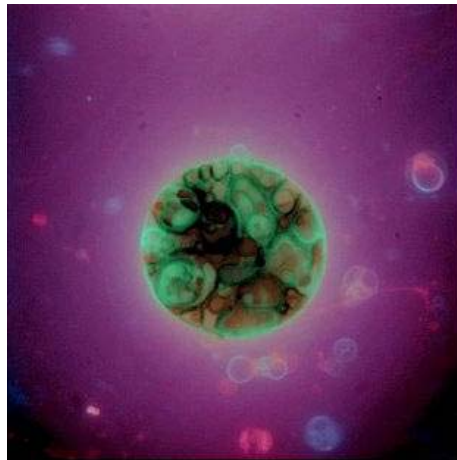


Does “Wet Artificial Life” Prove God Unnecessary?



The Big Story

On August 20th, 2007, the Associated Press published a news story updating the work of international scientists who are working in the area of “Wet Artificial Life” (you can download a Word Document copy of the article [HERE](#)). This story was widely disseminated in the national news services and describes the work of a handful of scientists who are trying to create life from non-living chemicals. While the work has been continuing for years, the story came to the forefront because scientists appear to be on the verge of a breakthrough. They report that they are only three to ten years away from creating sustainable artificial cellular life.



Vesicles, artificial membranes for cells, made from 'scratch'

Mark Bedau, the chief operating officer of ProtoLife (Venice, Italy), one of the scientific companies that are involved in the race to be the first to create artificial life, made an interesting statement when interviewed for the story:

"It's going to be a big deal and everybody's going to know about it. We're talking about a technology that could change our world in pretty fundamental ways in fact, in ways that are impossible to predict. Creating protocells has the potential to shed new light on our place in the universe. This will remove one of the few fundamental mysteries about creation in the universe and our role."

This is a very bold statement on the part of Mr. Bedau, as it seems to imply that we are closer to understanding something about the nature of our first appearance as living beings, and the function that we are to play in the universe. That's pretty heady stuff! It's clear from reading the article that scientists who are involved in this work believe that completely natural processes alone can account for the formation of life in our universe. They are trusting that some sort of evolutionary process will explain the formation of life, even here at this simple cellular level.

Jack Szostak, from the Harvard Medical School is quoted as saying that he fully expects evolution to play a major role in this experiment. He believes that once scientists begin the process, Darwinian evolution may simply take over:

“We aren't smart enough to design things, we just let evolution do the hard work and then we figure out what happened”

The bias of the AP article is clearly toward naturalism (the idea that the origin of life can be explained naturally, without the intervention of God), and many who read this article may confuse the work being done here with “Origin of Life” experiments that have previously tried to describe a ‘natural’ origin for life in the universe. But a careful reading of the process involved reveals that the “Wet Artificial Life” project really supports the claims of theists. Let’s see how that can be so.



What’s It Going to Take?

The AP story reports that scientists believe three steps will be necessary before artificial life can be created in the laboratory:

- 1** *First, a container, (or membrane) for the cell must be created. This membrane must be specifically designed to prevent ‘bad’ molecules from entering the new protocell, yet also be designed to allow ‘good molecules’ in. The container must also be ‘friendly’ enough to allow these molecules to multiply.*
- 2** *Next, a genetic system must be created that controls the functions of the new cell. This genetic system must allow the cell to reproduce and ‘mutate’ as the cell responds to environmental changes.*
- 3** *Finally, a metabolism must be created that will allow the cell to extract raw materials from the environment as food and then change this raw material into energy.*

Their excitement at this time is centered on the fact that they appear to be very close to accomplishing step one; the creation of the cellular container. They appear to be only six months away from success in this area:

“One of the leaders in the field, Jack Szostak at Harvard Medical School, predicts that within the next six months, scientists will report evidence that the first step creating a cell membrane is ‘not a big problem.’ Scientists are using fatty acids in that effort.”

The article indicates that Szostak believes that the next step in the process may be achieved by allowing evolution to kick in:

“His idea is that once the container is made, if scientists add nucleotides in the right proportions, then Darwinian evolution could simply take over.”

Not everyone appears to share Szostak’s enthusiasm for the creative ability of the evolutionary process, however. Steve Benner, a biological chemist at the Foundation for Applied Molecular Evolution in Gainesville Florida, is tackling the second step by taking matters into his own hands:

“(Benner is) attacking that problem by going outside of natural genetics. Normal DNA consists of four bases adenine, cytosine, guanine and thymine (known as A,C,G,T)”

molecules that spell out the genetic code in pairs. Benner is trying to add eight new bases to the genetic alphabet.”

By creating these extra ‘bases’ from outside the natural order, Benner is taking extraordinary creative license as he tries to create a pallet from which the new artificial cell can form DNA. And Benner is obviously not trusting that some evolutionary process can accomplish the task. He’s directly involved, creating previously unknown nucleotides in an effort to guide the process.

And what is the result? A very weak and fragile protocell that will need protection from the environment. Mark Bedau recognizes that this fragile cell will be remarkably vulnerable:

“When these things are created, they’re going to be so weak, it’ll be a huge achievement if you can keep them alive for an hour in the lab”



So, What Does It All Prove?

Many in the scientific world are anxiously awaiting the possibility that we will create life from non-life in the very near future. As philosophical naturalists, these scientists believe that the creation of life from non-living matter will finally explain the process by which life could evolve in the universe from simple base chemicals, without ANY divine intervention or creation. As a theist, I am also excited about the reality that this process demonstrates, even as I have serious concerns about the path on which we, as humans, are about to embark. Like the philosophical naturalists in the scientific community, I too believe that the “Wet Artificial Life” projects tell us something about our origin. But unlike these scientists, I believe these experiments demonstrate CREATIONISM in a rather convincing way.



The “Wet Artificial Life” Project is NOT An “Origin of Life” Project

We’ve got to remember that scientists have been trying for generations to prove that life can originate without any creative input from the hand of God. Classic “Origin of Life” projects seek to understand and simulate the conditions of the early earth in an effort to recreate a set of entirely natural processes in which life can originate. If these projects could demonstrate an entirely natural path from non-living chemicals to living organisms, they would successfully prove that God’s creative power is unnecessary as we seek to explain our origin. But efforts in the area of “Origin of Life” research have repeatedly failed to find that path. The origin of life is as mysterious today as it was on the very first day of this research.

But “Wet Artificial Life’ research is very different from “Origin of Life” research. “Wet Artificial Life” research makes NO effort to reproduce a completely natural path from non-life to life. In fact, scientists are constantly intervening as part of a creative process in order to shape, connect, control, protect, design and equip the simple microscopic structures they hope to eventually form into some type of very primitive protocell. In these efforts to CREATE life, scientists themselves are acting as a CREATIVE agent. In the end, their efforts will only demonstrate the need for a CREATOR!



A Creator and Designer is Necessary

Let’s look carefully at the press release related to this “Wet Artificial Life” project and see if it tells us anything about the need for a Creator. Over and over again, we read about the need for creative and protective input on the part of scientists that demonstrates the desperate need for a powerful Creator in the creation of life.

1 They're Controlling the Creative Environment

Before scientists can even begin to try to structure the chemical elements required to build the protocell, they've got to create a specific environment that is friendly to this creation. This environment does NOT reflect the harsh nature of the early earth. As a result, the experiment will not provide answers to the question of earthly origin of life. In controlling the environment in this way, they are acting CREATIVELY even before the work begins. They are, in fact introducing the hand of a designer.

2 They're Relying on Pre-Existing "Scratch"

Scientists might actually make the claim that they are creating life from "scratch" but, in reality, they can't account for how these 'scratch' chemicals and nucleotides enter into existence in the first place. Where does the 'scratch' come from? We can't bake without flour and sugar and basic cooking ingredients. The same is true in these experiments. But one has to ask, where do the 'cooking ingredients' come from in the first place? This mystery is perhaps great enough on it's own to postulate the existence of a Grand Creator.

3 They're Using Fatty Acids

It's also interesting to note that Jack Szostak said that scientists are using fatty acids to shape and create the membrane wall for the artificial cell. When scientists use these building blocks (acids), they are already jumping well ahead of the supposed 'evolutionary' curve and employing a relatively complex set of biological components. In essence, the scientists are already 'borrowing' from 'life' in order to create life. When employing fatty acids, scientists are no longer building life from base chemicals. They are now jumping much further along in the process and using building blocks that are themselves incredibly difficult to form naturally. The evolutionary process has the burden of having to account for the initial formation of acids such as these in the first place, and these acids are incredibly complex and difficult to account from a numerical probability standpoint.

4 They're Controlling the Probabilities

And controlling the numerical probability appears to be a key strategy for these scientists. For example, Szostak says that his idea for 'kick starting' some sort of 'evolutionary' process inside the artificial cell (necessary for the creation of a genetic system) is to "add nucleotides in the right proportions" This is, of course, the problem. Philosophic naturalists have to imagine a scenario in which a vast number of nucleotides can combine WITHOUT any outside intervention, and statistical probability models for this are staggeringly prohibitive. There is simply NOT enough time in the history of the planet for this to occur randomly. Think about it for a minute. Outside of the controlled laboratory environment, how can raw, unguided naturalism account for the vast quantity of genetic material that simply must exist in close proximity? And this material must come into contact repeatedly (millions of contacts) before the proper relationship could ever possibly occur, giving life even the slightest chance of survival.

5 They're Controlling the Proportions

In addition to this, a creative force is required to provide the "right proportions". And even if Steven Benner could create new genetic bases in an effort to find the right proportion, these bases would still have to be properly arranged if they are ever to amount to anything. They must eventually provide INFORMATION. The arrangement is

critical and it is specific; it requires a DESIGN effort. Naturalism would require tens of thousands of the A,C,G,T nucleotides to come together in some kind of PRESCRIBED order to have enough genetic code available for even the simplest workable cell. The mathematical probability is astronomical.

6 They're Controlling the Resulting Environment

Finally, even Mark Bedau admits that the resulting protocell is far too fragile to exist in the natural environment of the early earth. In fact, even in the controlled and protected environment of the laboratory, Bedau suspects that the cell is "going to be so weak, it'll be a huge achievement if you can keep them alive for an hour in the lab". The last universal common ancestor (LUCA) that is required for evolution to begin turns out to be so fragile that its very existence is HIGHLY improbable according to the scientists themselves.

Even from the cursory description of the "Wet Artificial Life" program that is provided in the press releases, it is clear that the process itself is replete with DESIGN efforts! Scientists are acting as DESIGNERS to control and shape the process that may eventually form some type of primitive cellular life. The "Wet Artificial Life" project is not a proof that life can occur from completely natural processes. Instead, it is a proof that a Creator is necessary if non-living matter has any hope of coming to life. The Christian worldview is once again substantiated by the work of the scientific community.



Our Desire to Be God

Have you ever wondered what lies at the core of man's desire to create life in the first place? While scientists may argue that their efforts are driven by a desire to help mankind and cure disease, have you ever wondered if there might be another motive? The desire to 'play God' is as ancient as the human race. It is rooted in pride and a desire to be more than we were created to be. And this desire to elevate ourselves to the role of God is dangerous in many ways. Even those who deny the existence of God can recognize that this behavior has dangerous potential. After all, how many horror and science fiction films have been based on the twisted idea that some scientist might unleash unspeakable evil as the result of his efforts to create life?

But for the Christian, there is yet another reason to fear this kind of behavior. The history of our faith tells us that the greatest sins are generally tied to our attempts to play God. Remember the first sin ever recorded in the scriptures?



Genesis 3:1-7

Now the serpent was more crafty than any beast of the field which the LORD God had made. And he said to the woman, "Indeed, has God said, 'You shall not eat from any tree of the garden'?" And the woman said to the serpent, "From the fruit of the trees of the garden we may eat; but from the fruit of the tree which is in the middle of the garden, God has said, 'You shall not eat from it or touch it, lest you die.'" And the serpent said to the woman, "You surely shall not die! "For God knows that in the day you eat from it your eyes will be opened, and you will be like God, knowing good and evil." When the woman saw that the tree was good for food, and that it was a delight to the eyes, and that the tree was desirable to make one wise, she took from its fruit and ate; and she gave also to her husband with her, and he ate.

From a Biblical worldview, any attempt on our part to act as though we are God, is simply a misguided effort to think of ourselves as something more than we were ever created to be. If nothing else, the “Wet Artificial Life” project should demonstrate the reality that we are created beings, and as such, have no right to act as though we are the creators. When we do this, we take the risk of biting off more than we can chew. As we consider with the awesome responsibility of creation, let’s be careful not to underestimate the dangerous possibilities