascinating things take place inside of the cell. Some environmental conditions have harmful effects on life. In our daily lives, we often see examples of this phenomena. For instance, if we leave a piece of meat outside of the fridge, it will become tainted. Once you pick up a fruit from its tree, it will rot after a short while. In other words, it is impossible for the systems of the cell to be built in the external environment. However, the situation is quite the opposite in the cell. Not only is the existing order preserved, but there is also constant organization and construction. Appearing inanimate outside the cell, these molecules begin to carry out their duties once inside the cell. This is a clear evidence of creation, and shows that there is no room for chance, neither in the past nor now.

The truth is, even inside the cell, conditions exist that could be detrimental to the existing order any moment; however, hundreds of molecular complexes work together to preserve the order and maintain life.

Evolutionist scientist Kunihiko Kaneko had to admit the surprising aspects of this harmful environment: *"It looks miraculous that such high numbers of processes that involve such a high variety of molecules always result in the same macroscopic shapes. This can be compared to people trying to build a certain shape using irregularly shaped blocks during a violent earthquake."*[77]

When viewed from the outside, the cell looks like a very complex, very crowded place with tens of billions of molecules constantly busy. Regulating the acid-base levels is only one thing among countless other balances that must to be checked constantly. Unless these controls are in place, death will be imminent. However, this system can operate only if many different parts work together concurrently. Any flaw in the system will lead to diseases and death. For example, if the parts that constituted the V-ATPase motor existed, but not the proteins that assembled them, the system would be of no use. Even the existence of the assembly proteins and the parts that make up the motor don't really mean much because the absence of control staff will turn V-ATPase into a weapon that only brings detriment to the cell. This and many other similar details clearly show that rhetoric, such as 'gradual evolution, evolutionary pressure, and evolutionary tendency,' are only hollow claims. You can encounter these phrases in many scientific articles, however this doesn't make them scientific. In fact, they can be compared to meaningless words that the ancient sorcerers repeated to themselves.

Every new discovery proves once more that life was created by God, the Owner of infinite knowledge and wisdom.

## Gates Made of Protein Need To Be Present in the First Cell

The cell is isolated from the external environment with a lipid membrane, which gives cell a very effective protection. However, in order to ensure that the cell functions properly, many different materials and physical conditions are required. For this reason, the presence of special passage systems made up of proteins, which fascinates scientists, is essential. These passage systems include specialized gates, channels, motors and transportation proteins. The smallest mistake or flaw in these structures will lead to the cell's death.

## Iron Miracle

Special systems and measures are required to benefit from certain materials. For example, explosives are very important for armies. But unless the proper measures aren't taken in their production, handling, storage or usage, they could cause great damage. For this reason, guidelines prepared by experts are

followed in their handling and every possible precaution is taken against potential dangers. Iron, in the world of living structures, is one of those sensitive substances and requires careful handling.

Free iron ions are extremely dangerous for organisms. However, precise precautions and security measures in its handling offer another example of God's beautiful creation.

## Iron is indispensable for life

Iron is the fourth most abundant element in the world. It is represented by the letters 'Fe' in the periodic table and its atomic number is 26. It is absolutely necessary for life and is used in various biologic processes from respiration, photosynthesis, nitrogen binding, regulation of gene control in the DNA synthesis.[78] However, as the iron carries out these vital functions, it has to be taken to its place of duty in a very careful manner. Because free iron ions are very active atoms and can start undesired chemical reactions, which would be very dangerous for the cell. We can compare the free iron ions to grenades ready to explode because iron ions cause aggressive molecules to form in the cell.[79] These aggressive molecules attack cellular structures like DNA, RNA, proteins and membrane structures and might fatally damage them.[80] However, despite the fact that we live with countless bombs in each of our cells, we comfortably carry on with our daily lives. This is possible only because God created a perfect system for our protection.

## Special agents created to scavenge iron

Although iron is one of the most abundant elements in nature, since it is an active atom, free iron ions are scarce. However, even small amounts of free iron would be enough to poison us. For this reason, God created dedicated proteins in our bodies which are charged with binding to iron atoms in order to reduce the level of iron ions.[81]

All living structures require iron to survive, including bacteria. But how can the bacteria remain alive in such harsh conditions? The answer offers another miracle. The bacteria release agent proteins called siderophores into the extracellular space in order to take in the iron.

## SIDEROPHORES

Being an agent requires expertise and can be possible only after a long period of training. Experienced people train those who wish to be agents by ensuring necessary conditions for their training. They are equipped with special knowledge and talents so that they can discharge their duties in the best way possible. To this end, they usually use devices intended to identify, monitor and communicate. Siderophore proteins though, do not receive any training; neither do they have specially designed equipment. Nevertheless, by the virtue of God's inspiration, they discharge their mission in the most excellent manner, just like experienced spies.

Siderophores, recognize the iron elements outside the bacteria, which are bound to other molecules and grab them and run. The one that does the 'grabbing and running' is a mere molecule. A molecule, which doesn't have eyes to see, a memory to remember, or hands to grab. However, in complete darkness, it is able to distinguish between iron, magnesium, calcium and other elements, detain it and escort it to its destination. Needless to say, inanimate and unconscious molecules can carry out such complex procedures only because God designed it to do so.

The iron elements captured by siderophores are taken inside the cell after a series of security and control processes. The molecules that formed a compound with iron, began a new journey from this point

on. This substance, which is dangerous for the cell, must be safely taken inside and successfully escorted to where it is needed. But how are the agent molecules that are outside the cell, taken inside the cell?

## Special security gates at the cell membrane

God created a very complicated system in the bacteria so that siderophores which form a compound with iron, can be taken inside the cell.

In order for the cell to carry out its vital functions, it is important that not everything is admitted into the cell. Many substances that can damage the cell, cannot pass through the gates due to their size. Siderophores attached to iron are also rather big molecules. Then how do they enter into the cell? It is because the cell membrane is equipped with very special recognition, transportation and security systems.

## Special systems at the security gates

Bacteria have many different units designed to ensure that iron can pass through cell membrane. Receptors, doors, transportation proteins, proteins in charge of transferring energy, power and many other units act in concert for this purpose.

For instance, as shown in the picture, bilayer membranes have a complex system. God created special receptors in the outer membrane that can recognize and bind with siderophore. The energy required for the iron-siderophore compound to pass through the outer membrane is produced in the inner membrane. The iron complex that passes through the outer membrane is taken to the inner membrane with the help of another protein. It then passes through the door created especially for it in the inner membrane, and enters into the cell.

The picture above, shows a simplified version of the system that allows the iron to enter the bacteria. As can be seen in the model, the bacteria membrane has two layers and the top layer has receptors called **FepA**. This receptor recognizes the molecules that built a complex with the iron element and takes them to the region between the inner and outer membrane. The necessary energy to open up the receptor is provided from the interior layer of the membrane, and by means of TonB-**ExbB-ExbD** proteins, this energy is transferred to the receptors.[82]

These proteins are found in large amounts on the cell membrane especially when the need for iron molecules is high. Another intermediary protein named **FepB**, transfers the iron complex which had passed through the receptor, to the inner membrane. On the inner membrane is a security door made up of **FepG** and **FepD** proteins. This door recognizes the iron complex and admits it to the cell with the help of several other proteins.[83]

If even one of the structures in charge of passing iron through the cell membrane were missing or was flawed, the whole system would collapse. This is clear proof that the theory of evolution is gravely mistaken as it claims that life developed gradually. Both cell and the cell membrane are clear examples of God’s flawless creation.

This is not everything that makes iron very interesting. The adventures of iron inside the cell is a display of another series of miracles.

## Miracle in the iron storage proteins

The level of iron molecules kept in our bodies must be strictly regulated. If it is less than required, the aforementioned functions cannot be performed, if more than what is necessary, it will be destructive. In the presence of oxygen, excessive iron will break down the most basic building blocks of the cell including

DNA, RNA, proteins and membranes.[84] The free iron ions inside the cell, therefore, must be kept under close control.[85]

Iron is the fourth most abundant element in the world.[86] However, under normal circumstances, since it is insoluble, additional systems are required to get it into the cell. As a part of this control, some proteins are assigned the task of storing iron ions. There are three types of iron storage proteins in living beings. These are:

- Ferritin
- Bacterioferritin (Bfr)
- DPS

These proteins are found in different types of living structures, and carry out their duties in the most flawless manner. For example, a single Ferritin or Bfr protein can house 2000 to 3000 iron atoms.[87] The fact that a protein carries hazardous materials for the benefit of the cell, with the help of complex processes, is a clear miracle of God. These molecules act on the orders of God and discharge this important duty in a selfless manner.

Factory warehouses are special places used to keep excessive materials so stored materials can be used later as necessary. Iron storing proteins, in an awe-inspiring display of art of creation, work just like these warehouses. The manifestation of such marvelous features on molecules is a breathtaking phenomenon.

The ferritin molecule is created to store the iron ions. This molecule is a wonder also due to its peculiar shape, specifically it is built with the combination of 24 sub-units in the most excellent manner.

The proteins Bacterioferrin and Dps are also created to carry the iron ions. These molecules have very complex appearances. As the three-dimensional pictures clearly illustrate, iron storage proteins all have a very complex structures. In the space right inside their centers exists a special place for iron ions where they are stored. As the iron is taken to this space in the center, it is also subjected to certain chemical processes.[88]One of the most important qualities of ships is their load capacity. Similarly, inside our cells, iron storage proteins carry large amounts of iron ions.

## General inspection of the system

In addition, iron has to be kept under strict control in terms of its total mass in the body. Research has revealed an incredible system that keeps the total amount of iron under control.

Protein named **Fur** acts as the brain of the system and makes all the strategic decisions regarding iron. When the iron levels are low, it activates the systems that will absorb iron into the cell.[89] And when the levels are high, it shuts down the production of systems that ensure absorption of iron into the cell. Furthermore, when there are high levels of iron in the cell, storage proteins like ferritin are produced in addition to antioxidants to quell the effect of the free radicals caused by excessive iron and its detrimental effects. However, such control strategies are not limited to these systems only. There is a multi-layered plan in this control system.

## Control system with a foresight

Recent researches have shown that Fur protein is in charge of production of another decision-making protein. This second decision-maker protein is produced only when iron levels go to low and suppresses the production of proteins that don't have priority of iron use. This way, scarce iron is used only for absolutely necessary operations while the cell works to handle this difficult situation.[90]

Chess masters make multi-layered plans. The system that controls iron also works on a multi-layered plan. Unconscious molecules cannot build such a system. This glorious control manifested in bacteria is a reflection of God's art and wisdom.

The cell survives in an environment with so many perilous factors, **all of which can break down its existing structures.** There exist countless destructive machines capable of breaking down a healthy protein. As what we have seen so far shows, one of those elements in iron. Unless iron ions needed for life are kept under control, they can inflict damage on the proteins, the DNA, RNA, and the membranes.

Therefore, special molecules are assigned to carry and store them. Furthermore, countless control techniques are employed to keep the iron at desired levels. However, none of such protective measures existed in the so-called primitive earth conditions that the evolutionists claim existed. For this reason, the claim of gradual development by chance, is a mere deception. Life is clearly created as a miracle and continues to be created in the same manner.

If there hadn't been the cellular control mechanisms that are present today, the cell would be severely damaged by various factors. Ultraviolet light, poisonous substances, free radicals caused by oxygen, and poisonous heavy metals are only a few of these. Life is maintained continuously through protective measures and repair mechanisms. As we have seen, iron has the capability of damaging the most basic components of life. Unless there are special protection systems in place, life would collapse. Despite all these protective measures, countless proteins are damaged every day even in protected cells. When this is the case, it is clear that life would have been under constant threat under the world conditions that evolutionists claim existed in the so-called primitive earth. It is also clear that, under such conditions, random, spontaneous or gradual development cannot account for the cell. God created life and God allows it to continue.

Indeed, God informs us of this fact with the following verse:

> **"God keeps a firm hold on the heavens and earth, preventing them from vanishing away. And if they vanished no one could then keep hold of them." (Qur'an, 35:41)**

## Nobel-worthy protein repair mechanisms

In 2015, for the first time a Turkish scientist, Prof. Dr. Aziz Sancar won the Nobel Prize for chemistry. He was awarded this important accolade for showing the working mechanism of 'nucleotide excision repair' enzymes, proteins used to repair mutations in the DNA caused by ultraviolet light. As a result of these studies, new medications may be developed to treat diseases such as skin cancer by contributing to healthier operation of proteins in charge of repairing DNA. Professor Sancar has researched this mechanism for almost 40 years. In other words, these molecular structures, with their astonishing features, took 40 years to reveal their beauties. A Nobel award should make its owner very proud, but the proteins that are studied should be given a standing ovation. They are the ones that do the real job and, due to the help of the scientists, we are able to witness ever more closely the Supreme Being of our Lord, as Almighty Lord has created the entirety of proteins and everything out of nothing.

## Antibodies: Proteins That Protect Your Body from Foreign Substances

Living things are so delicate that the slightest change in the systems that maintain life, or the entry of a microbe no larger than a billionth of a meter, may cause severe diseases. So how can such a delicate system be protected from the microbes that are all around us?

In the body of every living thing is a defense team that stands ready to protect it from harmful substances. Indeed, this immune system represents the largest army in the world today. Of the 100 trillion or so cells in the human body, a large part represent *defense system cells.* These cells are present in the blood throughout the body and monitor every cubic millimeter of it. These 'troops' also use weapons equipped with the most advanced technology—again a kind of protein known as antibodies.

These antibodies made up of proteins with a spherical structure and play a crucial role in the body's defense. Known as *immune globulin*, these globular proteins found on the surface of the cell are generally referred to by the letters Ig for short.

Antibodies, manufactured by B cells produced in the bone marrow, are wide-ranging weapons specially prepared for use against foreign substances. Antibodies constitute 20% of the proteins in plasma, some found in lymph nodes. These proteins' most important feature is their ability to distinguish cells belonging to the body from foreign substances, and to swiftly eliminate the latter. The very important question to consider right at this point is: How do these proteins manage to accomplish such a difficult task? Proteins, composed of specific combinations of inanimate atoms, can identify foreign and harmful microbes, even though they have no sensory systems to perceive, nor brains with which to interpret their perceptions.

In addition to targeting foreign substances entering the body, antibodies can also combine with them and create perfect three-dimensional compounds with specific molecules or molecular components identified as foreign to the body, in other words, the antigens.

These antigens are stimulating molecules on foreign bodies and initiate the manufacture of antibodies. When the defense cells patrolling in the bloodstream identify an antigen, the defense system goes on alert and begin manufacturing appropriate antibodies suitable for the virus and bacteria that have entered the body. When the antigen and its appropriate antibody join together, an antigen-antibody complex is formed and bacteria or virus carrying that antigen is rendered ineffective. When antibodies bind to antigens, the reactions that take place trigger five different processes, which may be summed up as follows:

**Agglutination:** The antigens and antibodies clump together, thus preventing the antigens' activities.

**Precipitation (Sedimentation):** Antibodies and antigens form a complex, and this forms a sediment and separates from the solution.

**Neutralization:** The antibody blocks the poisonous portion of the foreign substance and prevents it doing damage.

**Opsonization:** After binding to the antigen, the antibody causes the foreign cell membrane to dissolve. As the cell structure is impaired, the antigen is neutralized.

**Activation of Complement System:** This system is contained in the plasma, but not normally in an active state. The combining of the antigen and antibody makes this system active. As a result, the stimulated system enters a series of reactions and enzymes in the system destroy the disease structures.

This information about the body's defense system contains very important messages for those who reflect on it without ignoring the truth. All the molecules in your body are in a constant activity. Usually it's impossible to become aware of a foreign substance entering your body, but the molecules which comprise your antibodies have assumed this duty and are equipped with miraculous abilities for your protection. In this defense system, atoms identify and recognize other atoms. Unconscious proteins and molecules, made entirely of atoms, can recognize harmful substances, instantly produce the most effective weapons against the enemy, and immediately disable it. To whom belongs the power and intelligence that helps them display such conscious behavior? All of these belong to God, the sole Lord of living things' flawless creation.

Like all other miracles of creation, the defense system represents a major dilemma for Darwinists. This system, which can manufacture up to 10 million of different types of antibodies, can recognize an intruder

and produce the appropriate antibody.[91] Antibodies are proteins and the body produces up to 200,000 types of proteins. However, if the antibodies that bind to foreign substances in the body had only 200,000 types of variety, we could have fallen ill with the simplest germ and could die. However, it is not the case because God created our immune system in such a way that it is able to defend our body against countless number of bacteria. But how is it possible that we have tens of thousands of genes in our cells, but are still protected against billions and even more bacteria? This variety is ensured at two levels. Gene sections V, D and J are used for the synthesis of antibodies. However, they are not the only gene sections in the DNA that encode antibodies. There are also different candidate genes that encode the same region. In the synthesis of every antibody, genes from these different sections are selected, creating countless different combinations, thus countless antibodies. This is the first level of diversification.

However, the second stage is even more impressive due to the very specific selections that take place. Certain rearrangements are made in the gene sections that correspond to the areas where the antibodies contact the antigens. An enzyme called activation-induced cytidine deaminase (AICDA) is responsible for this new arrangement. By changing the protein sequences in the antigen-binding site of the Y shaped antibody, it gives rise to countless variations. We can compare the activity of this enzyme to a very skilled locksmith that makes deliberate changes in the teeth of the key so that it can open different types of locks.

Notice that this process has nothing to do with the ‘elusive beneficial mutations’ that evolutionists claim exist. There are no accidental mutations or mutations caused by various mutagens involved. On the contrary, AICDA enzyme makes the right changes on the right genes –among 25.000 genes- on the exact sequences that correspond to the antibody parts that contact the antigen. This is clearly a very deliberate system designed to produce variety.

Clearly this system could not have come into being except by design. Despite his being an evolutionist, California University Professor of Biology Christopher Wills states in The *Wisdom of the Genes* that the body's defense system raises one of the most complex and controversial questions in the whole field of biology. Humans have been the target of diseases for millions of years, but we now know how our immune system defends us. Even better, Willis explains we know that our immune system can protect us even against the diseases we are yet to encounter. To do this, the immune system uses immunoglobulins, which are proteins, and able to bind to molecules they have never seen before. Wills states that this state of affairs seems to drag scientists into an area that they prefer to avoid when discussing evolution. He goes on to ask how the immune system can foresee the future and produce immunoglobulins capable of defending against future attacks.[92]

Darwinists are unable to answer this question. Looking at the answers of evolutionists to questions such as, "How did antibodies come about?" or "How did the immune system come into being?" the only reply they can give is "By much time and a lot of chance." Yet when they examine the defense system and similar structures, Darwinists either avoid touching on the subject or else admit their bafflement. It would be blatantly illogical to say "by chance" in answer to the question of how these systems came to be.

Since it is evident that God created life down to its very smallest component, it is truly surprising that Darwinist scientists still blindly deny this fact. God refers to such people in the Qur'an:

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?

> **We have decreed death for you and We will not be forestalled in replacing you with others the same as you and re-forming you in a way you know nothing about. You have known the first formation, so will you not pay heed? (Qur’an, 56:62)**

Now let’s cover the bacterial flagellum, one of the most impressive machines built from proteins.

## TYPES OF ANTIBODIES

Different types of antibodies perform different tasks, such as communicating the presence of antigens to other defense cells or merging with antigens to initiate the destructive process of war. It is vital that a tiny molecule undertakes so many different tasks and fulfill them successfully. Why do these molecules take on such tasks, and from whom they take their orders?

It is useful to examine at large the tasks of antibodies to understand the overall significance of each antibody in the immune system as well as the sense of responsibility of such small molecules.

**IgE Antibody (Immun Globulin E):** IgE antibodies circulating in the blood. These antibodies, which are tasked with summoning warrior and some blood cells to the battle, are also involved in allergic reactions. Therefore, the number of IgE antibodies remains high in allergic bodies.

**IgA Antibody (Immun Globulin A):** They are found in sensitive areas where the body fights antigens, such as tears, saliva, breast milk, blood, air vesicles, mucous membranes, stomach and intestinal secretions. What makes these areas sensitive is that such moist environments are favorable for bacteria and viruses.

IgAs, which structurally resemble each other, gather in areas where microbes can easily enter the body and keep the area in control. It is similar to deploying reliable guard troops to strategically important areas.

Antibodies that protect babies from diseases in their mother's wombs do not leave their bodies after birth and continue to protect and look after them. The baby indeed needs the help the mother provides. Because the newborn's immune system is not fully developed and its digestive system is defenseless against microbes since acid production has not started yet.

A newborn baby does not yet have IgA antibodies in its body. However, IgA antibodies are given to the baby in 100 times higher concentration than in the mother's blood through the breast milk. A defenseless baby born to a world full of microbes after living in the sterile environment of the mother's womb is thus protected. Like the IgG antibodies, this antibody type disappears when the baby is several weeks old, since their task is then completed. All of this is the result of a highly intelligent, planned and calculated design based on vital information. As you can see, every stage of baby's development and protection is taken into account. These soldiers, ready to protect the baby when necessary, disappear to avoid occupying unnecessary space when they are not needed. No coincidence can design such a perfect and complete plan, and no coincidence can influence and control such masses of atoms. It is a clear truth that all this design for protection is the work of God, the most merciful and protective.

**IgM Antibody (Immun Globulin M):** These antibodies are found in the blood, the lymph nodes and the B cells. When the human body encounters an antigen, IgM is the antibody that is produced to fight this hostile intruder. IgM molecules are a combination of 5 IgG molecules.

**IgD Antibody (Immun Globulin D):** IgD antibodies are found in the blood and on the surface of defense cells (B cells). They cannot act alone. They position themselves on the surface of certain defense cells (T cells), allowing them to catch antigens.

**IgG Antibody (Immun Globulin G):** IgG is the most basic and most abundant antibody in the body. It constitutes about 70-75% of all antibodies. It only takes a few days to synthesize them but they last at least few weeks and at most several years. These antibodies are found in the blood, the lymph nodes and the intestines. They circulate with the blood, attack directly to the foreign matter that enters the body and stick to it. They have a strong antibacterial and antigen-destructive effect. They protect the body against bacterial and viral infections and counteract the acidity of poisons.

Moreover, they get stuck between cells, immobilizing bacterial and microorganismal invaders that penetrate the cells and the skin. Because of their small size and the aforementioned capabilities, it is the only type of antibody that can enter a pregnant woman's placenta. This way, a baby with underdeveloped immune system can be protected against certain infections starting from the first months of its life.

As you can see, the antibodies are very diverse and there is a perfect division of labor between them. Each antibody does its job perfectly. Then, who do this power, will and intelligence belongs to that equips the same protein with different features for the same purpose, that tells them what to do in the body, that trains and informs them based on their tasks? Could these proteins have established a perfect division of labor and organization after deciding to protect the body, even taking into account a newborn baby, on their own? How can these unconscious proteins, without eyes, ears, brains or hands, be as disciplined and obedient as an army? For a person who contemplates on all this, the existence of God, the supreme Creator, becomes an obvious truth.

## Bacterial flagellum

Like all other living structures, bacteria also have basic needs like food and reproduction, and most of the time, they need to move to do these. But how do they move?

It is very difficult for the bacteria to move in their environment, since they are only a single cell. A bacterium moving inside a liquid can be compared to a rowboat trying to move with oars in a heap of rubble. At this point, a flawless mechanism created by God for these organisms comes to the rescue.

Actually, scientists have long known about the bacterial flagellum. However, when recent studies revealed the details of this structure, the world of science was completely taken aback. The reason is because studies showed the flagellum wasn't a simple oscillating mechanism, but on the contrary, a state of the art structure.

This structure works like a propeller and, just like the motor at the rear of a boat, creates propelling power to push the bacteria further.

Similar to an engine, there is a rotor embedded in the inner membrane of the cell that provides the rotating movement. The stator is a fixed part. The rotating rotor has a tubular structure and, starting from the cell membrane, extends until the outer part of the flagella and turns with it.

While some bacteria have only one flagellum, some have multiple. The rotation of the flagellum allows the bacteria to move in response to various chemical signals. It can rotate up to 100-150 times a second. The necessary energy is provided by the engine proteins ATPase, which work like a mill as the external atoms pass through the cell membrane.

The internal structure of the motor is highly complex. Fully 240 different proteins make up the flagella. With an admirable mechanical design, they are accurately placed in their places of duty. The diameter of the flagella is only 40 nanometers, in other words, the fortieth of a billionth of a millimeter.

Scientists have discovered that the proteins making up the flagella send signals to turn on/off the engine, build atomic hinges allowing movement and move the proteins that bind the flagella to the cell membrane. Even the simplified models of the system reveal a lot about the complexity of the system.

The motor of the bacteria flagella first makes up the rotor circle with Fli-F proteins coming together. These parts made up of proteins recognize each other and with inspiration from God, continue to build themselves. After the engine is built, the hook proteins first build the hook structure and the flagellum proteins produce the flagella, which acts like a propeller. It is known that more than 30,000 proteins are

used in the flagella area. Flagellum molecules are secreted inside the cell, pass through the inner canal of the motor, sent outside and build the fast rotating structure that we call the flagella.

However, this structure wears out in time and its parts need replacing. At this point, another miracle shows itself. The three-dimensional electron microscope images of these atomic structures reveal that the canal linking the center of motor to the external environment is extremely narrow, only 2 nanometers. Thus, while the diameter of the flagella is 40 nm, the tunnel used for transportation of the materials is only 2nm! However, the bacterial flagella's self-construction must take place through parts added to the top. For this reason, the proteins produced inside the cell have to pass through this 2 nm tunnel before they can be added to the tip of the bacterial flagella.

## The most critical point

Proteins cannot pass through this canal because of their three-dimensional structure. To overcome this hurdle, the three-dimensional structure is unfolded and the protein passes through the canal in the form of an amino acid chain. Later, once outside the canal, the protein will be folded back into its three-dimensional form. Remember, a single flagellum protein consists of 495 amino acids!

Let's briefly go over how this happens: two different proteins, Fli I and Fli H, in charge of transportation, join together before they are joined by the flagellum protein to be carried. This protein complex binds to a ring made of proteins, to be dismantled later. Here they wait for the exit door to be cleared. Once the door is available, the protein to be transported binds to the exit gate together with the protein complex.

Keep in mind that this is a very smart gate. When there is no queue, the gate is closed. However, if there are proteins bound to it, the gates open and the protein is dismantled to lose its three-dimensional shape and passes through the canal. Fli I and Fli H proteins leave the exit gate by means of ATP hydrolysis. The smart exit gate uses the driving force of the protons to send the flagellum proteins to the canal. Proteins, now dismantled from their three-dimensional forms into long amino acid chains, pass through the 2nm canal. After the entire chain enters the canal, it is sent to the outer edge so that the flagellum can be built. In the meantime, the Fli I and Fli H proteins that were released before, bind to another flagellum protein and this cycle continues.

The fact that such a highly complex process takes place inside the bacteria in a very short amount of time and on a constant basis is another clear proof of Almighty God's infinite power.

Naturally, evolutionists cannot explain this.

# A Major Deadlock For Darwinists: How Did Proteins Come Into Being?

One of the greatest errors of the theory of evolution is maintaining that complex structures with superior characteristics and processes came into existence spontaneously, by time, mutations and chance. In the 19th century when Charles Darwin first proposed his theory, very little was known about the basic structure of life. Under the microscopes of the day, the cell resembled nothing more than a blot, which some described as 'a jelly-like substance.' For this reason, when Darwin claimed that life arose through the spontaneous and chance development of a cell, he received little opposition. However, later science and technology (during the second half of the 20th century in particular) revealed just what a complex and superior structure the cell actually possessed, together with a great many features that could not have come into being by chance, as Darwinists maintained. Instead, the cell rather resembled a biochemical factory, one superior to any on Earth.

As has been discussed throughout this book, proteins and other cellular subcomponents all possess exceedingly complex structures, and among them is an extraordinary organization and impeccable planning. Every protein fulfils vitally important functions in the human body; with a plan so detailed as to amaze. It is utterly illogical to maintain that such structures emerged after inanimate and unconscious atoms came together by chance to form such complex structures, with flawless organization and a division of labor. Yet Darwinists still blindly defend the theory of evolution despite its having been discredited scientifically, solely in order to keep alive their materialist ideologies and deny the existence of a Creator. They set out their most irrational claims, even using false proofs to influence laymen who seldom reflect on these issues.

For example, in order to make the theory sound convincing, an evolutionist wishing to propound the theory of evolution describes the chance appearance of proteins as something very likely. Yet someone with only the most basic knowledge of proteins can recognize the bias and distortions in such accounts. One example to such explanations can be found below:

> *Evolution is the passage, in both animate and inanimate nature, from the simple to the complex, over the course of time (over billions of years; through millions or even billions of reactions). To formularize, the process began with two elements for example; let us say that the odds of A combining with B are fifty percent. Once AB has formed, the odds of C joining are also fifty percent. The odds of D then combining with ABC are fifty percent, or similar probabilities. The idea that this happened in a moment, and the impossibility of this, cannot be laid at Darwinists' door.*[93]

These words describe a scenario astonishing to anyone with even the slightest knowledge of biochemistry. This evolutionist is unaware, or else ignoring the facts that proteins consist of strings of amino acids arranged as if on a beaded necklace; that there are 20 different types of amino acids; and even more importantly, for a chain of amino acids to be regarded as a protein, they must be arranged in a specific order.

This is like imagining that a poem is a random combination of letters, and then saying, "It's easy for a poem to emerge by chance. Put two letters together, then a third and then a fourth, and you can easily wind up with a poem thousands of letters long." In fact, however, in order for a poem to emerge, letters need to be set out in a particular sequence to acquire meaning. And amino acids are arranged to constitute proteins in a far more difficult and complex process.

Since amino acid strings must be arranged in a particular order to produce a protein, the odds of such a sequence coming about by chance are zero.

Even the most dyed-in-the-wool Darwinists accept the fact that proteins cannot emerge by chance. As one example, the Russian scientist Alexander Oparin, regarded as the father of the theory of molecular evolution, said: *"The spontaneous formation of such an atomic arrangement in the protein molecule would seem as improbable as the accidental origin of Virgil's Aeneid from scattered letters."*[94]

The same calculations have been performed, and the same probability figures obtained, by such well-known Darwinists as David Shapiro, Harold Morovitz, Francis Crick, Carl Sagan, Lecompte du Nuoy and Frank Salisbury.

For years, it has been known that every protein's properties and functions depend on its amino acid sequence and bonds. For example, the protein histone turns into a three-dimensional shape with a positive charge distributed on its surface. As a result of this shape and charge distribution, it enables DNA to adopt its correct functional form and to store data. The density of data storage in DNA is thus several billion times that of the most advanced computers.[95] And by means of this protein, the DNA molecules possess the capacity to store and encode all the information needed to build and maintain the body.

With the discovery that proteins and DNA molecules have such a complex structure, it was understood that even if the whole universe was filled with amino acids, life could never spontaneously emerge from them. The evolutionist geologist William Stokes admits this fact:

> *[Protein] would not occur during billions of years on billions of planets, each covered by a blanket of a concentrated watery solution of the necessary amino acids.*[96]

In addition, a number of preconditions must be met at the same time, before even a single protein molecule can be synthesized in the cell. These conditions, which are impossible to come into being by chance, are briefly summarized below:

- For even the smallest protein to form, hundreds of amino acids have to be arranged in specific numbers, varieties and sequences.

- A single amino acid too many—or too few, or in the wrong place—could render the protein useless.

- All the amino acids in a protein must be left-handed. The appearance of a single right-handed amino acid will impair the protein's structure.

- Sufficient amounts of a different variety of amino acids must exist in the cell for which, cell's amino acid synthesis mechanism must also be present. The 35 enzymes in charge of this production in bacteria use the raw material produced by the enzymes present in the cell. If the amino acid is obtained outside the cell, special gates are required to allow their passage through the membrane. Both the enzymes and the gates at the membrane are made of proteins and those proteins are made of amino acids.

- Amino acids must be bound with a special bond called a peptide bond. This bond can be built only in the ribosome, which is made of RNA and proteins. Furthermore, the hydrophobic environment of the ribosome is essential. Any other chemical bond will deform the functional structure of the protein.

- The protein's three-dimensional structure is the most sensitive aspect that endows it with functionality. Protein synthesis is carried out in the ribosome inside of the cell with the help of special enzymes, and in a wide variety of proteins, this three-dimensional form cannot form spontaneously. Therefore, when the first functional protein came into being, other enzymes must have existed beforehand—a fact that demonstrates the invalidity of the theory of evolution.

- In order for the protein synthesis to begin, at least 100 different enzymes must be present.

Another point that the evolutionists try to ignore is the fact that, in order for life to come about, all the parts constituting life must emerge at the same time and at the required location.

Because, in order for those parts to function, they must be complete. A faulty structure cannot function and will be eliminated by the cells recycling system. Known as 'irreducible complexity', this situation completely demolishes the theory of evolution.

An abundance of examples can be offered as proof of the necessity of sudden emergence. As we will show a phosphorus element, with its vital functions and duties, is conclusive proof that God created all living things suddenly and in their final form.

Phosphorus, which makes up the three percent of the dry weight of living structures, have crucial duties in many vital functions.

Phosphorus is:

**1.** the basic building block of the DNA, the databank in our cells, and our RNA.

**2.** found in the fats, proteins and sugars.

**3.** the entire energy cycle of the cell depends on this substance

**4.** it takes part in the production of the membrane and the letters making up the data.

**5.** it is used in photosynthesis, respiration and the control of many enzymes.[97]

Absorption of the phosphorus into the cell and its usage are kept under detailed and strict control.

Numerous enzymes bind phosphorus to other atoms in a controlled manner so that they can form necessary compounds for the cell.[98]

Phosphorus is usually found in a solid form in nature. It can be used by living cells only after being processed by bacteria and plants. When the living beings die, the residual phosphorus is recycled by the bacteria, creating a phosphorus cycle in nature.

Special gates were created in bacteria for the intake of the phosphorus. Moreover, these gates are furnished with specific traits. Research conducted on a bacterium named *E. coli* revealed that, if there is an abundance of phosphorus in the environment, phosphorus will not be able to enter the bacteria. However, bacteria resists loss of this valuable component, and will absorb phosphorus with special gates named PitA, which need energy to function.

In many bacteria, when the phosphorus levels become too low, a second system, pstSCAB, comes into play and helps take the phosphorus inside. Without phosphorus, life wouldn't be possible. In order to move the phosphorus inside of the cell or the bacteria, DNA and its components, which are already built through use of phosphorus, and proteins dependent on them, must be present! In other words, without phosphorus there cannot be proteins and without proteins there cannot be incorporation of phosphorus into the cell, which makes it clear that life is emerging every moment only because God created it.

The prominent Turkish evolutionist Professor Ali Demirsoy describes how all their components must be present together in order for living structures to become functional:

> *The most crucial point of the problem is how mitochondria acquired this property. For a single individual to acquire this feature as the result of chance, we have to combine an inconceivable number of such infinitesimal possibilities... Enzymes, which permit respiration and serve as catalysts in different forms at every level, represent the essence of the mechanism. A cell either possesses this full string of enzymes, or else it is meaningless. If some enzymes are missing, no result can emerge.* ***In order not to conflict with scientific thinking and not to engage in a more dogmatic explanation and speculation we must accept, albeit unwillingly, that all the respiratory enzymes are present in the cell at one time and with none missing, before making contact with oxygen.***[99]

In a despairing tone, this evolutionist states that all the respiratory enzymes must be present as a set in the cell. This means that all the organs, cells, enzymes and mechanisms of the respiratory system must have been created at once, and at the same time. Yet for some reason, this scientist views this self-evident truth as dogmatic and speculative, contrary to scientific thinking, and avoids admitting the facts. In reality, denying the proofs of creation that are plain to see represents a dogmatic violation of scientific thinking.

Professor Russell Doolittle, another world-famous evolutionist, admits that the very existence of proteins and their ability to function depend on other proteins—and that this represents an impasse for Darwinists:

> *How in the world did this complex and delicately balanced process evolve?…The paradox was, if each protein depended on activation by another, how could the system ever have arisen? Of what use would any part of the scheme be without the whole ensemble?*[100]

In the present day, many Darwinists honestly confess the impossibility of proteins and life emerging by chance. However, they still continue to defend the theory for the sake of their ideologies. Below you'll find a number of statements by world-famous Darwinists admitting the impossibility of proteins coming into existence as a result of coincidence:

Harold Blum:

> *"The spontaneous formation of a polypeptide of the size of the smallest known proteins seems beyond all probability."*[101]

Hoimar von Ditfurth:

> *"These two polymers [egg white and nucleic acids] have been constructed in such a complex manner and, as if that were not enough, their structures exhibit such a high level of individuality that to imagine these came to that level by acquiring wealth solely as the result of chance goes far beyond being even an astronomically and inconceivably small possibility."*[102]
>
> *"The statistical impossibility of the living structures in question emerging as the result of chance alone is a rather current example of the present-day level of development of science. Indeed, looking at those extraordinary individual features in the formations of a single protein carrying out biological functions, it appears impossible to explain a large number of atoms combining together, all in the correct and requisite sequence, at the right time and moment and with the right electrical and mechanical features, all in terms of chance."*[103]
>
> *"No matter how large the universe may be, chance giving rise to the birth of protein and nucleic acid is [an] impossibility..."*[104]

The information provided throughout this book regarding the structures, functions and production of proteins invisible to the naked eye shows that it is impossible for these structures to have formed by chance. This information about proteins is just a short summary of the total picture. In addition, there still remain many secrets about proteins that science has yet to fathom.

It is very important that people learn about proteins and the many other miracles of creation in order to grasp the logical mindset and thinking of those who maintain that proteins came into being by time, mutations and chance. Lacking a good knowledge of the protein structures, the cell and enzymes, someone may well accept they came to exist by evolution. However, after comprehending the details, that person will understand the serious threat posed by any theory that ascribes divine status to evolution.

Believing in evolution despite so much evidence to the contrary signifies a collapse of logic, understanding and comprehension. These people may be professors or researchers who have written dozens of scientific books and may even have won a Nobel Prize, but that does not change the facts.

The collapse of reason by some people refusing to understand what they see and hear is one of the greatest dangers facing humanity. For that reason, those of reason and conscience must prevent that collapse by taking the requisite precautions, and ensure that others receive accurate information and explanatory proofs.

The second reason for learning about proofs of creation, such as proteins is to learn about the revelation of God's infinite might, intellect, knowledge and incomparable creation, and to introduce them to its extraordinary splendor. Those who believe in the existence of God reflect on the proofs of His creation on Earth and in the heavens. This enhances their love for God, and also their fear of Him. As He has revealed in one verse:

> **And humanity and beasts and livestock are likewise of varying colors. Only those of His servants with knowledge have fear of God. God is Almighty, Ever-Forgiving. (Qur'an, 35:28)**

## FAULTY PROTEINS AND DISEASES RESULTING FROM MUTATIONS

We have seen that a large number of enzymes take part in the synthesis of amino acids and the building blocks of proteins. However, even the slightest error or missing parts in these enzymes can cause disease and even be deadly.

The latest researches on genetics showed that human DNA contains around 25,000 genes, and that mutations on these genes can cause more than 6,000 genetic disorders. The researchers are yet to find cures for many of these diseases.[105]

For instance, genetic errors in the enzyme named phenylalanine hydroxylase used for the production of amino acid called tyrosine, can cause mental problems, irregular temperature changes, defects in walking, and paralysis.[106] Parkinson is also related to the reduction of cells that produce dopamine, a substance made up amino acids. Not only the construction, but also the destruction of amino acids in the cell is subject to strict controls. For instance, mutations on the genes that code the enzyme named alpha-keto acid dehydrogenase, cause physical and mental disability named MSUD and sometimes death.[107]

Let alone the mutations in the gene sequence of the DNA that encodes the protein, even the misfolding of certain proteins can cause diseases such as mad cow disease that seriously damages brain tissue.[108]

## The Miller Experiment: A Lesson in Failure

In the 20th century, Darwinists began seeking an answer to the question of how the first cell came into being. The first work on this subject was done by Alexander L. Oparin, a Russian biologist who proposed the "chemical evolution" model. But Oparin was unable to obtain any meaningful results from his research, and finally admitted:

> *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.*[109]

After Oparin, a great many Darwinists have performed countless experiments attempting to prove that cells came into being as the result of evolutionary coincidences, but every one ended in failure. The most highly regarded of these doomed experiments was carried out in 1953 by the American researcher Stanley Miller.

Miller prepared a mechanism conforming to Oparin's chemical evolution model. A mixture of the gasses assumed to represent the primordial atmosphere, methane ($CH_4$), ammoniac ($NH_3$), steam ($H_2O$) and hydrogen ($H_2$) was placed in a tank containing an electrical apparatus. Miller then sent a high-voltage

electrical charge through the tank to simulate the effect of ultraviolet light on the pre-life atmospheric gasses. He then heated this gas mixture to 100 degrees for a week, while continuing to supply an electrical current, and eventually observed that three of the 20 amino acids essential to life had been synthesized. He immediately separated these molecules from the tank using a mechanism known as a cold trap. Other experiments made under similar conditions obtained various other amino acids under similar conditions.

This experiment carried out by Miller under allegedly primordial conditions was a source of great rejoicing among Darwinists, who portrayed the experiment as an enormous success. From their point of view, the experiment showed that biological building blocks could have been produced from simple atmospheric gasses in the primitive world—an important step in Oparin's scenario, which would thus provide experimental support for Oparin's theory of chemical evolution. Some scientists, aware of this point, sought to provide their own support for it. The famous astronomer Carl Sagan, for instance, described the Miller-Urey experiment "as the single most significant step in convincing many scientists that life is likely … abundant in the cosmos."[110]

Considerable space began to be devoted to the Miller experiment in textbooks and public media such as *Time* magazine. Inspired by the Miller experiment, fictitious evolutionary scenarios based on chemical evolution—and describing it as the origin of life—lost no time in appearing in schoolbooks. Indeed, as a result of this experiment, the belief known as ‘neovitalism’—the idea that matter possesses the inherent ability to reproduce itself—was resurrected.[111]

However, the Miller experiment was based on Oparin's preconceptions and actually contained a great many elements far removed from scientific fact. The experiment was prepared to confirm the theory of chemical evolution that Oparin had dreamed up, and was intended to prove the validity of the theory of evolution. The setup used to produce amino acids bore no relation to the actual atmospheric conditions on the primordial Earth. Furthermore, it included several multilateral mechanisms for the production of amino acids that were not found in any natural environment. In the light of scientific standards, this experiment clearly was contrived.

## Unrealistic Elements in the Miller Experiment

Shortly after Miller carried out his experiment that was formulated to prove that amino acids could form spontaneously under primordial world conditions, it was realized that this experiment was incompatible with the scientific facts in a number of ways. Considering the points that demonstrate the scientific invalidity of the experiment, it is clear that scientific objectivity was not its aim.

**1. The "primordial atmosphere" in Miller's setup did not reflect the facts. Actual conditions of the primordial atmosphere do not permit the formation of amino acids and other building blocks essential for life.**

When Oparin proposed his theory of chemical evolution, he suggested that the atmosphere on the primordial Earth was very different from what it is today.[112] Stanley Miller sought to recreate these primordial atmospheric assumptions set out in Oparin's book in 1936. Therefore, in seeking to reproduce the formation of amino acids, Miller assumed that the primordial atmosphere consisted of methane ($CH_4$), ammonia ($NH_3$) and hydrogen ($H_2$), as hypothesized by Oparin. In addition, he suggested that the Earth's atmosphere did not contain free oxygen. But in the years that followed his experiment, new geochemical evidence and experiments performed in the light of them clearly revealed that Oparin and Miller's estimates were inaccurate. On the contrary, the evidence has now demonstrated that the dominant gasses in the primordial atmosphere were carbon dioxide, nitrogen and water vapor plus some oxygen; there was very little, if any methane, ammonia or hydrogen.

This information showed that Miller's and similar experiments had been built on false assumptions. In any case, however, Miller had deliberately used these gasses. His objective was to prove experimentally

the chemical evolution scenario proposed by Oparin 1924. For that reason, in determining the parameters of his experiment, Miller set out to duplicate the conditions Oparin had assumed. In fact, his aim was not to create the actual primordial atmosphere before the emergence of life, but to produce the requisite atmosphere for amino acids to emerge.

Richard Kerr of *Science* magazine states that none of the geological and geochemical evidence collected over the last 30 years supports Miller's primordial atmosphere conditions.[113] The only reason for continuing to regard the primordial atmosphere conditions he used as accurate was that the theory of chemical evolution required this assumption. The primordial atmospheric conditions that Oparin and Miller assumed were the most appropriate ones to allow amino acids to emerge. Under normal conditions in a natural atmosphere, few chemical reactions will take place in atmospheric gasses. Even if they do they are not at the level that can give rise to significant levels of biological building blocks.

Trying to form biological building blocks in a neutral atmosphere is like expecting two inanimate chemicals to react.

In fact, the primordial conditions "recreated" in Miller's experiment and others like it constitute no scientific evidence regarding the origin of life, since they did not take place in the *actual* primordial environment. After independent geochemical studies demonstrated that chemical conditions prevailed in the early atmosphere that would never permit amino acids to form, it was realized that Miller's experiment show not only that chemical evolution is impossible, but they also prove the presence of a rational Creator in the planning of living systems.

**2. At the time when amino acids were suggested to have formed, so much oxygen was concentrated in the atmosphere that all amino acids would have been broken down.**

A series of geological studies showed that, even prior to the emergence of plant life, significant levels of free oxygen and volcanic gasses were present due to photo dissociation of water vapor. In rocks estimated to be around 3.5 billion years old, the presence of oxidized iron and uranium showed that there had been oxygen in the atmosphere.[114] These findings indicated that the level of oxygen at that time was not low, as Darwinists maintained, but was actually much higher than they had suggested. Research also showed that during the early period, 10,000 times more ultraviolet light reached the Earth than Darwinists had first estimated. Inevitably, such intense ultraviolet light would break down the water molecules in the atmosphere, producing free oxygen. This fact, which Miller neglected to take into account, made his experiment completely invalid. If he had used oxygen in the experiment, the methane would have broken down into carbon dioxide and water, and ammonia into nitrogen and water. On the other hand, in an oxygen-free atmosphere before the ozone layer had come into existence, amino acids directly exposed to ultraviolet rays would have broken down. Whether it contained oxygen or not, an atmosphere on the primordial earth would destroy amino acids.

**3. In his experiment, Miller immediately isolated the amino acids that formed, using a mechanism known as the cold trap.**

Let’s assume that Stanley Miller used gasses that actually resembled those in the primordial atmosphere. Then would the results of the experiment support chemical evolution? No! In addition to such building blocks as amino acids and nucleic acid bases, his experiments also produced non-biological substances. Barring human intervention, these substances would enter into reactions with other useful substances, to form chemical compounds with no biological significance. As soon as the amino acids appeared, Miller was obliged to protect them both from other substances and from the harmful effects of other conditions in that environment, so his experiment used a mechanism known as the **cold trap**. Otherwise, the same conditions that gave rise to the amino acids would have destroyed these molecules as soon as they formed.

On the primordial Earth, there was no such thing as a cold trap. Yet without one, even if a variety of amino acid were produced, those molecules would immediately be broken down in the prevailing environment. As the chemist Richard Bliss stated, "Actually, without this trap, the chemical products would have been destroyed by the energy source" Miller used.[115]

Indeed, before Miller installed a cold trap, he had been unable to obtain a single amino acid in experiments he had performed.

In fact, Miller's experiment completely discredited the claim that life emerged as the result of unconscious coincidences. He demonstrated that amino acids can be obtained only when there is conscious intervention, in a laboratory environment where all the necessary conditions are provided.

Even though the Miller experiment is still depicted as an important scientific discovery in some Turkish publications, it has effectively been abandoned by most evolutionary authorities. In recent years, Western scientific journals have stated that, in terms of accounting for the origins of life, the experiment is meaningless. For instance, the following comment, appeared in the February 1998 issue of the well-known evolutionist journal *Earth*, under the title "Life's Crucible":

> *Geologists now think that **the primordial atmosphere consisted mainly of carbon dioxide and nitrogen**, gases that are less reactive than those used in the 1953 experiment. And even if Miller's atmosphere could have existed, how do you get simple molecules such as amino acids to go through the necessary chemical changes that will convert them into more complicated compounds, or polymers, such as proteins? Miller himself throws up his hands at that part of the puzzle. "It's a problem," he sighs with exasperation. "How do you make polymers? That's not so easy."*[116]

As we have seen, Miller himself realized that his experiment added nothing to explain the origin of life. In the March 1998 edition of *National Geographic* magazine, an article titled "The Rise of Life on Earth," contained the following:

> *Many scientists now suspect **that the early atmosphere was different from what Miller first supposed.** They think it consisted of carbon dioxide and nitrogen rather than hydrogen, methane, and ammonia. That's bad news for chemists. When they try sparking carbon dioxide and nitrogen, they get a paltry amount of organic molecules—the equivalent of dissolving a drop of food coloring in a swimming pool of water. Scientists find it hard to imagine life emerging from such a diluted soup.*[117]

In short, neither the Miller experiment nor any other evolutionist endeavor can answer the question of how life on Earth appeared. All their research shows the *impossibility* of life coming into being by evolution and, therefore, that it was created. Darwinists refuse to accept this because they hold to a series of preconceptions that fly in the face of science. In fact, Harold Urey—Stanley Miller's professor who helped set up his experiment—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.*[118]

At this stage, it is important to remind a point mentioned in the beginning of this book. Even if the world was completely full of amino acids, only proteins can join them together to make a chain and then fold them in the required way to produce proteins. In other words, without the presence and help of other proteins, functional proteins cannot emerge and therefore, life cannot emerge gradually by itself. Let’s briefly go over the facts:

## WHY PROTEINS CANNOT FORM WITHOUT THE HELP OF OTHER PROTEINS

Based on what we have seen so far, let's remember why, in order for a single protein to emerge, other proteins must be present and what qualities the amino acid chains making up the protein, must possess:

**1.** Only 20 out of close to 200 natural or synthetic amino acids on Earth can be used for protein production. Therefore, the ones necessary among these more than 200 amino acids should be selected and set aside.

**2.** The selected amino acids must be always left handed, because only left-handed ones can be used for the synthesis of amino acids in living structures.

**3.** An enzyme system responsible for the production of amino acids in the cell must also be present. For example, in bacteria that can produce the 20 amino acids, this enzyme system consists of 35 enzymes.

**4.** Amino acid production must be accompanied by a control system.

**5.** Amino acids must be lined up according to a certain sequence.

**6.** Various proteins need to be present for copying the protein data in the DNA and for the subsequent processes.

**7.** Cell organelles called ribosomes are required to synthesize the copied data. Ribosome contains ribosomal proteins and rRNA. In other words, for the ribosome to come into being, proteins must already be present.

**8.** Inside the ribosome, there exists a hydrophobic enzymatic region called **peptidyl transferase**. This region keeps the water away, and allows the building of peptide bonds with its catalytic functions.

Clearly, the gradual and random building of the aforementioned conditions, which are required for a single protein to form, is impossible. In other words, since not a single protein can come into being by chance, life cannot come into being by chance.

Today, even evolutionist scientists like Harold Morowitz, Fred Hoyle, Ilya Prigogine, Hubert Yockey and Robert Sauer agree that it is impossible for the proteins to come into being by chance. Despite themselves being evolutionists, they stated with certainty that macromolecules, like proteins, cannot rise coincidentally.

The presence of consciousness, intelligence, will, wisdom, knowledge, power and design are evident in every stage of protein synthesis. These are the attributes of our Lord, Almighty God. Those who take concepts like coincidences or materials as creators, which have absolutely no power, are gravely mistaken. God explains their situation in a verse:

> **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 gods 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. (Qur'an, 35:2-3)**

## Another Failure: The Fox Experiment

Despite its invalidity, some Darwinists still seek to use the Miller experiment as proof that amino acids could have formed from inanimate substances. But even if that were the case, it would still not resolve Darwinists' difficulties! Even more impossible hurdles stand in their way: Amino acids would have to combine to form proteins—which are vastly more complex structures than amino acids.

And it is even more unrealistic to maintain that proteins formed by chance under natural conditions. We have already seen the mathematical impossibility of amino acids combining in the sequences needed to give rise to proteins. And it's also chemically impossible for proteins to have emerged in the primordial Earth's atmosphere.

## The Problem of Synthesizing Proteins in Water

As already made clear, when amino acids combine to form proteins, they establish special peptide bonds among themselves. When this bond is established, a water molecule is released.

This invalidates the Darwinist account of primordial life emerging in the seas because, according to the law of chemistry known as the Le Chatelier principle, any reaction that *releases* water (a so-called condensation reaction) cannot take place in a watery environment. Specifically, such a reaction taking place in a watery environment is described as having the 'lowest probability of occurrence.'

Therefore, the ocean—which many Darwinists describe as the place where amino acids formed and life began—is an absolutely unsuitable environment for amino acids to combine and give rise to proteins. Chemist Richard E. Dickinson explains the reasons as follows: "If polymeric chains of proteins and nucleic acids are to be forged out of their precursor monomers, a molecule of water must be removed at each link in the chain.

It is therefore hard to see how polymerization could have proceeded in the aqueous environment of the primitive ocean, since the presence of water favors depolymerization rather than polymerization. The chemist Richard E. Dickinson explains why:

> *If polymeric chains of proteins and nucleic acids are to be forged out of their precursor monomers, a molecule of water must be removed at each link in the chain. It is therefore hard to see how polymerization could have proceeded in the aqueous environment of the primitive ocean, since the presence of water favors depolymerization rather than polymerization.*[119]

But, in the face of this fact, proponents of Darwinism cannot alter their claims and maintain that primordial life first appeared on land. The oceans and seas are the only environment that could have protected amino acids from the harmful effects of sunlight coming through the primordial atmosphere. On land, amino acids are quickly broken down by ultraviolet rays. Yet the Le Chatelier principle makes it impossible for them to emerge in the sea. As far as the theory of evolution is concerned, this represents two dead ends.

## The Fox Experiment

Faced with the dilemma described above, Darwinist researchers set about producing various scenarios to overcome the "water problem" that has demolished all their theories. To resolve the difficulty, the well-known Sydney Fox advanced one interesting theory: that after the first amino acids had formed in the primordial ocean, they must have immediately been cast up onto cliffs near a volcano. The high temperatures on those rocks must have evaporated the water containing amino acids. In this way, the "dried" amino acids could have combined to form proteins.

However, this sophistry convinced no one, because amino acids do not exhibit heat resistance to the extent proposed by Fox. Research has revealed that, at high temperatures, amino acids are rapidly destroyed.

However, Fox did not give up. Under "very special conditions in the laboratory," he combined purified amino acids by heating them in a dry environment. The amino acids did combine, but Fox still failed to obtain proteins, only randomly connected, simple and irregular amino acid links—a far cry from the proteins

in any living thing. Furthermore, had Fox maintained the amino acids at that same temperature, then the useless links that did emerge would have been broken.[120]

Another point depriving the experiment of any significance is that rather than the amino acids obtained in the Miller experiment, Fox used the pure amino acids found in living organisms. Since he claimed his experiment was a continuation of Miller's, he should have started off from where Miller left off. Yet, neither Fox nor any other researcher used the useless amino acids that Miller produced.[121]

Fox's experiment received no welcome from Darwinists because it was plain that the meaningless chains of amino acids (or proteinoids) that Fox obtained could never have emerged under natural conditions. In addition, he had still not obtained the proteins that constitute the building blocks of living things, so the problem of the origin of proteins had still not been resolved. An article published at the time in *Chemical Engineering* magazine commented on Fox's experiment:

> *Sydney Fox and the other researchers managed to unite the amino acids in the shape of "proteinoids" by using very special heating techniques under conditions, which in fact did not exist at all in the primordial stages of Earth. Also, they are not at all similar to the very regular proteins present in living things. They are nothing but useless, irregular chemical stains. It was explained that even if such molecules had formed in the early ages, they would definitely be destroyed.*[122]

Indeed, the proteinoids that Fox obtained were far from having the function and structure of real proteins. The difference was as great as between a pile of scrap metal and a complex technological device.

Furthermore, this meaningless collection of amino acids had no way of survival in the primordial atmosphere. Under the destructive conditions of the time, intense ultraviolet rays and uncontrolled natural phenomena would cause these proteinoids to break down with no opportunity to continue combining. The Le Chatelier principle removes any question of amino acids being underwater where ultraviolet rays could not reach them. In light of these facts, scientists rapidly began to doubt the hypothesis that proteinoid molecules could represent the beginning of life.

We have answered the unscientific allegations made up until now. As a final note, let’s see the very special systems recently uncovered that showed how even the amino acids, the building blocks of proteins, must be kept to prevent their destruction:

## Another Quality of the Special Structure of the Proteins

The unscientific claims made in past centuries were refuted by science and modern discoveries continue to reveal more of these highly specialized systems. For instance, it became evident that even amino acids should be kept under control at all times:

## Amino acid response system

Protein synthesis is a multi-stage process and requires a control system. For example, if amino acid levels drop, this should be recognized and the production system should start production. This is where the amino acid response system comes into play.

Highly specialized sensor molecules regulate the amount of amino acids needed in mammalian cells. Needless to say, this duty requires consciousness. These sensor molecules called GCN2, stop the protein production system in the cell when there is no need for more amino acids. In this way, precious amino acids are not wasted.

## Amino Acid Response System

Protein synthesis is a multi-phase process and that requires a very strict control system. For instance, it is crucial that a system exists to determine if the amino acid levels are dropping, so that the production system can be triggered. This is called the amino acid response system.

Dedicated sensor molecules in mammalian cells regulate the amount of amino acids. Surely, this is an action that requires consciousness. When the amino acids needed for the cells decrease, these sensor cells called GCN2, stop the system in the cell responsible for protein production. This way, amino acids, limited in numbers in the cell, will not be wasted.

The cell is equipped with a special system to prevent amino acid starvation. These control systems work as follows: tRNA molecule in the cell is responsible for the transportation of amino acids to the ribosome, which can be called the protein production factory of the cell. GCN2 molecule binds to free tRNAs, which means that GCN2s will bind to tRNAs when amino acid levels drop. This way, they activate eIF2 alpha molecule, which has two opposing tasks. When the amino acid levels go down in the cell, the protein production system will be suppressed. This is a designed decision because when there is a shortage of amino acids, ribosome must not consume the already limited sources. However, the system will increase the production of certain amino acids must also be put into motion. Very surprisingly, eIF2 alpha, after stopping the general protein production, increases the production of proteins in charge of increasing the amount of amino acids.[123-124]

This entire control, inspection of the levels of substances in the cell, intelligently stopping various production systems while increasing others, requires foresight and detailed knowledge.

# Conclusion

The aim of this book is very different from most books on biology, biochemistry or genetics. We have intended to show the might, intellect and, incomparable creation of God, Who, with His superior knowledge and Intellect, created the entities, systems, living things and orders studied by all branches of science, from biology to physics, from anatomy to astronomy.

Hundreds of thousands of scientists are presently specializing in the study of proteins day and night, thus acquiring sufficient information about them to fill an encyclopedia consisting of a great many volumes. Yet all this information fails to save some of them from errors and nonsense of evolution. Although they realize what complex and flawless structures proteins are, many scientists still believe that thousands of atoms combined by chance under just the right conditions and—for example—became hemoglobin to transport oxygen in the bloodstream!

In the same way that they believe these incredible claims, these scientists also use their status to convince others. This book's objective has been to exhibit the facts to anyone who believes in the nonsense of "coincidence" and to provide corroboration for those who already believe in God's creation. This book gives them the facts about that creation, so that they can inform others.

The 21st century will be the time when people will comprehend the fact of creation and free themselves of superstitions. Sincere believers, therefore, must discharge their responsibilities to the letter, using the most rational means, reason and science and—most important of all—in the light of the truths God reveals us in the Qur'an, call on others to reflect on the question posed in the verse below:

> **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. (Qur’an, 82:6-8)**

# The Deception Of Evolution

The theory of evolution, in other words Darwinism, was put forward with the aim of denying the fact of creation, but is in truth nothing but a failed, unscientific nonsense. The theory of evolution has its origins in pagan superstitions dating back to the time of ancient Egypt and Sumeria. Like these superstitions, the theory of evolution explains the origin of the universe and life through coincidences, and it has nothing to do with science. This theory, which claims that life emerged through coincidences from inanimate matter, was invalidated by the scientific evidence demonstrating the miraculous order in the universe and in living things, as well as by the discovery of about 700 million fossils revealing that evolution never happened. Furthermore, the theory of evolution is incapable of explaining the formation of even a single protein, the main building block of life. Science has proven that it is impossible for a protein to come into existence through coincidences. In this way, the fact that God created the universe and the living things in it has been confirmed by science as well. The worldwide propaganda carried out today to keep the theory of evolution alive is based solely on the distortion of 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 to 30 years. Research carried out after the 1980s in particular revealed that the claims of Darwinism are totally unfounded and this fact has been stated by a large number of scientists. Many scientists from such different fields as biology, biochemistry, paleontology, genetics, zoology and archeology recognize the invalidity of Darwinism and explain the origin of life through the fact of creation.

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 continuing to do so. Given the enormous importance of this subject, it will be of great benefit to summarize it here.

## CHALLENGES THAT DEVASTATE DARWIN

As a pagan doctrine going back as far as ancient Egypt and Sumeria, the theory of evolution came to the fore most extensively once more in the nineteenth century. The most important development that made it the top topic of the world of science was the publication of Charles Darwin's *The Origin of Species* in 1859. In this book, Darwin in his own way opposes the fact that God created different living species on Earth separately, for he erroneously claimed that all living beings had an imaginary 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 his hopes in new scientific discoveries, which he expected would solve these difficulties. He indicated this expectation again and again in his book. However, contrary to his expectations, scientific findings expanded the dimensions of these difficulties and refuted the basic assumptions of the theory one by one.

The defeat of Darwinism in the face of science can be reviewed under three basic headings:

**1)** The theory cannot explain how life originated on Earth.

**2)** There is no scientific finding that indicates 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 haphazardly on Earth 3.8 billion years ago, supposedly having appeared as a result of coincidences. How a cell comprising a wide range of organelles such as vacuoles, mitochondria, lysosomes and Golgi apparatus could come into existence in a puddle of mud, 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 focus on the first step of the supposed evolutionary process. **How did the aforementioned “first cell” originate?**

Since the theory of evolution ignorantly denies creation, it maintains that the “first cell” originated as a product of blind coincidence within the laws of nature, without any plan or arrangement. According to the theory, inanimate matter must have haphazardly produced a living cell out of nowhere. 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. That is because 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. In that period, 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 were assumed to be evidence of life originating from inanimate materials. 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**. At the time 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, which 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.”** (Sidney Fox, Klaus Dose, *Molecular Evolution and The Origin of Life,* W. H. Freeman and Company, San Francisco, 1972, p. 4)

For a long time, advocates of the theory of evolution resisted Pasteur’s 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.

## FUTILE EFFORTS IN 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 chance. 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. (Alexander I. Oparin, Origin of Life, Dover Publications, New York, 1936, 1953 and 2003 (reprint), p. 196)*

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 those gases he alleged to have existed in the primordial Earth's atmosphere in an experimental 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.** ("New Evidence on Evolution of Early Atmosphere and Life", *Bulletin of the American Meteorological Society,* vol. 63, November 1982, 1328-1330)

After a long silence, **Miller, himself confessed that the atmosphere medium he used was unrealistic.** (Stanley Miller, *Molecular Evolution of Life: Current Status of the Prebiotic Synthesis of Small Molecules,* 1986, p. 7)

**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, accepted 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? (Jeffrey Bada, Earth, February 1998, p. 40)*

## THE COMPLEX STRUCTURE OF LIFE: NOT EVEN A SINGLE PROTEIN CAN COME INTO EXISTENCE BY CHANCE

The primary reason why evolutionists ended up at such a great impasse regarding the origin of life is that even those living organisms Darwinists deemed to be the simplest have outstandingly complex features. The cell of a living thing is more complex than all our man-made technological products. **Today, even in the most developed laboratories of the world, not even a single protein of a cell, let alone a living cell itself, can be produced by bringing non-living materials together.**

The conditions required for the formation of a cell are too great in quantity to be explained away by mere coincidence. However, there is no need to explain the situation with too many details. Evolutionists are at a dead-end even before reaching the stage of the cell. That is because the **probability of just a single protein, an essential building block of the cell, coming into being by chance is mathematically "0"**.

The main reason for this is the need for other proteins to be present if one protein is to form, and this completely eradicates the possibility of chance formation. This fact by itself is sufficient to eliminate the evolutionist claim of chance right from the outset. To summarize,

**1. Proteins cannot be synthesized without enzymes, and enzymes are all proteins.**

**2. Around 60 proteins assuming the task of an enzyme need to be present for a single protein to be synthesized. Therefore, proteins are essential for proteins to exist.**

**3. DNA manufactures the protein-synthesizing enzymes. Proteins cannot be synthesized without DNA. DNA is therefore also needed for proteins to form.**

**4. All the organelles in the cell have important tasks in protein synthesis. In other words, for proteins to form, a complete and fully functioning cell needs to exist with all its organelles.**

Evolutionist science writer Brian Switek admitted that the origin of life remains to be unaccountable by evolutionists as follows:

> *How life began is one of nature's enduring mysteries. (Brian Switek, "Debate bubbles over the origin of life", Nature, February 13, 2012)*

Harvard chemist George Whitesides made the following confession in his acceptance speech of the Priestley Medal, the highest award of the American Chemical Society:

> *The Origin of Life. This problem is one of the big ones in science. ... Most chemists believe, as do I, that life emerged spontaneously from mixtures of molecules in the prebiotic Earth. How? I have no idea. (George M. Whitesides, "Revolutions In Chemistry: Priestley Medalist George M. Whitesides' Address", Chemical and Engineering News, 85: 12-17, March 26, 2007)*

The DNA molecule, located in the nucleus of a cell and which stores genetic information, is a magnificent databank. If the information coded in DNA were transcribed on paper, it would make a giant library consisting of an estimated 900 volumes of 500 pages each.

A very interesting insurmountable predicament emerges at this point for the evolutionists: 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 must exist at the same time for replication. This razes the scenario where life originated by itself to the ground. 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. (Leslie E. Orgel, "The Origin of Life on Earth," Scientific American, vol. 271, October 1994, p. 78)*

No doubt, if it is impossible for life to have originated spontaneously through blind coincidence, then it must be accepted that life was created. This fact explicitly invalidates the theory of evolution, whose main purpose is to deny creation.

## IMAGINARY MECHANISMS 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. (Charles Darwin, The Origin of Species by Means of Natural Selection, The Modern Library, New York, p. 127)*

## LAMARCK'S FALLACY

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. (Charles Darwin, *The Origin of Species: A Facsimile of the First Edition,* Harvard University Press, 1964, p. 184)

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 was left 'alone' and consequently rendered completely ineffective 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 selection.

Today, the model that Darwinists espouse, despite their own awareness of its scientific invalidity, is Neo-Darwinism. The theory maintains that millions of living species were formed through 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 horrific images that appeared after the nuclear explosions in Chernobyl, Hiroshima and Nagasaki are the exact results brought about by mutations. The organisms with proper structures either died or were severely damaged by mutations.

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. (B. G. Ranganathan, Origins?, Pennsylvania: The Banner of Truth Trust, 1988, p. 7)*

According to the claims of Darwinists, mutations must produce proportionate and coherent changes all over the body. For example, as per the claims of Darwinists, if an ear is formed on the right side as a result of chance mutations just as they claim, chance mutations should also form a second ear on the left side that shares the same symmetry and properties, and hears just as well. The hammer, anvil and stirrup must each come into existence in the same perfect and equal state. Random mutations must form heart valves on both sides in the same way; the valves and auricles produced by random mutations must be formed simultaneously and equally compatible with one another; they must be flawless, in their proper places. Huge discrepancies would appear if this symmetry and order could not be maintained in every organ of the body. Bizarre structures with its one ear upside down, one unusual tooth, one eye on the forehead while the other on the nose, would appear. But living organisms do not possess such imbalances. According to the claims of the Darwinists, everything formed by mutations must be symmetrical and compatible. However, all mutations are harmful. In the past, it was assumed that 99% of the mutations were harmful while the remaining 1% was neutral. Yet new researches revealed that those 1% of mutations that take place in those regions of the DNA that do not code proteins and were thus assumed to be harmless, are in fact harmful in the long run. That is why scientists named these mutations as 'silent mutations'. **It is impossible for mutations that are absolutely harmful to form rational, compatible, symmetrical organs at the same time.**

Mutations can be likened to shooting at an intact structure with a machine gun. Shooting at an intact object will completely ruin its structure. One of the bullets proving ineffective, or curing a pre-existing infection in the body by cauterizing it, does not change the result. The organism would already be ruined by the remaining 99 bullets that hit it.

Lynn Margulis, a member of the US National Academy of Sciences, has made the following confession regarding the evident harmful effects of mutations:

*New mutations don't create new species; they create offspring that are impaired. (Lynn Margulis, quoted in Darry Madden, UMass Scientist to Lead Debate on Evolutionary Theory, Brattleboro (Vt.) Reformer, February 3, 2006)*

Also in an interview in 2011, Margulis emphasized the fact that "there is no evidence" indicating that mutations modify organisms and thus give rise to new species:

*[N]eo-Darwinists say that new species emerge when mutations occur and modify an organism. I was taught over and over again that the accumulation of random mutations led to evolutionary change-led to new species. I believed it until I looked for evidence. (Lynn Margulis quoted in "Lynn Margulis: Q + A," Discover Magazine, April 2011, p. 68)*

As Margulis stated, there is not a single evidence showing that random mutations lead to evolutionary changes, which in turn lead to the emergence of new species.

Indeed, no beneficial mutation – one that would advance the genetic code – has ever been observed. All mutations have proved to be harmful. It is now 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 there is no evolutionary mechanism, no such imaginary process called "evolution" can take place.

## THE FOSSIL RECORD: NO SIGN OF INTERMEDIATE FORMS

The fossil records constitute the clearest evidence showing us that the scenario suggested by the theory of evolution did not take place.

According to the unscientific supposition behind this theory, every living species has sprung from a predecessor. A previously existing species (evolutionists have yet to offer an explanation on how this species came into existence) turned into something else over time and all species have come into being in this way. In other words, this imaginary transformation took millions of years and proceeded gradually.

If this were the case, innumerable intermediary species should have existed and lived within this long transformation period.

For instance, some half-fish/half-reptiles would 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 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 would 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... (Charles Darwin, The Origin of Species, New York: D. Appleton and Company, p. 161)*

However, **Darwin, having written these lines, was also well aware of the fact that no fossils of these intermediate forms had yet been found**. He regarded this as a major difficulty for his theory. That is why, in one chapter of his book titled “Difficulties on Theory,” he wrote:

> *Firstly, why, if species have descended from other species by insensibly fine gradations, do we not everywhere see innumerable transitional forms? Why is not all nature in confusion instead of the species being, as we see them, well defined?…. But, as by this theory innumerable transitional forms must have existed, why do we not find them embedded in countless numbers in the crust of the earth?… (Charles Darwin, The Origin of Species, New York: D. Appleton and Company, p.154, 155)*
>
> *Why then is not every geological formation and every stratum full of such intermediate links? (Charles Darwin, The Origin of Species, New York: D. Appleton and Company, p. 246)*

## DARWIN’S SHATTERED HOPES

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 the fossils, contrary to the evolutionists’ expectations, show that life appeared on **Earth all of a sudden and fully-formed.**

Renowned 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. (Derek V. Ager, "The Nature of the Fossil Record," Proceedings of the British Geological Association, vol. 87, 1976, p. 133)*

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. Furthermore, this is very strong evidence that **all living things are created.** The only explanation of a living species emerging instantaneously and completely 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. (Douglas J. Futuyma, Science on Trial, Pantheon Books, New York, 1983, p. 197)*

Today, there are 700 million unearthed fossils. **All these fossils reveal that living beings emerged fully developed and in a perfect state on the Earth.** It is as if the fossils are saying "We did not evolve through evolutionary processes." That means, contrary to Darwin's supposition, "the origin of species" cannot be explained by evolution, but is explained by 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 man evolved from so-called ape-like creatures. During this alleged evolutionary process, which is supposed to have started four to five million years ago, some "transitional forms" between man and his imaginary 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 "Southern ape". These living beings are actually nothing but an 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 (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).

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 an imaginary evolution scheme by arranging different fossils of these creatures in a particular order. This scheme is imaginary because it has never been proven that there is any evolutionary relationship between these different classes.

By outlining the chain's links as *Australopithecus* > *Homo habilis* > *Homo erectus* > *Homo sapiens*, evolutionists imply that each of these species is another's ancestor. However, recent findings of paleoanthropologists have revealed that *Australopithecus, Homo habilis,* and *Homo erectus* all lived at different parts of the world at the same time. (Alan Walker, Science, vol. 207, 7 March 1980, p. 1103; A. J.

Kelso, *Physical Anthropology,* 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)

Moreover, a certain segment of humans classified as *Homo erectus* have lived up until very modern times. **Homo erectus and Homo sapiens co-existed in the same region and era**. (Jeffrey Kluger, "Not So Extinct After All", *Time,* 24 June 2001)

This situation indicates the invalidity of the claim that they are ancestors of one another. The late 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. (S. J. Gould, Natural History, vol. 85, 1976, p. 30)*

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 textbooks, that is, frankly, 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 a 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. (Solly Zuckerman, Beyond the Ivory Tower, New York: Toplinger Publications, 1970, p. 19)*

**The tale of human evolution** boils down to nothing but the prejudiced interpretations of some unearthed fossils by certain people who blindly adhere to their theory.

## WHY A MUSLIM CANNOT BE AN ADVOCATE OF EVOLUTION

Based on the knowledge of the 1940s and 1950s, some Muslims imagine that evolution is a theory supported by science, and try to reconcile it with Islam employing a strange logic which suggests that 'Muslims knew about evolution long before Darwin.' This logic is a product of serious lack of knowledge. Science has proven the invalidity of evolution. The fact science reveals is the fact of creation.

The fact that Muslims believe in, and the Qur'an clearly states, is that God created everything. Therefore, it is impossible for a Muslim to advocate the theory of evolution, which is a pagan superstition dating back to the time of the ancient Egyptians and Sumerians, explaining everything with coincidences.

God surely could have created the living organisms through evolution if He had wished so. However, the Qur'an does not contain any such information or any verse supporting the gradual formation of life forms as claimed by evolutionists. Had such a manner of creation existed, we would have seen it in the

verses of the Qur'an with its elaborate explanations. But on the contrary, God informs us in the Qur'an that life and the universe is created miraculously with God's commandment, 'Be'.

**He is 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)**

The fact God heralds in the Qur'an is that mankind was created out of nothing, in the finest form:

**We created man in the finest mold. (Surat at-Tin, 4)**

**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)**

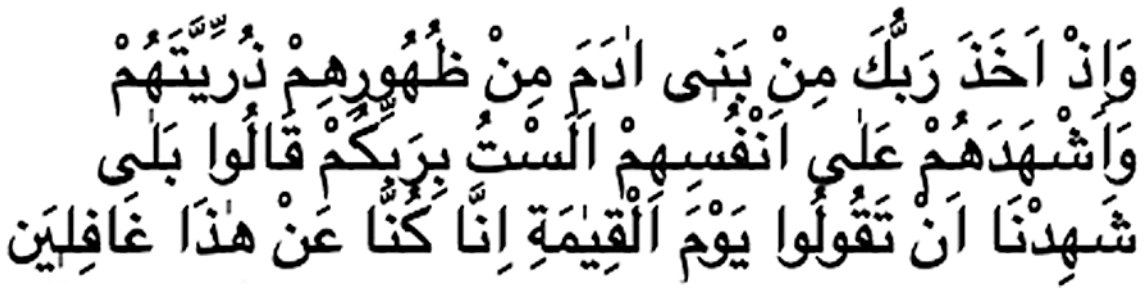
## THE PROPHET ADAM (PBUH) AND ALL MANKIND EXISTED IN THE SPIRITUAL REALM BEFORE THE UNIVERSE WAS CREATED

In the Qur'an, God informs us He created mankind in the spiritual realm even before the creation of the Universe and called everyone to testify:

**When your Lord took out all their descendants from the loins of the children of Adam and made them testify against themselves 'Am I not your Lord?' they said, 'We testify that indeed You are!' Lest you say on the Day of Rising, 'We knew nothing of this.' (Surat al-A'raf, 172)**

As it is seen, God informs us in the verse that mankind was brought into being before the universe, that they were created flawlessly and were fully developed, and that they testified and promised that God is their Lord. According to the information imparted by the verse, fully developed, talking, hearing, promising, testifying human beings existed with all their organs and all their physical characteristics even before the universe was created.

The original Arabic verse is as below:




**"Ve iz ehaze rabbuka min benî âdama min zuhûrihim zurriyyatahum wa asyhadahum alâ anfusihim, a lastu birabbikum, qâlû balâ, syahidna, an taqûlû yaumal qiyâmati innâ kunnâ an hâzâ gâfilîn (gâfilîna)."**

**ve iz ehaze:** And when (He) took out

(**iz:** you know, remember, then, at that time, … when… because, as, hence)

**rabbuka:** your Lord

**min benî âdama:** from the children of Adam

**min zuhûri-him:** from their loins

**zurriyyatahum:** their descendant, their lines, their lineage

**wa asyhadahum:** and made them testify

**alâ anfusi-him:** against themselves

**a lastu:** am I not?

**bi rabbikum:** your Lord

**qâlû:** they said

**bala:** yes

**syahidna:** we testify

**an taqûlû:** lest, so that you say not

**yaumal qiyâmati:** the Day of Rising

**innâ:** certainly we, genuinely we

**kunnâ:** we are, … we were

**'an hâza:** of this

**gâfilîn(a):** unaware, knew nothing

The Arabic word *"zurriyyat"* (descendant) used in the verse, is used 18 more times in the Qur'an. The meaning of this word in all the verses it is used in is 'mankind' or 'human generation' as all the Islamic scholars unanimously agree. In this verse, there is a reference to the descendants of Adam - the line of the Prophet Adam (pbuh)- meaning all human beings that have lived and will live on Earth. That is because, had that been a promise taken only from the person of the Prophet Adam (pbuh), the verse would have read 'When your Lord made Adam testify." As the verse states **'When your Lord took out all their descendants from the loins of the children of Adam', there is a reference to all the descendants of the Prophet Adam (pbuh), meaning all mankind.**

The Arabic word *'iz'* (meaning; remember that time, when) refers to the time when this address was made to the descendants of the Prophet Adam (pbuh), meaning to all mankind. The word *'iz'* is a preposition used while talking about an incident that took place in the past. It means 'remember this incident that took place in the past'. What is meant here is the testimony, the promise all humankind gave in the past, even before the universe was created.

In another verse of the Qur'an, it is stated that people will die twice and will be given life twice:

> **They will say, 'Our Lord, twice You caused us to die and twice You gave us life. We admit our wrong actions. Is there no way out?' (Surah Ghafir, 11)**

The first death and life mentioned in this verse is the way people–in a sense- die after they gave this promise in the spiritual realm, and then are given life by God using their parents as instruments and are sent to this world. The second death is the physical death that we know of in this world. After that, people will be given life for the second time in the Hereafter.

When this is the case, the 'gradual formation of mankind' claims of those who assert that creation through evolution is mentioned in the Qur'an become utterly invalid. Humans did not come into existence in a gradual manner. The whole of mankind, the Prophet Adam (pbuh), and all the other prophets existed in the spiritual realm even before the whole universe was created. The claim that the Prophet Adam (pbuh) and the rest of mankind turned into modern man through a set of evolutionary processes does not hold any truth.

The Prophet Adam (pbuh), just like the rest of humanity, existed in the spiritual realm even before the universe was created, and then was created in Heaven, later to be sent to the Earth:

**Your Lord said to the angels, 'I am going to create a human being out of clay. When I have formed him and breathed My Soul into him, fall down in prostration to him!' (Surah Sad, 71-72)**

**But satan made them slip up by means of it, expelling them from where they were. We said, 'Go down from here as enemies to each other! You will have residence on the earth and enjoyment for a time.' (Surat al-Baqara, 36)**

In another verse of the Qur'an, God informs us about the promise given by all mankind in the spiritual realm as follows:

**Remember God's blessing to you and the covenant He made with you when you said, 'We hear and we obey.' Have fear of God. God knows what the heart contains. (Surat al-Ma'ida, 7)**

Those who gave their promises to God in the spiritual realm were not part human and part other creatures, with incomplete forms and undeveloped limbs. They were complete and conscious humans. This is a clear proof that creation through evolution does not exist in the Qur'an.

## THOSE MUSLIMS WHO ADVOCATE EVOLUTION ARE UNABLE TO EXPLAIN THE CREATION OF ANGELS AND THE JINN

When those who claim that mankind developed through an evolutionary process are asked about how angels and the jinn were created, their answer will be 'God created them out of nothing'. It is quite astonishing that these individuals, who are aware of and acknowledge the fact that angels and the jinn are creations of God, fail to realize that God created mankind in the same manner. It is highly surprising that they fail to see that Almighty Lord, Who created angels with His command 'Be', created mankind in the same manner. Likewise, God creates angels in human form, instantaneously. The angels who visited the Prophet Abraham (pbuh) had the appearance of fully developed and flawless human beings and were created instantaneously.

God informs in the Qur'an that the jinn, unlike mankind, were created from fire:

**He created man from dry earth like baked clay; and He created the jinn from a fusion of fire. (Surat ar-Rahman, 14-15)**

As God reveals in the Qur'an, the creation of angels is also quite different from the creation of mankind. In the following verse, God informs us about the creation of angels:

**Praise be to God, the Bringer into Being of the heavens and earth, He Who made the angels messengers, with wings – two, three or four. He adds to creation in any way He wills. God has power over all things. (Surah Fatir, 1)**

As clearly understood from the statement in the verse, angels also have a very distinct appearance, very different from that of humans. Additionally, God informs us in the Qur'an that both angels and the jinn were created before mankind. It is very easy for God to create. Our Lord is the One Who creates out of nothing and without cause. Just as He created the jinn and angels out of nothing and in distinct forms, so did He create mankind as a separate creature out of nothing, without any need for evolutionary processes. The same is also true for other life forms such as animals and plants. Here is the explicit truth explained in the Qur'an: God created all beings instantaneously and out of nothing without subjecting them to evolution; in other words, without turning them into other species.

# MUSLIMS WHO ADVOCATE EVOLUTION CANNOT OFFER ANY EXPLANATION FOR THE MIRACLES MENTIONED IN THE QUR'AN

God informs us in the Qur'an that when the Prophet Moses (pbuh) threw his staff to the ground, by God's will, it turned into a living snake.

As we are informed in the verses, when the Prophet Moses (pbuh) throws his staff to the ground, an inanimate tree branch turns into a living snake, and when he takes it in his hand, it reverts back to an inanimate tree branch, and when he throws it once more to the ground, it again comes to life. In other words, an inanimate matter comes to life and then becomes lifeless, and then comes to life again. With this miracle, God shows us the constant creation. God commands in the verses:

> **He threw it down and suddenly it was a slithering snake. He said, 'Take hold of it and have no fear. We will return it to its original form.' (Surah Ta Ha, 20-21)**
>
> **'Throw down what is in your right hand. It will swallow up their handiwork. Their handiwork is just a magician's trick. Magicians do not prosper wherever they go.' (Surah Ta Ha, 69)**
>
> **'Throw down your staff.' Then when he saw it slithering like a snake he turned and fled and did not turn back again. 'Have no fear, Moses. In My Presence the Messengers have no fear.' (Surat an-Naml, 10)**

When the Prophet Moses (pbuh) threw his staff to the ground, as a blessing of God, an inanimate piece of wood turned into a very much alive creature that slithered and swallowed the conjurations of the others; in other words, a creature with a functional digestive system. This transformation took place instantaneously. Thus, God showed people an example of how living organisms are created out of nothing. An inanimate matter came to life by God simply willing it, in other words, with His command 'Be'. This miracle that God granted to the Prophet Moses (pbuh) shattered the superstitious evolutionary beliefs of the Egyptians of the time with a single blow, and even those who were against the Prophet Moses (pbuh) realized the truth at that very moment, renouncing their superstitious beliefs and believing in God.

Furthermore, God informs us in the Qur'an about how the Prophet Jesus (pbuh) made a clay object in the shape of a bird and breathed into it, and how the bird came to life by God's Will:

> **Remember when God said, "Jesus, son of Mary, remember My blessing to you and to your mother when I reinforced you with the Purest Spirit so that you could speak to people in the cradle and when you were fully grown; and when I taught you the Book and Wisdom, and the Torah and the Gospel; and when you created a bird-shape out of clay by My permission, and then breathed into it and it became a bird by My permission..." (Surat al-Ma'ida, 110)**

A bird came to life without being bound to any cause, by God's leave and miracle. A living bird emerging from inanimate matter is one example of Almighty God's peerless, causeless and sublime creation. Through this miracle bestowed upon him by God, the Prophet Jesus (pbuh) revealed the illogicality and invalidity of evolutionist thinking also. It is impossible for those who try to arbitrarily reconcile Islam with evolution to offer an explanation of these miracles of our Lord.

**Just as God did not create the jinn, angels, the women of Heaven (houris), the male servants of Heaven (gillmans), the children of Heaven, palaces and gardens of Heaven, hell and its guardians through evolution, so did He not create mankind through evolution.** God created every detail in Heaven; the high palaces, ornaments, gardens, birds, foods and infinite blessings instantly and out of nothing without any evolutionary process. The mansions in the Heaven, rivers of milk, thrones and jewels of Heaven were all created by God's command "Be". No cause is needed such as foremen, tailors or craftsmen for those to appear. Just as the fruits of Heaven such as date palms and figs or the jewels of heaven such as pearls and mother-of-pearls were not created by means of evolution in Heaven, they are not created by means of evolution in this world either. Creation is not through evolution, neither in this

world, nor in Heaven. (For further information, refer to: *Why Darwinism Is Incompatible with the Qur'an,* Harun Yahya (Adnan Oktar).)

## DARWINIAN FORMULA!

Besides all the technical evidence we have dealt with so far, let us now examine what kind of an irrational belief the evolutionists have with an example so simple as to be understood even by children:

The theory of evolution claims that life is formed by chance. According to this irrational claim, lifeless and unconscious atoms came together to form the cell and then they supposedly 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 treatment 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 what evolutionists really claim about the **"Darwinian formula"**:

Let evolutionists put plenty of the 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 even exist under normal conditions, but that they think is necessary. Let them add in this mixture as many amino acids and as many proteins - not a single one of which can by any means be formed by chance - 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 or even trillions of years. Let them be free to use anything they believe to be necessary for a living being's formation.

**No matter what they do, they cannot produce from these barrels a living being.** 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, multicolored butterflies, or any of the other millions of other living beings such as these. Indeed, they could not obtain even a single cell of any living being.

Briefly, **unconscious atoms cannot form a cell** by coming together. They cannot make a new decision and divide this cell into two, then make other decisions and create the professors who invented the electron microscope and then examine their own cell structure under that microscope. **Life only comes with God'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 about 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 the theory of evolution 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 upside down on the retina in the eye. Here, these light rays are transmitted into electrical signals by cells and reach a tiny spot at the back of the brain, the "center of vision". These electrical signals are then perceived in this center as an image. Given this brief technical explanation, let us do some thinking.

**The brain is insulated from light.** That means that it is completely dark inside the brain, 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-black darkness.

**The image formed in the eye is so sharp and so distinct that even the technology of the twenty-first century has not been able to attain that clarity and sharpness**. For instance, look at the book you are reading, your hands with which you are holding it, then lift your head and look around you. Have you ever seen such a sharp and distinct image as you now see, with any other device? Even the most developed television screen produced by the greatest television manufacturer in the world cannot provide such a sharp image for you. For more than 100 years, thousands of engineers have been trying to achieve this sharpness. Factories, huge premises have been 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 from a three-dimensional perspective which adds 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 artificially three-dimensional. The background is more blurred, the foreground appears like a paper setting. Never has it been possible to produce as sharp and distinct vision as that of the eye. In both the camera and the television, there is a comparative loss of image quality.

Evolutionists claim that the mechanism producing this sharp and distinct image has been formed by haphazard events. Now, if somebody told you that the television in your room was formed as a result of coincidences, 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 unconscious 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 is valid for the ear as well. 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 electrical signals. Just as with the eye, the act of hearing is finalized in the center of hearing in the brain.

The situation of 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 the outside is, 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 the noises in a crowded place.** However, if the sound level in your brain were measured by a precise device at that moment, complete silence would be found to prevail there.

As is the case with sharp imagery, decades of effort have been spent in trying to generate and reproduce sound that is faithful to the original. Sound recorders, high-fidelity systems, many electronic devices and music systems sensing sound are all the results of such efforts. Despite all 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, highest-fidelity systems produced by the largest company in the music industry. Even with these devices, when sound is recorded, some of it is lost; or notice how when you turn on a hi-fi you always hear a slight interference or static even 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 static as does a music set; 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 video or audio 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 THIS CONSCIOUSNESS THAT SEES AND HEARS WITHIN THE BRAIN BELONG?

Who watches an alluring world inside 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 an answer to the most important question: 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, or neurons comprising the brain. This is why Darwinist-materialists, who believe that everything is composed of matter, cannot answer this question.

For **this consciousness is the spirit, the soul created by God**, 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 answer should reflect on Almighty God, and fear and seek refuge in Him, for He fits this entire universe into a pitch-dark place of a few cubic centimeters in a three-dimensional, colored, shadowy, and luminous form.

## A MATERIALIST SUPERSTITION

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 intermediate forms the theory necessitates have never existed. So, these certainly require that the theory of evolution be pushed aside as a disproven theory. This is how many ideas, such as the geocentric model of the universe, have been taken out of the realm of science throughout history.

However, the theory of evolution is persistently kept on the agenda of science. Some people even try to represent criticisms directed against it as an "attack on science" and to suppress adversatives. Why?

Because this theory is an indispensable dogmatic belief in some circles. These circles are **blindly devoted** to a 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]... (Richard Lewontin, "The Demon-Haunted World," The New York Review of Books, January 9, 1997, p. 28)*

These are explicit statements demonstrating that **Darwinism is a dogma** kept alive just for the sake of adherence to materialism. This dogma maintains that there is no being except for matter. Therefore, it argues that inanimate, unconscious matter brought life into being. It claims that millions of different living species (e.g., birds, fish, giraffes, tigers, insects, trees, flowers, whales, and human beings) originated as a result of interactions between matter, such as pouring rain, lightning flashes, and so on, or out of inanimate matter. This is a precept contrary to both reason and science. Yet Darwinists continue to ignorantly defend it just so as not to acknowledge, in their own eyes, the evident existence of God.

Anyone who does not look at the origin of living beings with a materialist prejudice sees this evident truth: **All living beings are works of a Creator**, Who is All-Powerful, All-Wise, and All-Knowing. **This Creator is God**, Who created the whole universe from non-existence, in the most perfect form, and fashioned all living beings.

## THE THEORY OF EVOLUTION: THE MOST POTENT SPELL IN THE WORLD

It should be openly stated first and foremost that 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 true science, is quite impossible to embrace.

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 Hubble; such artists as Frank Sinatra and Charlton Heston; 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 necessitates an even worse and unbelievable blindness than the totems worshipped in some parts of Africa, the people of Saba worshipping the Sun, the tribe of the Prophet Abraham (pbuh) worshipping idols they had made with their own hands, or some among the people of the Prophet Moses (pbuh) worshipping the Golden Calf.

In fact, God 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. God 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)**

God informs us in the Surat al-Hijr that these people are under a spell that they do not believe even if they see miracles:

> **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, keeping people from the truth, and remaining unbroken for 150 years. It is understandable that one or

a few people might believe in impossible, illogical scenarios and claims full of stupidity and illogicality. However, “spell” is the only possible word to use when people from all over the world believe 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 its features so perfectly suited to life; and living things full of countless complex systems.

In fact, in the Qur’an God relates the incident of the Prophet Moses (pbuh) and Pharaoh to show that some people who support atheistic philosophies actually influence others by use of spells. When Pharaoh was told about the true religion, he told the Prophet Moses (pbuh) to meet with his own magicians. When the Prophet Moses (pbuh) 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 the Prophet Moses (pbuh) and those who believed in him. However, his evidence broke the spell, or “swallowed up what they had forged,” as revealed in the verse:

> **We revealed to Moses: “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, 117-118)**

The Prophet Moses’ throwing his staff of inanimate wood and then that staff coming to life and instantly overthrowing the deceptions of the Pharaoh and his followers is like breaking the spell of evolution. 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 of evolution 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 advocating the theory of evolution for some sixty 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. (Malcolm Muggeridge, The End of Christendom, Grand Rapids: Eerdmans, 1980, p. 43)*

That future is not far off: On the contrary, people will soon see that “coincidences” are 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 now rapidly beginning to be lifted from 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.

**They said, 'Glory be to You! We have no knowledge except what You have taught us. You are the All-Knowing, the All-Wise.' (Qur'an, 2:32)**

# NOTES


1 Michael Walker, *Quadrant*, October 1982, p.44
2 Fred Hoyle, Chandra Wickramasinghe, *Evolution from Space*, London:J.M. Dent and Company, 1981, p. 141
3 Ali Demirsoy, *Kalıtım ve Evrim* (Heredity and Evolution), Meteksan Publishing, Ankara, 1995, 7th Edition, p. 61
4 Ali Demirsoy, *Kalıtım ve Evrim* (Heredity and Evolution), Meteksan Publishing, Ankara, 1995, 7th Edition, p. 61
5 http://www.ncbi.nlm.nih.gov/books/NBK26830/
6 *Fabbri Britannica Science Encyclopedia*, vol. 2, No. 22, p.519
7 Walter T. Brown, *In the Beginning* (1989), p. 8
8 Engin Gözükara, *Biochemistry,* Nobel Tıp Publishing 1997, 3rd Edition, Vol.1, pp.123-124
9 Curtis Barnes, *Invitation to Biology*, Worth publishers, Inc, New York 1985, p. 49
10 Michael Behe, *Darwin's Black Box*, Aksoy Publishing, İstanbul, June 1998, p. 259
11 Gosline JM, DeMont EM, Denny MW. The structure and properties of spider silk. *Endeavour*. 1986; Vol:10, p.42
12 Michael Behe, *Darwin's Black Box*, Aksoy Publishing, Istanbul, June 1998, p.60
13 James Watson, *The Molecular Biology of the Gene,* 3rd edition, (Menlo Park, Calif: W.A.Benjamin), 1976, p.100
14 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry*, Second Edıtıon, Worth Publshers, New York, p.892
15 Joseph Panno, The Cell Evolution of the First Organism, p.79
16 Aaldert Mennega, "Reflections on The Scientific Method" in *Creation Research Society Quarterly,* Haziran 1972, s. 36)
17 Werner Gitt, *In The Beginning Was Information,* Christliche Literatur- Verbreitung e.V., CLV Bielefeld Germany, 1997, pp. 95-96
18 Akira Ishihama (2000). *Functional modulation of Escherichia coli RNA polymerase*, pp. 499–518. doi:10.1146/annurev.micro.54.1.499
19 Robert A. Weinberg, *One Renegade Cell, How Cancer Begins*, 1998 Basic Books, First Edition, New York, p. 42
20 "Cells Energy Use High for Protein Synthesis", *Chemical & Engineering News*, August, 20, 1979, p. 6
21 *Campbell Biology*, 9.Edition, p.337
22 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry*, Second Edition, Worth Publshers, New York, p. 892
23 *ScienceDaily*, DNA Translator More Complicated Than Thought, 24.08.2009
24 *ScienceDaily*, DNA Translator More Complicated Than Thought, 24.08.2009
25 Simulating movement of tRNA into the ribosome during decoding, *PNAS* 1.11. 2005 vol. 102 no. 44 )
26 Curtis Barnes, *Invitation to Biology,* Worth publishers, Inc, New York 1985, p.191
27 Curtis Barnes, *Invitation to Biology,* Worth publishers, Inc, New York 1985, p.191
28 *ScienceDaily,* DNA Translator More Complicated Than Thought, 24.08.2009.
29 Engin Gözükara, *Biochemistry*, Nobel Tıp Publishing, 1997, Third Edition, Vol.1, p. 157
30 William S. Klug, Michael R. Cummings, *Genetik Kavramlar* (Concepts of Genetics), Palme Publishing, Turkish translation from the 6th Edition, p. 401
31 Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter, *Molecular Biology of the Cell*, Garland Science; 5. Edition, pp. 738-739
32 Leslie E. Orgel, "The Origin of Life on Earth," *Scientific American,* Vol. 271, October 1994, p. 78
33 Eva Tolgyesi, D. W. Coble, F. S. Fang, and E. O. Kairinen, *A comparative study of beard and scalp hair*. http://journal.scconline.org/pdf/cc1983/cc034n07/p00361-p00382.pdf
34 *Campbell Biology,* 7th edition, p.44
35 https://www.technologyreview.com/s/514846/google-and-nasa-launch-quantum-computing-ai-lab/
36 http://www.dwavesys.com/d-wave-two-system
37 http://blogs.nature.com/news/2012/08/d-wave-quantum-computer-solves-protein-folding-problem.html
38 http://nobelprize.org/nobel_prizes/chemistry/ laureates/2004/
39 Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter, *Molecular Biology of the Cell*, Garland Science; 5. Edition, pp. 393-395

40 Neil A. Campbell, Jane B. Reece, Benjamin Cummings, *Biology*, Pearson Education, Turkish Translation from the Sixth Edition, Palme Publishing, Ankara 2006, p. 368
41 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry,* Second Edition, Worth Publshers New York, p. 929
42 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry,* Second Edition, Worth Publshers New York, p. 929
43 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry,* Second Edition, Worth Publshers New York, p. 929
44 Michael Behe, *Darwin's Black Box*, Aksoy Publishing, Istanbul, June 1998, p. 113
45 Muammer Bilge, *Hücre Bilimi* (Cytology), 3. Edition, pp. 131-132
46 *Molecular Biology of the Cell*, p.785
47 *Molecular Biology of the Cell,* p.727
48 Joseph Panno, *The Cell Evolution of the First Organism*, p.47
49 Joseph Panno, *The Cell Evolution of the First Organism*, p.48
50 http://www.nobelprize.org/nobel_prizes/medicine/laureates/2013/press.html
51 Carly P. Haskins, "Advances and Challenges in Science", *American Scientist*, 59 (1971), p. 298
52 Albert Lehninger L., David L. Nelson, Mıchael M. Cox, *Principles of Biochemistry,* Second Edition, Worth Publshers New York, p. 188
53 Curtis Barnes, *Invitation to Biology,* Worth publishers, Inc, New York 1985, p. 51
54 Engin Gözükara, *Biochemistry*, Nobel Tıp Publishing, 1997, Third Edition, Vol.1, p. 176
55 Albert Lehninger L., David L. Nelson, Michael M. Cox, *Principles of Biochemistry*, Second Edition, Worth Publshers New York, p.189
56 http://www.britannica.com/bcom/eb/article/7/0,5716, 53637+1+52330,00.html?query=methemoglobinemia
57 Michael Denton, *Nature's Destiny*, Free Press, New York, p. 201-202
58 Michael Behe, *Darwin's Black Box,* Aksoy Publishing, İstanbul, June 1998, p.68
59 Michael Behe, *Darwin's Black Box*, Aksoy Publishing, İstanbul, June 1998, p. 80
60 Bairoch A. (2000). "The ENZYME database in 2000". *Nucleic Acids Res* 28: 304–305. DOI:10.1093/nar/28.1. 304.PMID 10592255
61 Engin Gözükara, *Biochemistry*, Nobel Tıp Publishing, 1997, Third Edition, Vol.1, p. 580
62 Engin Gözükara, *Biochemistry,* Nobel Tıp Publishing, 1997, Third Edition, Vol.1, pp. 579-580
63 Michael Pitman, *Adam and Evolution*, 1986, p. 144
64 Lester McCann, *Blowing the Whistle on Darwinism,* United States of America by Graphic Publishing Company, 1986, p. 70
65 J.J.R. Frausto da Silva, R.J.P. Williams, *The Biological Chemistry of the Elements*, The Inorganic Chemistry of Life, Clarendon Press, Oxford 1991, p. 224
66 J.J.R. Frausto da Silva, R.J.P. Williams, *The Biological Chemistry of the Elements,* The Inorganic Chemistry of Life, Clarendon Press, Oxford 1991, p. 224
67 Ahmet Yıldız, Joseph N. Forkey, Sean A. McKinney, Taekjip Ha, Yale E. Goldman, and Paul R. Selvin, "Kinesin Walks Hand-Over-Hand", *Science*, 27 June 2003
68 Ahmet Yıldız, Joseph N. Forkey, Sean A. McKinney, Taekjip Ha, Yale E. Goldman, and Paul R. Selvin, "Kinesin Walks Hand-Over-Hand", *Science*, 27 June 2003
69 "Extracellular Sensors and Extracellular Induction Components in Stress Tolerance Induction" by Robin J. Rowbury; in *Bacterial Physiology A Molecular Approach,* Editor: Walid El-Sharaoud, Springer 2008, pp. 263-292
70 Demaurex, N. (2002), "pH homeostasis of cellular organelles", *News Physiol. Sci.* 17, 1-5.
71 *Molecular Biology of The Cell,* 4th Edition, p. 740
72 Nelson, N., N. Perzov, A. Cohen, K. Hagai, V. Padler, and H. Nelson. 2000. "The cellular biology of proton-motive force generation by V-ATPases". *J. Exp. Biol.* 203:89-95; Demaurex, N. (2002). "pH homeostasis of cellular organelles". *News Physiol. Sci.* 17, 1-5.; Grabe M & Oster G., "Regulation of organelle acidity". J General Physiol (2001) 117: 329–344
73 Forgac,M. 2007. "Vacuolar ATPases: rotary proton pumps in physiology and pathophysiology". *Nature Reviews Molecular Cell Biology* 8, 917-929.
74 Forgac,M. 2007. "Vacuolar ATPases: rotary proton pumps in physiology and pathophysiology". *Nature Reviews Molecular Cell Biology* 8, 917-929.
75 Forgac,M. 2007. "Vacuolar ATPases: rotary proton pumps in physiology and pathophysiology". *Nature Reviews Molecular Cell Biology* 8, 917-929.
76 Forgac,M. 2007. "Vacuolar ATPases: rotary proton pumps in physiology and pathophysiology". *Nature Reviews Molecular Cell Biology* 8, 917-929.
77 Kunihiko Kaneko, *Life: An Introduction to Complex Systems Biology,* Springer Verlag Berlin Heidelberg, 2006, p. 20

78 Andrews, S. C., A. K. Robinson, and F. Rodriguez-Quinones. 2003. “Bacterial iron homeostasis”. *FEMS Microbiol. Rev.* 27:215-237
79 Rodriguez, G. M., and Smith, I. (2003). “Mechanisms of iron regulation in mycobacteria: role in physiology and virulence”. *Molecular Microbiology* 2003 Mar;47(6): 1485-94
80 Masse E, Salvail H, Desnoyers G, Arguin M. “Small RNAs controlling iron metabolism”. *Curr. Opin. Microbiol.* (2007) 10:140–145
81 K. N. Raymond, E. A. Dertz, and S. S. Kim, Bioinorganic Chemistry Special Feature: Enterobactin: An archetype for microbial iron transport, *PNAS*, April 1, 2003; 100(7): 3584 - 3588.
82 Andrews, S. C., A. K. Robinson, and F. Rodriguez-Quinones. 2003. “Bacterial iron homeostasis”. *FEMS Microbiol. Rev*. 27:215-237.
83 K. N. Raymond, E. A. Dertz, and S. S. Kim, “Bioinorganic Chemistry Special Feature: Enterobactin: An archetype for microbial iron transport”, *PNAS*, April 1, 2003; 100(7): 3584 - 3588.
84 Masse E, Salvail H, Desnoyers G, Arguin M. “Small RNAs controlling iron metabolism.” *Curr. Opin. Microbiol.* (2007) 10:140–145
85 Masse E, Salvail H, Desnoyers G, Arguin M. “Small RNAs controlling iron metabolism.” *Curr. Opin. Microbiol.* (2007) 10:140–145
86 Andrews, S. C., A. K. Robinson, and F. Rodriguez-Quinones. 2003. “Bacterial iron homeostasis”. *FEMS Microbiol. Rev.* 27:215-237.
87 Andrews, S. C., A. K. Robinson, and F. Rodriguez-Quinones. 2003. “Bacterial iron homeostasis”. *FEMS Microbiol. Rev.* 27:215-237.
88 Andrews, S. C., A. K. Robinson, and F. Rodriguez-Quinones. 2003. “Bacterial iron homeostasis”. *FEMS Microbiol. Rev.* 27:215-237.
89 Larry Snyder, Wendy Champness, *Molecular Genetics of Bacteria,* Asm Press, Third Edition, 2007, p.584
90 Larry Snyder, Wendy Champness, *Molecular Genetics of Bacteria,* Asm Press, Third Edition, 2007, p. 584-586
91 Curtis Barnes, *Invitation to Biology,* Worth publishers, Inc, New York 1985, p.419
92 Christopher Wills, *Wisdom of The Genes,* Sarmal Publishing, March 1997, Istanbul,(Turkish translation), pp.151-152
93 Alaeddin Şenel, “Evrim Aldatmacası mı, Devrin Aldatmacası mı?”, *Bilim ve Ütopya Magazine,* Dec 1998
94 Alexander I. Oparin, *Origin of Life,* (1936) NewYork, Dover Publications, 1953 (Reprint), pp. 132-133
95 Stephen C.Meyer, *The Intercollegiate Review* 31, No:2 (Spring 1996)
96 W.R. Bird, *The Origin of Species Revisited,* Nashville, Thomas Nelson Co., 1991, p. 305
97 Lamarche MG Wanner BL Crépin Sharel J. “The phosphate regulon and bacterial virulence: a regulatory network connecting phosphate homeostasis and pathogenesis”. *FEMS microbiology reviews,* Vol. 32 No. 3. (May 2008) pp. 461-473
98 “Phosphorus Metabolism and its Regulation” by Volker F. Wendish and Michael Bott; in *Corynebacteria Genomics and Molecular Biology,* edited by Andreas Burkowski Caister Academics Press (2008), p. 204
99 Ali Demirsoy, *Kalıtım ve Evrim* (Heredity and Evolution), Ankara Meteksan Publishing, 1984
100 Michael Behe, *Darwin’s Black Box*, Aksoy Publishing, June 1998, p.97
101 W. R. Bird, *The Origin of Species Revisited,* Nashville, Thomas Nelson Co., 1991, p. 304
102 Hoimar Von Ditfurth, *Dinozorların Sessiz Gecesi 1* (Secret Night of the Dinosaurs 1), Alan Publishing, November 1996, İstanbul, Turkish Translation:: Veysel Atayman, p.122
103 Hoimar Von Ditfurth, *Dinozorların Sessiz Gecesi 1* (Secret Night of the Dinosaurs 1), Alan Publishing, November 1996, İstanbul, Turkish Translation:: Veysel Atayman, p.122
104 Hoimar Von Ditfurth, *Dinozorların Sessiz Gecesi 1* (Secret Night of the Dinosaurs 1), Alan Publishing, November 1996, İstanbul, Turkish Translation:: Veysel Atayman, p.126
105 Nicholas Wright Gillham, *Genes Chromosomes and Disease,* 2011, p.19
106 Miriam D. Rosenthal, Robert H. Glew, *Medical Biochemistry Human Metabolism in Health and Disease*, A John Wiley & Sons, Inc., Publication, 2009, p. 324
107 Miriam D. Rosenthal, Robert H. Glew, *Medical Biochemistry Human Metabolism in Health and Disease,* A John Wiley & Sons, Inc., Publication, 2009, p.322
108 *Campbell Biology,* 7th ed. p.44
109 Alexander I. Oparin, *Origin of Life,* (1936) NewYork, Dover Publications, 1953 (Reprint), p.196.
110 R.Shapiro, *Origins* (New York: Summit Books,1986) p. 99
111 K.Dose, “The Origin of Life: More Questions than Answers”, *Interdisciplinary Science Reviews* 13 (1988):348
112 *Mere Creation*, Edited By William A. Dembski, Intervarsity Press, Illinois, 1998, pp. 116, 119
113 Stephen C.Meyer, *The Origin of Life and the Death of The Metarialism*, Reprinted from the Intercollegiate Review 31, no.2, (Spring 1996)
114 “New Evidence on Evolution of Early Atmosphere & Life”, *Bulletin of the American Meteorological Society*, vol. 63, Nov 1982, pp.1328-1330

115 Richard B.Bliss & Gary. E.Parker, *Origin of Life,* California, 1979, p.14
116 *Earth*, “Life’s Crucible”, Feb 1998, p. 34.
117 *National Geographic,* “The Rise of Life on Earth”, Mart 1998, p. 68
118 W. R. Bird, *The Origin of Species Revisited*, Nashville: Thomas Nelson Co., 1991, p. 325
119 Richard Dickerson, "Chemical Evolution," *Scientific American,* Vol. 239:3, 1978, p. 75
120 Richard B. Bliss & Gary E. Parker, *Origin of Life,* California: 1979, p. 25
121 Richard B. Bliss & Gary E. Parker, *Origin of Life,* California: 1979, p. 25
122 W. Fox, K. Harada, G. Kramptiz, G. Mueller, “Chemical Origin of Cells”, *Chemical Engineering News,* 22 June 1970, p. 80
123 Quirós, Pedro M., Adrienne Mottis, and Johan Auwerx. “Mitonuclear communication in homeostasis and stress.” *Nature Reviews Molecular Cell Biology* 17.4 (2016): 213-226.-
124 Kilberg, Michael S., et al. “The transcription factor network associated with the amino acid response in mammalian cells.” *Advances in Nutrition: An International Review Journal* 3.3 (2012): 295-306.

# RESİM ALTI YAZILARI

s.17

**How can you reject God, when you were dead and then He gave you life, then He will make you die and then give you life again, then you will be returned to Him? It is He Who created everything on the Earth for you and then directed His attention up to heaven and arranged it into seven regular heavens. He has knowledge of all things. (Qur'an, 2:28-29)**

s.20

spongy bone

lamella

collagen fiber

cortical bone

haversian canal

osteon

10 – 500 μm

3 – 7 μm

0.5 μm

mineralized collagen fibers

100x40x2 mm

collagen molecule

1.3 nm

collagen fibrils

50 – 500 nm

fascicle

50 – 300 μm

tertiary fibre bundle

100 – 500 μm

third order lamella

0.2 mm

second order lamella

0.5 – 10 μm

first order lamella

4-5 nm

collagen fibrils

collagen molecules (triple helices)

amino acid chains

collagen fibrils

amino acid chains

Structure of the collagen and the keratin proteins. The below illustration shows the detailed inner structure of a collagen fiber.

s.21

When certain atoms bind to each other with the right bonds and in the right order, they turn into miraculous molecules like proteins, which have very specialized jobs. The illustration shows the inner structure of the atoms that make up the molecules.

molecule

atom

neutron

proton

quarks

s.23

The three-dimensional structure of the cytochrome-c protein

s.26

Coincidences can never produce a complicated design. Claiming that molecules as complicated as proteins can come into being by chance is more illogical than claiming rocks can turn into architectural wonders through the effect of water or wind.

s.29

The picture on the left is a camera produced to imitate the human eye.

Bipolar cells rod and cone cells

ganglion cells

light

eye

optic nerves

Imagine the best quality image you can make using a state-of-the-art camera, which consists of hundreds of different parts. For decades, thousands of scientists, technical experts and engineers have worked relentlessly and used the most advanced technology to achieve better and better image qualities. However, they could never match the quality of the human eye. When this is the case, it is clear that this flawless system cannot be the product of a coincidental assembly of unconscious atoms. Such a claim would be more irrational and absurd than claiming that a state-of-the-art cameras coincidentally emerged as a result of environmental conditions. The truth is this: the human eye, together with all its different and complex parts, was created by our Creator, Who has infinite wisdom and knowledge.

s.31

Amino, carboxyl and side chain groups bind to a carbon atom and together form the amino acids.

amino group

carboxyl group

side chain group

glycine

alanine

valine

phenylalanine

leucine

asparagine

isoleucine

Structure of the amino acids

Site of attachment to various R groups

amino group

acid group

basic amino acid

EXAMPLES

Amino acids that make up the proteins are named according to their R (radical) groups.

s.33

**20 DIFFERENT TYPES OF AMINO ACIDS IN THE HUMAN BODY**

Although much smaller compared to proteins, amino acids are also very complex molecules. There are more than 200 amino acids found in living beings, but only 20 out of them are used in protein production. This is because specific amino acids are needed for the proteins to carry out their duties.

KEY

ESSENTIAL

NON-ESSENTIAL

ACIDIC

ALPHATIC

AMIDIC

AROMATIC

BASIC

HYDROXLIC

CONTAINS SULPHUR

TYROSINE

HISTIDINE

VALINE

PROLINE

GLYCINE

GLUTAMIC ACID

GLUTAMINE

PHENYLALANINE

ARGININE

SERINE

THREONINE

METHIONINE

CYSTEINE

TRYPTOPHAN

LYSINE

LEUCINE

ALANINE

ISOLEUCINE

ASPARTIC ACID

ASPARAGINE

s.34

**PRIMARY AND SECONDARY PROTEIN STRUCTURES**

Amino terminus

Carbon
Hydrogen
Oxygen
Nitrogen
R group

5.4 Å (3.6 residues)

(a) Carboxyl terminus
(b)

- R-groups are found in the outer part of the helix.
- Hydrogen bonds stabilize the helix.
- Proline, apolar and polar groups destabilize the helix.

left: amino acid chain with ‘alpha-helix’ side chain
right: amino acid chain with ‘beta-sheet’ side chain

s.35

Pro
Gly
Pro
Pro
Gly
Pro

s.36

There are both right-handed and left-handed amino acids in nature. But only left-handed amino acids are used in protein construction.

Left-handed amino acids

Right-handed amino acids

s.38

Coincidences cannot explain the fact that all the amino acids used in the proteins are left-handed.

s.41

main chain

side chain

An amino acid chain with its side chain. If any of the amino acids in this chain are removed or replaced, the protein will become useless. Clearly, this sequence is not a coincidence, but obviously a design.

s.42

DNA sequence

Start of a coding sequence

DNA sequence

Amino acid sequence

Valine

Histidine

Leucine

Threonine

Proline

Glutamic acid

Glutamic acid

DNA sequence

Amino acid sequence

Valine

Histidine

Leucine

Threonine

Proline

Valine

Glutamic acid

normal red blood cells

sickled red blood cells

Due to mutations, glutamic acid, which codes hemoglobin protein turn into valin, leading to the crystallization of hemoglobin molecules. As a result, red blood cells change shape and get stuck in small blood vessels.

**HEMOGLOBIN**

Hemoglobin molecule

(the iron is the site of oxygen binding)

Iron

Red blood cells

Oxygen molecule

Sickle cell anemia is a disease caused by valin replacing glutamic acid in hemoglobin protein. The illustration at the right shows a sickle shaped hemoglobin protein.

Sickle-Cell Anemia

Normal red blood cell (RBC)

Normal red blood cell section

Normal hemoglobin

RBCs flow freely within blood vessel

Abnormal sickle red blood cell section

Sticky sickle cells

Sickle cells blocking blood flow

Abnormal hemoglobin form strands that cause sickle shape

Hydrogen bond

Hydrophobic bond

Ionic bond

Covalent bond

s.45

**Formation of peptide bonds**

Amino group

Peptide bond

Carboxyl group

Amino acids bind to each other with peptide bonds, which unlike other bonds, do not break easily. This is why proteins are so strong.

Amino end

Carboxyl end

Peptide bond

Peptide bond

s.48

**HOW DID LIFE ON EARTH EMERGE?**

Imagine the letters that comprise this sentence are the amino acids that constitute a protein. There is no chance that the letters in this sentence will form a meaningful sentence if they are distributed at random. Such a random action will produce billions of different outcomes. Just three of these possibilities are as follows:

**1) HOW DID LIFE ON EARTH EMERGE?**

First and foremost, some of the letters will fall face down.

**2) HOW DID LIFE ON EARTH EMERGE?**

Some of the letters will fall on their sides or upside down. Moreover, the letters may not line up side by side when they are thrown down. Even if we assume they line up side by side, some will form an oval shape and others a circle.

**3) HOW DID LIFE ON EARTH EMERGE?**

The chances of them lining up side by side are very small. Even if we assume they do line up side by side, against all the odds, they will still be in the wrong order. And the result will be a mass of letters signifying nothing.

As you see from this example, if the amino acids in nature come together by chance, some will be right-handed and others left-handed. When set out at random, they will form a meaningless sequence. Thus, no protein will emerge.

When you read a meaningful sentence, you can be sure some rational, informed human being wrote it. In the same way, proteins that have existed for billions of years show the existence of a superior Creator Who brought them into being with His intellect and consciousness.

s.49

Prof. Michael Behe explained that one hundred amino acids linking in the exactly right sequential order by chance is much less probable than a blind folded man finding a single marked grain of sand in the Sahara Desert. Even this example is enough to show that proteins were created by God, Who has infinite knowledge and power.

s.53

(a) Primary structure

Chain of amino acids

Bonds

OR

Alpha-helix

(b) Secondary structure

(pleated sheet)

(c) Tertiary structure

Heme units

(d) Quaternary structure

Hemoglobin

(globular protein)

PRIMARY STRUCTURE: Amino acids in a certain number, shape and order, make a chain.

Secondary structure

SECONDARY STRUCTURE: Amino acid chains fold into helices. This is because every amino acid links with the one next to it with a hydrogen bond.

Tertiary structure

TERTIARY STRUCTURE: Amino acid chain folds like a ball of wool using various bonds.

Quaternary structure

QUATERNARY STRUCTURE: Previously folded protein chains join together to make a single protein, like this ‘hemoglobin protein’.

s.55

When amino acids are linked side -by -side like beads on a string, they form primary structures.

s.57

When amino acids join with not only peptide bonds but also with hydrogen bonds, the protein chain gains a helical or a layered structure. This is called a secondary structure.

Hydrogen bonds

s.58

**RED MUSCLE CELLS**

Mitochondria

Sarcolemma

Myofibrils

Nucleus

T tubule

Terminal cisterna

Triad

Sarcoplasmic Reticulum

Fibril structure of the myosin protein found in muscle cells. The special structure of fibrils allows them to contract and relax.

s.59

The illustration below shows the three-dimensional structure of the silk fibroins. Proteins like silk fibers consist of chains that lie parallel to each other and bind with hydrogen bonds. This makes them straight and flexible. Spiders depend on this quality of their silk to survive.

Ala

Gly

Ala

Gly

s.60

Helix

Beta sheet

Hydrophobic interaction

Polypeptide backbone

Disulfide linkage

(c) Tertiary structure: Folded helix and beta sheet

Hydrogen bond

Disulfide linkage (between cysteine molecules)

Ionic bond

Details of bonds in tertiary structure

(d) Quarternary structure: two or more folded polypeptides

After proteins assume their secondary structures with H bonds, Van der Waals forces cause them to fold into their tertiary structure.

s.61

Three dimensional structure of lysosome protein

Three dimensional structure of myoglobin protein and the peptide groups between its atoms.

s.62

This myoglobin shows the superior complexity and details present in the protein folding process. Needless to say, it is impossible for such a flawless structure that is capable of carrying out such vital tasks to come into being by chance.

Proximal histidine

Heme

A

Myoglobin

B

$\beta$ - Chain of hemoglobine

C

$\beta 2$

$\beta 1$

Hem grubu

$\alpha 2$

$\alpha 1$

Protein folding is another example of God's glorious creation. This process can be compared to following step-by-step instructions to fold a sheet of paper into a ship or a bird. One missed or wrong stage will prevent the bird shape from appearing. Needless to say, the folds required to produce even a single protein is incomparably more complex and can never be a product of coincidences.

s.67

**DNA replication and repair:**

900 different proteins are used

**DNA transcription and translation:**

3200 different proteins are used

**Protein modifiers:**

850 different proteins are used

Total: 4950 different proteins are used

s.70

Cytosine

Guanine

Adenine

Uracil

Nucleobases of RNA

Nucleobases

Base pair

helix of sugar-phosphates

**RNA**

Ribonucleic acid

**DNA**

Deoxyribonucleic acid

Cytosine

Guanine

Adenine

Thymine

Nucleobases of DNA

The structure of the DNA; the body’s data bank. DNA molecule is comprised of four different nucleotides that are arranged in a very specific sequence. Their sequences determine all the details about the proteins to be used.

s.71

The truly extraordinary data contained in DNA is equivalent to a 20-volume encyclopedia condensed into an area of less than 1 nanometer, or 1 billionth of a meter. It is impossible for people to conceive of such a data-storage system, let alone manufacture one. Through computer technology, microchips have been manufactured to store data, but as of yet, they have nowhere near the capacity of DNA.

s.72

RNA polymerase enzyme

RNA polymerase enzyme

When a protein is to be produced, RNA polymerase enzyme selects and copies the necessary data from the DNA. It is an amazing miracle that a collection of atoms we call an enzyme, can display such intelligent behavior.

s.73

Humans have been using the most advanced technology for years, but managed to analyze the DNA only in the year 2000. Yet proteins invisible to the naked eye have been flawlessly doing this for billions of years.

s.76

DNA primase

RNA primer

DNA-ligase

DNA-Polymerase (Pol$\alpha$)

Lagging strand

Okazaki fragment

Leading strand

DNA Polymerase (Pol$\delta$)

Helicase

Single strand, Binding proteins

Topoisomerase

DNA replication

s.78

The information determining any one protein may sometimes be found in different places in DNA. Enzymes known as sliceosomes then bend the chain in such a way that the two ends of the unwanted DNA region touch. This "loop" is removed and discarded. In order to do this, enzymes need to display incredible intelligence and consciousness. They must carefully identify and eliminate the appropriate genes from the millions in the helix, without making any mistakes. The fact that a small molecule of unconscious atoms can display such intelligence shows the perfection of Almighty God's creation.

DNA

RNA

Protein

Transcription

Translation

Nucleus

Ribosome

Polymerase movement

RNA POLYMERASE

Coding strand

Rewinding of DNA

Unwinding of DNA

Template strand

RNA

RNA-DNA hybrid region

NTPs

Nucleotide being added to the 3’ end of the RNA

3’ Antisense strand

RNA polymerase

RNA transcript

Sense strand

s.82

The information required for the protein to be produced leaves the cell nucleus as mRNA and arrives at the ribosome, where protein production begins. At this point, the tRNAs begin bringing the necessary materials to the ribosome.

**RIBOSOME**

Amino acid chain (protein)

Amino acid

tRNA

Large subunit

mRNA

Codon

Small subunit

s.83

newly born protein

amino acids

large subunit

tRNA

B site

A site

mRNA

small subunit

s.84

During protein synthesis, the alphabet of the DNA should be translated into the alphabet of the protein. For example, the text above should be translated to the protein language, which is at the bottom.

DNA translation

RNA translation

protein

**TABLE OF AMINO ACID**

START

**Amino acid code**

A - Alanine

C - Cysteine

D - Aspartic acid

E - Glutamic acid

F - Phenylalanine

G - Glycine

H - Histidine

I - Isoleucine

K - Lysine

L - Leucine

M - Methionine

N - Asparagine

P - Proline

Q - Glutamine

R - Arginine

S - Serine

T - Threonine

V - Valine

W - Tryptophan

Y - Tyrosine

s.86

mRNA and tRNA match each other like a lock and key, which allows the DNA language to be translated into protein language. Every third letter in the mRNA is like a key, and the end of the tRNA that corresponds to it, is like a lock that opens this key.

attached amino acid

(Phenylalanine)

third

5’ end

anticodon loop

Anticodon

clover leaf

Anticodon

s.88

Messenger RNA (mRNA) that carries the protein information

amino acid

Transporter RNA (tRNA)

1. First, the messenger RNA carrying the production instructions arrives at the ribosome where the amino acids will be combined. Then the transfer RNAs arrive with the ‘raw materials’. transfer RNA (tRNA)

s.89

2. The codon-anticodon method prevents any errors during the translation and combination processes. In this method, the messenger RNA and the transfer RNA pair and interact like a lock and a key. Every three letter in the mRNA is considered a ‘codon’, or a key. The end of the transfer RNA that can unlock this key is called the anti-codon and pairs with the codon.

anticodon

codon

Large ribosomal element

2nd part

1st part

Small ribosomal element

3. As messenger RNA and transfer RNA pair, two special sections of the ribosomal DNA are used. mRNA enters the smaller unit of the ribosomal RNA, while tRNA enters the larger unit. Special mechanisms facilitate these movements. This is crucial, because it shows that a Creator knew about tRNA, mRNA when ribosome was first created, He knew about their qualities and that they would use ribosome for a special purpose and it is also clear that He created these specialized tasks and regions of the ribosome. It is definitely not possible for these structures to come into being by gradual, random changes and create this impeccable harmony. Furthermore, there are even more detailed designs and complicated steps not explained here. In addition, there are two special sections at the site where the tRNAs attach. The first one will be used by the tRNA that just arrived, and the other one is used by the other tRNA which has completed its duty and is about to leave the ribosome.

4. tRNA brings the first amino acid required for the protein to be produced and places it across a special codon called the ‘start codon’, allowing the translation process to start. Ribosome will not start the production without this start codon, which always codes for methionine.

Initiating code

mRNA

s.90

amino acids

peptide bond

5. After the start codon is recognized, codons, in other words ‘instructions for the production’ are read in quick succession. In other words, they are translated.

6. First, the start codon attaches to the smaller unit in the ribosomal RNA, which is the translation unit. Then ribosomal RNA moves along the mRNA, which carries the production instructions.

7. At the same time, tRNA takes its position in the ribosome with its anticodon and amino acid load. The amino acid, of which process is now complete, links with the newly coming amino acid, using a peptide bond.

The first tRNA to arrive

8. The tRNA that came first, leaves the ribosome and the second tRNA, together with its two amino acids, moves towards the second section.

peptide bond

9. The next tRNA that arrives at the ribosome, attaches to the first section of the large unit, where tRNAs bind. The amino acids of the first and second tRNAs attach to the amino acid of the third tRNA.

s.91

10- The second tRNA leaves the ribosome after this attachment process.

The second tRNA to arrive

11- At the same time, the third tRNA, together with the three amino acids it now carries, moves from the first section to the second section. Ribosomal RNA continues this process.

the newly formed protein chain

tRNA after it met the stop codon

12. The process ends when ribosomal RNA identifies the stop codon at the mRNA.

stop codon

s.93

Ribosome

Transporter vesicle

Lysosome

Synthesized protein

Crude endoplasmic reticulum

Protein packaging

Secretor vesicle

Protein emerges by way of exocytosis

Cell membrane

Activity continues non-stop in the cell, even after the protein production is completed. The protein is either taken outside the cell through special carriers and taken to wherever it is needed in the body, or taken to the golgi apparatus to be stored until it is needed.

s.97

Proteins, just like origami, have three dimensional shapes. In origami, no shape will appear through random folding. On the contrary, experts design and decide which parts of the sheet should be folded, with specific instructions, which are unique to every individual shape.

s.98

The picture above shows the protein before and after it is folded. Amino acids come out of the ribosome as a straight line, but they cannot function as proteins until they fold.

s.100

The chaperone molecules in this picture are called GroEL-GroES complex and are responsible for protein folding process. It is a miracle that a molecule is capable of doing this job in a conscious manner.

Misfolded protein

Cap

Correctly folded protein

Chaperone protein

Isolated protein

Change for protein to refold

It is crucial that the proteins are folded correctly. Any errors in protein folding can lead to diseases like Parkinson's and Alzheimer. Chaperone proteins play an important role in this duty.

s.101

Calnexin: membrane-bound chaperone protein

Calreticulin: soluble chaperone protein

UNFOLDED

INCOMPLETELY FOLDED

NORMALLY FOLDED

GLUCOSE TRIMMING

glucose

UDP-glucose

UDP

glucosyl transferase

EXIT FROM ER

N-linked oligosaccharide

glucosidase

calnexin

ER LUMEN

ER membrane

CYTOSOL

s.103

Dr. Leslie Orgel

s.104

The hair and the beard are made of a protein called keratin, seen below.

Overlapping cuticle cells with IB-MEA and other lipids et the surface

Cross-section of cuticle

Matrix proteine

Micro fibril

Cortica cell

Micro filament

Cortex

Intermediate filament proteine

s.106

Substrate

Active site

Enzyme changes shape slightly as substrate binds

Products

Substrate entering active site of enzyme

Enzyme/substrate complex

Enzyme/products complex

Products leaving active site of enzyme

After the enzymes assume their final shape, a region called ‘active site’ forms on them. The molecule that the enzyme will attach to (substrate) and this site match each other like a key and a lock.

s.107

A very high processing power is required to find the right shape of protein from among all other possible variations. Humans have to use giant quantum computers, as seen in this picture, to do a similar job.

s.109

Protein quality control

Regulation

misfolding

folding

accumulation

oligomers inclusions

dysfunction

cell cycle arrest

apoptosis

proteasome

degradation

accumulation

dysfunction

cell cycle arrest

apoptosis

The quality control system present in proteins is an example of God’s fascinating art of creation. A small protein, called ubiquitin, identifies and tags damaged proteins for degradation.

s.110

**Degradation of Ubiquitinated Proteins by 26S Proteasome**

Protein

26S Proteasome

Ubiquitin chain

19S

20S core

6 ATPases

Free ubiquitin

Peptidases

Antigenic peptides

Amino acids

Cytosolic peptidases

2-25 residues

Damaged proteins are tagged by ubiquitin and cut out of the amino acid chains by another protein called proteasome.

s.112

**The Ubiquitin - Proteasome Pathway**

Ubiquitin chain

ATP

Ubiquitin

26S Proteasome

ATP

E1, E2, E3

Amino acids

Ubiquitin

Protein substrate

Antigen presentation

Proteasome is like a smart recycling machine. This wonderful structure destroys tagged proteins. However it does not harm the tag, which is also a protein.

s.114

In order to identify and destroy harmful bacteria and viruses, our immune system produces antibodies that match their antigens and destroy the foreign substances by taking advantage of this key-lock harmony between them.

APC

Lat

PLCϒ

SLP76

Nck

Vav

ZAP70

Lck

Talin

T cell

WAVE 2 complex

WASp

Key

LFA-1

ICAM1

Actin

TCR

Myosin IIA

CD3

pMHC

s.116

| **FUNCTION OF SIGNAL SEQUENCE** | **EXAMPLE OF SIGNAL SEQUENCE** |
|---|---|
| Import into nucleus | -Pro-Pro-Lys-Lys-Lys-Arg-Lys-Val |
| Export from nucleus | -Leu-Ala-Leu-Lys-Leu-Ala-Gly-Leu-<br>Asp-Ile- |
| Import into mitochondria | $+H_3N$-Met-Leu-Ser-Leu-Arg-Gln-Ser-Ile-Arg-Phe-Lys-Pro-Ala-Thr-Arg-Thr-Leu-Cys-Ser-Ser-Arg-Tyr-Leu-Leu- |
| Import into plastid | $+H_3N$-Met-Val-Ala-Met-Ala-Ser-Leu-Gln-Ser-Ser-Met-Ser-Ser-Leu-Ser-Leu-Ser-Ser-Asn-Ser-Phe-Leu-Gly-Gln-Pro-Leu-Ser-Pro-Ile-Thr-Leu-Ser-Pro-Phe-Leu-<br>Gln-Gly- |
| Import into peroxisomes | -Ser-Lys-Leu-COO- |
| Import into ER | $+H_3N$-Met-Met-Ser-Phe-Val-Ser-Leu-Leu-Leu-Val-Gly-Ile-Leu,Phe-Trp-Ala-Thr-<br>Glu-Ala-Glu-Gln-Leu-Thr-Lys-Cys-Glu-Val-Phe-Gln- |
| Return to ER | -Lys-Asp-Glu-Leu-COO- |

s.119

**Endoplasmic reticulum**

Smooth endoplasmic reticulum

Nucleolus

Nucleolus

Nuclear pore

Rough endoplasmic reticulum

Ribosomes

s.121

hydrophobic start-transfer sequence

COOH

hydrophobic stop-transfer sequence

$NH_2$

CYTOSOL

ER LUMEN

translocation channel

signal peptidase

$NH_2$

mature transmembrane protein in ER membrane

Transfers from cell membrane to the endoplasmic reticulum (ER), which is the intra-cellular transfer system, is a highly sensitive process. Gates on the cell membrane, which are also made of proteins, recognize the relevant proteins and let them in without harming them.

s.125

Hemoglobin is a fairly large molecule

s.126

Active tissues have high levels of $Co_2$. When hemoglobin reaches these tissues, it will tend to give $O_2$ to them. This allows the hemoglobin to quickly release its oxygen to tissues that need it and receive the carbon dioxide in exchange.

Hemoglobin

Erythrocyte

Blood vessel

s.128

When hemoglobin binds with oxygen, it goes through various structural changes. The left picture shows the normal state of hemoglobin, and the right shows it after it binds with the oxygen.

s.130

microhairs

cell

Some cells have flagella which they use to move themselves or the objects around them.

s.133

Microtubule

Cell membrane

Microtubules

Cell membrane

Microtubule

Cell flagella have extraordinary designs. A cross-section reveals nine rod-like microtubules, each of which consists of two interconnected microtubules and each of these microtubules in return, consists of 13 separate filaments.

s.136

Microtubules act like a boat’s oars in the movement of the flagellum and a dynein protein serves as the engine. This flawless interlinked system is only a part of a very small structure that is invisible to the naked eye.

Cell membrane

Dynein arms

Single microtubule inside

Exterior twin microtubules

Dynein moves

Internal membrane

In state of rest

Moving dynein sets up a tilt

s.138

The micro hairs move at the same time in the same direction like rowers. This movement allows the cell to move fast. They can also move objects in a certain direction. The picture below shows the flagellum that pushes the egg through the fallopian tube towards the uterus.

s.141

Enzymes are produced inside the mitochondria of the cell.

s.142

Three dimensional view of the carbonic anhydrases enzyme.

s.144

non-enzymatic reaction

activation energy difference stemming from enzymes

enzymatic reaction

energy

matter

direction of reaction

product

Although enzymes do not enter into reactions themselves, they lower the activation energy required for reactions to accelerate them. The figure shows how long the reactions would take without the enzymes.

s.145

Three dimensional model of the catalase enzyme.

s.147

(a) Reaction

substrate

active site

allosteric site

enzyme

Substrate molecule binds with active site of enzyme molecule, preventing binding of inhibitor molecule.

Reaction occurs and product molecules are generated

(b) Inhibition

inhibitor

active site

Inhibitor molecule binds with the active site of enzyme molecule

Inhibitor molecule prevents the binding of substrate molecule

The enzymes match the substance they are charged with and the two will fit each other perfectly like the pieces of a puzzle. Enzymes, in a highly conscious manner, find and bind with the substances that match them. The illustration above shows how the enzymes and their matching substrates fit each other.

s.148

When it is not desirable for enzymes to accelerate the reactions, the cell sends a fake substrate to stall the enzyme. This substrate also perfectly fits with the enzyme. This remarkably conscious act is an evidence of God's beautiful creation.

normal matter

replica matter

enzyme

replica matter

enzyme

s.151

Elements needed for the cell are controlled by gates, which act like they are conscious, and are taken inside in the required amounts or are removed from the cell.

$Na^+$ electrochemical gradient

$K^+$ electrochemical gradient

CYTOSOL

s.153

Isotonic

Hypotonic

Hypertonic

Relative salt concentration

Movement of water molecules

Effect of Osmosis on Cells

In osmosis, water diffuses through a selectively permeable membrane.

Water molecules

Cell membrane

A Normal Red Blood Cell

Concentration ıf water inside the cell is the same es outside.

C High Water Concentration Outside Cell

During osmosis, water moves into the cell.

B Low Water Concentration Outside Cell

Water moves out of the cell during osmosis

s.154

Cell membrane

Extracellular

Charge Separation

Intracellular

Across Membrane

Ion Concentration Gradients

$Na^+$

$K^+$

$Cl^-$

ELECTROLYTE IMBALANCES IN THE CELL CAN LEAD TO DEATH OF THE CELL DUE TO INSUFFICIENT OR EXCESSIVE WATER INTAKE.

Hypertonic

Isotonic

Hypotonic

$H_2O$

$H_2O$

$H_2O$

$H_2O$

$H_2O$

Vacuole

Plasmolyzed

Flaccid

Turgid

OSMOSIS

Semipermeable membrane
Fluid

A High solute concentration, low fluid concentration and high osmotic pressure
Low solute concentration, high fluid concentration and low osmotic pressure

DIFFUSION

Semipermeable membrane
Solutes
Fluid

B High solute concentration
Low solute concentration

s.157
Dinein

s.160
The PH scale

acidic
neutral
alkaline

s.161

Important substances can be taken inside the cell after they are covered with a membrane called vesicle. Lysosome digests the nutrients, while the proteins to be transferred are first packaged by the golgi apparatus before being taken to their destinations.

s.162

V-ATPaz carries the H+ ions outside the membrane, which will be used for ATP molecule production.

ADP+Pi

ATP

Cytoplasm

Lumen

s.165

Parts of a V-ATPaz protein, newly synthesized inside the cell, are first marked like the parts of car and then transferred according to those marks. After they are taken to their destination through a series of miraculous processes, they are assembled and put to use.

Golgi

Cytoplasm

Membrane

ER lumen

s.167

V-ATPaz is one of the most extraordinary molecular engines that humans have ever encountered. No engine can be produced by chance. V-ATPaz is only one of the remarkable examples of God's glorious art of creation.

$Na^+$

a

Periplazm

c

$Na^+$

Cytoplasm

$F_0$

$F_1$

ATP

b

$ADP+P_i$

10nm

s.169

Miraculous molecule: Iron

s.171

Finding the ferritin: Two ways

Deferipone (L1)

Desferrioxamine mesylate B (DFO)

Lysosome

Ferritin

Hemosiderin

Proteasome

Deferasirox (XJ)

Urine

s.173

A very intricate system is created in the bacteria so that iron-chelating siderophores can be taken inside the cell through the cell membrane.

Ferritin

Reductive pathway

Siderophore utilisation

Asidic pH

Complex

Ferritin

s.174

Iron is an atom that needs careful handling inside the atom. For this reason, special mechanisms were created to ensure it is carried carefully in every stage. It is almost like iron is carefully passed on from hand to hand.

Endogenous ferri-siderophore

Exogenous ferri-siderophore

Heme

Ligand-specific OM receptor

Outer membrane

Ligand-specific periplasmic binding protein

TonB

ExbBD

Ligand-specific IM permease complex

Inner membrane

Siderophore

ADP

ATP

ATP

ADP

s.176

Ferritin

Single ferritin subunit

Ferritin protein consisting of 24 subunits

Cross section

Energy distribution lines are used to transfer energy generated in power stations to distant places. Just like these lines, energy generated in the cell membrane is carried to the outer membrane through transmission lines made up of proteins called TonB-ExbB-ExbD.

s.177

FebB proteins in between the outer cell membrane and inner membrane in the bacteria, work just like freight ships and carry the iron complex.

s.184

IgE

IgA

s.185

IgM

IgD

IgG

s.191

Flagellum

Cell wall

Plasma membrane

Rod

Filament

20 nm

Hook

Motor

Peptidoglycan layer

Bacteria flagellum act like propellers and make the bacteria move, just like engines at the back of a boat propelling the boat forward.

Flagellum

Cell

MotB

MotA

IM

Stator

Rotor

s.195

First microscope

First cell seen ever observed with a microscope

Primitive microscopes used in the 19th century made the cells look like mere stains.

Electron microscope

Organelles inside the cell

s.196

Amino acid chain

s.198

histone protein

The protein histone assumes a three dimensional shape due to its structure. This special structure allows the DNA to coil around it and store data.

s.200

All the amino acids in a protein chain should be left-handed. Even one right-handed one will render the entire chain useless.

s.201

Amino acids that make up proteins should bind with peptide bonds.

s.211

Methane

Ammonia

Hydrogen

Water

Carbon dioxide

Lightning

Ultraviolet rays from the Sun

Sugar, phosphate, organic bases

Amino acids

Polypeptide chain

Polynucleotide chain

Primitive cell

Simple cell-like substances

Proteins, enzymes, nucleotides

Evolutionists claim that unconscious atoms turned into flawless protein molecules after going through the above alleged stages in the conditions of primordial earth . However, scientific discoveries of the 20th century proved that the idea was unscientific and irrational.

s.212

For years, evolutionists tried to prove that inorganic matter coincidentally built proteins in the conditions of primordial earth. However, today it is a known fact that proteins cannot come into being by chance.

s.214

Water is added to the condenser.

Vacuum

Water boils

Reaction cell

Methane, ammonia, water and hydrogen gas

The mechanisms Stanley Miller used in his experiment. Many conditions that did not exist in real life, were used in Miller's experiment. As a result, science circles considered the experiment invalid.

s.224

Fox claimed that amino acids formed in the oceans and then were dragged towards rocky areas close to volcanoes. However, amino acids would not be able to withstand such high temperatures and therefore, his ideas were rejected by the scientific circles.

s.225

THE AMINO ACID RESPONSE (AAR)

Dietary Protein or Amino Acid Limitation

AAR-responsive Gene Activation

s.230

FALSE

s.233

French biologist Louis Pasteur

s.234

Russian biologist Alexander Oparin

American chemist Stanley Miller

s.235

As accepted by renowned evolutionist sources, the topic about the origin of life poses the greatest predicament for the evolution theory.

s.237

The DNA in the nucleus of the living cell is a databank consisting of various sequences of four different nucleotide bases. The codes of all physical characteristics belonging to that living being are stored in that molecule. When human DNA is transcribed on paper it is assumed that it would make a library as large as

900 volumes of encyclopedias. Such an extraordinary amount of data completely renders the claims about coincidental formation invalid.

s.240

FALSE

Lamarck claimed that giraffes evolved from a species similar to antelopes and that their necks grew longer while they were trying to eat the leaves of high trees. However, this claim of Lamarck's is refuted by scientific findings and took its place in history as a false assumption.

s.242

antenna

eyes

mouth

legs

Evolutionists have been trying to form an example of useful mutation by subjecting flies to mutations since the beginning of the century. All they attained as a result of decades of studies are crippled, diseased and defective flies.

On the left: Head of a normal fruit fly

On the right: A mutated fruit fly

s.246

Frog

Period: Eocene

Age: 40 million years

Location: China

s.247

Sumac Leaf

Period: Eocene

Age: 45 million years

Location:  USA

Ant-Like Stone Beetle

Period: Cretaceous

Age: 100 million years

Location: Myanmar

s.248

FALSE

There are no fossil remains that support the tale of human evolution. On the contrary, the fossil record shows that there is an insurmountable barrier between apes and men. In the face of this truth, evolutionists fixed their hopes on certain drawings and models. They randomly place masks on the fossil remains and fabricate imaginary half-ape, half-human faces.

s.250

Evolutionists generally interpret fossils in the light of their ideological expectations, for which reason the conclusions they arrive at are for the most part unreliable.

s.260

Can life emerge if all the conditions stipulated by evolutionists are met? Of course not! In order to show why not, let us carry out the following experiment: Place all the enzymes, hormones and proteins—everything that evolutionists regard as essential for life to form—into a barrel such as that pictured above. Then mix all these substances, using all possible physical and chemical techniques. But whatever you do, no matter how long you wait, not a single living cell will emerge from that barrel.

s.263

The brain is soundproof as much as it is lightproof. Therefore, no matter how loud the sound we may hear, inside our brains it is completely silent. However, within this silence resides a consciousness that interprets the electrical signals as a favorite song, the voice of a friend or the ring of the phone. This consciousness is our soul.

s.265

Signals from an object affect the brain by turning into electrical signals. When we say we see something, we are actually experiencing the effect of electrical signals in our brain. The brain is closed off to light. The interior of the brain is pitch black, and no light can enter where the brain is. The area known as the visual cortex is pitch black, somewhere that light can never reach, darker perhaps than anywhere you have ever seen. But you watch a brightly colored world in that pitch dark.

s.269

Today, the beliefs of Darwinists are as incomprehensible as the weird and unreasonable beliefs of those who worshiped alligators in the past. Darwinists ignorantly regard coincidences and inanimate, unconscious atoms as if they have creative powers. Moreover, they adhere to this superstitious belief as one would adhere to a religion.

# ARKA KAPAK

Many of your daily activities are actually carried out by biological machines that are one millionth of a millimeter wide called ‘proteins’. The word 'protein' is usually associated with a healthy diet. Most people have heard that a healthy body requires taking in large amounts of protein, yet often know little more. However, proteins are miraculous molecules that reveal to us very significant facts. These micro giants that form with the lining of different atoms in different sequences, but surely with an orderly plan shows us what a great art creation of God is.

This book scrutinizes this art in the proteins and displays the fact that God has created all living beings with a superior knowledge.

It also examines Darwin's theory of evolution which refuses divine creation and proves that this theory is a major deception. Even a single arrangement in the structure of the protein is sufficient to overthrow Darwin's theory of evolution.

**ABOUT THE AUTHOR:** Adnan Oktar, who writes under the pen-name Harun Yahya, was born in Ankara in 1956. Since the 1980s, the author has published many books on faith-related, scientific and political issues. He 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.

All of the author’s works share one single goal: to convey the Qur'an's message, encourage readers to consider basic faith-related issues such as God's existence and unity and the Hereafter; and to expose irreligious systems' feeble foundations and perverted ideologies. His more than 300 works, translated into 73 different languages, enjoy a wide readership across the world.

By the will of God, the books of Harun Yahya will be a means through which people in the twenty-first century will attain the peace, justice, and happiness promised in the Qur'an. The seal on the cover of the books is the Prophet's (pbuh) seal. It represents the Qur'an (the final scripture) and the Prophet Muhammad (the last of the prophets). The author uses this seal as a symbol of taking the Qur’an and the peaceful and loving morality of the Prophet as his guide.