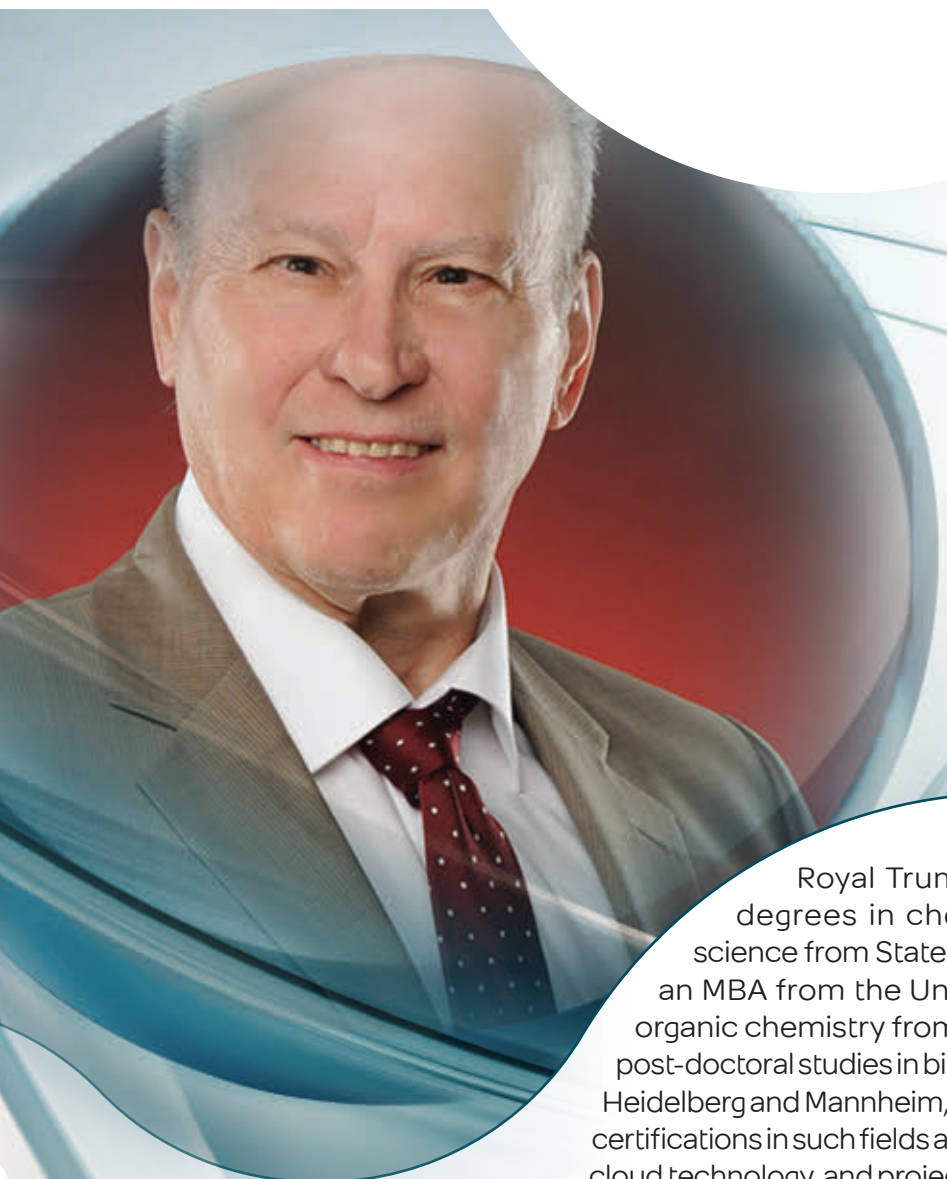


SCIENTIST VS

Don Batten interviews professional scientist *Dr Royal Truman*



RAISED BY missionary parents in Chile, training in North America, and then working in Germany, Dr Truman speaks five languages. He also plays multiple musical instruments and is very artistic (oil and acrylic painting, drawings, ink, and watercolour). He says his home looks like a museum. He trained in several forms of martial arts, attaining a brown belt in a North Korean style of Taekwondo. There is a lake in front of their house in Germany where Royal swims year-round (ice swimming!). He is one interesting guy!

Developing a productive career

Dr Truman shared that,

During my PhD studies and afterwards, I worked with hard-core scientists looking for detailed chemical explanations and developing complex chemical products.

Royal Truman has bachelor's degrees in chemistry and computer science from State University New York, Buffalo, an MBA from the University of Michigan, a PhD in organic chemistry from Michigan State University, plus post-doctoral studies in bioinformatics from the universities of Heidelberg and Mannheim, Germany. He has many professional certifications in such fields as cyber security, supply chain logistics, cloud technology, and project management. He has worked for 40 years for the largest chemical company in the world.

Royal is married to Petra, who worked as a lawyer, and later as a full-time homemaker. They have two grown sons; one has a law degree and the other is working on a PhD in computer science.



CHEMICAL EVOLUTION

This was in application areas like detergents, fuel additives, and oil exploitation.

He sees that he gained an edge over others by acquiring a variety of ‘tools’ organic chemists do not usually learn, in the areas of mathematics and computer science. He refers to his career as ‘Data Scientist’.

Using these skills allowed him to devise experiments that explained things the other scientists could not figure out.

Dr Truman shared,

Throughout my career I worked with very clever and conscientious scientists who accepted evolution as a given, although this was not related to their own scientific training. But nothing I learned about evolution made any sense based on my own areas of expertise. But how could such clever people all be wrong? What was I overlooking?

Acquiring expertise in molecular biology

To find out, Royal devoted more than 35 years to learning all he could about molecular biology and systems biology. This is the chemistry of the machinery of life (proteins, nucleic acids, etc.). This included taking formal courses in

bioinformatics. Such training assisted in analyzing the vast amounts of complex data involved—for example, the human DNA has over 3 billion ‘letters’. Even a relatively simple protein requires hundreds of DNA letters that specify how to make it.

First, Dr Truman had to understand the biological reality that needs explaining. What is it about the simplest living things that needs to be explained? For example, all self-reproducing (‘living’) cells have a set of very complex chemical units called tRNAs (‘transfer RNAs’). There must be at least one unique tRNA for each of the ~20 amino acids that make up proteins.

These tRNAs are essential for the manufacture of all proteins since the cell’s machinery uses them to interpret from the DNA code which amino acid is to be used at each position of a protein. But these are just a small component of the genetic equipment needed! Dr Truman researched the biochemical source of tRNAs and noted that their manufacture was coded for on DNA and they must be extracted by special proteins. But these proteins could only exist if functional tRNAs were *already available* to help decode instructions for *their* manufacture. He concluded that tRNAs and proteins could never arise by any natural (evolutionary) process.¹

Royal read extensively in the evolutionary literature, to see what theories were offered for the origin of what he had learned about cellular processing.

Irreducible complexity everywhere!

Irreducible complexity describes biological systems with multiple interacting parts that would not function if any one of the parts was removed. Dr Truman discovered many examples of ‘irreducible complexity’. These include dozens of ‘molecular machines’, such as polymerases, helicases, isomerases, ribosomes, and ATP synthase. Each of these is a stupendously complex and efficient ‘nano-machine’, flawlessly repeating indispensable services over and over. But not only is each one irreducibly complex, *all* these, and much more, must be present together for cells to function, to reproduce. Dr Truman comments, “How are all these multiple irreducibly complex components to come together without a Planner?”

Royal discovered that cells share properties with computers—he published two papers on this.² He is uniquely qualified to understand this, having been responsible for several years to identify all new computing technologies (hardware and software) which could someday be applicable to the chemical industry. This underlined again how cells are *designed*; they could not have come about by a natural (evolutionary) process.

Dr Truman shares how “I quickly discovered that evolutionary explanations were only vague imaginings; there was nothing solid enough to research, and the speculative narratives were easy to disprove.”

The origin of life?

Being a chemist, it was almost inevitable that Royal should examine origin of life (OoL) publications. He read hundreds of chemical publications that tried to explain the OoL and concluded that “all were nothing but wishful thinking.”

For example, thousands of complex proteins are needed for cells to work. However, not one of even the simplest proteins could be created naturally. Some of the problems he noted are:

1. *Racemization*. Nearly all the amino acids that make up proteins come in two forms, Levo (L) and Dextro (D), that are mirror images of each other like your left and right hands respectively. Only left-handed amino acids (L) make functional proteins. But they readily turn into each other, so even if you start off with pure L forms, they naturally move towards 50:50 quantities of L and D amino acids. This is called *racemization*. Not only do individual amino acids racemize, this happens even faster if they bond together to form proteins! Dr Truman showed that this happens so quickly under realistic conditions (temperature and pH) as to *stop* the formation of any functional proteins.³
2. *Side-chain reactions*. To make functional proteins, amino acids must be joined together in the correct manner. But without the help of enzymes (which are themselves cell proteins), many will join in the wrong way.
3. *Reactions with other chemicals*. This includes dozens of unsuitable kinds of amino acids, all the amines, all the carboxylic acids, all the alcohols, and all aldehydes. These would have dominated a hypothetical early earth. You simply cannot get the life-necessary chemicals without the ones that will interfere with the chemistry of life.
4. *Wrong proportions of biologically relevant amino acids*. The latest research reveals that of the 20 amino acids needed for life, between

99%–99.9% produced in realistically natural processes would have been only glycine, the simplest and biologically least important amino acid.

5. *Obtaining long chains in water*. Any experiments that join some amino acids together must remove water that is generated by the reaction, because the water hinders the joining from continuing. None having 10 or more amino acids would form in water; too short to be functional.

Dr Truman commented,

If simply obtaining a long, linear *random* amino acid polymer (i.e., a ‘protein’) isn’t possible, how in the world were thousands of different proteins, each having the *correct sequence* of amino acids, supposed to have arisen? Natural selection can’t operate until you already have something that makes copies of itself.

Origin of life research “spinning its wheels”?

Dr Truman:

OoL research is spinning its wheels. Experiments are designed with a specific goal in mind and the laboratory setup is never plausible; it never mimics something feasible in nature. When chemists such as I evaluate the results, we find them to be inconsistent with the claim that life made itself by *natural* processes.

He gave one example:

To obtain chains up to three amino acids long, absurdly high concentrations of pure amino acids were rapidly forced into a specially designed gold-plated (!) container with water at very high temperatures and pressures.⁴ Despite having optimized everything to the point of no longer having

any relevance for OoL purposes, the amino acids were rapidly destroyed, but the experiments were celebrated as a major success. Why? The concentration of the tiny chains was reported for only a few hours, before the concentrations dropped to zero. The published curves clearly showed this.

Evolutionists often claim that progress is being made, whereas an objective evaluation is that experiment after experiment fails to support evolution. I usually summarize each paper as ‘yet another example of what could not have occurred’.

Royal noted that,

There is no feasible path from simple chemicals *obtained naturally* to a biological cell controlled by DNA-encoded information.

Instead, there is an assumption that ‘life’ can be defined as any process involving some form of chemical replication and then with enough time a cell must inevitably arise. This has nothing to do with science; is it pure speculation with no mechanistic basis.

I have concluded that no chemist ever became an evolutionist because this is what the data showed them. Instead, clever people decided to believe in evolution, and then went about cherry-picking the data to support this notion and ignoring what is inconvenient.

The ID movement

Dr Truman has been a member of the ID (intelligent design) movement⁵ from the start, at the invitation of the founder, the law professor Phillip Johnson (1940–2019) from Berkeley University. He says he

benefitted greatly from detailed exchanges with many scientists, some of whom were not Christians.

The shared conviction was simply that biology cannot be explained without an intelligent, guiding agent. *When* this involvement occurred, and how much could be explained by natural processes, were regarded as open questions.

However, regarding ‘when’, Royal said:

“I observed repeatedly that *time* posed a serious constraint to all models. Specifically, long multi-generational transitions would not have been viable. There are countless examples of features present in discrete classes of organism that had to be functional *immediately*.

For example, prokaryotes (e.g., bacteria) and eukaryotes (e.g., humans) regulate genes in entirely different ways. All genes in eukaryotes have large regions of ‘regulatory DNA’ with unique sequences that communicate the logic of when to activate the gene and for how long. Interpreting this ‘regulatory code’ requires many specialized proteins working like computer processors. But prokaryotes lack such a system and use entirely different principles. An evolving intermediate gene cannot work in either kind of organism for millions of generations without the appropriate regulation system; so for eukaryotes to have evolved, how are *all* the thousands of genes to have done so? Such a transformation could only have been viable if this had occurred instantly, within one generation.

According to Dr Truman, biblical creation makes for good science:

God, the Intelligent Agent, has told us in Genesis that He

created discrete classes of organism instantly, and this is consistent with sound scientific reasoning. The narrower a scientific model is, the more precise predictions become and hypotheses can be formulated. A one-time creative act with the intention that each kind would reproduce reliably across future generations implies that robustness and adaptability had to be built in from the beginning. A model that assumes a recent universal Flood also predicts that there must be genetic mechanisms for rapid variation within each created kind (which is often at the family level). Leaving all theistic options open—such as old earth creation and theistic evolution—provides little guidance for research.

So, the ID movement can serve as a steppingstone for evolutionists not willing to go too far out on a limb too quickly. But the Young Earth Creation scientist has a major advantage. For example, he or she would assume that any new gene discovered will have a biological function and will be carefully regulated. This will motivate researching the details deeply. Other researchers would lack this motivation to be consistent with their premises, having to assume by default that nothing very interesting would be discovered, since virtually all evolutionary changes involved millions of years of non- or minimally-functional transition periods. Why should



Figure 1. Dr Truman and his wife Petra



Figure 2. Royal swims year-around in Germany at the lake where he lives. Sometimes he must break the ice to get into the water.



Figure 3. Royal has an active sports life. Here he is working out in Thailand with Saenchai P.K. Saenchaimuaythaigym, an ex-world champion kick-boxer.



this discovery just now, at this moment in the supposed vast eons, happen to be highly optimized and worth researching?

Royal has been actively involved in research motivated by biblical creation for three decades, yet his enthusiasm remains high: “These are exciting times for Christians in the sciences who are willing to trust God’s revelation, giving them a massive competitive advantage!”

We thank Dr Truman for his many contributions, only some of which we can mention here (search ‘Truman’ on creation.com). May God motivate an increasing number of other scientists to get excited about biblically-inspired research! ■

References and notes

1. Truman, R., The surprisingly complex tRNA subsystem (5-part series), *J. Creation* **34**(3)–**35**(2), 2020–2021; creation.com/trna-subsystem (hub page, lists all 5 papers).
2. Truman, R., Cells as Information Processors Part I: Formal Software Principles, *Creation Res. Soc. Quart.* **52**(3):275–308, 2016, and Part 2: Hardware Implementation, *CRSQ* **53**(4):19–41, 2016.
3. Truman, R., Racemization of amino acids under natural conditions: 4-part series, *J. Creation* **36**(1–3), 2022; creation.com/racemization-amino-acids (hub page).
4. Truman, R. and McCombs, C., Insignificant concentrations of peptides form in water: part 1—using hot temperatures or high pH, *J. Creation* **38**(1):126–135, 2024.
5. Wieland, C., CMI’s views on the Intelligent Design Movement, 2002, creation.com/IDM.

DON BATTEN B.Sc.Agr.(Hons.), Ph.D.

Dr Batten worked as a research scientist in tropical fruit physiology before joining Creation Ministries International in Brisbane, Australia. For more: creation.com/batten.

Creation magazine’s BRAINY BIG BROTHER

How good is this?

If you’re a fan of rigorous thought, of ideas that have been hashed out in the battleground of peer review, then the *Journal of Creation* will take your thinking to the next level. *Creation* magazine’s ‘brainy big brother’, *Journal of Creation*, will educate, inform, and inspire you.

Its 128+ digital pages of robust creationist thought, written by experts and peer-reviewed, will get you ahead of the curve.

Subscribe or renew at:

creation.com/journal

