

EVOLUTION'S ACHILLES' HEELS

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Larry Springer: choslyf@gmail.com

OUTLINE

0. INTRODUCTION
1. NATURAL SELECTION
2. GENETICS
3. ORIGIN OF LIFE
4. FOSSIL RECORD
5. GEOLOGIC RECORD
6. RADIOMETRIC DATING
7. COSMOLOGY
8. ETHICAL IMPLICATIONS
9. SUMMARY

DEFINITION AND PROBLEMS

Life is deemed to have arisen from chemical evolution (abiogenesis). Dictionary.reference.com defines this as: "*The formation of complex organic molecules from simpler inorganic molecules through chemical reactions . . .*" It is in effect, life coming from nonliving molecules.

The Miller-Urey experiments

An experiment in the 1950s by Stanley Miller and Harold Urey attempted to produce amino acids needed for living protein. They drove reducing gases, thought to exist on the primordial earth, past a 60,000-volt spark simulating lightening, which precipitated reaction products. 'No intelligence was required for the origin of life' was proclaimed. However the results were a failure as no amino acids useful to life were formed. Instead a large insoluble, toxic, and carcinogenic mixture of tar or resin was.¹ Any large amino acids needed for life would have been broken down, verifying: 'random chemical reactions produce random chemicals'!

The problem of chirality

Chirality (ky-rality) covered in 'Genetics', is the 'right-handedness' and 'left-handedness' of molecules because they are 3-dimensional. All sugar molecules must be 'right-handed' in DNA 'backbones', and all amino acids in proteins must be 'left-handed'. This is only the beginning of a countless list of impossible problems fabricating a living organism in a lab, let alone it arising in nature.

The implausibility of forming the right amino acids

The synthesizing of just a small few amino acids in the laboratory required scientific intelligence. Colossal problems that must be overcome for nature alone to form the correct large amino acids are:

- "An extremely concentrated mixture of just the right chemicals would be required. An original 'primordial soup' would not be nearly rich enough to form the amino acids required for life.
- A continuous high-energy and high voltage (tens of thousands of volts) electrical source would be required for an extended period (one week in the Miller experiment) to produce amino acids.
- Just the correct coupling agents would be needed, but there are none in nature.
- The 'soup' could not contain water as it prevents large molecules by breaking them back down.
- Each step in the process would have to occur in a completely oxygen free environment to prevent oxidation. Again, this situation would have never existed in nature.
- Temperatures vital to produce amino acid intermediates would destroy end-product proteins.
- Even amino acids, even built in a lab, do not form biologically needed alpha peptide bonds."²

The impossibility of forming just one protein, let alone life

Even if enough proper amino acids were formed, additional astronomical requirements make it impossible for nature alone to ever have formed even one viable protein required for life:

- “The amino acids produced would be mixed with a vast amount of tars, etc., fouling reactions.
- Any amino acids produced would be a 50/50 mix of both left (L) and right (R) handed.
- Cross-reactions occur between amino acids and sugars, amines, ketones, aldehydes, and carboxylic acids in the mix. These would prevent the amino acids from forming into proteins.
- There are approximately 500 different amino acids found in nature, but none are the ones needed for life. There are 20 different biological proteins. So not just any amino acid, but these select 20 large proteins need to be produced by nature.
- A minimum of about 400 amino acids is needed to make up the smallest viable protein.
- Protein demands only left-hand amino acids. If even only one is right handed the protein will not function. However, no method has been conceived, even in a laboratory, to enrich a mixture by even 1%, so there is no chance that nature could produce 100% left-hand ones.
- The amino acids must be in an exact sequence for the protein to fold into the proper 3-dimensional shape to function. If even one is missing or out of order the protein will not work.
- There are trillions of possible combinations, but only a few thousand of these are useful in life.
- Worst of all evolution claims anything possible if given enough time, but geological time is no help. Large bio-molecules outside a living system decompose over time.”²

The RNA World Model

The RNA world model is the belief that RNA could perform both roles of the molecular structure and the protein enzymes functions. However, this has more problems than amino acids to protein. In an NIH research report partially titled, “the worst theory of the early evolution of life”, the author states:

“The problems . . . are well known. . . . objections have been raised to the RNA world hypothesis:
(i) RNA is too complex a molecule to have arisen prebiotically;
(ii) RNA is inherently unstable [far more than DNA with about one million breaks per day per cell];
(iii) catalysis is a relatively rare property of long RNA sequences only;
(iv) the catalytic repertoire of RNA is too limited. . . .”³ In addition:

- RNA requires sugars, phosphates, and bases, in order to form bio-molecular structures.
- Fabricating RNA building blocks: extremely complicated in the laboratory, impossible in nature.
- Cytosine, one of the primary amino acids (the ‘C’ in the ‘A’ ‘C’ ‘G’ ‘T’ bases), has a half-life of 340 years at 25⁰ C, too unstable to evolve over the alleged millions of years of geological time.
- Even simpler RNA building blocks are unstable outside the cell.
- RNA requires chirality (‘right-handed’) in its sugar ‘backbone’.
- RNA would have to accurately replicate itself without an existing template. Even the 96.7% accuracy of a highly touted case isn’t close to the 99.9999999% human DNA requirement.
- Free phosphate (PO₄³⁻) is essential for life. Research experiments use about a million times the amount in seawater. In nature, calcium and magnesium lock phosphorous into insoluble solids.
- Enzymes are needed as a catalyst; the RNA molecule is very limited in this respect.
- RNA couldn’t yield modern organisms that have DNA coded protein and enzymes. The RNA molecule would have required new decoding machinery to switch from RNA to DNA/protein.

‘RNA World’ is not supported by evidence. A leading researcher of models, Gerald Joyce, wrote:

“The most reasonable assumption is that life did not start with RNA . . . an RNA world, like the origins of life in general, is fraught with uncertainty and is plagued by a lack of experimental data.”⁴

There are other models for the origin of life, each successively more and more problematic. In the end, microbiologists are finding that the complexity of life precludes having arisen from nature.

A.G. Cairns-Smith is an evolutionary organic chemist and molecular biologist at the University of Glasgow. The reviewer of his book on chemical evolution states:

“And to Andrew Cairns-Smith parts of it, at least, are despairingly implausible . . . he proceeds to explain . . . why he does not believe it. There are too many difficulties. Consider, for example . . . nucleotides cannot be assembled . . . by any kind of easy synthesis. Cairns Smith gives no less than 19 reasons why not. . . . We seem to be dealing with endless interrelated chicken-and-egg questions.”⁵

Evolutionary concepts for origins are at the end of the road, leaving only one option, and it certainly isn't panspermia, life brought here by aliens. It is that God created life, but even with the overwhelming evidence given in 'GENETICS', apparently some hold endless chicken-and-egg beliefs more credible.

ENZYMES

The need for enzymes, and DNA / enzyme complications

An enzyme is a protein acting as a catalyst. Some speed up reactions by 10^{18} , so a reaction taking millions or billions of years will take only milliseconds! The simplest organism requires 350 enzymes.

The smallest enzyme requires a minimum of over a hundred amino acids, and each must consist of an exact sequence of all 'left-handed' amino acids that are all in the exact right order. Even assuming less than 1/10th the smallest, with only 10 amino acids per enzyme, the chance occurrence of the exact 350 enzymes needed, assembled with the select 20 amino acids for life, would be one in $20^{10 \times 350}$, or one in 10^{5000} . This would be equivalent to guessing a five thousand-digit PIN number!

The real chicken-and-egg problem is that enzymes are required to read info on DNA, but instructions to build enzymes are on the DNA, and the info is meaningless without enzymes & DNA!

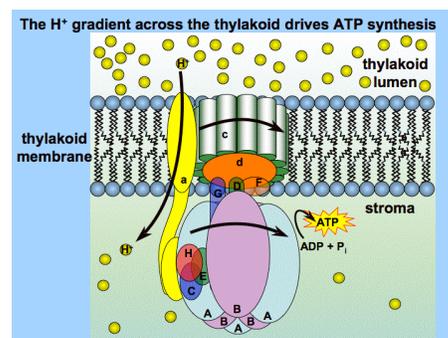
So, the DNA, enzymes, and instructions would have had to all evolve together!

PROTEIN ATP MOTOR-GENERATOR

ATP synthase

Residing in the mitochondria, an organelle in the cell, is an extraordinary protein, the ATP synthase proton driven motor-generator. It combines ADP and phosphate to produce ATP. Adenosine TriPhosphate, 'the energy currency of the cell'. All life, including the first organism, could not have existed without it.

- Our body generates over half its weight in ATP daily.
- Even the smallest first organism would have required it.
- Its 10,000-rpm motor is as efficient as scientific laws allow. Researchers said, “Our results suggested a 100% free-energy transduction efficiency . . .”⁶
- The secular journal Nature even called them, “Real engines of creation.”⁷
- A cell's organelles receive energy by extracting phosphate, and an ATP motor then reinserts it.
- ATP is not in nonliving systems. Where did the first living organism get it before producing it?



REQUIREMENT OF INFORMATION AND LANGUAGE

The spontaneous accumulation of self-replicating molecules will not produce life, as amino acids, proteins, DNA, or even RNA will never assemble into a viable cell. Even if they could it wouldn't be even close to creating life. What is also needed is meaningful information and language.

The simplest living cell, the *mycoplasma genitalium* has 580,000 letters of DNA equivalent to 600 kilobytes of information. But, like a book, they mean nothing unless meaningfully created and interpreted. Nothing in chemistry will produce meaningful information. Even if a meaningful instruction evolved after millions of years, it would still be surrounded by countless random letters. Spontaneous

accumulation of self-replicating molecules is the opposite of what is needed to produce life. Life needs:

- A prodigious amount of organized meaningful information.
- Very tight control in function.
- Protection from a harmful environment within the cell.
- The ability to be accurately copied for replication (99.9999999% accuracy in human DNA).
- The exact assemblage of enzymes to repair DNA damage (a million breaks per day per cell).

Even individually these would each be a daunting challenge to evolve. However, they all need to be present in the first life form that appears. Evolutionary microbiologists realize this as a 2009 article:

“There is no doubt that the common ancestor possessed DNA, RNA, and proteins, a universal genetic code, ribosomes (the protein-building factories), ATP and a proton-powered enzyme for making ATP. The detailed mechanisms for reading off DNA and converting genes to protein were also in place. In short, then, the last common ancestor of all life looks pretty much like a modern cell.”⁸

As the first life, the lowest universal common ancestor (LUCA) is claimed the cell, all the processes forming it had to occur only by random chance as evolution can only occur on living organisms.

SUMMARY

- ❖ The Miller-Urey experiment failure, verified random chemical reactions produce random chemicals.
- ❖ There's no known way of nature overcoming the chirality problem in producing proteins and DNA.
- ❖ Amino acids must be in an exact sequence for the protein to fold properly, or it will not function.
- ❖ Geological time is of no help. Large bio-molecules outside a living system decompose over time.
- ❖ Over a dozen more equally serious problems prohibit any chance of life coming from nonlife.
- ❖ DNA is a very unstable molecule. It would have broken down over the supposed long geological time required to evolve the first viable living entity.
- ❖ RNA is even more unstable than DNA. This precludes any chance of an 'RNA World' scenario.
- ❖ Enzymes are critical for life. Some speed up processes as much as 10^{18} . The chance occurrence of an enzyme only $1/10^{\text{th}}$ the size of the smallest would be equal to guessing a 5000 digit PIN.
- ❖ Life requires ATP. How/where did the first organism get it before producing it as it is not in nature?
- ❖ Enzymes read DNA, but instructions to build them are on DNA, which needs enzymes to read it, which can't be read without the enzymes! More chicken-and-egg problems than Frank Purdue.
- ❖ After over a half century of research by intelligent, highly educated scientists, laboring tens of millions of hours, using high-tech equipment, and amassing enormous amounts of data, we are no closer to understanding life yet alone ascertaining how it could have arisen by naturalistic means.
- ❖ All known scientific laws argue against any possibility of life from nonlife. So thinking it occurred implicates believing scientific laws were violated. This is not science, but faith in naturalism.

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