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EVOLUTION HOPES YOU DON'T KNOW CHEMISTRY: THE PROBLEM WITH CHIRALITY

by Charles McCombs*

When the newspaper headline, "Life in a Test-tube," appeared in 1953, the evolutionary community became very excited because they viewed the work of Stanley Miller and Harold Urey as scientific proof that life could have been formed from chemicals by random chance natural processes. In that classic experiment, Miller and Urey combined a mixture of methane, ammonia, hydrogen, and water vapor and passed the mixture through an electric discharge to simulate lightning. At the end of the experiment, the products were found to contain a few amino acids. Since amino acids are the individual links of long chain polymers called proteins, and proteins are important in our bodies, newspapers quickly reported there was laboratory evidence that now proved life came from chemicals.

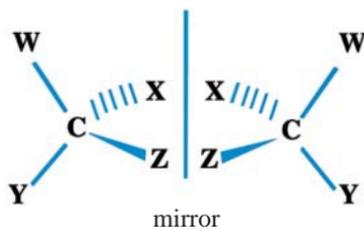
As a Ph.D. Organic Chemist, I have to admit that the formation of amino acids under these conditions is fascinating, but there is a major problem. Life was never formed in that experiment. The product was amino acids, which are normal everyday chemicals that do not "live." Even unto this day, there is no known process that has ever converted amino acids into a life form, but this fact does not stop evolutionists from claiming that this experiment is proof that life came from chemicals. Evolutionists know that amino acids do not live, but they call this proof anyway because they claim that amino acids are the building blocks of life. This claim suggests that if enough building blocks are present, life would result, but this conclusion is only an assumption and has never been demonstrated. Amino acids may be the building blocks of proteins, and proteins are necessary for life, but that does not mean that amino acids are the building blocks of life. I could go to an auto parts store and buy every single part to construct a car, but that does not provide me with a

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functioning motor vehicle. Just as there had to be an assembler to make a moving vehicle from those auto parts, there had to be an assembler of those amino acids to make the proteins so that life could exist in our bodies.

Ever since 1953, scientists have been asking if the formation of amino acids in those experiments proves the claim that life came from chemicals? Many have debated if this experiment validates evolution or does the evidence point to an Omnipotent Creator? For 50 years, scientists have been asking questions; for 50 years, the discussion ends in debate. Call it professional curiosity, but as a scientist, I always wondered why there are more debates on this issue than discussion of the facts. Then I realized that a discussion of the facts would inevitably lead to a discussion of the subject of chirality. Chirality is probably one of the best scientific evidences we have against random chance evolution and chirality totally destroys the claim that life came from chemicals. Obviously, this is one fact they do not even want to discuss.

Chirality is a chemical term that means handedness. Although two chemical molecules may appear to have the same elements and similar properties, they can still have different structures. When two molecules appear identical and their structures differ only by being mirror images of each other, those molecules are said to have chirality. Your left and right hands illustrate chirality. Your hands may appear to be identical, but in reality, they are only mirror images of each other, hence the term handedness. For this reason, chirality can exist as a right-handed or a left-handed molecule, and each individual molecule is called an optical isomer.



What is the problem of chirality? In our bodies, proteins and DNA possess a unique 3-dimensional shape, and it is because of this 3D shape that the biochemical processes within our bodies work as they do. It is chirality that provides the unique shape for proteins and DNA, and without chirality, the biochemical processes in our bodies would not do their job. In our body, every single amino acid of every protein is found with the same left-handed chirality. Although Miller and Urey formed amino acids in their experiments, all the amino acids that formed lacked chirality. It is a universally accepted fact of chemistry that chirality cannot be created in chemical molecules by a random process. When a random chemical reaction is used to prepare molecules having chirality, there is an equal opportunity to prepare the left-handed isomer as well as the right-handed isomer. It is a scientifically verifiable fact that a random chance process, which forms a chiral product, can only be a

50/50 mixture of the two optical isomers. There are *no exceptions*. Chirality is a property that only a few scientists would even recognize as a problem. The fact that chirality was missing in those amino acids is not just a problem to be debated, it points to a catastrophic failure that “life” cannot come from chemicals by natural processes.

Let’s look at chirality in proteins and DNA. Proteins are polymers of amino acids and each one of the component amino acids exists as the “L” or left-handed optical isomer. Even though the “R” or right-handed optical isomers can be synthesized in the lab, this isomer does not exist in natural proteins. The DNA molecule is made up of billions of complicated chemical molecules called nucleotides, and these nucleotide molecules exist as the “R” or right-handed optical isomer. The “L” isomer of nucleotides can be prepared in the lab, but they do not exist in natural DNA. There is no way that a random chance process could have formed these proteins and DNA with their unique chirality.

If proteins and DNA were formed by chance, each and every one of the components would be a 50/50 mixture of the two optical isomers. This is not what we see in natural proteins or in natural DNA. How can a random chance natural process create proteins with thousands of “L” molecules, and then also create DNA with billions of “R” molecules? Does this sound like random chance or a product of design? Even if there were a magic process to introduce chirality, it would only create one isomer. If such a process existed, we do not know anything about it or how it would work. If it did exist, how were compounds with the other chirality ever formed? Even if there were two magical processes, one for each isomer, what determined which process was used and when it was used, if this was a random chance natural process? The idea of two processes requires a controlling mechanism, and this kind of control is not possible in a random chance natural process.

However, the problem with chirality goes even deeper. As nucleotide molecules come together to form the structure of DNA, they develop a twist that forms the double helix structure of DNA. DNA develops a twist in the chain because each component contains chirality or handedness. It is this handedness that gives DNA the spiral shaped helical structure. If one molecule in the DNA structure had the wrong chirality, DNA would not exist in the double helix form, and DNA would not function properly. The entire replication process would be derailed like a train on bad railroad tracks. In order for DNA evolution to work, billions of molecules within our body would have to be generated with the “R” configuration all at the same time, without error. If it is impossible for *one* nucleotide to be formed with chirality, how much less likely would it be for billions of nucleotides to come together exactly at the same time, and all of them be formed with the same chirality? If evolution cannot provide a mechanism that forms one product with chirality, how can it explain the formation of two products of opposite chirality?

Chirality is not just a major problem for evolution; it is a dilemma. According to evolution, natural processes must explain everything over long periods of time. However, the process that forms chirality cannot be explained by natural science in any amount of time. That is the dilemma, either natural processes cannot explain everything, or chirality doesn’t exist.

If you're in doubt as to which is correct, you are a living example of the reality of chirality. Without chirality, proteins and enzymes could not do their job; DNA could not function at all. Without properly functioning proteins and DNA, there would be no life on this earth. The reality of chirality, more than any other evidence, did more to convince me of the reality of an all-powerful Creator. I hope it will do the same for you.

I find it interesting that when creationists start talking about God's supernatural creation, evolutionists usually counter by saying that everything must be explained by natural science and divine intervention is not science. I find this remark extremely amusing. When we show them that the laws of natural science cannot explain the existence of chirality, evolutionists say that the process happened a long time ago by some unknown method that they cannot explain. Now who's relying on a supernatural explanation? Although they would never call it divine intervention, they certainly are relying on faith and not on scientific facts. Evolution just hopes you don't know chemistry.

There is another problem with DNA and how it works in the human body. As part of the normal replication process for DNA, an enzyme travels down the DNA strand



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