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Charlene BOEHM DNA Frequencies

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<http://www.dnafrequencies.com>

What we offer

Sets and packages of DNA-related pathogen frequencies are offered for sale on a consulting basis for experimental use. Because these life forms are sometimes in a state of evolution, or as our knowledge of them is widened, the sets of numbers will occasionally be expanded or updated.

Many times, it's not initially known what strain of bacteria or virus may be involved in a pathogenic infectious situation. For that reason, some sets are offered which are designated "general". Those sets contain numbers that relate to more than one species or strain of an organism.

If you would like to see something of interest to you included on these pages that you cannot currently find, please contact us.

Frequency sets for common human pathogens Available @ dnafrequencies.com

Bartonella general

Brucella general

Childhood viruses -- Includes items from measles (red measles) virus, mumps virus, Rubella (German measles) virus, and Chickenpox virus (human herpesvirus 3)

Dental pathogens general -- Includes items from Streptococcus mutans, Treponema denticola, Porphyromonas gingivalis, and Fusobacterium nucleatum

Ehrlichia general

HPV (Human papillomavirus) cervical, general

HPV (Human papillomavirus) skin, general

Respiratory viruses general, non-influenza

Acanthamoeba castellanii

Achromobacter xylosoxidans

Acinetobacter baumannii general

Acinetobacter lwoffii

Actinobacillus actinomycetemcomitans -- Renamed: Aggregatibacter actinomycetemcomitans

Adenovirus type 14 (human)

Adenovirus type 36 (human)

Aeromonas hydrophila

Aeromonas veronii

Aggregatibacter actinomycetemcomitans -- Previously known as Actinobacillus actinomycetemcomitans

Alcaligenes faecalis

Anaerococcus prevotii

Anaplasma phagocytophilum

Ancylostoma duodenale & Necator americanus

Angiostrongylus general

Aspergillus flavus

Aspergillus fumigatus
Aspergillus niger
Atopobium vaginae
Avian erythroblastosis virus
Avian leucosis virus
Avian myelocytomatosis virus
Babesia bovis
Babesia microti
Bacillus anthracis general
Bacillus cereus
Bacteroides distasonis
Bacteroides fragilis
Bacteroides vulgatus
Barmah forest virus
Bartonella bacilliformis
Bartonella clarridgeiae
Bartonella grahamii
Bartonella henselae
Bartonella quintana
Bartonella tribocorum
Bartonella vinsonii
Bayliascaris procyonis
BK virus general
Blastocystis general
Blastomyces dermatitidis
Bordetella pertussis & parapertussis
Borna disease virus
Borrelia afzelii
Borrelia bissetii
Borrelia burgdorferi
Borrelia duttonii
Borrelia garinii
Borrelia hermsii
Borrelia miyamotoi
Borrelia parkeri
Borrelia recurrentis
Borrelia spielmanii
Borrelia turicatae
Borrelia valaisiana
Brucella abortus
Brucella canis
Brucella melitensis
Brucella suis
Brugia malayi
Burkholderia cepacia & cenocepacia
Burkholderia multivorans
Campylobacter jejuni
Campylobacter rectus
Candida albicans general
Candida glabrata
Candida parapsilosis
Candida tropicalis
Capnocytophaga ochracea
Chikungunya virus
Chlamydia muridarum
Chlamydia trachomatis general
Chlamydophila caviae
Chlamydophila pecorum
Chlamydophila pneumoniae general
Chlamydophila psittaci
Citrobacter freundii
Citrobacter koseri
Clonorchis sinensis
Clostridium botulinum general
Clostridium difficile

Clostridium perfringens
Clostridium ramosum
Clostridium tetani
Coccidioides general
Coronavirus, MERS
Corynebacterium diphtheriae
Corynebacterium urealyticum
Coxiella burnetti
Coxsackievirus A, types 1-12
Coxsackievirus A, types 13-24
Coxsackievirus B, type 4
Coxsackievirus B, types 1-6
Cryptococcus neoformans
Cryptosporidium hominis
Cryptosporidium parvum
Cytomegalovirus
Dengue virus, general
Dialister invisus
Dictyostelium discoideum
Dientamoeba fragilis
Diphyllobothrium latum & nihonkaiense
Dirofilaria immitis
Eastern equine encephalitis virus

Ebola virus

Echinococcus general
Echovirus type 11
Echovirus type 7
Ehrlichia canis
Ehrlichia chaffeensis
Eikenella corrodens
Encephalitozoon cuniculi
Entamoeba histolytica
Enterobacter cloacae
Enterobacter sakazakii
Enterobius vermicularis
Enterococcus faecalis
Enterococcus faecium
Enterococcus general
Enterovirus 68 (human)
Enterovirus 71 (human)
Epidermophyton floccosum
Epstein Barr virus
Escherichia coli (E. coli), general
Fasciola hepatica
Finegoldia magna
Francisella tularensis
Fusobacterium necrophorum
Fusobacterium nucleatum
Gardnerella vaginalis
Giardia lamblia (aka Giardia intestinalis)
Gordonia bronchialis
Granulicatella adiacens
Haemonchus contortus
Haemophilus influenzae general
Hantavirus (aka Hantaan virus)
Helicobacter hepaticus
Helicobacter pylori general
Hendra virus
Hepatitis A
Hepatitis B virus general
Hepatitis C virus general
Hepatitis G
Herpes simplex 1 virus
Herpes simplex 2 virus
Histoplasma capsulatum

HIV-1 (Human immunodeficiency virus 1), general
HTLV-1 (Human T-cell lymphotropic virus type 1, aka Human T-cell leukemia virus type 1)
HTLV-2 (Human T-cell lymphotropic virus type 2)
Human endogenous retrovirus HRES-1
Human endogenous retrovirus K
Human endogenous retrovirus W
Human foamy virus (aka Human spumaretrovirus)
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 5
Human herpesvirus 6A
Human herpesvirus 6B
Human herpesvirus 7
Human herpesvirus 8
Human immunodeficiency virus 1 (HIV-1), general
Human mouse mammary tumor virus
Human papillomavirus (HPV) type 16
Human papillomavirus (HPV) type 18
Human papillomavirus (HPV) type 3
Human Papillomavirus (HPV) type 31
Human papillomavirus (HPV) type 5
Human papillomavirus (HPV) types 1 & 2
Human papillomavirus (HPV) types 3, 10, & 28
Human papillomavirus (HPV) types 38, 41, & 49
Human papillomavirus (HPV) types 4, 27, 29
Human papillomavirus (HPV) types 6 & 11
Human parvovirus B19
Human spumaretrovirus (aka Human foamy virus)
Human T-cell leukemia virus type 1 (HTLV-1), aka Human T-cell lymphotropic virus type 1
Human T-cell lymphotropic virus type 1 (HTLV-1), aka Human T-cell leukemia virus type 1
Human T-cell lymphotropic virus type 2 (HTLV-2)
Hymenolepsis diminuta
Influenza A general
Influenza B general
Japanese encephalitis virus
JC virus
Kingella kingae
Klebsiella oxytoca
Klebsiella planticola
Klebsiella pneumoniae subspecies pneumoniae
Legionella pneumophila general
Leishmania braziliensis
Leptospira general
Listeria monocytogenes
Loa loa
Louping ill virus
Malassezia sympodialis
Measles virus (red measles, rubeola)
Merkel cell polyomavirus
MERS coronavirus
Methanobacter smithii
Micrococcus luteus
Microfilaria general
Microsporum canis
Mobiluncus curtisii
Molluscum contagiosum virus
Moraxella catarrhalis
Morganella morganii
Mortierella verticillata
Mumps virus
Mycobacterium abscessus
Mycobacterium avium
Mycobacterium avium subspecies paratuberculosis

Mycobacterium bovis
Mycobacterium general
Mycobacterium intracellulare
Mycobacterium kansasii
Mycobacterium leprae
Mycobacterium paratuberculosis
Mycobacterium tuberculosis general
Mycoplasma arthritidis
Mycoplasma fermentans
Mycoplasma general
Mycoplasma genitalium
Mycoplasma hominis
Mycoplasma penetrans
Mycoplasma pneumoniae
Necator americanus & Ancylostoma duodenale
Neisseria gonorrhoeae
Neisseria mucosa
Neorickettsia sennetsu
Nocardia farcinica
Nocardia general
Norovirus / Norwalk virus, general
Novosphingobium aromaticivorans
Ochrobactrum anthropi
Onchocerca volvulus
Opisthorchis felinus - common name: cat liver fluke
Pantoea ananatis
Parachlamydia acanthamoeba
Paragonimus westermani -- Also known as Oriental lung fluke
Parvovirus B19, human
Pasteurella multocida
Pediculus humanus capitis -- Common name: human head louse
Penicillium marneffeii
Peptostreptococcus anaerobius
Peptostreptococcus stomatis
Photobacterium damsela
Plasmodium falciparum
Pneumocystis jirovecii -- formerly called Pneumocystis carinii
Poliovirus general
Porphyromonas endodontalis
Porphyromonas gingivalis
Powassan virus
Prevotella intermedia
Prevotella melaninogenica
Prevotella nigrescens
Prevotella tannerae
Propionibacterium acnes
Propionibacterium propionicum
Proteus mirabilis
Protochlamydia amoebophila
Providencia alcalifaciens
Providencia stuartii
Pseudomonas aeruginosa general
Pseudomonas fluorescens
Ralstonia pickettii
Respiratory syncytial virus general
Rhizopus oryzae
Rhodococcus equi -- Formerly called Corynebacterium equi
Rickettsia africae
Rickettsia felis -- Causes spotted fever in humans; carried by fleas
Rickettsia prowazekii
Rickettsia rickettsii
Rickettsia typhi
Rift Valley fever virus
Ross River Virus
Rothia dentocarios

Rubella virus (German measles) -- This set is not related to measles virus (aka red measles or rubeola)
Salmonella enterica, serovars typhi & paratyphi
Salmonella typhimurium -- This species associated with food poisoning
Schistosoma haematobium -- common name: human blood fluke
Schistosoma japonicum -- common name: Oriental blood fluke
Schistosoma mansoni -- common name: human blood fluke
Schistosoma mekongi
Serratia marcescens
Shigella general
Simian parainfluenza virus 5
Simian virus 40 (SV40)
Simkania negevensis
Chlamydia family organism
Solobacterium moorei
Spiroplasma mirum
Sporothrix schenckii
St. Louis encephalitis virus
Staphylococcus aureus general
Staphylococcus epidermidis general
Staphylococcus general
Staphylococcus haemolyticus
Staphylococcus saprophyticus
Stenotrophomonas maltophilia
Streptococcus agalactiae general
Streptococcus anginosus
Streptococcus constellatus subspecies pharyngitis
Streptococcus dysgalactiae subspecies equisimilis
Streptococcus equi subspecies zooepidemicus
Streptococcus gallolyticus
Streptococcus gordonii
Streptococcus intermedius
Streptococcus mitis
Streptococcus mutans
Streptococcus oralis
Streptococcus parasanguinis
Streptococcus pneumoniae
Streptococcus porcinus
Streptococcus pyogenes
Streptococcus salivarius
Streptococcus sanguinis
Streptococcus suis
Streptomyces griseus
Strongyloides stercoralis
Swine influenza A, 2009
Taenia general
Taenia hydatigena
Taenia solium -- common name: pork tapeworm
Tannerella forsythensis
Tick-borne encephalitis virus -- aka FSME virus ("Fruhsommer Meningoenzephalitis Virus"), or Early summer meningoencephalitis virus
Toxocara canis & Toxocara felis -- Common names: dog roundworm and cat roundworm
Toxoplasma gondii
Treponema denticola
Treponema pallidum
Treponema vincentii
Trichinella spiralis
Trichomonas vaginalis
Trichophyton general
Trichuris trichiura -- common name: human whipworm
Tropheryma whipplei
Trypanosoma brucei gambiense
Trypanosoma cruzi
Ureaplasma parvum
Ureaplasma urealyticum
Varicella zoster virus -- aka Human herpesvirus 3

Venezuelan equine encephalitis virus
Waddlia chondrophila
Chlamydia family organism
West Nile virus
Western equine encephalitis virus
Wolbachia endosymbiont of Brugia malayi
Wuchereria bancrofti
XMRV (Xenotropic MuLV-related virus)
Yellow fever virus
Yersinia enterocolitica

DNA Pathogen Frequencies

An abridged version of the longer one published in 1999 by Charlene Boehm, the inventor of the DNA frequency method. Some text from that original paper has been removed from this version because it is outdated, redundant, or not specifically related to the DNA frequency method.

A Look At the Frequencies of Rife-related Plasma Emission Devices

by Charlene Boehm

This is a story of an exploration with numbers.

The origin of the MORs (Mortal Oscillatory Rates of bacteria and viruses), originally discovered by Royal Rife during the first half of the twentieth century, has perplexed many people since that time. While it is generally acknowledged that some type of resonance phenomenon destroyed or debilitated the organisms, it has been difficult at best to pinpoint any association of specific frequency with what is physically affecting these life forms during the time of their debilitation or demise.

What exactly might be the destructive mechanism that is affecting each organism? Is it a resonance related to its full size, or perhaps that of the nucleus, mitochondria, or capsid? Is it a correlation with some type of biochemical resonance? Why does each organism seem to need a specific frequency? Could the phenomenon be related to its DNA, and if so, what is the resonance relationship? These questions and more have kept folks that use or explore Rife-related technologies awake into the wee hours of the morning on many occasions, and have been the focus of endless animated discussions.

This paper will explore some possibilities that might assist in shedding light on the resonance relationships.

These mechanisms of action require that some type of physical parameter be available that can be converted into frequency. Two major physics relationships, that of converting a length into frequency (or wavelength, to be more accurate); and that of converting mass into frequency, will be looked at in some detail.

While it is acknowledged that some of the concepts presented in this paper will be open to dispute, it was felt that the sheer number of correlations found with the audio frequencies currently being used begged a closer look. For that reason these ideas are being offered to the community of serious researchers as a springboard for further discussion. The concepts and frequencies discussed in this paper, and any materials eventually offered in conjunction with this paper, are in no manner intended to suggest treatment or cure for any disease or condition. Furthermore, this writer cannot assume any responsibility for enhancement of or degradation to physical health arising from use of the information presented in this paper.

The complete genome.

The developments in the past thirty to forty years in the field of genetics and molecular biology has resulted in an explosion of information available to anyone that cares to take a look. Information is widely available in medical and scientific journals, and extensive databases can also be accessed on the internet.

The length of any object can be thought of as having a resonant frequency by virtue of correlation with a wave-length. For instance, a person's height has its own resonant wavelength and resultant frequency. Is it possible that an organism's entire DNA genome could also possess a resonant wavelength and frequency related to its total length? Is there a way to calculate the entire length of an organism's DNA genome? Thanks to explicit analysis of DNA structure, it is now accurately known how far apart the base pair molecules are spaced in that helix. If one knows exactly how many base pairs are contained in the complete genome, finding the entire length is a simple matter of multiplying the number of base pairs times the spacing. [For an explanation regarding structure and base pairs of

DNA, see L. Stryer, Biochemistry, 4th ed., (W.H. Freeman, 1995), p. 75 ff., ISBN 0-7167-2009-4]

As a point of discussion, it must be pointed out that advanced x-ray analysis of crystallized DNA has shown that base pair spacing is not always consistent. There are some very localized areas that contain “squeezing” or “spreading” of the base pairs. However, for the purpose of this analysis, the classic Watson-Crick model of base pair spacing will be used, which is actually an average spacing over the entire length of the DNA genome. To use any other model for this discussion would make it hopelessly complex for these purposes. For further discussion on this subject, see Stryer, p. 788.

The dimensions of the B-helix, which is by far the most common DNA form for bacterial and eukaryotic life forms, tells us that:

a. One complete turn of the helix spans a distance of 35.4 angstroms on its axis.

b. There are 10.4 base pairs in each helical turn. [These measurements are given in Stryer, p. 791].

Therefore, the spacing of the individual base pairs on the axis would be 35.4 angstroms divided by 10.4, which equals 3.403846 angstroms. In scientific notation, this can be written as 3.403846 e-10 meters. The use of meters will now make it possible to convert this total length (or wavelength) to frequency.

Looking at an example from a real organism, the Rubella measles virus contains 9755 base pairs in its entire DNA genome. (For access to base pair information on viruses, go to <http://www.ncbi.nlm.nih.gov/genomes/static/vis.html>).

9755 base pairs x the base pair spacing of 3.403846 e-10 meters = 3.32045 e-06 meters total length. This is a figure that can be used as a possible wavelength for the Rubella viral DNA.

To convert this wavelength to frequency, we turn to the physics formula:
velocity / wavelength = frequency

[See J. Cutnell & K. Johnson, Physics, 2nd ed., (John Wiley & Sons, 1992), pg. 698, ISBN 0-471-52919-2, or any good physics text].

In this instance we will use the speed of light: 299,792,458 meters per second as a velocity. (Further comments regarding the use of this velocity follow shortly).

Substituting the numbers into the formula, we get 299,792,458 meters/second divided by 3.32045 e-06 meters = 9.02866 e+13 hertz.

This would be a possible theoretical resonant frequency for the Rubella DNA genome. It is interesting to note that this frequency falls at the high end of the infrared section of the electromagnetic spectrum (near visible light), and in the general area of the spectrum that Royal Rife had under consideration in his microscopic work.

To access this frequency in the audio range, an accurate and resonant way to accomplish this is to repeatedly divide the frequency by 2. In music, this would be called going to a lower octave. Because there is no comparable term to “octave” in electromagnetic frequency terminology, the word “octave” will be used from this point onward to designate this /2 relationship (or x2 for an upper octave). It is a calculation that will be used often. Furthermore, dividing a frequency by 2 (i.e., translating it into the immediate lower octave) can also be visualized as doubling its wavelength in an exact and exceedingly precise manner.

Therefore, dividing the original Rubella resonant frequency of 9.02866 e+13 hz down by many octaves (i.e., doubling the wavelength many times) eventually brings us to a frequency at a representative octave low in the audio range: 164.23045 hz. This could be a possible resonant frequency of the Rubella genome in this low audio range.

To “debilitate” this frequency, the following mathematical relationship was considered: multiplying this resonant frequency by the square root of 2 (1.4142136).

A note is perhaps in order to the general reader: while these ideas are being presented in a manner to reach as wide an audience as possible, a brief explanation follows (involving the square root of 2 relationship) which will get slightly technical. One can proceed to the section following the starred line (if desired), with no interruption in content.

The general physics formula for the velocity of electromagnetic (EM) radiation through any medium equals the inverse of the square root of the product of the electrical permittivity and the magnetic permeability. The formula reads (in the case of EM velocity through a vacuum, and also a good approximation for air):

$$\text{velocity} = 1/\sqrt{\epsilon_0\mu_0}$$

where ϵ_0 is the electrical permittivity, and μ_0 is the magnetic permeability.

The permittivity and permeability are commonly known physics constants:

permittivity $\epsilon_0 = 8.85418782 \times 10^{-12}$ farads/meter

permeability $\mu_0 = 1.2566370614 \times 10^{-6}$ henrys/meter

[D. Lide, ed., Handbook of Chemistry and Physics, 76th ed., (CRC Press, 1995), p. 1-1].

Applying these constants in the above formula indeed results in the velocity of light through a vacuum: 299,792,458 meters per second. Having this velocity figure makes it possible to compute electromagnetic frequencies (if the wavelength is also a known factor).

However, the next question arises: do electromagnetic waves travel through biological tissue at this velocity? Perhaps a new velocity can be computed from the formula above, using values for permittivity and permeability through biological media.

A representative figure for permittivity (ϵ) through body tissue is: 71×10^{-12} farads/meter. [See E. Hecht, Physics, Vol. 2, (Brooks/Cole Publishing Co., 1996), p. 664].

And the permeability (μ) through body tissue is for all practical purposes, the same as that of a vacuum:

$1.25663706144 \times 10^{-6}$ henrys/meter. [See R. T. Hitchcock & R. Patterson, Radio-Frequency and ELF Electromagnetic Energies, A Handbook for Professionals, (Van Nostrand Reinhold, 1995), chart on page 27].

Applying these numbers to the above physics formula, the result is: velocity = $1 / \sqrt{[(71 \times 10^{-12} \text{ F/m}) \times (1.2566370614 \times 10^{-6} \text{ H/m})]} = 105,868,288.9$ meters per second as a representative velocity of electromagnetic energy through body tissue.

How does this figure compare with that of the speed of light through a vacuum?

Putting these two figures into a ratio gives:

$299,792,458 \text{ meters per sec.} / 105,868,288.9 \text{ meters per sec.} = 2.831749347$

If that ratio is divided in half, the result is 1.4158747, extremely close to 1.4142136, the value for the square root of 2. The next logical step would then be to explore the use of this ratio in computing possible frequencies for use in conjunction with body tissue (i.e., multiplying a frequency obtained with speed-of-light velocity by the square root of two).

The possible low-octave DNA resonant frequency for the Rubella virus (using the speed of light velocity) was 164.23045 hz, and multiplying that number by $\sqrt{2} = 232.256$ hz. (The frequencies that are arrived at using the $\sqrt{2}$ multiplier will henceforth be referred to as a “debilitating frequency”).

Now if one uses the representative EM velocity through body tissue (105,868,288.9 meters per second), and recalculates the frequency associated with the Rubella viral genome wavelength (using the formula: velocity / wavelength = frequency), and then divides down by octaves as usual, one will come up with nearly the exact same frequency as would be arrived at by using the speed of light velocity, dividing the high frequency down by octaves, and multiplying the low octave by the square root of 2. ($105,868,288.9 \text{ meters per sec} / 3.32045 \times 10^{-6} \text{ meters} = 3.188371724 \times 10^{13} \text{ hz}$, which divided down by many octaves comes to 231.9845 hz, and is extremely close to the 232.256 hz debilitating frequency using the speed of light and $\sqrt{2}$ method).

Now, if we multiply the frequency 232.256 up by just one octave ($\times 2$), we get 464.5 hz. Interestingly, one of the frequencies used for Rubella with the plasma beam devices is 459 hz, only 4.5 hz away!

Because the plasma beam devices present the frequencies using a square wave (which contains a very strong showing of odd-numbered harmonics), it was thought that perhaps some of the early odd harmonics (such as 3, 5, 7, 9, 11, etc.) of a currently used frequency might also show a mathematical correlation with the DNA debilitating frequency suggested above. Such correlations could easily be determined using a computer spreadsheet. Here is one such example.

One of the frequencies used for “general” measles is 745 hz. Its 5th harmonic falls at 3725 hz ($745 \times 5 = 3725$), which when divided down by 4 octaves (divide by 16) gives 232.8 hz. This is extremely close to the above debilitating frequency of 232.256 hz.

One could also look at it in this manner: multiplying the original DNA debilitating frequency up by four octaves, $232.256 \text{ hz} \times 16 = 3716.1 \text{ hz}$. This is close to the fifth harmonic of 745 hz (3725 hz). So at this juncture we might ask, is the fifth harmonic of 745 hz hitting an octave of the DNA “debilitating frequency” as described above, or at least very close to it?

The Rubella viral organism was used to present the basic concepts and procedures being used in this methodology.

Another organism that gives even more information is *Borrelia burgdorferi*, which is associated with Lyme's disease.

For convenience however, the formula for finding the genome-related debilitating frequency is recapitulated:

$[299,792,458 \text{ m. per sec} / (\# \text{ of base pairs}) \times (3.403846154 \text{ E-10 m.})] = \text{frequency}$
which, when divided down by many octaves to the low audio range, and then multiplied by $\sqrt{2}$, yields a baseline "debilitating frequency".

The entire genome of *Borrelia burgdorferi* has 910,724 base pairs. Using the spacing length of 3.403846 e-10 meters, this gives us a total genome length of 3.09996 e-04 meters, which converts to a frequency (using speed of light as velocity) of 9.670835558 e+11 Hz. Dividing this down by octaves into the low audio range gives us 112.58 Hz, and then multiplying by $\sqrt{2}$ yields a debilitating frequency of 159.217 Hz.

Multiplying this number up by 2 octaves ($\times 4$) gives 636.87 Hz. One of the frequencies currently being used for Lyme's is 640 Hz (under "hatchlings/eggs" in the frequency list website given above).

Another frequency currently used for this condition is 254 Hz, and its 5th harmonic is 1270 Hz, which divided down by 3 octaves (divide by 8) = 158.75 Hz, almost exactly falling at the *Borrelia* representative debilitating frequency (abbr. "df") of 159.217 Hz. Remember, it is possible that a debilitating frequency may occur for an organism at any octave location up and down the entire spectrum!

Yet another frequency being used for Lyme's is 432 Hz and its upper octave 864 Hz. The third harmonic of 432 Hz = 1296 Hz, which divided down by 3 octaves (divide by 8) gives 162 Hz, also fairly close to the df of 159.217 Hz.

Once again these are two more examples of the odd harmonics of currently used frequencies correlating with an upper octave of the debilitating frequency. It could also help to initially explain why more than one audio frequency is effective at targeting an organism.

At this point it also must be stated, there will always be variation in nature, now and forever. Organisms constantly adapt to their surroundings, and this is reflected in (or initiated by) changes in their DNA structure. Therefore, one can never assume that frequencies computed on the basis of genome wavelength will always and forever give accurate, hard and fast results. The numbers should be used only to guide us into the ballpark, so to speak.

Another aspect of *Borrelia burgdorferi* that turns out to hold considerable interest is that of the plasmids that the organism harbors. Plasmids are small, freely-circulating independent pieces of usually circular DNA that often (but not always) program information relating to the pathogenicity or virulence of the organism, and are present in nearly all (if not all) types of bacteria. After looking at the base pair information of 11 *Borrelia* plasmids thus far, the following frequency correlations have shown up (to save time and space, the entire mathematical procedure will be shortened):

1. Plasmid cp26 containing 26,498 base pairs. Debilitating frequency (df) is at 171 Hz, one octave up is at 342 Hz, near currently used Lyme frequencies of 338 and 344 Hz.
2. Plasmid cp9 containing 9386 base pairs, df is at 241.4 Hz, one octave up is 482.8 Hz, near currently used frequencies of 484 and 485 Hz.
3. Plasmid lp28-1 containing 26,921 base pairs, df is at 168.3 Hz, one octave up is 336.6 Hz, very near currently used frequency at 338 Hz.
4. Plasmid lp28-2 containing 29,766 base pairs, df is at 152.2 Hz, next 2 octaves up are at 304.5 and 608.9 Hz, near the currently used frequencies of 306 & 610 Hz.
5. Plasmid lp28-3 containing 28,601 base pairs, df is at 158.4 Hz, two octaves up falls at 633.6 Hz, near the currently used frequency of 630 Hz.
6. Plasmid lp28-4 containing 27,323 base pairs, df is at 165.8 Hz, two octaves up falls at 663.4 Hz, near the currently used frequency of 667 Hz.
7. Plasmid lp36 containing 36,849 base pairs, df is at 245.9 Hz, one octave up falls at 491.9 Hz, near the currently used frequency of 495 Hz.
8. Plasmid lp54 containing 53,561 base pairs, df is at 169.2 Hz, one octave up falls at 338.4 Hz, almost exactly the same as the currently used frequency of 338 Hz.

Charlene Boehm

<http://www.espacenet.com>

US7280874

Methods for determining therapeutic resonant frequencies

Methods are provided for readily and efficiently determining resonant frequencies that can be used therapeutically or beneficially, for debilitation of specific types of genomic materials, including DNA and/or RNA, genes, and gene sections. The methods can be used in a variety of circumstances related to various human and animal diseases and conditions. Methods allow determination of therapeutic resonant frequencies for use in various media having different refractivities. Therapeutic or beneficial resonance frequencies thus determined are adapted for use with currently available frequency-emitting devices by shifting resonant frequencies to electromagnetic ranges capable of generation by such devices.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to applicant's co-pending application having U.S. Ser. No. 60/181,460, filed Feb. 10, 2000.

FIELD OF THE INVENTION

[0002] The present invention relates to methods for determining resonant frequencies having therapeutic uses in a variety of settings. In particular, the present invention provides methods for efficiently determining therapeutic resonant frequencies for complete genomes or partial genomic materials, for use in various media having different refractivities.

BACKGROUND OF THE INVENTION

[0003] Resonant frequency therapy (RFT) is a non-invasive treatment that has been reported to offer significant relief to sufferers of a variety of ailments and medical conditions. The use of RFT for human and animal therapeutic purposes began in the early 1900's, and experienced accelerated development through the research of Royal Rife and his associates in the 1930's and afterward.

[0004] Using new microscope technology he developed, Rife discovered that plasma waves could be used to transmit radio and audio frequencies, which were tuned to the frequencies of specific microorganisms, and that each microorganism responded to its unique frequencies. For example, Rife found that staphylococcus, streptococcus, microorganisms associated with tuberculosis, typhoid, and leprosy, as well as cancer particles, and other disease-causing agents succumbed when exposed to certain frequencies peculiar to each organism or particle. See, Siedel, R. E., and M. E. Winter, *The New Microscopes*, Smithsonian Annual Report 1944, pp. 193-200.

[0005] Using the principles of Rife's discoveries, various researchers developed devices for emitting frequencies designed to treat a range of diseases and conditions. For example, Dr. Abraham Ginsberg used an apparatus which produced intermittent bursts of high energy in the short wave spectrum. Ginsberg's modality was found to stimulate the reticuloendothelial system without undesirably heating tissue. Using his device, Ginsberg reported successfully treating patients with various clinical conditions, including chronic Staphylococcus infections, acute inflammatory middle ear, chronic ulcerative colitis, bronchitis, rheumatoid arthritis, gout, flu, and thrombophlebitis, among others. See, Cominole, B., *Clinical Impressions and Speculations on the Use of High-Frequency Pulsed Energy*, The Dr. Abraham J. Ginsberg Foundation for Medical Research Symposium, Jun. 29, 1959.

[0006] Research utilizing resonant frequencies and therapeutic modalities implementing such frequencies have proliferated over the past ten years. A recent example of the use of resonant frequency therapy is the Christchurch Resonant Frequency Therapy Centre in Dunedin, New Zealand. While the Centre emphasizes that resonant frequency therapy is not intended to replace treatment regimens and medication prescribed by physicians, it does report successful treatment of a range of clinical conditions, including arthritis, tinnitus, blood pressure, cataracts, headaches, shingles, and psoriasis. Arthritis patients report particular success with pain reduction and greater mobility. See *The Christchurch Press, Frequency Therapy Offers Relief*, Independent Newspapers Limited, Oct. 28, 1999.

[0007] Thus, the use of audio, radio, and light waves to inhibit microbial growth and to treat diseases and affected tissue is well known in the art. Effective therapeutic resonant frequencies have been identified through various means. Trial and error approaches with resonant frequencies have been used to obtain therapeutic responses. Devices for applying electromagnetic energy to living tissue are disclosed, for example, in U.S. Pat. Nos. 3,876,373, 4,524,079, and 5,091,152. Effective resonant frequencies have also been identified through the use of frequency scanning with electronic devices capable of detecting a frequency response from a bacterial, viral, and/or tissue sample. Such

devices for detecting frequency response are disclosed, for example, in U.S. Pat. Nos. 5,552,274, 5,981,182, and 6,004,257. Thus, there exists a need for more efficient and accurate methodology than trial and error, to determine therapeutic resonant frequencies for specific target materials, such as microorganisms.

[0008] Therapeutic resonant frequencies may be used to inhibit, or debilitate, and/or stimulate a biophysical event. The efficacy of such frequencies, whether for stimulation or for debilitation, depends to some extent on the type of frequency delivery system used, including variables such as power levels, waveform, harmonic content of the wave, and other factors. Once therapeutic resonant frequencies are determined, the user must choose which devices and delivery systems are most effectively used in conjunction with those frequencies. To increase efficacy, an easier, quicker, and more accurate way of determining therapeutic resonant frequencies is needed.

[0009] Despite both historical and increasing recent interest in use of resonant frequency therapy, mechanism(s) of action underlying the use of known therapeutic resonant frequencies is not fully understood. While it is recognized that some type of resonance phenomenon debilitates or destroys microorganisms, the biophysical and/or biochemical mechanism(s) associated with use of specific resonant frequencies and that lead to microbial inhibition are not completely known.

[0010] Before now, there has never existed a methodology that links effective therapeutic resonant frequencies to a biophysical or biochemical event, process, or structure. The electronic scanning devices and methods currently commercially available provide no explanation or insight regarding which physical structure or process is influenced by the frequencies used.

[0011] There is a need for methodology to more readily and efficiently influence genomic materials, by more precisely and efficiently determining therapeutic resonant frequencies that can be easily and accurately adjusted to ranges used by currently available devices. It is to these perceived needs that the present invention is directed.

SUMMARY OF INVENTION

[0012] The present invention provides methods for determining resonant frequencies having therapeutic uses in a variety of settings. In particular, the present invention provides methods for efficiently and accurately determining therapeutic resonant frequencies for complete genomes and partial genomic materials, for use in various media having different refractivities.

[0013] Methods of the present invention utilize biophysical and biochemical properties of genomic materials to determine therapeutic resonant frequencies. For example, the length of any object can be considered as having a resonant frequency by virtue of correlation with a wavelength that manifests itself into a surrounding medium. On that basis, the length of biomolecular chains of DNA and RNA can be calculated, and thus can provide wavelength-matching information unique to a specific strand of genomic material.

[0014] DNA or RNA chains are constructed in such a way that negatively-charged molecular ions (the PO₄ groups) run the entire length of the molecule on the outer surface of the chain in a helical fashion, causing the molecule to contain a relatively large negative charge on its surface. Thus the chain is highly electro-sensitive to the influences of resonant oscillating electromagnetic fields. Resonance is defined as the increase in amplitude of the natural oscillation or frequency of a system, when exposed to a periodic force whose frequency is equal or very close to the natural frequency of the system. The natural oscillation of a system or part of a system is defined as its "natural resonant frequency".

[0015] In radio science, the length of an antenna will largely determine how effectively the antenna responds to the wavelength energy of an incoming transmission. Methods for determining therapeutic resonant frequencies of the present invention utilize the principle that the length of a DNA or RNA helical chain can be electromagnetically resonated in similar fashion.

[0016] Methods of the present invention allow precise correlations between resonant frequencies and the length of the genomic material under consideration. If a resonant frequency is generated in air (or a vacuum) while the target material resides in a different medium, in this invention's method a refractive adjustment is made to insure that the wavelength traveling from the air or vacuum medium transforms to the length of the target material in the surrounding medium. By accounting for an appropriate electromagnetic refractive index for the surrounding medium, such as water or tissue, methods of the present invention provide the advantage of determining a resonant frequency that would be more closely related to the length of the genomic material and its natural resonant frequency, and thus would be more appropriate, or therapeutic, for the genomic material in that specific medium.

[0017] The natural electromagnetic resonant frequencies for genomes fall for the most part in the infrared region of the electromagnetic (EM) spectrum. The natural resonant frequencies for genes and smaller portions of DNA or RNA appear in the near infrared, visible, and near ultraviolet regions of the spectrum. For many currently available frequency-emitting devices, the natural resonant frequencies such as those associated with genomic material are not

achievable due to the technical limitations of the device. Indeed, particular devices often are capable of generating frequencies in only narrow ranges. To overcome such limitations, methods of the present invention adjust resonant frequencies upward or downward. For example, to determine an appropriate lower range frequency in accordance with the present invention, the therapeutic resonant frequency is divided by the number 2, as many times as necessary, until a frequency in the frequency-generating range of a device is reached. The power of 2 by which a therapeutic resonant frequency is factored will depend on the range of the electromagnetic spectrum within which a frequency delivery device operates.

[0018] In music, a similar adjustment would be termed moving to a higher or lower octave. Moving to a higher octave would in effect cut the wavelength in half, while moving to a lower octave would double the wavelength. In accordance with methods of the present invention, therapeutic resonant frequencies of genomic material "shifted by octaves," to a lower octave in the electromagnetic spectrum, by dividing the therapeutic resonant frequency by some power of the number 2. The lower octave of a therapeutic resonant frequency, while having a much longer wavelength, will resonate with the first therapeutic resonant frequency, just as musical octaves resonate with and amplify each other, but only when the octave shift is exact.

[0019] The present invention comprises methods for determining therapeutic resonant frequencies of electromagnetic radiation for influencing a target genomic material, where the genomic material is surrounded by a medium. Embodiments of these methods include the following steps: (1) determining a velocity of electromagnetic radiation through the medium surrounding the genomic material; (2) determining the length of the genomic material; (3) determining a first resonant frequency of the genomic material in one electromagnetic frequency range by dividing the velocity of the electromagnetic radiation through the surrounding medium by the length of the genomic material; (4) dividing or multiplying the first resonant frequency by a factor of a power of two to obtain at least one resonant frequency in another electromagnetic frequency range; (5) programming a frequency-emitting device to emit at least one resonant frequency in the other electromagnetic frequency range selected in step 4; and (6) selectively influencing the target genomic material with at least one resonant frequency in the selected electromagnetic frequency range, when the frequency-emitting device emits at least one resonant frequency in the selected electromagnetic frequency range into the medium surrounding the target genomic material.

[0020] Methods of the present invention further comprise determining the length of the genomic material by determining the number of base pairs in the genomic material (in the case of single-stranded genomic material, this step would comprise determining the number of bases); using the spacing between adjacent base pairs or bases; and multiplying the number of base pairs or bases in the genomic material by the spacing between adjacent base pairs or bases. In a preferred embodiment, the base pairs or bases are spaced apart by an average spacing, which is a known value, and determining the length of the genomic material comprises determining the number of base pairs or bases in the genomic material, and then multiplying that number of base pairs or bases in the genomic material by the known value for the average spacing between base pairs or bases.

[0021] In a typical environment, genomic material exists in living, or in-vivo, tissue. In methods of the present invention, the velocity of electromagnetic radiation through in-vivo tissue is determined by accounting for the electrical permittivity of in-vivo tissue in relation to velocity, such that the velocity= $1/[\text{square root of }([\epsilon][\mu])]$, where $[\epsilon]$ is the electrical permittivity of in-vivo tissue, and $[\mu]$ is the magnetic permeability of in-vivo tissue. With this measurement of in-vivo velocity, a refractive index of electromagnetic radiation through in-vivo tissue is determined by dividing the velocity of electromagnetic radiation, or the speed of light in a vacuum, by the speed of light in in-vivo tissue. Then by dividing a therapeutic resonant frequency determined for the genomic material in an air medium by the refractive index for in-vivo tissue, a therapeutic resonant frequency for the genomic material surrounded by in-vivo tissue is determined.

[0022] In other embodiments, methods of the present invention include multiplying therapeutic resonant frequencies in a range adaptable for use in frequency-emitting devices by a positive integer to determine harmonic frequencies; or dividing therapeutic resonant frequencies in a range adaptable for use in frequency-emitting devices by a positive integer to determine subharmonic frequencies. By programming a frequency-emitting device to emit the harmonic and subharmonic frequencies, target genomic material is selectively influenced with the therapeutic resonant frequencies and the harmonic and subharmonic frequencies, when the frequency-emitting device emits these frequencies into the medium surrounding the target genomic material.

[0023] Features of methods for determining therapeutic resonant frequencies of the present invention may be accomplished singularly, or in combination, in one or more of the embodiments of the present invention. As will be appreciated by those of ordinary skill in the art, the present invention has wide utility in a number of applications as illustrated by the variety of features and advantages discussed below.

[0024] Methods of the present invention provide numerous advantages over prior efforts to identify therapeutic resonant frequencies. For example, the present invention advantageously provides methods for determining resonant frequencies effective for stimulation and/or debilitation of specific types of DNA and/or RNA genomes, genes and gene sections.

[0025] Another advantage of the methods of the present invention is that they provide means for readily and efficiently determining therapeutic resonant frequencies using widely available data.

[0026] Another advantage is that the present invention provides methods for readily and efficiently predicting resonant frequencies that can be used therapeutically or beneficially in a variety of circumstances related to treatment of various human and animal diseases and conditions.

[0027] Another advantage is that the present invention provides methods for readily and efficiently determining therapeutic resonant frequencies that take into account an appropriate electromagnetic refractive index for a surrounding medium. In so doing, the present invention has the advantage of determining a more precise therapeutic resonant frequency for the genomic system in a particular medium.

[0028] Still another advantage is that the present invention provides easier and more efficient methods for determining resonant frequencies that significantly enhance the therapeutic benefit and cost-effectiveness of currently existing electromagnetic, magnetic, plasma, audio, or other frequency-emitting devices.

[0029] Another advantage over prior approaches to identifying resonant frequencies is that the present invention provides the advantage of methods that utilize a simple biophysical model for explaining and understanding why specific resonant frequencies are effective.

[0030] As will be realized by those of skill in the art, many different embodiments of methods for determining therapeutic resonant frequencies according to the present invention are possible. Additional uses, objects, advantages, and novel features of the invention are set forth in the detailed description that follows and will become more apparent to those skilled in the art upon examination of the following or by practice of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0031] The present invention comprises methods for determining resonant frequencies having therapeutic or beneficial uses in a variety of settings. In particular, the present invention includes methods for efficiently and accurately determining therapeutic resonant frequencies for specific complete genomes, or partial genomic materials. Methods of the present invention also comprise means for determining a more precise, and thus more therapeutic resonant frequency for the genomic system in a particular medium by accounting for an appropriate electromagnetic refractive index for the surrounding medium. Complete Genome

[0032] As described above, an object has a natural resonant frequency by the correlation of the length of the object with a wavelength that manifests into its surrounding medium. For example, the length of a DNA or RNA chain provides a wavelength measurement that can be used to determine a resonant frequency. In embodiments of the present invention, the spacing of nucleotide base pairs in a DNA double helix is used in the mathematical process to determine frequency. The entire length of a piece of genomic material, is determined by multiplying the number of base pairs or bases in the genomic material times the spacing length between base pairs or bases.

[0033] It is known that base pair spacing in strands of DNA is not always consistent. Localized areas contain "squeezing" or "spreading" of base pairs in various ways. In embodiments of the methods of the present invention, the classic Watson-Crick model of base pair spacing is used. The Watson-Crick model of base pair spacing is an average spacing over the entire length of the DNA molecule. Use of an average base pair spacing allows for accuracy sufficient to determine therapeutic resonant frequencies in accordance with the methods of the present invention.

[0034] The B-helix is the most common in-vivo DNA form in bacterial and eukaryotic life forms, and is used herein as illustration in the methods of the present invention. In the B-helix, one complete turn of the helix spans a distance of 35.4 angstroms on its axis; and there are 10.4 base pairs in each helical turn. Therefore, the spacing of individual base pairs on the axis would be 35.4 angstroms per turn divided by 10.4 base pairs per turn, which equals 3.403846 angstroms spacing between each base pair. In scientific notation using SI units, the base pair spacing length is expressed as 3.403846 e-10 meters. This use of meters allows conversion of the total length (treated as wavelength) into a frequency.

[0035] By way of illustration using a pathogenic microorganism, the DNA genome of *Borrelia burgdorferi* strain B31 contains 910,724 base pairs. To determine its length, 910,724 base pairs times the base pair spacing of 3.403846 e-10 meters=3.09996 e-4 meters total length of the genome. As described above, the length of an object can represent the object's wavelength; in this case, the length of the *Borrelia* genome represents its wavelength.

[0036] To convert this wavelength to frequency, the following common physics relationship is used:

velocity/wavelength=frequency (1)

[0037] If the DNA under consideration was in a medium of air, velocity would be the speed of electromagnetic

radiation, or light, in air. For purposes of comparison, if *Borrelia burgdorferi* was in an air medium, according to methods of the present invention, the velocity of electromagnetic radiation through air (299,792,458 m/s) would be used in determining a therapeutic resonant frequency. Dividing this velocity by the *Borrelia burgdorferi* genome wavelength: (299,792,458 m/s/3.09996 e-4 meters)=9.6708492 e+11 Hz, the therapeutic resonant frequency for *Borrelia burgdorferi* in an air medium.

[0038] However, genomic material including that of *Borrelia burgdorferi*, generally exists in a medium of living tissue. The velocity of electromagnetic radiation through a general in-vivo tissue medium is equal to the inverse of the square root of the product of the electrical permittivity and the magnetic permeability of the medium. The formula for velocity of electromagnetic radiation through a typical in-vivo tissue medium is given as:

$$\text{velocity} = 1 / [\text{square root of}]([\epsilon][\mu]) \quad (2)$$

where $[\epsilon]$ is the electrical permittivity and $[\mu]$ is the magnetic permeability of the medium.

[0039] The magnetic permeability ($[\mu]$) through in-vivo tissue is known to be the same as that in air: 1.2566370614 e-6 henrys/meter. However, electrical permittivity in live body tissue is not the same as for air. A representative value for electrical permittivity through in-vivo tissue is 71 e-12 farads/meter. Applying these figures to formula (2) above, the result is: velocity=1/[square root of]((71 e-12 F/m)*(1.2566370614 e-6 H/m))=105,868,288.9 meters per second, a representative velocity of electromagnetic radiation through in-vivo tissue.

[0040] Thus, in this method of the present invention, to obtain an in-vivo therapeutic resonant frequency of the *Borrelia burgdorferi* DNA genome having a length of 3.09996 e-4 meters, formula (1) above (velocity/wavelength=frequency) is used: 105,868,288.9 meters per second/3.09996 e-4 meters=3.41515016 e+11 Hz.

[0041] Using the results of the above steps, a general refractive index of electromagnetic radiation through in-vivo tissue can be determined. A refractive index (n) is given by the ratio of the speed of light in a vacuum to the speed of light in the medium under consideration. This ratio is stated as:

$$n = \text{speed of light in a vacuum} / \text{speed of light in a medium} \quad (3)$$

According to the steps given above, a refractive index of electromagnetic radiation through in-vivo tissue would be: (299,792,458 m/s)/(105,868,288.9 m/s)=2.831749.

[0042] Then, by dividing a therapeutic frequency determined for a particular genomic material in an air medium by the refractive index for in-vivo tissue, a therapeutic resonant frequency for the genomic material in an in-vivo tissue medium is quickly determined. Following the example above, dividing the resonant frequency of *Borrelia* in air (9.6708492 e+11 Hz) by the refractive index of electromagnetic radiation through in-vivo tissue (2.831749), gives the in-vivo resonant frequency for the *Borrelia burgdorferi* genome (3.41515016 e+11 Hz).

[0043] The steps described above for the methods of the present invention can be adjusted to correlate with any medium surrounding the genomic material under consideration, as long as an accurate electromagnetic velocity through the medium is known or can be determined.

[0044] The 3.41515016 e+11 Hz in-vivo therapeutic resonant frequency determined above for the *Borrelia burgdorferi* genome appears in the infrared range of the electromagnetic spectrum. In embodiments of the present invention, methods allow access to corresponding resonant frequencies in the lower audio range. For example, to determine an accurate resonant frequency in the audio range corresponding to first therapeutic resonant frequency, the first resonant frequency is divided by the number 2, as many times as necessary, to reach a frequency in the audio range. In musical terms, as described above, frequencies that are related by a factor of 2, or a power thereof, are known as octaves. In the example of the in-vivo *Borrelia burgdorferi* genome, a multi-octave shift to audio range can be reached by dividing the first therapeutic resonant frequency by 2^{29} , which gives a corresponding second therapeutic resonant frequency of 636.12 Hz, which is in the audio range. This process of dividing (or multiplying) any resonant frequency transposes it into a different octave by doubling (or halving) its wavelength in an exact and precise manner, allowing a resonant correlation with the length under consideration in a specific medium. Thus, in the present invention, an octave-shifted therapeutic resonant frequency will have a precise correlation with the first therapeutic resonant frequency.

[0045] In the example above, an in-vivo therapeutic resonant frequency of the *Borrelia burgdorferi* genome is 3.41515016 e+11 Hz. Corresponding therapeutic useful resonant frequencies in a different electromagnetic range, determined by dividing by appropriate powers of 2, results in *Borrelia burgdorferi* in-vivo therapeutic resonant frequencies in the audio range at: 636.12 Hz, 1272.24 Hz, 2544.5 Hz, 5088.9 Hz, etc.

[0046] As another illustration, if *Borrelia burgdorferi* were in a different medium such as water at 40 degrees centigrade, according to methods of the present invention, the velocity of EM radiation through water at that

temperature (225,319,768 m/s) would be used in determining therapeutic resonant frequencies. Dividing this velocity by the genome length: $(225,319,768 \text{ m/s}) / (3.09996 \text{ e-4 meters}) = 7.2684734 \text{ e+11 Hz}$, which would be the therapeutic resonant frequency of *Borrelia burgdorferi* DNA in water at 40 degrees centigrade.

[0047] To determine corresponding therapeutic resonant frequencies in a different electromagnetic frequency range, again in this instance the audio range, the resulting resonant frequency above is then divided by appropriate powers of 2. This gives therapeutic resonant frequencies in the audio range for *Borrelia burgdorferi* in a 40-degree centigrade water medium of: 676.9 Hz, 1353.9 Hz, 2707.7 Hz, 5415.4 Hz, etc.

[0048] In an alternative embodiment of the present invention, methods for determining therapeutic resonant frequencies for genomic material under consideration use the numerical constant 4,526,016.44 as follows: 4,526,016.44 divided by the number of base pairs or bases in a chain=frequency. As such, this method provides an efficient means for determining frequency by ascertaining the number of base pairs or bases in the genomic material, and dividing that number into the aforementioned constant. For example, if there are 250 base pairs, or bases in a DNA chain, $4,526,016.44 / 250 = 18,104.07$ hertz. For 5,000 base pairs or bases in a DNA chain, $4,526,016.44 / 5,000 = 905.20$ hertz. For 22,000 base pairs or bases in a DNA chain, $4,526,016.44 / 22,000 = 205.73$ hertz.

[0049] As described above, in methods of the present invention, therapeutic resonant frequencies are also determined for a different electromagnetic range, for example in the audio range, by dividing (or multiplying) by appropriate powers of 2. Using the example of a 250-base pair DNA chain above, $18,104.07 \text{ Hz} / 2 = 9,052.035 \text{ Hz}$. Repeated division of the resulting frequency by a factor of 2, such that $9,052.035 \text{ Hz} / 2 = 4526.017 \text{ Hz} / 2 = 2263.008 \text{ Hz} / 2 = 1131.504 \text{ Hz} / 2 = 565.752 \text{ Hz}$, quickly determines frequencies in the range capable of generation by typical frequency-emitting devices. To further shorten the process, dividing 18,104.07 hz by 32, or 2^5 (2 to the power of 5), yields a frequency of 565.752 Hz. Multiplying or dividing by an appropriate factor of 2 (2, 4, 8, 16, 32, 64, 128, 526, etc.) will accurately convert therapeutic resonant frequencies to a desired range for use in currently available frequency emission devices. Shifting frequencies by factors of 2 produces a frequency event that is an octave-related resonant frequency and wavelength.

[0050] As described above, many currently available frequency-emitting devices are not capable of producing therapeutic resonant frequencies in the infrared range, as that determined for the *Borrelia burgdorferi* genome. To overcome such limitations, methods of the present invention adjust resonant frequencies downward (or upward) by dividing (or multiplying) by a power of 2, until a frequency in the frequency-generating range of a device is achieved.

[0051] Certain frequency devices emit not only a basic frequency (also referred to as the "fundamental" frequency), but also many harmonics of that frequency. A "harmonic" is defined as a positive integer multiple of the fundamental frequency. On this basis, in methods of the present invention, additional frequencies can be determined and programmed into a frequency-emitting device such that a harmonic of a frequency corresponding to a first therapeutic resonant frequency of a target genomic material, would be emitted along with the fundamental frequency. Similar additional frequencies can be determined by dividing the therapeutic resonant frequency by a positive integer, resulting in a "subharmonic" frequency. Subharmonic frequencies corresponding to a first therapeutic resonant frequency of a target genomic material could also be programmed into a frequency-emitting device, and be emitted along with the fundamental frequency. In this manner, a group of resonant frequencies corresponding to the first therapeutic resonant frequency can be emitted simultaneously. As a result, effectiveness of a particular device can be enhanced.

[0052] As an example, one in-vivo *Borrelia burgdorferi* therapeutic resonant frequency in an audio-range octave is 636.12 Hz. When this therapeutic resonant frequency is divided by the positive integer 2, the resulting subharmonic frequency is 318.06 Hz. When this subharmonic frequency is programmed into a harmonic-rich output device and emitted, the audio-range therapeutic resonant frequency 636.12 Hz is emitted simultaneously, increasing the likelihood that a therapeutic resonant frequency will impinge a target *Borrelia burgdorferi* genome. In like manner, when dividing the audio-range therapeutic resonant frequency 636.12 Hz by the positive integer 3, the resulting subharmonic frequency is 212.04 Hz. A harmonic-rich output device programmed with this subharmonic frequency would also emit the 636.12 Hz therapeutic resonant frequency, further increasing the likely efficacy of the treatment.

[0053] The in-vivo therapeutic resonant frequency determined in the audio range for the *Borrelia burgdorferi* genome (636.12 Hz) is very close to a frequency (640 Hz) commonly used for Lyme disease, which is caused by *Borrelia burgdorferi*. The accuracy of the methods of the present invention may be confirmed by comparing the resultant therapeutic resonant frequencies produced by these methods, with many known and publicly available therapeutic frequencies.

[0054] In another example using a different pathogen, the Rubella measles RNA virus contains 9755 bases in its entire genome. $(9755 \text{ nucleotides}) * (\text{the spacing of } 3.403846 \text{ e-10 meters}) = 3.32045 \text{ e-6 meters total length}$. This length is used as the wavelength for the Rubella viral genome. To obtain the in-vivo therapeutic resonant frequency of this wavelength, formula (1) above is again used: $(105,868,288.9 \text{ meters per second}) / (3.32045 \text{ e-6 meters}) = 3.188371724 \text{ e+13 Hz}$. A shifting of this near-infrared frequency to audio range by dividing by 2^{36} , gives

a frequency of 463.97 Hz. A known therapeutic frequency for the condition of Rubella measles is 459 Hz, which is another close match to the therapeutic resonant frequency determined by the methods of the present invention.

[0055] A number of favorable responses have been reported by individuals using previously unknown therapeutic resonant frequencies determined by methods of the present invention. For example, one person who often experienced severe outbreaks of herpes simplex virus used the genome-related therapeutic resonant frequencies derived by the methods of the present invention for several strains of herpes simplex viruses. This individual reported a much faster healing process than what is usually experienced. Another example involves a person suffering from cancerous cervical warts. After use of previously unknown therapeutic resonant frequencies relating to the genome of a strain of papilloma virus derived by the methods of the present invention, this person reported disappearance of the warts. Still another example is a person infected with the chickenpox virus, who used a previously unavailable therapeutic resonant frequency derived by the methods of the present invention and associated with the varicella virus genome. This person reported rapid disappearance of blisters and symptoms associated with this disease.

[0056] In addition, in-vitro laboratory testing demonstrated that exposure of a strain of Escherichia coli to a genome-related resonant frequency produced a statistically significant reduction in the number of colonies in cultures. Genes and Gene Sections

[0057] Methods of the present invention for determining therapeutic resonant frequencies as described above can also be applied to sections of DNA and/or RNA, as in genes, for example. Using genetic coding information, methods of the present invention for determining therapeutic resonant frequencies may also be utilized with other sub-components of genomic material, such as the coding associated with enzymes, immune factors, oncogenes, oncogenic growth factors, and other proteins.

[0058] In embodiments of the present invention, therapeutic resonant frequencies are determined using basic information about a protein, for example, how many amino acids are in the protein chain. Because an amino acid is always coded by three bases in the messenger RNA, the number of bases for use in determining resonant frequencies can be ascertained by multiplying the number of amino acids in a protein chain by 3. For example, if there are 100 amino acids in a protein chain, there would be 300 bases in the final messenger RNA related to that protein. Thus, according to methods of the present invention, a therapeutic resonant frequency can be easily determined: $4,526,016.44/300 \text{ bases} = 15,086.72 \text{ Hz}$. Using a factor of $2^{<5>}$ to determine a corresponding therapeutic resonant frequency in a lower octave within the acoustic range as described in the methods of the present invention above, the resulting therapeutic resonant frequency would be: $15,086.72 \text{ Hz}/32 = 471.46 \text{ Hz}$. which is a frequency that currently available frequency-emitting devices are capable of generating.

[0059] As an example, the int-1 mammary oncogene contains 4522 base pairs of DNA. A therapeutic resonant frequency for this oncogene determined by the methods of the present invention above is 2001.77 Hz. This therapeutic resonant frequency is very close to 2008 Hz, a commonly used cancer-related frequency. Furthermore, the messenger RNA associated with the final form of the transforming protein of the int-1 mammary oncogene contains 1112 bases. A therapeutic resonant frequency for this transforming protein determined by the methods of the present invention above is 2035.08 Hz, which is also in a range of cancer-related frequencies currently in use.

[0060] As another example, the messenger RNA for the cancer-associated enzyme human tyrosine kinase contains 3151 bases. A therapeutic resonant frequency for this enzyme's messenger RNA, as determined by the methods of the present invention above, is 2872.7 Hz. This frequency is very close to the cancer-related frequency 2876 Hz, which, along with its related octaves, have been used throughout most of the twentieth century in association with certain cancer therapy modalities.

[0061] Another example is a precursor gene for Borrelia burgdorferi outer surface protein A (ospA), which contains 822 base pairs. A therapeutic resonant frequency for this gene determined by the methods of the present invention above, after being factored by powers of 2 to the audible range, is 344.13 Hz. A previously known frequency currently used for therapy related to lyme disease is 344 Hz, nearly an exact match.

[0062] As can be seen, therapeutic resonant frequencies for genes, gene sections, and constituent components of genomic material can be determined more readily and efficiently by methods of the present invention than for example, by trial and error.

[0063] Favorable responses have been reported from the use of previously unavailable therapeutic resonant frequencies determined by methods of the present invention, relating to genes, components of genes, and/or messenger RNA coding associated with certain proteins. For example, an individual diagnosed with lung cancer used therapeutic resonant frequencies related to certain growth factors and the K-ras oncogene, which is associated with his type of tumor. It is reported that this individual experienced eradication of lung tumor material. Another example is a student experiencing symptoms of both lyme disease and ehrlichiosis, who was unable to attend school for a year and half due to the severity of symptoms. The student used previously unavailable therapeutic resonant frequencies as determined by methods of the present invention, for certain membrane and antigenic proteins associated with the

organism Ehrlichia chaffeensis. Within two weeks of beginning therapy with those therapeutic resonant frequencies, this student was well enough to return to school.

[0064] While the present invention has been described with reference to several specific embodiments, those skilled in the art will be able to make various modifications to the described embodiments, for instance, by factoring therapeutic resonant frequencies to electromagnetic ranges to other than audible ranges, and by adjusting for various media, without departing from the spirit and scope of the invention. It is therefore to be understood that within the scope of the appended claims the invention may be practiced other than as specifically described herein.

<http://www.scribd.com/doc/116884099/Boehm-et-al>

United States District Court
for the
Western District of North Carolina

Charlene A. Boehm and cpsBioResearch, LLC)	
)	
Plaintiff,)	
)	
v.)	Civil Action No.3:12cv831
)	
Future Tech Today, Inc., Joshua Korn)	
a/k/a Joshua Parker, and)	
AAA Production, Inc.)	
)	
Defendants.)	

**Complaint for Patent Infringement and
Wrongful Interference with Contract**

The Parties

1. Plaintiff Charlene A. Boehm is an individual residing at 320 Gilbert Road, Columbus, North Carolina 28722.
2. Plaintiff cpsBioResearch, LLC ("cps") is a limited liability corporation organized under the laws of the State of North Carolina, with its principal place

<http://www.scribd.com/doc/189456824/PROSTATE-CANCER-Charlene-Boehm-DNA-Frequencies-The-Rife-Forum>

[Dec 5, 2013](#)

PROSTATE CANCER- Charlene Boehm DNA Frequencies - The Rife Forum

Re: PROSTATE CANCER- Charlene Boehm DNA Frequencies

Hi Ronald

I have personally with my lady teacher treated prostate cancer of a very close friend of mine. He has been suffering from prostate cancer for years and were against alternative treatment but when he saw with his own eyes my cancer (non Hoskins) were cured by the Rife – CAFL frequencies, he agreed. We gave him 10 CALF frequency treatments where after he went to the specialist had tests and scans and was declared cancer free by the specialist that treated him for all these years. The specialist could not believe it by the way.

The biggest problem when people run frequencies for cancer is that they only run the specific ones pertaining to their cancer and not the other frequencies that must accompany it. It is not that the Rife frequencies does not work, it is more a case of running the correct ones.

For prostate cancer we ran the following every second day:

Cancer Treatment 1

CANCER PROSTATE

CANCER PROSTRATE

20,72,304,442,666,690,727,766,787,790,800,920,1875

1998,2008,2050,2120,2127,2128,2130,2217,2250,2720, 5000 - 3 min each

PROSTATE ADENOMINUM

442,688,1875,748,766 - 4 min each

BLOOD CLEANSER

727,787,880,2008,2127,5000 - 3 min each

IMMUNE SYSTEM STIMULATION

8,20,120,304,432,464,665,728,800,880,1488,1862,200

8,2128,2180,2489,2720,2791,2855,2867,2929,3176,334

7,3448,4014,5000,5611,10000 - 4 min each DETOX 3 TOXINS IN THE

KIDNEYS AND LIVER 2.4,6.3,7.8,9.2,14,20,35,60,72,95,126,160,200,240,

440,444,465,522,600,625,666,690,727,787,802,832,88

0,1500,1550,1865,2000,

Cancer Treatment 2

CANCER PROSTRATE 1

666,2125,2128,2131,2140,2145,3672 - 6 min each

PROSTATE HYPERPLASIA - 920 for 5 min

BLOOD CLEANSER 727,787,880,2008,2127,5000 - 3 min each

IMMUNE SYSTEM STIMULATION

IMMUNE SYSTEM STIMULATION

8,20,120,304,432,464,665,728,800,880,1488,1862,200

8,2128,2180,2489,2720,2791,2855,2867,2929,3176,334

7,3448,4014,5000,5611,10000 - 4 min each DETOX 3 TOXINS IN THE

KIDNEYS AND LIVER 2.4,6.3,7.8,9.2,14,20,35,60,72,95,126,160,200,240,

440,444,465,522,600,625,666,690,727,787,802,832,88

0,1500,1550,1865,2000,

Do Cancer Treatment 1 on day 1 and then Cancer Treatment 2 on day 3 and then start with Cancer Treatment 1. Thus rotating them.

With the 3rd or 4th cancer treatment also run:

BLADDER AND PROSTRATE COMPLAINTS -

9.39,20,465,727,787,802,880,1550 - 3 min each as prostate cancer also effect the bladder.

If the cancer has entered the bone run the following during the off days:

Bone Treatment

BONE REGENERATION - 2720,10000, - 10 min each

BONE SPURS - 1.2,250, - 10 min each

OSTEITIS - 770,724,736,743 - 6 min each

OSTEOMYELOSCLEROSIS - 79,330, - 7 min each

DETOX 3 TOXINS IN THE KIDNEYS AND LIVER

2.4,6.3,7.8,9.2,14,20,35,60,72,95,126,160,200,240,

440,444,465,522,600,625,666,690,727,787,802,832,88

0,1500,1550,1865,2000,

Dr. Hamer states that Prostate is due to an early conflict with sexual

Dr. Hanner states that Prostate is due to an ugly conflict with sexual connections or connotations which is unresolved and must be resolved in ...
