Chemical soup is not your ancestor

Interview with Dr Aw Swee-Eng, M.B., B.S., Ph.D.(Lond.), FRC Path., MI Biol. (Lond.)

by Carl Wieland

First published in:
Creation Ex Nihilo **16**(2):46–47
March-May 1994

Biochemist and head of nuclear medicine at Singapore General Hospital, Dr Aw says it is becoming even *more difficult* to believe that the first cell was produced by evolution.

Carl Wieland [CW]: Dr Aw, how did you become a Christian?

> **Dr Aw [AS]:** I was rethinking values for some time. I was looking for the truth and I had read the various religious books such as the Koran, Bhagavadgita, Upanishads, Rigveda and then some of the writings of Confucius. But they did not satisfy me spiritually until I read the Bible and I noticed a vast difference between God's Word and the other writings. After I became a Christian I really passed through an unhappy time because nobody introduced me to Bible study and fellowship and prayer. I was just left to myself. At the end of my first year in the university, I came in contact with some Christians who knew the Lord, loved His Word and showed me what it meant to them. And what it meant to be a good disciple. After that I had great difficulty with trying to match what I knew in the world of science and what the Scripture teaches in Genesis. Then I began my great learning process of understanding God's Word in the light of what we have in nature (God's works). It is through this that I came into contact with the work of Creation Science Foundation and Creation magazine, for which I am very thankful.

[CW]: Dr Aw, you're obviously familiar in your field of biochemistry with theories of how chemicals allegedly evolved into the 'first cell.' How would you rate the best of these from a scientific viewpoint?

> **[AS]:** Very poorly. There have been many such evolutionary theories, from the early days down to the present period. But the difficulties have not decreased, they have increased, because the more we know about the cell, the more difficult it is to imagine that such an intricate thing could have just evolved by sheer random process over time without any directive force.

Are there some secular evolutionists who are coming to this realization?

> I suspect that many of them have realized the futility of thinking in purely chemical evolutionary terms. But as you know they are reluctant to change their point of view, at least in public because of the religious nature of the opinions held.

You mean that for them chemical evolution is sort of like a religion?

> Yes, indeed. For many of them it is the anchor with which they keep to the reality of the world they imagine they are in. And to let go—that is awfully painful.

If they were to acknowledge that a great intelligence was necessary to put the order and information on the machinery of the first living things, I suppose that would mean they would have to face up to their responsibility to this Creator?

> That's precisely it. I think they are intelligent enough to realize that there are only two views of the world. Either it came about in the way it has been advertised, that is through chance acting on matter over long periods of time, or the alternative is the special creation told by the Scripture. Many of the best thinkers come to this conclusion, the made-up stories in-between do not impress many.

Many theistic evolutionists I know of will not even allow God to at least create the first cell: they hold to chemical 'chance' evolution theories, but still somehow involve God.

> That is an interesting point. I think it is because for them to admit that God *directly* created the first cell, they might as well admit that God created everything *directly*.

Why is that?

> Because a cell is already so complex; the more you know the cell the more you marvel at the intricacies, the regulatory mechanisms, the self-preservation of the cell which is inbuilt in addition to its complexity.

What about the belief that, 'OK, today's cells are very complex, but maybe the first one didn't have to be that complex,' is that a logical position?

> This concept of the 'protocell,' it's sheer nonsense because a cell by definition must have enormous metabolic complexity or it will not survive. It's not just a bag of protoplasm with just fluid and a few salts and bits of furniture floating around, but it's built to control itself and propagate itself and for that there must be a minimum complexity which is the problem for 'chemical evolution.'

Could you compare the minimum complexity of a self-reproducing 'first cell' to some machine that we would all be familiar with?

> There is no comparison at all, because if you look at the 'simplest' known cell, say a bacterium, it is acknowledged by the best microbiologists and biochemists that such cells are extremely complex, with self-diagnosis and repair systems, and incredibly complex mechanisms which are still not fully understood. People can spend their lifetime just studying the cell membrane; entire departments in universities study just the chemical 'pumps' that keep the integrity of the membrane. I don't see how anybody can say there is such a thing as a protocell, there just isn't such an animal and could never have been.

Many people still remember the experiment by Stanley Miller in 1953 in which he mixed up some chemicals and a spark and got some very simple 'building blocks' of life. I read recently an interview with Stanley Miller in which he basically admitted that he hadn't gotten any further.

> Well, that's what I call an honest man, because the original experiment of the sparking produced only certain amino acids. And they are all a

mixture of left and right-handed forms. Life is made up only of left-handed forms so to get the mixture of left and right forms and expect only the left form to associate together to form proteins is just 'not on.'

I understand that there are other reasons why that experiment couldn't go any further.

Yes, if you keep on heating the mixture of amino acids it just produces a type of brownish gunk, non-biological polymers. So he had to stop the experiment after a few days.

In any case, the cell is made of more than just amino acids—also fats, carbohydrates, DNA, RNA and so on. The scientists who work on origin of life problems know very well that experiments designed to produce amino acids don't produce sugars. And those that produce sugars don't produce anything else, and so on. And there is of course a problem of preservation of the molecules. They just undergo random destruction unless they are protected, like in a cell.

What if you had all of the raw materials necessary to construct a cell and you just threw them together into a random jumbled pile, would it just assemble itself by its own properties?

No, the presence of building materials is one thing, the requirement of the plan to put these building materials in the proper places and get them working together is another thing. That's why a cell is so beautiful, so intricate. Because of that, even non-Christian scientists marvel at that. Even to get one single functional protein molecule to form by chance is a mathematical absurdity. Sir Fred Hoyle recognized this. He teased his colleagues, told them to put all the raw ingredients in a swimming pool, and see if they get one single molecule needed. Of course no one will take him up, because they know it won't work.

A biochemist called Sidney Fox heated up some dry amino acids which caused them to link together into small chains, then dropped them in some water and some little round things formed that got people excited because they looked like cells—and some of them even looked like they were dividing. He called them 'protocells.'

This is a misnomer—they are nothing to do with cells at all. They look like cells because they are round, but there are many round things which are not cells.

Like soap bubbles?

Yes, like soap bubbles, or things like that.

Or blobs of fat on your chicken soup? They can also 'divide,' from simple surface tension, for example.

Yes, these alleged 'protocells' could be compared to something like that. Oparin, the famous Russian origin-of-life theorist, created what we call coacervates, which also form a round structure. He placed certain enzymes within this coacervate, and these 'protocells' (as they like to think they were) carried out certain automatic reactions. The reaction products were released out through this membrane into the surrounding medium, and because of simple physico-chemical factors things flowed in and out. This only superficially mimicked a cell. You could blow up a cellophane balloon and put in the enzyme and get the same reaction. It is an entirely man-made, terribly simplified system, nothing at all in comparison to a cell.

Do you use creation science in your own witnessing?

Yes, regularly, because I find that many people today have problems with Genesis and creation. They don't say it openly, but if you talk to them, after a while it will come out and then you have a chance to witness to them from the Word.

I'm sure you get good results from this creation evangelism.

Yes, I have had the glad news on a number of occasions that several people have come to know the Lord following that. And that always delights me, as I'm sure it delights CSF.

Is there a creation movement as such in your country?

Not as such, The *Origins* series by Films for Christ has been a great benefit to many churches. There are many individual believers who subscribe to *Creation Ex Nihilo* and others that have come from the talks that have been given. They maintain the interest and they start their own little discussion groups.

Besides buying material for myself and my church, I came here to thank Creation Science Foundation for its excellent ministry all over the world. Only on the other side of Heaven will we know the extent and value of your ministry. Thank you very much, CSF.

Dr Aw was Associate Professor of Biochemistry, University of Singapore up to 1978. He is head of the Department of Nuclear Medicine and Director of Clinical Research at Singapore General Hospital. Author of around 30 technical papers in his field of biochemistry and nuclear medicine, he has authored a critique of origin-of-life theories titled *Chemical Evolution—An Examination of Current Ideas* (available from Creation Science Foundation). Return to top.

Available online at:
http://answersingenesis.org/Home/Area/Magazines/docs/v16n2_aw.asp