



The Building Blocks of Living Beings: Up Quarks not Cells

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Abstract:

Spontaneous Generation (Abiogenesis) the most prevalent theory was widely held for nearly 2,000 years, championed by Greek Philosophers like Aristotle. Aristotle believed in Spontaneous Generation (Abiogenesis) that living organism could arise from non-living, decaying matter, citing observation like maggots could emerge on dead meat, mice could come from grain and rags, and also believed that life could appear from substances like mud or decaying flesh. Spontaneous Generation (Abiogenesis) idea was complemented by concepts like Vitalism and Preformationism. The “vital force” was considered essential or absolutely necessary for life’s processes and was thought to be a fundamental contrast between organic and inorganic material. The Wohler unification of urea from inorganic materials was a blast to this theory, suggesting that organic compounds could be generated without a “vital force.” Preformationism was prominent in the 17th and 18th centuries stating that the entire organism was formed in microscopic within either the sperm or the egg, and the development was simply the process of tiny individual enlarging. The Karl Ernst Von Baer’s discovery of the mammalian ovum (egg cell), and the development of embryology in the 19th century, provided evidence that an organism progresses from a simple state to a complex one through a series of growing stages, with new structures pop up that were not pre-formed in the original cell, refuting Preformationism. Spontaneous Generation (Abiogenesis) was eventually disproven from scientists like Francesco Redi (1668), Lazzaro Spallanzani (1765) and Louis Pasteur (1861). In the 17th century, Francesco Redi conducted an experiment to refute Spontaneous Generation (Abiogenesis) and his experiments concluded that maggots come from the eggs of flies, not from the meat itself (Life come from pre-existing life). Lazzaro Spallanzani’s experiment (involved boiling broth in two flasks: one left open and left sealed) and the swan neck flask experiment by Louis Pasteur disproved Spontaneous Generation (Abiogenesis) and supported biogenesis (Life come from pre-existing life).

The Classical Cell Theory (a scientific principle) was developed during 19th century by scientists Matthias Schleiden and Theodor Schwann, and laid the foundation for cell biology based on three main principles or beliefs. The Classical Cell Theory states that all living organisms are made or formed of cells and their products, the cell is the fundamental, essential or elementary unit of life, and all cells begin to exist from pre-existing cells. The technological developments particularly the invention and the improvement of the microscope allowed for more detailed observations, leading to the Modern Cell Theory incorporating additional principles. The Modern Cell Theory expands the Classical Cell Theory with the addition of one or more key principle, that the life of an organism is the sum of the activities of its cells, energy flow (metabolism and biochemistry) occurs within cells and it also include that cells contain hereditary information. The other important theories are Endosymbiotic Theory and Central Dogma of Molecular Biology. The Endosymbiotic Theory describes the origin of eukaryotic organelles, and the Central Dogma of Molecular Biology explains the flow of genetic information from DNA to RNA to protein. However, the Classical Cell Theory, Modern Cell Theory, Endosymbiotic Theory and Central Dogma of Molecular Biology do not describe the origin of cells or the first cell itself. **“How death occurs,” it is a topic addressed by both science, and by various philosophies and religions. There is no single theory that describes “How death occurs.”**

In 1958 Vethathiri (1911-2006) founder of the World Community Service Centre (WCSC), Aliyar, Pollachi, Tamil Nadu, India discovered that not only mass is acting on Space but also Space is acting on mass and named Space as Unified Force, which is defined as ‘Self-Compressive Surrounding Pressure Force.’ The author of this paper has introduced a new model namely “The Super-Standard Model of the Universe (Vethathiri Model of the Universe)”. During the first stage of the evolution, the self-compression of Space, the Static-Silent State itself becomes a moving force as a wave and **Up Quarks (God Particles)** are expelled from a tiny portion of Space, **which cannot be further divided**. During the second stage of the evolution, Repulsive Force (electrons) are generated constantly due to the friction between Up Quarks and Space (Self-Compressive Surrounding Pressure Force) and each Up Quarks are surrounded by much lighter, negatively charged electrons (Repulsive Force). During the third stage of the evolution, Repulsive Force cannot withstand the Self-Compressive Surrounding Pressure Force for a long period of time, and gradually merges into the Self-Compressive Surrounding Pressure Force, and becomes Space (at one stage the frequency becomes zero). During the fourth stage of the evolution, Self-Compressive Surrounding Pressure Force **binds Up Quarks** in clusters to form Down Quarks, Protons, Neutrons, Atoms, Molecules, Planets and Stars etc. **Mass can be defined as “association of Up Quarks (God Particles), which are bound by Self-Compressive Surrounding Pressure Force.** Any object

or a person's mass is composed of Up Quarks, which are bound by Self-Compressive Surrounding Pressure Force. Repulsive Force (electrons) **separates** Up Quarks and keeps Up Quarks in their orbits so that they don't hit each other in Down Quarks, which are composed of two Up Quarks (bound by Self-Compressive Surrounding Pressure Force) and two electrons (Repulsive Force). Repulsive Force (electrons) **separates** Up Quarks and keeps Up Quarks in their orbits so that they don't hit each other in Protons, which are composed of four Up Quarks (bound by Self-Compressive Surrounding Pressure Force) and four electrons (Repulsive Force), and in Neutrons, which are composed of five Up Quarks (bound by Self-Compressive Surrounding Pressure Force) and five electrons (Repulsive Force). Similarly, Repulsive Force (electrons) also keeps the Sun, which are composed of Trillions and Trillions of Up Quarks (bound by Self-Compressive Surrounding Pressure Force) and the Planets, which are composed of Trillions and Trillions of Up Quarks (bound by Self-Compressive Surrounding Pressure Force) in their orbits so that they don't hit each other. From the appearance of evolution of Repulsive Force (electrons) to its disappearance, all the processes occur only in the Space, which is defined as 'Self-Compressive Surrounding Pressure Force'. **Down Quarks, Protons, Neutrons, Atoms, Molecules and the Universe can be defined as "Repulsive Force and its associated fluctuations".**

The Super-Standard Model of the Universe (Vethathiri Model of the Universe) further states that all living organisms are made or formed of Up Quarks. The Up Quarks are the fundamental, essential or elementary unit of life, **which cannot be further divided**, and all Up Quarks begin to exist from the Space, which is defined as "Self Compressive Surrounding Pressure Force." Self-Compressive Surrounding Pressure Force **binds** Up Quarks in clusters to form Down Quarks (Composed of Two Up Quarks, which are bound by Self-Compressive Surrounding Pressure Force), Protons (Composed of Four Up Quarks, which are bound by Self-Compressive Surrounding Pressure Force), and Neutrons (Composed of Five Up Quarks, which are bound by Self-Compressive Surrounding Pressure Force). Atoms are made up of a nucleus (Protons and Neutrons) and electrons, while molecules are formed when two or more atoms of the same element (e.g. O₂) or different elements (e.g. H₂O), representing the building blocks of matter. Therefore, atoms and molecules are composed of multiple Up Quarks, which are bound by Self-Compressive Surrounding Pressure Force and electrons (Repulsive Force). **The author of this paper has discovered that there are two electrons (Repulsive Force) in Down Quarks, four electrons (Repulsive Force) inside Protons and five electrons (Repulsive Force) inside Neutrons.** On July 4, 2012, scientists announced the four final state Leptons (either four electrons, four muons, or a combination of two electrons or muons, which are Repulsive Forces) is measured by detectors like ATLAS and CMS at CERN is clear and distinct and validates the discovery of the author of this paper that there are four electrons (Repulsive Force) inside Protons and five electrons (Repulsive Force) inside Neutrons.

The six common elements (about 98%) in all living things are carbon (C), hydrogen (H), oxygen (O), nitrogen (N), phosphorus (P) and sulphur (S) combine to form four vital organic molecules (carbohydrates, lipids, nucleotides, and proteins) and an inorganic molecule (water). Water (H₂O) is the essential medium in which all the four organic components (carbohydrates, lipids, nucleotides, and proteins) exist and operate. The fundamental building blocks of carbohydrates and lipids are carbon (C), hydrogen (H) and oxygen (O). Proteins are primarily made carbon (C), hydrogen (H), oxygen (O), nitrogen (N), but some also contain sulphur (S), which are directly incorporated into protein chains. **Nucleotides are composed of three parts: a sugar molecule, a phosphate group and a nitrogen-containing base. Nucleotides formed first, followed by RNA and DNA** and Nucleotides are the basic building blocks of RNA and DNA, **and are essential for all life**, serving as the monomers that links together to form long chains which store genetic information and acting as an "energy currency" of the cell (ATP, which stands for Adenosine triphosphate). **RNA is believed to be preceded DNA in evolution because modern DNA is synthesized by RNA precursors.** Organic molecules (carbohydrates, lipids, nucleotides and proteins), inorganic molecules and ions (water, sodium, potassium, calcium, magnesium and chloride etc.) and trace elements (iron, zinc, copper, iodine, cobalt etc.) organise to form **Organelles** and structures (like RNA, DNA, Cytoplasm, Mitochondria, Ribosomes, Cell wall etc.) that function together as a **Cell**. **The author of this paper has discovered that the connecting link between living and non-living things is the RNA, which is formed from Nucleotides, and concludes that the building blocks of living beings are Up Quarks not Cells.**

A free Neutron (Composed of Five Up Quarks, which is bound by Self-Compressive Surrounding Pressure Force) is unstable and decays quickly into a Proton (Composed of Four Up Quarks, which is bound by Self-Compressive Surrounding Pressure Force) and Repulsive Force (an electron and an antineutrino), a fundamental example of radioactive decay. The author of this paper concludes that, **one missing Up Quark** (a tiny portion of Space, which cannot be further divided) **has died and merged with space**, which is defined as 'Self-Compressive Surrounding Pressure Force.' The author of this paper further concludes that the matter that makes up all stars and galaxies only accounts for **about 1%** of the content of the Universe. **The Super-Standard Model of the Universe (Vethathiri Model of the Universe) vouchsafes the solution for "How death occurs."** Beta-minus decay experiments (Nuclear transformation), Alpha decay experiments and The Large Hadron Collider (LHC), which is one of the current large-scale particle collider at CERN, which were interpreted in the wrong way, describes "How death occurs," and supports the Super-Standard Model of the Universe (Vethathiri Model of the Universe).

Key Words: Spontaneous Generation (Abiogenesis), The Standard Cell Theory, The Super-Standard Model of the Universe (Vethathiri Model of the Universe), Self-Compressive Surrounding Pressure Force, Up Quarks (God Particles), electrons (Repulsive Force), Organelles, Cells, Organisms, Beta-minus decay, Alpha decay, The Large Hardon Collider (LHC).