



# A Study of the Origin of Life on Earth from the Perspectives of the Quran and Science

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## Abstract

The origin of life on Earth has long been a central ontological question, debated between experimental scientists and religious scholars. This paper aims to explore the perspectives of Quranic exegetes and experimental scientists on this topic. It begins by clarifying the literal and technical meanings of key terms such as life, experimental science, and scientific exegesis. The study then analyzes Muslim exegetes' interpretations of the Quran regarding the origin of life, followed by an examination of prominent scientific theories and hypotheses on the subject. Employing a descriptive-analytical method, the research presents and evaluates data using logical and textual evidence, with data collected via library research. Findings reveal that the Quran does not explicitly address the origin of life on Earth but provides detailed accounts of human creation. Many ancient and contemporary scientific theories on the origin of life are found to be inconsistent with Quranic narratives, highlighting a divergence between scientific and religious perspectives on this fundamental question.

**Keywords:** Quran, Scientific Exegesis, Scientific Miracle, Experimental Science, Origin of Life; Life on Earth

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## Statement of the Problem

Undoubtedly, the emergence of life on Earth is one of the most fundamental and intriguing phenomena in the universe, the exact nature of which remains unresolved for scientists. Various theories and perspectives regarding the origin of life on Earth have been proposed by Western materialist thinkers, which are not in accordance with the teachings of the Quran.

This study will examine several Quranic verses, including verse 30 of Quran 21 and verse 45 of Quran 24, which, according to some Quranic scholars, refer to the issue of the emergence of life. Additionally, it will explore some theories put forth by scientists in the field of experimental sciences regarding the origin of life on Earth.

First, it is essential to carefully study the origins of life from a scientific perspective, discussing various theories along with their limitations and empirical critiques. Following this, the mysterious nature of life from the Quranic viewpoint will also be addressed. This research aims to analyze and compare the Quranic verses and scientific theories concerning the emergence of life, highlighting their similarities and differences, thereby demonstrating the scientific miracles of the Quran.

## Literature Review

Over the past two centuries, Muslim scholars have explored the concept of scientific miracles in the Quran. They have often used findings from experimental sciences, which align with the Quran's scientific references, to demonstrate the divine nature of this sacred book. Undoubtedly, comparative studies between the Quran and experimental sciences regarding the origin of life on Earth are relatively recent. However, many Quranic exegetes and Muslim Quranic researchers have made valuable contributions in the fields of Quran and biology.

Numerous studies have been conducted by Muslim scholars on topics such as biology and cosmology, including the origin of the Earth and galaxies, the creation of stars and planets, and more. Additionally, research concerning the origin of life on Earth from the perspectives of the Quran and Islamic traditions has been carried out. Several books and articles, particularly in Arabic and Persian, have been written and published on these subjects.

In the late 1960s, 'Abdul Ghanī al-Khaṭīb wrote a book in

Arabic with the title '*Qur'ān wa 'ilm al-jadīd*' (Qur'ān and the modern science), which was translated into Persian under the title '*Qur'ān wa 'Ilmi Imrūz*' by Asadullāh Mubashshirī in 1362 Sh/1983. In chapter three of the book, various viewpoints, including those of Greek philosophers, natural scientists, the Old and New Testaments (Torah and Bible), and the Quran on the creation of existence, are discussed (Khaṭīb, 1983: 69-97).

In 1365 SH/1986, Martyr Dr. Seyyed Reza Pāk Nejād published a book titled *Awwalīn Dānishqā Wa Ākhirīn Payāmbār* (The First University and the Last Prophet) to examine the Quranic perspective on various medical sciences. The third and fourth sections of the first volume of this book discuss animal biology and embryology, referencing some views of natural scientists and the Quran on the emergence of life on Earth (Pāk Nejād, 1986: 1/135-154). In 1376 SH/1997, Dr. Abdul-Karim Bi-Āzār Shirāzī authored a book titled *Quran va Ṭabī'at: Ghuzashteh va Āyandeh* (Quran and Nature: Past and Future) which examines the phenomena of the natural world and other significant topics from the Quranic perspective. In part of this book, he discusses the origin of the Earth, the creation of the cosmos, the emergence of life, and certain other living organisms (Bi-Āzār Shirāzī, 1997: 15-42).

In 1381SH/2002, Dr. Mohammad Ali Rezaei Isfahani published a book titled *Pajūhishi dar 'Ijazi 'Ilmi Quran* (A Research of Scientific Miracle of Quran). In the fourth section of this book, titled *Quran va 'Ulūm-e Zistshenasi* (Quran and Biological Sciences), he examined the origin of life on Earth from the Quranic perspective and analyzed the theory of biological evolution. He also critiqued and analyzed the interpretations of some Quranic commentators regarding related verses (Rezaei Isfahani, 2002: 2/235-293).

In 1384SH/2005, Saeed Hamidi Kaliji authored a book titled *Quran va Ṭabī'at* (Quran and Nature). This book explores the relationship between humans and nature from various perspectives (Ḥamīdī Kalījī, 2005: 170-171).

In addition, in 2001, a book titled *What is the Origin of Man? Answers from Science and the Holy Books* (Maurice, 2001: 166-167) was written by a French physician named Maurice Bucaille, who later converted to Islam. This book examines the origin of

humans from the perspectives of experimental science, the Old and New Testaments, and the Quran, with a brief mention of the origin of life on Earth.

The efforts of Muslim exegetes and Quranic scholars in this field are highly commendable and valuable. However, none of these studies has provided a comprehensive and detailed comparative analysis between the Quran and experimental sciences regarding the origin of life on Earth. Therefore, it is necessary to conduct a detailed and independent investigation into the Quran's perspective and experimental sciences on the origin of life on Earth.

### Conceptual Analysis

Before delving into the main discussion, defining key terms related to the study is essential for a better and more accurate understanding.

#### 1. Life

The term *Ḥayāt* (life) pertains to fields such as biology, biochemistry, and astrobiology. However, there is no universally agreed-upon definition of life among experimental scientists.

Linguistically, *Ḥayāt* means "life" or "becoming alive" and is the opposite of death (*Mamāt*), which refers to "dying" (Dehkhoda, 1338 Sh: 19/843).

In biological terms, life is defined as the ability to breathe, grow, and reproduce, characteristics possessed by living beings like humans, animals, and plants but absent in non-living objects (Hornby, Advanced Learner's Dictionary, 2000: 683).

Thus, the growing and thriving force in plants and animals is considered life. For this reason, a plant is called *Hayy* (a growing entity), and a living, sensing entity is referred to as an animal (Rāghib Iṣfahānī, 1991: 268). The term *Ḥayāt* and its derivatives are used 76 times in the Quran (Abdul Baqi, 1386AH: 283-286).

In the Quran, the concept of *Hayat* encompasses all living beings, and in five verses, the term *Hayy* (the Living) is attributed to Almighty God (Quran 2: 255; 3:2).

#### 2. Experimental Science

Experimental science, equivalent to the English term *Science*, refers to the knowledge of the structure and behavior of the natural and physical world based on facts that can be observed, tested,

and verified through human experience (Hornby, 2000: 1051).

In other words, experimental sciences, also known as natural sciences, study the physical characteristics of the natural world. Scientists in these fields strive to explain natural phenomena through scientific methods and processes based on natural principles.

### 3. Scientific Exegesis

Scientific interpretation is regarded by some Quranic scholars as a methodological approach and by others as an exegetical trend. In this context, "science" refers specifically to empirical sciences, which examine natural phenomena through experimental methods. With a clear understanding of the terms "interpretation" and "science," we will elaborate on the concept of scientific interpretation as understood by Muslim commentators and Quranic scholars. Various definitions of scientific interpretation have been proposed by these scholars:

- Dr. Abdul-Salām Abdul-Majīd writes: "Scientific exegesis is an interpretation where its proponents attempt to make Quranic expressions conform to scientific theories and terms, exerting all efforts to extract various sciences and philosophical ideas from the verses of the Quran." (Al-Muhtasib, 1402 AH: 247).
- Dr. Dhahbī states: "Scientific exegesis is the interpretation that aligns scientific terms with Quranic expressions and strives to derive various sciences and philosophical ideas from it." (Al-Dhahabī, n.d: 2/472).
- Dr. Fahd al-Rūmī writes: "The purpose of scientific exegesis is the effort of the interpreter to discover the connection between the cosmological verses of the Holy Quran and discoveries of experimental sciences, such that the miraculous nature of the Quran becomes evident, demonstrating its divine source and its relevance for all times and places." (Sulayman al-Rūmī, 1406 AH: 2/549).
- Dr. Rezaei Isfahani states: "Scientific exegesis refers to explaining the verses of the Quran through experimental sciences." (Rezaei Isfahani, 1375 Sh: 274).

Among these definitions, Dr. Fahd Rumi's is the most comprehensive. By including the concept of the effort of the interpreter, his definition encompasses both acceptable and unacceptable scientific exegesis while avoiding issues related to enforcing or aligning scientific theories with the Quran.

### The Relationship between the Quran and Experimental Sciences

Islam is a religion of knowledge and logic, emphasizing scientific progress and learning. From its very inception, Islam's mission was grounded in knowledge. The first verses revealed to the Prophet (PBUH) began with reading, knowledge, and the pen (Quran 96: 1-5). Indeed, one of Islam's honors is its contribution to building a great civilization that advanced human knowledge and development over several centuries.

The term *‘Ilm* (Science) and its derivatives are repeated more than 750 times in the Quran. However, it is important to note that the term *‘Ilm* in the Quran does not refer to a specific type of knowledge (e.g., philosophy, social sciences, experimental sciences, etc.). Instead, it encompasses all forms of understanding—any perspective or worldview derived from experience, revelation, or thought (Rezaei Isfahani, 1375 Sh: 133).

Undoubtedly, many verses of the Quran invite humans to ponder and reflect on creation and nature. Such verses are often referred to as the Scientific Verses (*Āyāt-e ‘Ilm*) of the Quran. However, among Muslim scholars and Quranic researchers, there are differing opinions regarding the relationship between the Quran and experimental sciences. These views can be divided into three categories:

#### 1. An Extreme Positive Approach

Some Quranic exegetes and Quranic scholars believe that the Quran encompasses all human sciences. These individuals strive to find the roots of every science in the Quran. In other words, such scholars argue that the Quran is the primary source of all knowledge, from which the foundations of all human sciences can be extracted. Figures like Abu Hāmid Al-Ghazali, Shaykh Ṭanṭawī, and Dr. Abdul Razzaq Nawfal are among those who held the belief that the Quran includes the knowledge of both past and future generations (Rafī‘ī Muhammadī, 1386 Sh: 27-27).

## 2. An Extreme Negative Approach

In contrast to the first group, some Quranic exegetes and Quranic scholars believe that the Quran was revealed to address divine laws, devotional matters, and issues related to the Hereafter, not to expand or detail human sciences. They argue that experimental sciences are not definitive; their theories and hypotheses are subject to change over time. Scholars such as Abu Ishāq Shātibī (d. 790 AH), Shaykh Maḥmūd Shaltūt (d. 1964 CE), and Dr. Dhahabi oppose scientific exegesis, arguing that this interpretive approach imposes external ideas upon the Quran and is therefore erroneous (Rezaei Isfahani, 1385 Sh: 2/199-201).

## 3. A Moderate Approach

Some Quranic exegetes and Quranic scholars advocate a nuanced approach. They accept certain aspects of scientific exegesis under specific conditions while rejecting others. They believe:

The Holy Quran is a divine revelation sent for human guidance and not an encyclopedia of human sciences. However, in proving monotheism, knowledge of God, and divine power, the Quran makes brief references to cosmological and natural sciences. Among those adopting this approach are Sayyid Quṭb (d. 1933), Muhammad Mustafā al-Maraghi (d. 1945), ‘Allāmah Ṭabāṭabā’ī (d. 1360 SH), Ayatollah Mohammad Hādī Ma’rifat (d. 1385 SH), and Ayatollah Makārim Shīrāzī (Rezaei Isfahani, 1385 Sh: 2/201-206).

## The Quran and the Origin of Life on Earth

Some Muslim Quranic exegetes and Quranic scholars believe that certain verses of the Quran refer to the issue of life and its emergence on Earth. They consider this alignment with scientific theories as an example of the Quran's scientific miracles. The primary evidence supporting this claim includes two specific verses of the Quran, namely verse 30 of Quran 21 and verse 45 of Quran 24, as well as certain narrations.

### 1. Quran 21: 30

وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ

*We made every living thing out of water*

Shaykh Ṭūsī writes in Tafsīr Al-Tibyān: “The statement of Allah, (وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ), means that every living thing is created from

water. This includes trees and plants. Some have said that water here refers to semen, from which animals are created. However, the first interpretation is more accurate” (Ṭūsī, n.d: 7/243).

Allamah Ṭabāṭabā’ī writes in Al-Mīzān: “From the apparent context, it is understood that the term (جعل) means ‘created.’ The phrase (كُلُّ شَيْءٍ حَيٍّ) serves as its object, indicating that water has a fundamental role in the existence of living beings. This notion is further supported by another verse: (وَاللَّهُ خَلَقَ كُلَّ دَابَّةٍ مِنْ مَّاءٍ). The context of these verses, which enumerate observable signs, suggests that the ruling of this verse excludes angels and similar beings, implying that their creation is not from water. However, the subject of the verse—the connection between life and water—is a matter well-established and substantiated in scientific discussions.” (Ṭabāṭabā’ī, 1374 Sh: 14/393).

Ayatollah Makārim Shīrāzī explains in Tafsīr-e Nemūneh: “Regarding the creation of all living beings from water mentioned in this verse, two interpretations are prevalent. First, the life of all living beings—including plants and animals—depends on water, whose source is ultimately rainfall. Second, the term (ماء) here refers to semen, from which living beings are usually created. Interestingly, today’s scientists believe that the first traces of life appeared in the depths of the oceans, which is why they consider water the origin of life. When the Quran describes the creation of humans from earth, we must note that ‘earth’ refers to clay, which is a combination of soil and water. It is also noteworthy that scientific research indicates that a significant portion of the human body and many animals are composed of water” (Makārim Shīrāzī, 1371 Sh: 13/396).

Ayatollah Ma`rifat states: The revealed texts that have come from the sources of divine revelation show that water was the first thing created by God in the form of a solid. However, there is a difference of opinion among the commentators regarding the meaning of the water that is the origin of life.) (Ma`rifat, 1416 AH: 6/31-32).

## 2. Qur'an 24: 45

وَاللَّهُ خَلَقَ كُلَّ دَابَّةٍ مِّن مَّاءٍ فَمِنْهُمْ مَّن يَمْشِي عَلَى بَطْنِهِ وَمِنْهُمْ مَّن يَمْشِي عَلَى رِجْلَيْنِ وَمِنْهُمْ



مَنْ يَمْشِي عَلَى أَرْبَعٍ يَخْلُقُ اللَّهُ مَا يَشَاءُ إِنَّ اللَّهَ عَلَى كُلِّ شَيْءٍ قَدِيرٌ

*Allah created every animal from water. Among them are some that creep upon their bellies, and among them are some that walk on two feet, and among them are some that walk on four. Allah creates whatever He wishes. Indeed, Allah has power over all things.*

Regarding this verse, Shaykh Ṭūsī writes: God Almighty informed that He is the Creator of everything that is made of water. He said ‘from water’ because water is the source of creation. Then He transformed it into fire and created the jinn from it; He transformed it into wind and created the angels from it; then it turned into clay and created Adam. The proof that the origin of all animals is water is the statement of God Almighty

وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ (We made every living thing out of water) (Quran 21:30).") (Ṭūsī, n.d: 7/448).

The author of Tafsir-e Nemūneh regarding verse 45 of Quran 24, writes: One of the most important aspects of the creation system, which is one of the clearest proofs of monotheism, is the issue of life in its diverse forms. He says: وَاللَّهُ خَلَقَ كُلَّ دَابَّةٍ مِنْ مَاءٍ (Allah created every animal from water) (Quran 24: 45). Although the origin of all of them returns to water, they still have very different and wondrous creations.

Regarding which water is referred to in this verse, there is a discussion among the commentators. In fact, three interpretations have been mentioned:

1. The first interpretation is that the term “water” refers to the sperm. Many Quranic exegetes have chosen this interpretation, and it is also mentioned in some narrations. The problem with this interpretation is that not all living creatures are created from sperm. Single-celled animals and some other creatures that are considered living (*Dabbah*) are created through cell division, not sperm; unless it is said that the term applies to the type of creatures, not all creatures.
2. The second interpretation is that it refers to the first created being, because according to some Islamic narrations, the first thing God created was water, and then He created humans from it. Also, according to some

modern scientific hypotheses, the first signs of life appeared in the seas, and this phenomenon first ruled over the depths or shores of the seas.

3. The third interpretation is that it refers to the fact that water currently constitutes the main substance of living creatures, and a large part of their composition is water, and without water, no living creature could continue life. These interpretations are not mutually exclusive; however, the first and second interpretations seem more accurate.) (Makārim Shīrāzī, 1371 Sh: 14/507-509).

Ayatollah Ma`rifat also explains God's intended meaning regarding this verse: The great truth that the Quran presents with such simplicity is that every living being was created from water, and this may mean the unity of the fundamental element in the composition of all living beings, (i.e., water). (Ma`rifat, 1415 AH: 7/34).

Meanwhile, from the statements of the Quranic exegetes and Quran researchers regarding the two verses (Quran 21:30 and Quran 24: 45), it can be concluded that some Quranic exegetes, including Sheikh Ṭūsī, Fakhr al-Rāzī, Ṭanṭāwī, and Ayatollah Ma`rifat, believe that the origin of life according to the Holy Quran is (water). Others, like 'Allāmah Ṭabāṭabā'ī and Ayatollah Makārim Shīrāzī, argue that the verse refers to the importance of water in living beings, meaning that water plays an essential role in their existence. Therefore, the verse does not refer to the initial stage of creation (i.e., the origin of life).

## Scientific Theories on the Origin of Life on Earth

For a long time, extensive research has been conducted by scientists and philosophers regarding the issue of life and how it originated on Earth. Undoubtedly, from ancient Greece to the present day, many theories and hypotheses have been proposed on this subject, of which only some will be briefly discussed.

### 1. Theory of Special Creation

According to the theory of special creation, or the theory of divine creation, life on Earth was created by a supernatural power (i.e., God). This theory was proposed by some Christians among natural scientists who believed that God is the source of life on

Earth, and He alone is the Creator of the world, planets, animals, plants, humans, and so on. Furthermore, they believe that all living beings were created at a specific time, and each appeared in its current form from the beginning without undergoing any transformation into another form. (Vishal, 2014: 3)

### Critical Analysis:

**First:** Materialist scientists and philosophers have rejected this theory because it cannot be proven in a laboratory. Additionally, they assume that life, like everything else in the world, is a natural and material phenomenon, and there is no need for a spiritual force to prove its origin (Oparin, 1957: x).

**Second:** The claim that all living beings were created at once in their current form has been rejected by scientific reality. Fossil records indicate that different life forms appeared at different times on Earth. In other words, the differences in the history of fossils and the structure of discovered creatures prove that all living beings did not appear at the same time (Vishal, 2014: 3).

**Third:** Natural scientists such as Darwin believed that living beings evolved from simpler forms to more complete and complex ones. Therefore, the belief that all creatures appeared in their current form from the beginning, without any natural evolution, is also rejected.

## 2. Theory of Deep-Sea Vents

According to the theory of deep-sea vents, the earliest forms of life originated in the locations of oceanic hot springs. In other words, life, according to this theory, began in the hot waters deep within the seas and oceans, where hydrogen-rich molecules were released into the water. Proponents of this theory believe that the high temperatures of the hot springs might have contributed to the stabilization of the molecules that formed life. (Hiscox, 2001: 193)

### Critical Analysis:

**First:** Many natural scientists have rejected this theory because there is no conclusive evidence to support this claim (Hiscox, 2001: 194).

**Second:** There are no definitive verses in the Holy Quran stating that life originated from deep-sea vents.

### 3. Theory of Spontaneous Generation

One of the oldest theories regarding the origin of life on Earth is the theory of spontaneous generation. From ancient Greece until the mid-19th century, it was believed that living organisms could spontaneously arise from inanimate matter. This means that living beings could arise not only from their own kind but could also emerge spontaneously from non-living matter. For example, people believed that insects, frogs, worms, etc., spontaneously arose from decaying matter like mud and rotting substances. It is worth mentioning that some experimental scientists believed that spontaneous generation is not only possible for primitive organisms such as insects, worms, etc., but also for higher animals and beings (including humans). (Oparin, 1957: 1-6)

In summary, the concept proposed by the theory of spontaneous generation is that living organisms can emerge from inanimate matter, without requiring any external factors (such as parents).

#### Critical Analysis:

**First:** The theory of spontaneous generation was criticized by natural scientists, including Francisco Redi, Lazzaro Spallanzani, and Louis Pasteur, who, through various scientific experiments, proved the falsity of this hypothesis. By the mid-19th century, the theory of biogenesis, proposed by Pasteur and others, gained such strong evidence that the theory of spontaneous generation was effectively abandoned. (Oparin, 1957: 18)

**Second:** In the present world, living beings only come from other living beings, and no living organism can arise from inanimate matter. However, in the distant past, this was certainly not the case. In other words, life on Earth has a history of origin, but how and under what conditions remains a mystery. (Makārim Shīrāzī, 1371 SH: 14/510)

**Third:** The theory of spontaneous generation contradicts several Quranic verses that describe in detail how certain living beings are created from other living beings.

### 4. Theory of Eternity of Life

According to the theory of the eternity of life, it is believed that naturally, living beings are born and die on Earth, but life itself, as an immaterial and eternal essence, never dies and will always

exist, reviving in future generations. In other words, according to the proponents of this theory, life is eternal, without beginning or end. Therefore, there is no need to discuss its origin on Earth. It should be noted that this theory is also known as the steady state theory. (Vishal, 2014: 7)

### Critical Analysis:

**First:** This theory, or hypothesis, is not directly related to the issue of the origin of life on Earth. The belief that life on Earth has no beginning or end does not address the issue of the origin of life on Earth and thus does not raise any questions about its origin.

**Second:** A major flaw in the theory of the eternity of life is that this claim cannot be proven by conclusive scientific evidence. Moreover, there is abundant scientific evidence that the Earth itself first formed, and only after that, did life and living beings appear. Therefore, there is no scientific basis for this theory. (Oparin, 1957: 50)

**Third:** This theory contradicts the Quranic reports, which demonstrate that immortality is an exclusive attribute of God Almighty (Quran 2: 255; 3:2; 20: 111; and 25: 25). Thus, only God is immortal and has no beginning or end, while all other beings certainly have a beginning and an end. Therefore, it can be concluded that the life of living creatures on Earth is neither eternal nor everlasting but has a beginning and an end. Hence, the theory of the eternity of life does not align with the Quran and Islamic teachings.

### 5. Theory of Evolution

According to this theory, living species were not in their current form from the beginning. Rather, initially, these microscopic organisms gradually evolved, changing from one type to another, moving from seas to deserts, and from there to the air, giving rise to aquatic and terrestrial plants and birds. The most complete stage of this evolution is represented by modern humans, who emerged from ape-like creatures. (Vishal, 2014: 39)

They believe that by studying the fossils of living organisms, it can be shown that the layers of the Earth's strata indicate that living beings have evolved from simpler forms to more complete and complex ones. Additionally, by examining the bones of

different animals and comparing them, it becomes clear that all living organisms originated from a single source.

### Critical Analysis:

**First:** The theory of evolution is based on probabilistic reasoning, and all the evidence provided by its proponents is not grounded in scientific laws or certainties. This hypothesis has also not been proven through experiments, as we have never encountered mutations that result in significant changes to the primary organs of an animal.

**Second:** The apparent similarity of animals in their egg or embryonic stages, which have not yet undergone full development, does not conclusively prove that all living organisms have originated from a single source. These animals may share a common appearance at this stage, but each of them could have come from a separate origin. Therefore, the human race was created from Adam (PBUH), who himself was created from clay, not from an ape (Quran 3:59; 18: 37; 35:11; 40: 67)

**Third:** The belief that advanced and higher organisms on Earth evolved solely from simpler, organized forms does not align with Quranic reports, as the Quran considers the creation of living beings, especially humans, as an independent act of creation (Quran 23:12; 32:12).

### 6. RNA World and DNA World Theories

The RNA World theory proposes that the origin of life was triggered by the formation of RNA molecules through the chemical combination of water molecules, cyanide, and aldehyde. According to this theory, RNA assembled itself in the primordial Earth's bubble soup and, in turn, transformed amino acids into proteins and enzymes. Ultimately, these enzymes helped RNA to produce DNA, leading to more complex life forms.

In contrast to the RNA World theory, the DNA World theory asserts that the origin of life on Earth began not with RNA molecules, but with DNA molecules. The primary function of DNA is to store information about how molecules should be organized. The genetic sequence in DNA essentially provides precise instructions for how amino acids should be organized into proteins. (Hiscox, 2001: 195)

### Critical Analysis:

**First:** Evidence suggests that both RNA and DNA emerged almost simultaneously from the building blocks of the primordial Earth's bubble soup. Additionally, protein is needed to form DNA, and DNA is necessary for the formation of proteins. The question remains as to how RNA could have persisted in its initial form. While some scientists believe that these molecules could have formed spontaneously on Earth, others argue that it is unlikely such an event occurred (Ibid)

**Second:** In modern biological systems, DNA components are synthesized from RNA components. Therefore, it is logical to view DNA as an evolved form of RNA. However, even the shortest DNA strands require proteins to assist in their replication. This creates the "chicken and egg" paradox: which came first, the chicken or the egg? Consequently, Francis Crick argued that DNA cannot be the "primary genetic unit" because DNA needs proteins to replicate, and if proteins were absent at the origin of life, how could DNA have been replicated? Given this, DNA cannot be considered the origin of life. No rational person can accept that a single substance can be both the cause and the effect simultaneously. Therefore, the fundamental question remains: which of these is the cause, and which is the effect? (Ibid)

### 7. The Theory of Chemical Evolution

The Chemical Evolution theory, or the theory of Abiogenesis, was proposed by two scientists, Aleksandr Oparin and J.B .S Haldane. According to this theory, in the primitive conditions of Earth, non-living matter could give rise to life. However, the conditions of the primitive Earth differ from those of today, which does not allow this theory to be entirely plausible. In other words, the chemical theory posits that life on Earth originated from a series of chemical compounds that led to the emergence of life (Christophe, 1995: 2).

### Critical Analysis:

**First:** Life has never been created in a laboratory; therefore, the hypothesis that life originated from chemical substances is incorrect.

**Second:** Even if this theory is true, natural scientists should have been successful in creating life in a laboratory by now, yet no one has been able to create life until today.

## Conclusion

From the above, the following conclusions are reached:

1. The phenomenon of life is one of the secrets of the Almighty God, and how it originated on Earth is beyond the knowledge and capabilities of humans. To this day, human knowledge, despite its vastness, has been unable to discover or understand it. Undoubtedly, life on Earth has an origin, but how and under what conditions it came into existence is still unclear.

2. In the Holy Quran, there are multiple declarations regarding the creation of living beings and the different stages of their creation, especially concerning the creation and origin of humans, either directly or indirectly. However, there is no specific theory mentioned about the origin of life on Earth, as the Quran is not a scientific encyclopedia; rather, it is a divine book revealed for the guidance of humankind.

3. The Quranic verses (Quran 21:30; 24:45), according to some Quranic exegetes and scholars of the Quran, refer to the origin of life from water. These verses highlight the important role of water in the formation and continuation of life. In other words, these verses do not suggest that all living creatures originated from water; instead, they emphasize that water is an essential substance in the creation and survival of all living beings on Earth, as life on Earth would be impossible without water. Thus, water is considered the primary source of life on Earth.

4. The Quran definitively states that Prophet Adam (peace be upon him) was the first human created on Earth, and the human lineage began with Adam and Eve. Consequently, Prophet Adam (peace be upon him) is known as the ancestor of mankind. He was created from clay or mud, and the rest of humanity was created from a sperm-drop. Therefore, humans have an independent creation, and there is no denial of the existence of other creatures on Earth before the creation of Adam. However, according to scientific reports, these creatures were not humans, and the human race did not originate from them.

5. A review of the theories proposed by natural scientists regarding the origin of life on Earth reveals that all these theories are hypotheses, not established scientific laws. Most of them are based on assumptions or incomplete evidence, and, most importantly, none of these theories are universally accepted by all scientists worldwide.



6. Over many years of research, no natural scientists have been able to create life through chemical processes in a laboratory. In other words, despite significant advancements in various fields of natural sciences, there has been no observation of non-living matter turning into living creatures in any laboratory. This is sufficient evidence that the phenomenon of life is beyond human knowledge and capabilities.

7. In general, no one has ever claimed to be the creator and originator of life, while according to Quranic reports, God Almighty has decisively stated that He is the primary source and origin of life. Therefore, God alone is the Creator and Originator of all life and all living and non-living beings.

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