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RESEARCH ARTICLE

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GENOMIC-THINGS

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ABSTRACT

The study of genomic-things is called biology. A genome is a complete set of a species characteristic number of DNA molecules or RNA in some biological viruses. Every individual genomic-thing of all species possesses a genome. A genomic-thing that does not possess a genome does not exist in this world. In our body one chromosome contains only one molecule of DNA. Each cell in our body has 46 chromosomes and therefore, each cell in our body contains 46 DNA molecules. Thus, the size of human (i.e., of *Homo sapiens*) genome is 46 DNA molecules. A genomic-thing is a product of reaction of its genome & its nutritive substances in its compatible environment. The genome of an individual organism contains all the information needed to build, or to synthesize that organism. The key objective of this paper was to prove that the terms genomic-things & nongenomic-things were correct to replace the erroneous ones namely, living-things & nonliving-things respectively. Scientists of biological sciences should discard soon the textbooks with the terms living-things & nonliving-things and substitute by textbooks written with genomic-things & nongenomic-things. Otherwise; it would be immoral for the scientists, because they are responsible/accountable for the global quality of biological science education. Active learning in science is doing things and thinking about the things being done to come up with understanding about them. Discovery is seeing what everybody else has seen but thinking is what nobody else has thought!!

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INTRODUCTION

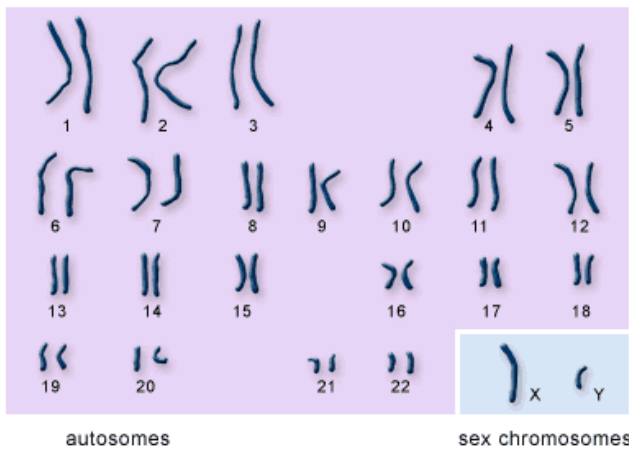
The study of genomic-things is called biology. But, what is a genomic-thing?

Answer: A genomic-thing is a product of reaction of its genome & its nutritive substances in its compatible environment. A genome contains an organism's complete set of genetic instructions (i.e., a complete/full coded information of a genome) which synthesized that organism by reacting with its nutritive substances as raw materials in its compatible environment [1-4]. The genome of an individual organism contains all the information needed to build, or to synthesize that organism. A good looking baby is in the process of being synthesized by his/her genome's transformative reaction with his/her nutritive substances into a fully grown person in his/her compatible environment.

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REVIEW

Molecular genetics studies demonstrated that two alleles can be codominant (characteristics of both alleles of a gene are expressed) and that not all traits are defined by single genes; in fact, many traits reflect the combined influences of numerous genes. The field of molecular genetics emerged from the realization that DNA and RNA (ribonucleic acid) constitute the genetic material in all genomic-things. In physical terms, a gene is a discrete stretch of nucleotides within a DNA molecule, with each nucleotide containing an A, G, T, or C base unit. It is the specific sequence of these bases that encodes the information contained in the gene and that is ultimately translated into a final product, a molecule of protein or in some cases a molecule of RNA. The protein or RNA product may have a structural role or a regulatory role, or it may serve as an enzyme to promote the formation or the formative metabolism of other molecules, including carbohydrates and lipids. All these molecules work in concert to maintain the processes required for life.



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Figure 1. The map (photograph) of the complete set of human chromosomes

How DNA directs protein synthesis

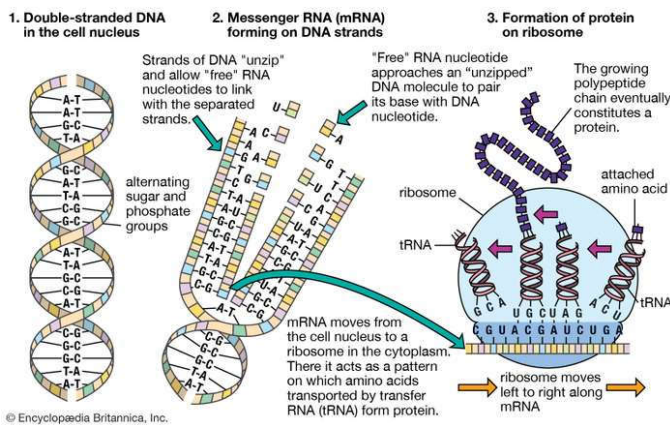


Figure 2. How DNA directs protein synthesis

Molecular genetics emerged from the realization that DNA and RNA constitute the genetic material of all genomic organisms. (1) DNA, located in the cell nucleus, is made up of nucleotides that contain the bases adenine (A), thymine (T), guanine (G), and cytosine (C). (2) RNA, which contains uracil (U) instead of thymine, transports the genetic code to protein-synthesizing sites in the cell. (3) Messenger RNA (mRNA) then carries the genetic information to ribosomes in the cell cytoplasm that translate the genetic information into molecules of protein. *Encyclopædia Britannica, Inc.*

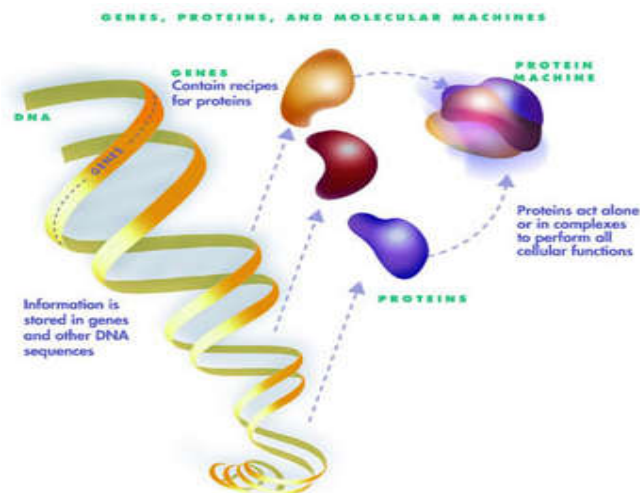


Figure 3. How DNA works

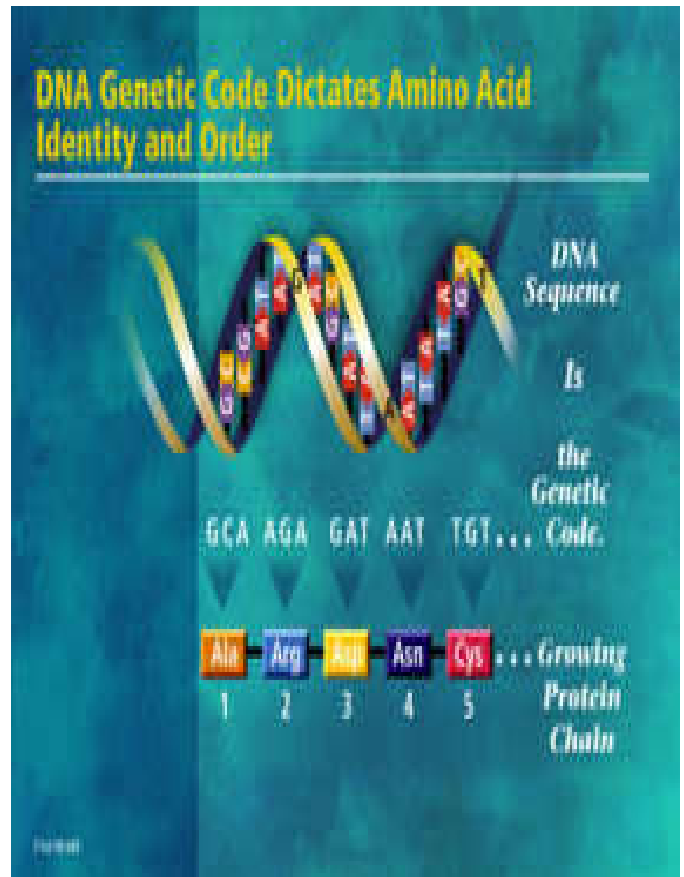


Figure 4. The order of 3-base “words” or codons, designating the order of the amino acids in the protein

Substantiated evidences about the fact that the term Genomic-thing is the only optionless name, being the must for all forms of life:

1st. Genome is possessed only by genomic-things or a genomic-thing that does not possess genome does not exist at all in this world. On the other hand, when we call “nongenomic-things” those things which do not possess genome, it remains correct and does not contradict with the “Law of Conservation of Matter,” which states that “Matter is Neither Created Nor Destroyed.” Matter is neither created nor destroyed means that everything is a living-thing!!! Note that nothing is a nonliving-thing in this world!!! In spite of this scientific truth, nongenomic-things had been called nonliving-things for centuries until the emergence of Genome Model of genomic-things.

2nd. When we used to call “living-things” all forms of life, the other things which were not forms of life had been called “nonliving-things” which had been in a direct and naked contradiction with the “Law of Conservation of Matter.” Having these obvious concepts of natural sciences in mind, using the term living-thing & its opposite nonliving-thing in biological sciences is:

- an intolerable,
- a shameful, and
- a paralyzing

error in science against the scientific understanding and consciousness of student children of both pure & applied biological sciences!!!



Antonie van Leeuwenhoek
(1632-1723)

(1)



(2)



(3)



(4)



(5)



(6)



(7)



M.J. Schleiden

(8)



Theodor Schwann

(9)



(10)



James Watson

(11)



Francis Crick

(12)



Maurice Wilkins

(13)



Rosalind Franklin

(14)



(15)



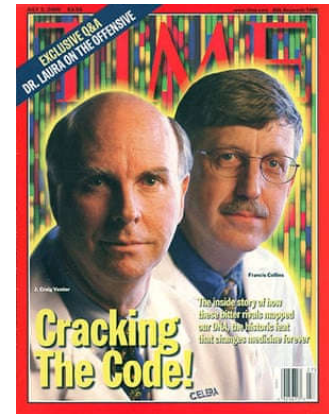
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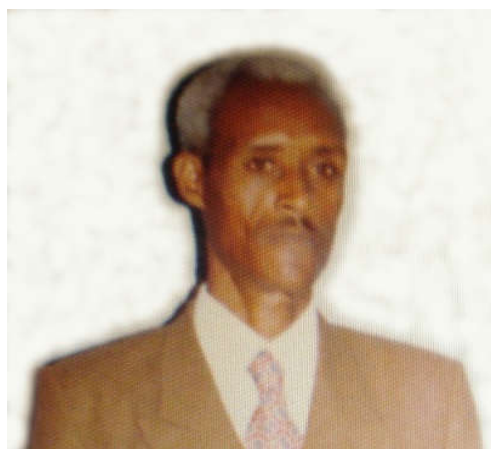
(17)



(18)



(19)



(20)

Figure 5. Globally disclosed participant scientists emerged, on the worldwide scale, in the course of dynamic and progressive development of both pure & applied biological sciences

Keys:

(1) Antonie van Leeuwenhoek (1432-1723):

- He was a Dutch business man and scientist.
- He was the first person to discover bacteria in 1674.

(2) Dmitri Iosifovich Ivanovsky (1864-1920):

- He was a Russian botanist.
- He was recognized to be the first discoverer of biological viruses presented in 1892.

(3) Frederick William Twort (1877-1950):

- He was an English bacteriologist.

- He was the original discoverer of bacteriophages in 1915.

(4) Felix d'Herelle (1873-1949):

- He was a French-Canadian microbiologist.
- He was a co-discoverer of bacteriophages in 1917.

(5) Jeaan-Baptiste Lamarck (1744-1829):

- He was a French biologist.
- He was a Professor of "Worms and Insects" in Paris.
- The first scientific theory of evolution he proposed stated that "acquired characteristics could be inherited"

from parents by any offspring". His theory was false, but believed to pave the way for Darwin.

(6) Charles Darwin (1809-1882):

- He was an English biologist (i.e., a naturalist).
- In spite of the fact that he genuinely battled for 40 years, Charles Darwin's theory of evolution which was overartificialized by his diagram of the ape with the human-like face is proved false at present.

(7) Gregor Mendel (July 20, 1822-January 6, 1884):

- He was an Austrian monk, known as "the father of genetics".
- He was nicknamed as "Man of Science, Man of God" because of his curiosity in studying seven pairs of genetic characteristics on *Pisum sativum* (pea plant) and being a monk in church.
- Gregor Mendel's investigation of genetics was a minute piece of hint about the secrets of genomic-things. Because of its minuteness Mendel's hint was not enough to disclose the whole miracles of genomic-things and that was the very reason for why scientists were not able to define what a genomic-thing was before the emergence of Genome Model of genomic-things.
- The investigation of Gregor Mendel was at the level of individual genes which are the subsets/elements of a Genome and not at the Genome level. The study of genes gives rise to the subject called Genetics whereas the study of genomes gives rise to the subject known as Genomics.

(8, 9, 10) Matthias Schleiden, Theodor Schwann, Rudolph Virchow (1810-1882):

- Three of them were Germans.
- Three of them were the establishers of Cell Theory. The cell theory is proved false at present.

(11, 12, 13, 14) James Watson, Francis Crick, Maurice Wilkins, Rosalind

Franklin (1916-2004):

- They were the discoverers of DNA model.
- They were English scientists, except James Watson who was American.
- They discovered (saw) DNA molecule but did not know the role or validity of DNA. They were incapable to interpret what they discovered or saw. Those who gave them the Nobel Prize did not understand the role of the DNA molecule either.
- Despite the fact that Gregor Mendel's principles were available and had paved the way for them as well as having better technology than Mendel's time, they were passive with the DNA molecule they discovered and somewhat resembled a group of innocent kids that found a stone-like explosive while playing on a roadside without knowing what kind of damage it could do to them!
- Gregor Mendel was able to explain the function of genes (i.e., segments of DNA molecule) without seeing or discovering the DNA molecule itself

whereas Watson, Crick, Wilkins and Franklin who saw (discovered) the DNA molecule were unable to explain or interpret the function or role of the DNA molecule.

- Not only these, Gregor Mendel generated his scientific work for human races with his single mind, but Crick & Watson with the team of 4 different minds and then the team of Crick & Watson was given the Nobel Prize whereas no Nobel Prize was given to Gregor Mendel. Now, honoring to Gregor Mendel in recognition of his scientific work for human races; the Nobel Prize must be given to the grand son/daughter descended from the family line of Gregor Mendel; otherwise, the present scientific community of the world is vulnerable to a serious blame of scientific dishonesty.

(15, 16) A team of scientists in thousands brought together from the globe, being funded with \$3 billion US Dollar and involved in the study of Human Genome Project (1990-2003):

- The Human Genome Project forwarded a tottering wrong and misleading definition for the term Genome.
- Its Genome sequencing is not different from what was reported by the discovery of Crick-Watson DNA Model.
- How it was sequencing the Human Genome somewhat resembled driving a car without knowing where to go!!!
- Jumping to conclusion from targetlessly inadequate data and failing of HGP's leaders to understand their own weaknesses could have a negative effect on the achievability of the objective, rendering the participant or competent researchers desperate.

(17) David Haussler (....-20..):

- He is an American Professor of biomolecular engineering and the Director of Genomics Institute in the University of California.
- He has declared that the current Reference Genome Sequence reported by Human Genome Project (HGP) is still an incomplete sequence and woefully inadequate as a representation of human diversity and genetic variation.
- He has proposed a new Human Pangenome Reference Sequence Project or "Human Pangenome Project" that will be sampled from 350 persons for a far better understanding than from the previous Reference Genome Sequence that was sampled from a single person by HGP.
- David Haussler is better, in his proposed Human Pangenome Project, than Human Genome Project in terms of sample size but his proposal also has lots of unrealized weak points which will be forwarded by the author of this paper in the next article after a few weeks or months.
- At any rate, David's being concerned to achieve a meaningful understanding about the science of human genomics and determination is appreciable and courageously heroic!!!

(18) Dr. Eric Green (during 1990-2003):

- Dr. Eric Green received HGP award for his participation in Human Genome Project as one of the directors.
- The output or achievement of HGP by the leadership of Human Genome Project was less than expected and below the standard, i.e., below the baseline data [5-7].

(19) Dr. Landers and Dr. Collins):

- Dr. Landers and Dr. Collins were leaders of the Human Genome Project.
- The output or achievement of HGP by the leadership of Human Genome Project was less than expected and below the standard, i.e., below the baseline data.

(20) Feleke Eriso (1962-20..):

- He is an Ethiopian biologist/Immunoparasitologist.
- He generated the dynamic Genome Model of genomic-things.
- He proved that biological viruses are certainly genomic-things.
- The scientists of the entire world concluded that defining a genomic-thing is impossible, but it is not impossible for the Genome Model generated by him!!
- He strongly stated that any curriculum of both pure & applied biological sciences designed to educate or train without the knowledge of Genome Model would be not teaching but beating around the bush and would produce beaters around the bush and not effective & conscious candidates or professionals.
- He stated that no chance is left for any one species of genomic-things to be outside the laws of Genome Model of genomic-things.
- In the conclusion section of the Genome Model of genomic-things, each of the 20 different conclusive statements is equivalent to a brand new independent article of authentic Nobel Prize standard.
- For the first time, in the history of progressive development of both pure & applied biological sciences, misleading student children of human races and confusing scientists of biological sciences are wiped out by Feleke's Genome Model of genomic-things from the whole system of genomic-things of the entire world.
- Clearly interpreted and explained reproductive, transformative, perpetuative, and speciation functions of Genome.
- He is the empowerer of student children of both pure & applied biological sciences to make this planet (Earth) a better place to live for all human races.
- Before the emergence of Genome Model of genomic-things, the scientists of the world defined that biology is the study of living-things and then they admitted that they do not know what a living-thing is!!
- He was the first scientist who interpreted & explained the pathogenic cause of Type 1 Diabetes Mellitus [4].
- He was the first scientist for correctly explaining by differentiating the pathogen & the host cell in the disease of cancer [8]. He also proved that cancerous genome, diabetogenous genome, and viral genome that enters a human cell are the same in their

foreignness to the immune system of a patient and are similarly destroyed by the same immunologically competent cells.

- He was the revolutionizer of both pure & applied biological sciences, and rescuer of student children of all human races of the world from the danger of misleading lies both in pure & applied biological sciences.
- He disproved the Cell Theory.
- He disproved Charles Darwin's Theory of Evolution (Darwinism).
- He directly disproved the concept which stated that biological viruses were nongenomic-things or transitional things between genomic & nongenomic-things.
- It is globally and authentically declared that Gregor Mendel is the father of Genetics because of his contribution of minute hint to biological sciences. Now, who is the father of Genomic-things & Role of Genomics forever?
- Genome Model of genomic-things has spectacularly changed the world of biological sciences forever; compatible with the law of conservation of matter, beginning from individual elements/atoms on the periodic table up to the biomass of a human being.

DISCUSSION

None of the scientists in Figure 5, from Antonie van Leeuwenhoek up to Dr. Landers and Dr. Collins (i.e., from number 1 to number 19) was able to define what a genomic-thing was before the emergence of Feleke's Model of Genome let alone identifying the fact that the term living-thing was terribly erroneous that could paralyze student children's scientific understanding about the Law of Conservation of Matter!!! When the first article of Genome Model submitted by the author of this paper, a British reviewer asked the following question. "Who is he to carry out this study that had been attempted by Charles Darwin for more than 40 years?" The answer to this question was given as one of the conclusive statements in the Conclusion Section of this paper. The terms living-things and nonliving-things were used in biological sciences, when we did not know that the terms were seriously erroneous. At present, the debilitating effects of pollutant textbooks with these erroneous terms, on scientific progress of student children of all human races of the globe is going on. This is so because education is international by its very nature. Therefore, it is crucially nondelayable to replace biological textbooks with erroneous terms of living-things & nonliving-things by modern textbooks with the correct scientific terms of genomic-things & nongenomic-things today (now), but not tomorrow. Otherwise; it would be immoral, for both pure & applied biological scientists of the world because they are responsible/accountable for the global quality of biological science education. The width & depth of weaknesses with the performance of Human Genome Project, during 1990-2003, were much worse and more than those which made Professor David Haussler angry. The Human Genome Project stated about itself that it was one of the great feats of exploration in history. To the best of scientific honesty, Human Genome Project did not generate anything new that could be considered to be one of the great feats of exploration. Hence, this is the greatest lie on Earth and has been shot killed by Genome Model of genomic-things because Genome Model

cannot tolerate lies of HGP unlike Professor David Haussler [9, 10]. The two major reasons for HGP's achievement being below the expected standard were:

- 1st. Unwise management or leadership, and
- 2nd. Failure to realize or identify the indispensable targets of the research proposed.

The Human Genome Project defines a Genome of a genomic-thing as "all of its DNA, genes and chromosomes". This is a tottering wrong & misleading definition for a genome. A definition is an indicator which shows what something is by excluding other possibilities.

Conclusion

- A complete set that is a characteristically fixed number of DNA (or RNA in some biological viruses) molecules in each species of genomic-things is known as a Genome. The genome is capable to synthesize itself and the other body parts in an individual of every species of all genomic-things, using its nutritive substances as raw materials in its compatible environment. The size of human genome is 46 DNA molecules.
- The term genomic-thing & revolution of biological sciences had been worked out with a mind synthesized by an Ethiopian Genome-Sequence.
- The pair of misleading terms (lies) phrased living-thing & nonliving-thing must be attacked not only by biologists but it must also be seriously attacked by Chemists & Physicists (of the entire world) who teach the Law of Conservation of Matter (Mass).
- A selected breed of:
 - chicken for the highest yield of egg or meat,
 - cattle for the highest yield of milk or beef, or a
 - selected species of crop for the highest
 - agricultural productivity or any desirable trait
 - means a selected Genome because it is the genome that synthesizes the highest yield of egg/meat, milk/beef, or generates the highest agricultural productivity as well as any other desirable trait in each species of those genomic-things mentioned above.
- Feleke is the father of genomic-things, revolutionizer of both pure & applied biological sciences, and rescuer of student children of all human races of the world from the danger of misleading lies both in pure & applied biological sciences.
- Scientists of biological sciences must discard soon the textbooks with terms living- things & nonliving-things and substitute by textbooks written with genomic-things & nongenomic-things. Otherwise; it would be immoral for the scientists, because they are responsible/accountable for the global quality of biological science education.
- Active learning in science is doing things and thinking about the things being done to come up with understanding about them.

- Discovery is seeing what everybody else has seen but thinking is what nobody else has thought!!

It is declared that this article had worked out that the terms living-things & nonliving-things were terribly erroneous, misleading student children in textbooks of biological sciences and had scientifically proved that the terms genomic-things & nongenomic-things were correct to replace the erroneous words phrased living-things & nonliving-things respectively, for the first time in the entire world.

Ethical Clearance: I declare that no ethical error is committed in the production of this paper.

Acknowledgement: I am deeply grateful to the scientists acknowledged in the text and list of references of this paper for their providing me with confidential data that can be counterchecked, for their correctness, with observable facts in the natural environment as well as with truths in modern textbooks, reputable journals, and Internet. This is so because science cannot develop without science.

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