D. Fisher
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1500 words

**FEATURE: Michael Behe interview**
**(Last in SERIES of 4)**
**达尔文黑盒子（4）**

PROF.: Recently NASA reported discovering something that relates to what we've been discussing in recent weeks. They claim this discovery makes it likely that what it calls chemical precursors to life, are formed in interstellar clouds.

近来美国国家航空航天局报道发现了，与我们这几周来所讨论有关的东西。他们宣称这个发现使得被称为生命的化学元素先驱，在星际间的云团中形成变得可能。

VOICE: In other words, they think amino acids or other organic substances evolved into the first cell.

换句话说，他们认为气基酸或有机化学物质会进化成为第一个细胞。

PROF.: Yes. And they think they have detected substances that make it likely at a particular part of the universe.

是的。他们认为他们找到了，使它在宇宙的一个特定部分存在变成可能的物质。

VOICE: Does that mean that the things Prof. Behe has been telling us, are wrong?

这是不是意味着比希教授告诉我们的都是错的呢？

PROF.: Let's ask him.

让我们来问他。

TAPE: THEME AND ANNOUNCEMENT

VOICE: In June, 2000, program editor David Fisher interviewed biochemistry professor Dr. Michael Behe, author of the book, *Darwin's Black Box.*

2000年6月，节目编辑大卫·费歇尔曾经采访了生化学家迈克尔·比希教授博士《达尔文的黑盒子》一书的作者。

He continued, "This week NASA reported discovering what it called 'a molecular cousin to table sugar in a giant interstellar cloud known as Saggitaurius B2. Their report said, quote, 'The discovery of sugar molecules in a cloud where new stars are forming, means it is increasingly likely that the chemical precursors to life are formed in such clouds long before planets develop around stars.' End quote.

他继续说：「美国国家航天航空和空间局报道在一个被称为，B2的大星际云团发现了被叫做"是糖的分子表亲" 的物质。他们的报告说，"在新星之形成的云彩中发现了类似糖的分子，这意味着生物先驱的化学元素，在星球发展出来以先，围绕着星" 」

"Dr. Behe, how would you evaluate that?"

「比希博士，你怎么评论这个呢？」

PROF.: That's in the same category as the people who point to water on Mars and say there must be life there. It's interesting to find molecules that in other contexts serve purposes in life, but just finding those molecules doesn't tell you at all how life started – as 50 years of origin-of-life research have shown.

这与认为火星上有水就说那里心存在生命的人，属于同一种类别。虽然这是有趣的，找到生命形成的其它关连的分子，但是找到这些分子并不告诉你，生命是怎么开始的－像生命起源研究的50年所表明的一样。

They omit the fact that find a lot of other molecules that have nothing to do with life. They don't suggest any way that nature could sort them from the molecules that are included in living organisms, or the many other problems that origin-of-life researchers have struggled with. People want to sell newspapers by making things seem exciting. But scientifically, this discovery of a sugar doesn't advance our understand of the origin of life.

他忽略了找到了许多与生命形成无关的许多分子的事实。他们没有提议任何办法，就是自然会从分子中拣选他们并加入有生命的有机物质中，或者就是从生命起源研究的研究者们所挣扎的许多问题。人们抄作这些事情的目的是销售报纸，但是从科学意义上说，这个糖的发现没有增进我们对生命起源的理解。

VOICE: I understand another reason why scientists hold onto an old idea like biochemical evolution. A scientist who has devoted 30 or 40 years of his life pursuing a particular idea, doesn't easily give up the possibility that it might right.

我明白为什么科学家坚持像生化进化一样的老旧观点的另一个原因。一位科学家花了一生心血去研究的某一种理念，是不会轻易放弃它可能是对的可能性。

PROF.: (LAUGHS) Oh, yes, that's true. If you've got a career invested in thinking one way, it's really psychologically hard to say: I've spent 30 years going down a blind alley.[1] And so you keep saying, maybe this next experiment – or the next one, or the next one – will prove my idea.

噢，是的，这是真的。如果你投身于一个观点中，从心理上真正很难说，我花了30年去追求一个错误的观点。因此你总是说，可能下次实验—或再下一次，或再再下一次会证明我的观点。

Sometimes you can't convince people in a field to change their mind, because they have so much invested in thinking one way. So we have to rely on young scientists who are just starting a career to be more open-minded.

[1] (pursuing a mistaken idea)

有时你不能说明在同一领域工作的人们改变他们的观点，因为他们倾心地投身于一个想法。因此我们要依靠那些刚开始工作，且思想开放的年轻的科学家们。

VOICE: Another thought that Asimov included in his biography of Stanley Miller was that for nearly a century it had been assumed that Pasteur had killed forever the concept of spontaneous generation. Quoting Asimov, "...but it had to be remembered that Pasteur had only disproved spontaneous generation under the specialized conditions of his experiment. He kept sterile solutions as long as four years without life developing, but what if he kept it a billion years? And instead of a flask full, what if he had an ocean full of solution? And instead of the air of our atmosphere bathing the solution, what if it was the air of a completely different primordial atmosphere?" End quote.

阿思莫在斯坦利·米勒的自传中的另一种想法， 就是近百年来它一直假定细菌学家巴斯德是永远地拒杀了自发性的一代的观念。阿恩莫引用"...但是必须记住巴斯德的实验仅仅在特殊的条件下证明了自然产生是错误的。他保存着这些无菌溶液长达四年都没有任何生命的发展，但是如果他保留之一亿年又会怎样呢？若用的不仅是一个烧瓶的溶液，而是大量的溶液呢？又或者用在空气浴的不是我们大气层的空气， 而是一种完全不同的原始大气层的空气呢？"

Besides what you've already said about that, how would you evaluate that argument?

除了你以上所说的，你会怎样评论这个争议呢？

PROF.: It has a limited point, in that if you do things on a larger scale, you've got a bigger chance of something happening. But doing it on a bigger scale doesn't mean that ***everything*** will happen. And if you try to calculate the odds of reactions that would be necessary for the origin of life occurring on a planet even with an ocean full of amino acids and nucleotides that Stanley Miller thought might be the case, it's still ***astronomically improbable that you would get a call.***

这个看法是有限的，从这个观点上看如果你大规模地做事，你就有更大的机会让某些事情发生，但是更大规模地做事并不意味着所有事情将发生。如果你想要计算用斯坦利·米勒认为可能有的整个海洋的氨基酸和核酸，在行星上产生生命须要的反应机会的话，从天文学上看你想获得一个细胞是不可能的。

This has been plainly said in the scientific literature. For example, a paper by Leslie Orgel [LES-lee OR-gul] and Gerald Joyce [JAIR-uld JOYS] in a book called *The RNA World* says the formation of RNA on an early earth would be a near miracle.

这在科学文献中，已经清楚地说明了。例如，在一本名为《RNA世界》书中的一篇由赖斯利·欧加和加路·焦思所写的文章说，在早期地球上RNA的形成几乎是一个奇迹。

VOICE: These are not priests or clergyman talking; they are scientists.

这里没有神父或者牧师在说话；他们都是科学家。

PROF.: Yes. And they say a second miracle would be to get an RNA was able to do something. So just going from a warm little pond to an ocean full of material helps you a little bit, but it doesn't help nearly as much as you need.

是的。他们说第二个奇迹是让RNA能做一些事。因此虽然离开一个暖和的小池到了一个海洋的物质会给你一点帮助，但是它不可能给你所要的全部帮助。

VOICE: If RNA did develop in an ocean, wouldn't a lot of it disintegrate if it were allowed to stay in the ocean very long? Wouldn't the motion of ocean waves and various other things destroy it?

如果RNA是在大海中发展起来的，而它又被允许长期留在大海的话，许多的RNA不会被分解吗？海洋波浪的移动和其它东西不会破坏它吗？

PROF.: Yes, that's a very good point. People concentrate on finding that some chemical can be produced. They don't concentrate on factors that remove that chemical from the environment.

是的，这是一个很好的想法。人们集中精力于找到能产生的某些化学物质，他们不集中精力于使化学物质在环境中消失的因素。

Some of the chemicals that Stanley Miller produced, would react with each other to destroy each other. He got things like formaldehyde[2] which would react with amino acids to essentially make them ineffective in any life process.

斯坦利·米勒产生的某些化学物质，会与另一种产生反应最终消灭彼此两者。他得到了一种会与氨基酸反应使他们基本上在生命发展进程没有作用，像CH2O一种无色气体的东西。

An enormous number of other processes would remove the precursors of life even if you managed to get them there in the first place.

尽管你试着在第一下就得到他们，许多其它发展进程会消除生命的前身。

VOICE: You told one interviewer that intelligent design doesn't necessarily need to be a religious idea. If the designer is not God, who or what is it?

你告诉一个采访者智慧创造不须要宗教观点。如果创造者不是上帝，他是谁？或它是什么呢？

PROF.: Certainly most people will think that the designer is God, but if somebody believed in space aliens instead that were very far advanced, then they could

[2] (a colorless gas, chemical formula CH2O).

think that perhaps the designer of life on earth was a space alien. Life is extremely complex. So the designer of life must have been very, very intelligent, but not necessarily supernatural.

当然大多数人会认为创造者是上帝，但是如果有人相信是更早前就存在的外星人，然后他们会认为地球上的生命创造者可能是外星人。生命是极其复杂的。因此生命的创造者一定非常非常聪明，但不一定是超自然的。

I certainly think the designer is God. But when I go into public discussions, I have to admit that it does not prove the point that the designer is God. However, other people advance arguments for design from the fine-tuning of the universe and how the universe seems to be friendly to life. And I think you can go from there to an argument for God. Certainly no space alien is going to be the designer of the universe.

无疑地我认为这位创造者是上帝。但是当我在公开地讨论时，我要承认我的想法并不能证明创造者是上帝这个观点。然而其它人推进了来自宇宙的精美调节的创造和宇宙好像对生命友好的争论。而且我认为你可以从那里到上帝的争论，当然没有外星人会是宇宙的创造者。

VOICE: So you can demonstrate at least the high probability that there was some intelligence designing the universe and causing life to come into existence.

你至少能举例说明智慧创造了宇宙和创造生命的高可能性。

But your research doesn't necessarily point to the personal God, whom the Bible calls "a very present help in trouble." (Psalm 46:1, Russian 45:1?).

但是你的研究不必要指出个人的上帝，就是在圣经中称为“我们在患难中随时的帮助．”（诗篇46篇第一节）

PROF.: Yes, that's exactly right. I don't think we would want to say that we get ***all we need to know about God*** from looking at the blood-clotting system. We need more.

是的，非常正确。我不认为我们要说从血液凝固系统看我们获得了想要知道上帝的一切。我们必要更多这方面的知识。

We Christians believe that God revealed himself through specific interaction with humans on earth.

我们基督徒相信上帝通过与地球上的人类的特定的相互作用，显现了他自己。

VOICE: And God shares his thoughts with us in the Bible.

在圣经中上帝与我们分享了他的观点。

PROF.: Yes..

是的。

VOICE: What would your final words be to someone who has listened today and may be curious, but who has never seriously thought about God or anything outside of nature?

对那些今天听你的录音，可能感到好奇的和对从来就没有正经地想到上帝或者自然之外的事情的那些人，你最后的话语会是什么呢？

PROF.: I would just say that you should ask yourself the question: Is nature self-sufficient?

我会说你应该问你自己这样的问题。自然是不是自给自足呢？

Everything we've ever experienced in our lives is there for a reason; something caused it to come there. Therefore, what caused nature to come? It's not self-explaining. One has to wonder where it came from. For me that's one of the very fundamental reasons to think that in fact God exists.

我们在生活中经历过的所有东西的存在是有原因的；某种东西使它在那里存在着。因此，是什么使得自然存在呢？它不是显而易见的，要想知道的是它从那里来，对我来说这是其中一个认为上帝实际上存在的最基本的原因。

The first verse in the Bible says, "In the beginning God created the heavens and the earth." End quote. And certainly, from what I've seen in biology and what I've read about the heavens, it's clear that God, the intelligent designer, did do this.

在圣经中第一节说，“起初上帝创造了天和地”。无疑地，从我在生物学中所见到的和从天空中所知道的，这是清楚的上帝，那个智慧创造者，一定创造了这。

This world that we live in is the result of God's purposeful act.

我们生活的这个世界是上帝有目的的创造的结果。

VOICE: Thank you very much, Dr. Michael Behe.

非常感谢你，迈克尔·比希博士。

My listening friend, Prof. Behe is certainly not the only natural scientist who believes the Bible. Among many examples is Nobel laureate physicist Arno Penzias. He said that if he had nothing but the early chapters of Genesis,[3] the Psalms and other parts of the Bible, he would have arrived at an idea of how the universe began, very similar to what his research has shown.

我的听众朋友，比希教授当然不是仅有的一位相信圣经的自然科学家。在许多例子中，有一位是诺贝尔荣誉奖得奖者物理学家阿尔诺·彭齐亚斯。他说如果我唯一有的是创世纪前面几章，诗篇和圣经的其它部分，他会获得宇宙怎样开始这样一个观点，这观点与他的研究所显示的相类似。

[3] (I Moses, the first book in the Bible).

We would encourage you to read the verse that Prof. Behe mentioned. Open the Bible to its very first page, and read "In the beginning God created the heavens and the earth."

我们会鼓励你去读比希教授提到的那些章节。打开圣经的第一页，读"起初上帝创造了天与地"。

But don't stop there. We would encourage you to read at least the first three chapters – telling how God created man and woman, and how the first humans got into trouble by disobeying their creator.

但是不要在此停住，我们会鼓励你去读至少前面三章－这三章描述了上帝怎么造了男人和女人，和第一个没有顺从他的创造者的人是怎么有麻烦的。

The Bible will help you understand God – and understand yourself – much better. Read at least the first three chapters this week.

圣经会帮助你更好地了解上帝－了解你自己。这周阅读至少前面的三章。

TAPE: THEME AND ANNOUNCEMENT

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