

# Science as a Christian Vocation

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CHRISTIANS · IN · SCIENCE

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# **A personal story**

- Early Christian and Scientific Foundations
- Guiding Principles
- Scientific Career

**What are the challenges of being a Christian in Science and what special opportunities does it bring to serve God?**

# Christian and Scientific Foundations



# Blundells School Tiverton







# Sidney Sussex College Cambridge



# Guiding Principles



**Augustine of Hippo  
(354-430)**

***All truth is  
God's Truth***

***“Let every good and true Christian understand that  
wherever truth may be found it belongs to his Master”***



**Francis Bacon**  
(1561 –1626)

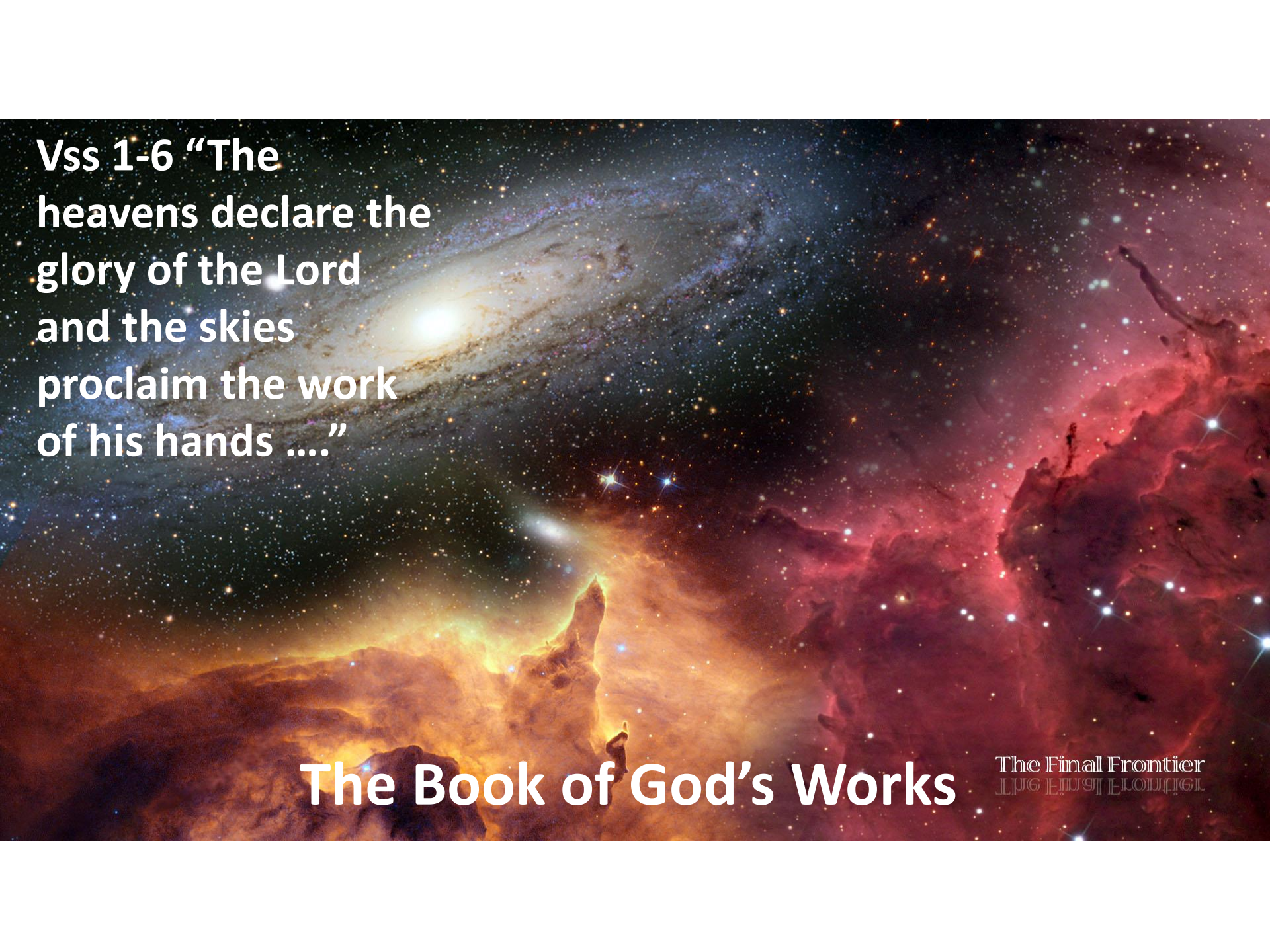
***“God has laid before us two books or volumes to study, if we will be free from error; first the Scriptures revealing the will of God, and then the creatures expressing his power”***

# **Psalm 19**

A Psalm in two halves

**The Book of God's Works**  
and  
**The Book of God's Words**



The background of the slide is a composite of cosmic imagery. In the upper left, a bright spiral galaxy is visible against a dark, star-filled sky. Below it, a large, vibrant nebula in shades of orange and yellow dominates the lower half. To the right, another nebula in deep red and purple hues is visible. A small, dark figure stands on a rocky peak in the lower center, looking out over the vastness of space.

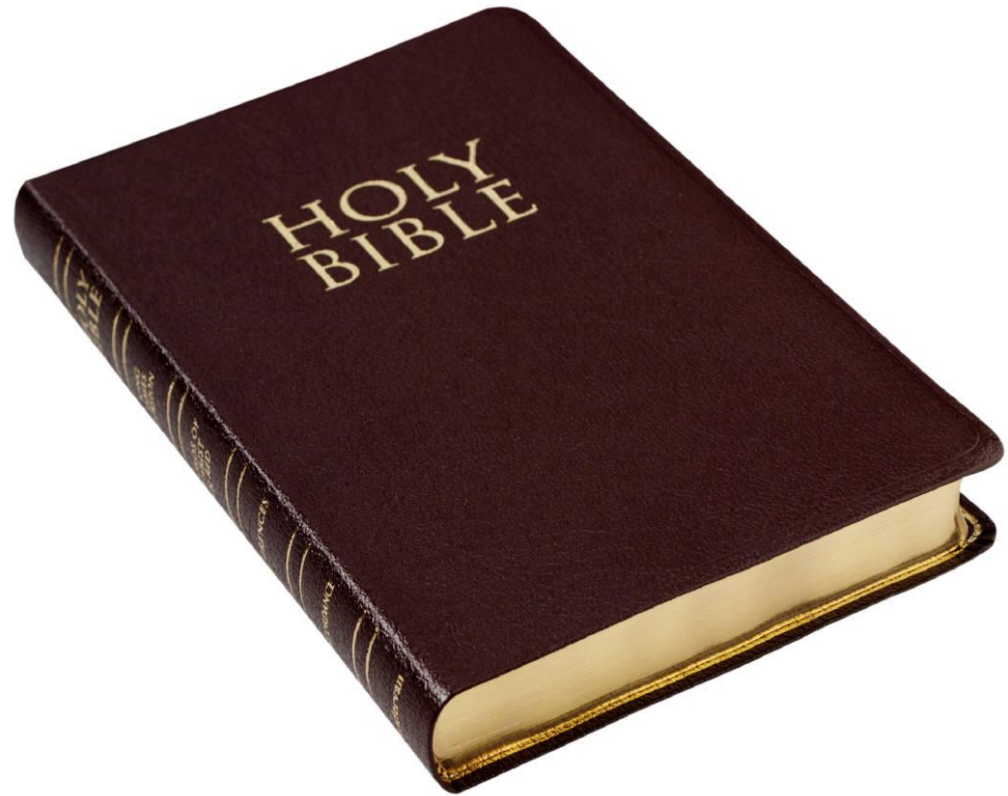
**Vss 1-6 “The  
heavens declare the  
glory of the Lord  
and the skies  
proclaim the work  
of his hands ....”**

**The Book of God’s Works**

The Final Frontier  
JUG JUG JUG JUG JUG

## **Vss 7-14**

“The law of the  
Lord is perfect,  
reviving the soul.  
The statutes of the  
Lord are  
trustworthy  
making wise the  
simple”



**The Book of God's Words**

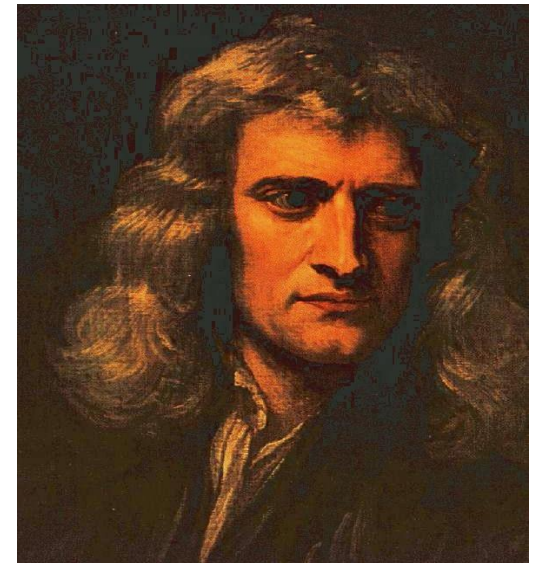




**Galileo**  
**(1564-1642)**

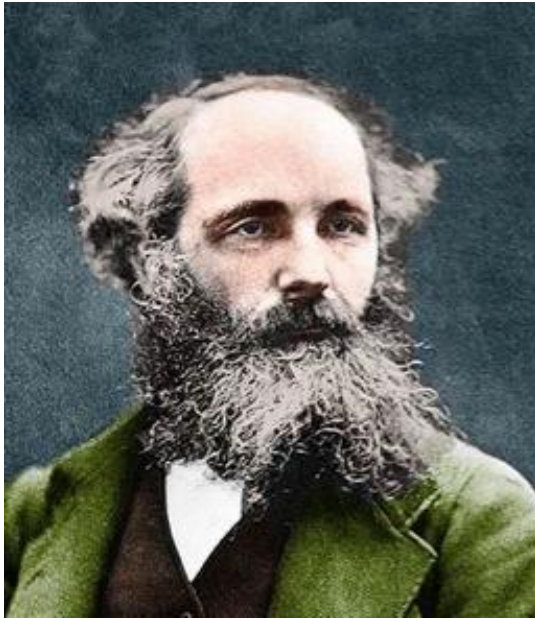


**Kepler**  
**(1571-1630)**



**Newton**  
**(1642-1727)**

**Ps 111: 2** *“Great are the works of the Lord;  
they are pondered by all who delight in him”.*



**James Clerk Maxwell**  
(1831-1879)

**Ps 111: 2** *“Great are the works of the Lord; they are pondered by all who delight in him”.*

Cavendish Laboratories in Cambridge (founded in 1874 by James Clerk Maxwell ) have produced 29 Nobel prizes



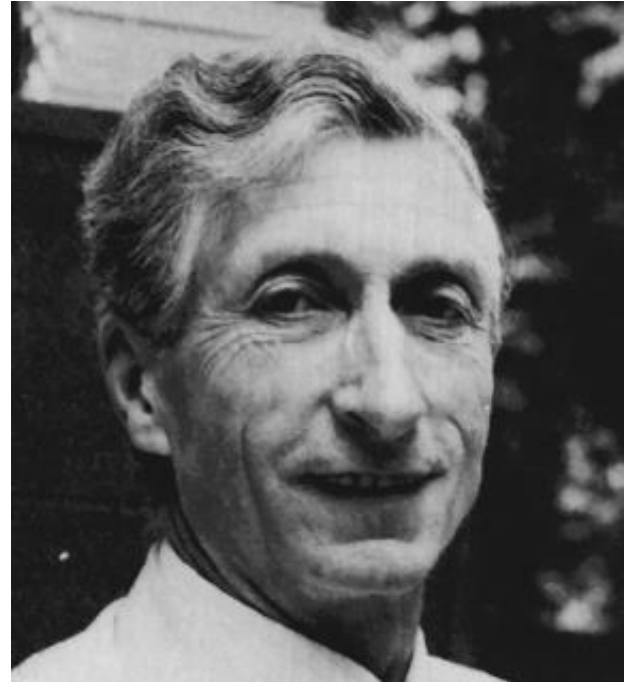




# Scripture does not support a “God of the Gaps”

**Charles Coulson** (Oxford  
Professor of Mathematics)

*"There is no 'God of the gaps' to take over at those strategic places where science fails; and the reason is that gaps of this sort have the unpreventable habit of shrinking".*



**Charles Coulson**  
**(1910-1974)**

**God of the Gaps** comes from a wrong understanding of the relationship between science and faith. They are complimentary ways of looking at the world.

**Science** asks the question **HOW** God works in his world – investigate by experimentation.

**Religion** the ultimate question of **WHY** – purpose, meaning.

**Science and faith in God provide complementary rather than contradictory explanations of reality**

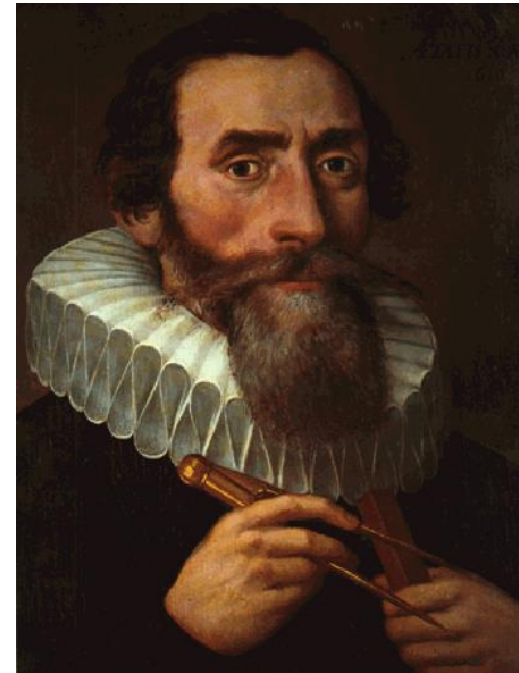
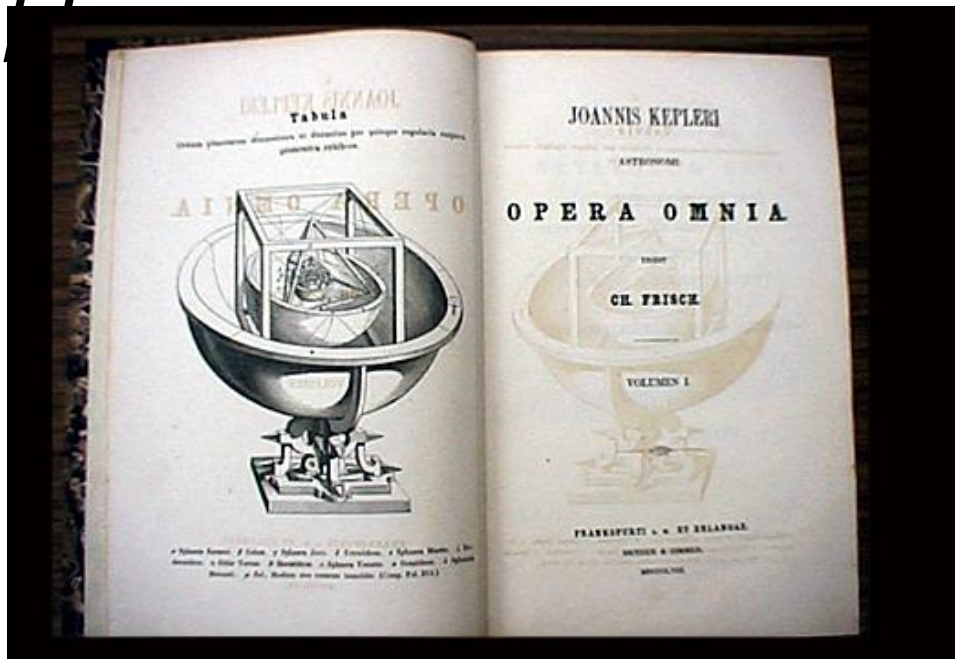


God is the ultimate cause but he works through processes that the scientist studies



# Johannes Kepler:

*Scientists are thinking God's thoughts after*



Kepler (1571-1630)

God is constantly active in his Universe as both architect and workman. **THEISM not DEISM**

**Heb 1: 3.**

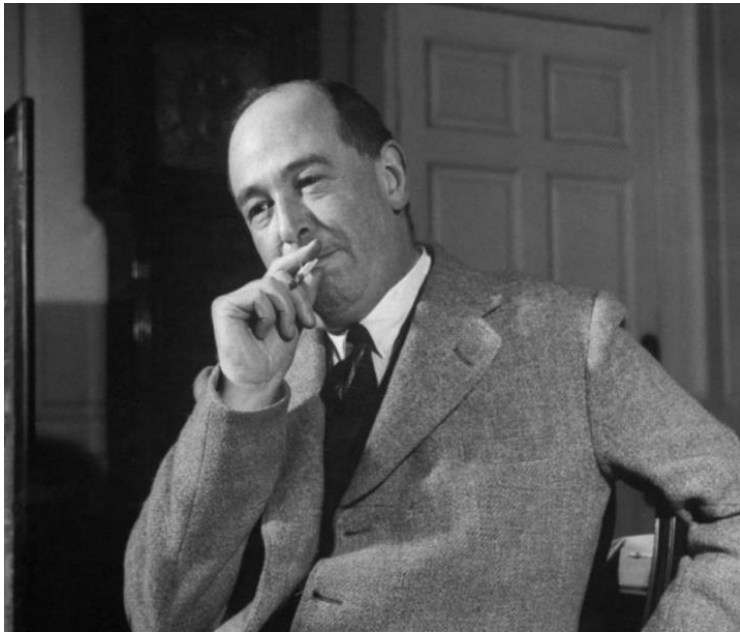
*“He upholds the universe by the word of his power”*



God is not fickle but has created an ordered universe that behaves consistently, allowing scientists to investigate it by experimentation. Indeed, all scientists depend on the consistency of the universe (The Laws of Nature) to carry out their research.

The resulting knowledge and predictions can be used for our benefit as **we act as stewards of God's creation – Genesis 1:28.**

For me, the Christian faith provides an integrated and wonderfully satisfying world view that not only makes sense of the scientific endeavour, but also provides a better intellectual framework for living and hope for the future.



## **C. S. Lewis**

*“I believe in Christianity as I believe that the Sun has risen, not only because I see it, but because by it, I see everything else.”*



# **Scientific Career**

## **From fat metabolism to diabetes, heart disease and cancer**

### **How it all began**



1970-1973 PhD with Dick Denton (now FRS, FMedSci) on the regulation of fat synthesis in epididymal fat pads by insulin

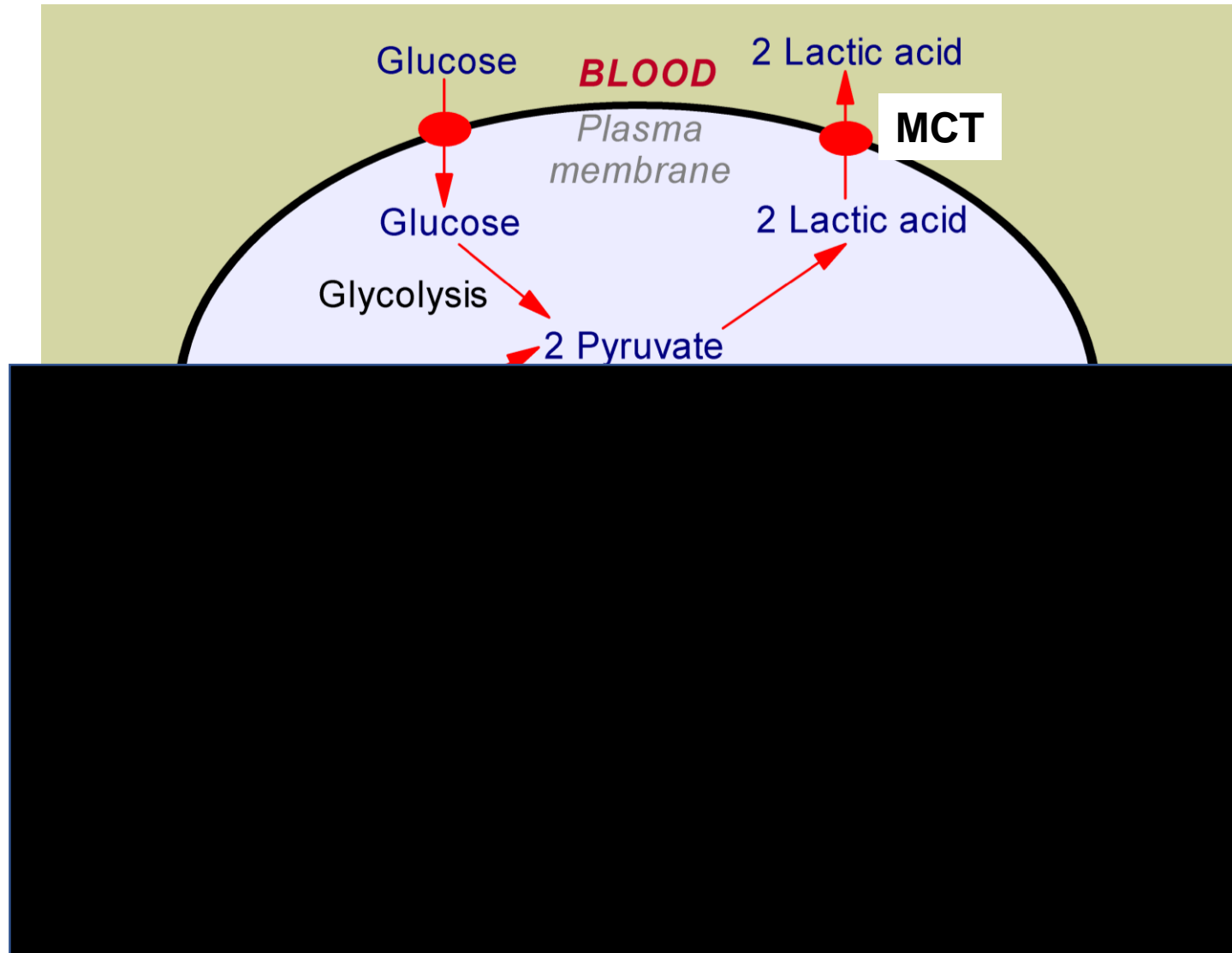


# Curiosity and Serendipity in Science

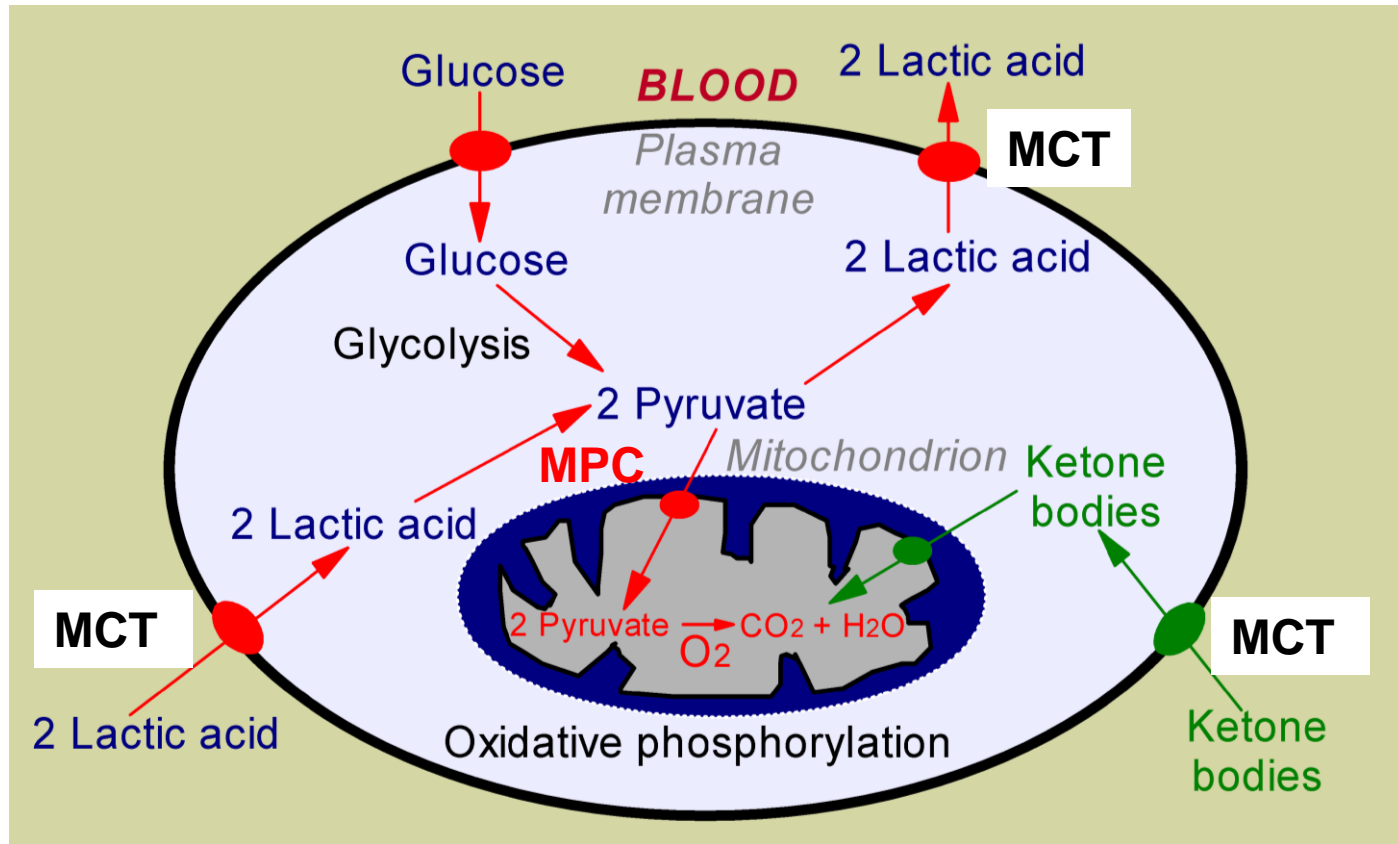
Working with Pfizer on anti-obesity drugs, an unusual set of results led to a finding that laid the foundations of my scientific career.

This involved several changes of direction and unexpected discoveries in the fields of **fat metabolism, diabetes** (including the mechanism of action of the anti-diabetic drug **metformin**), **cancer** and **heart disease**.

# Discovery of Monocarboxylate Transporters



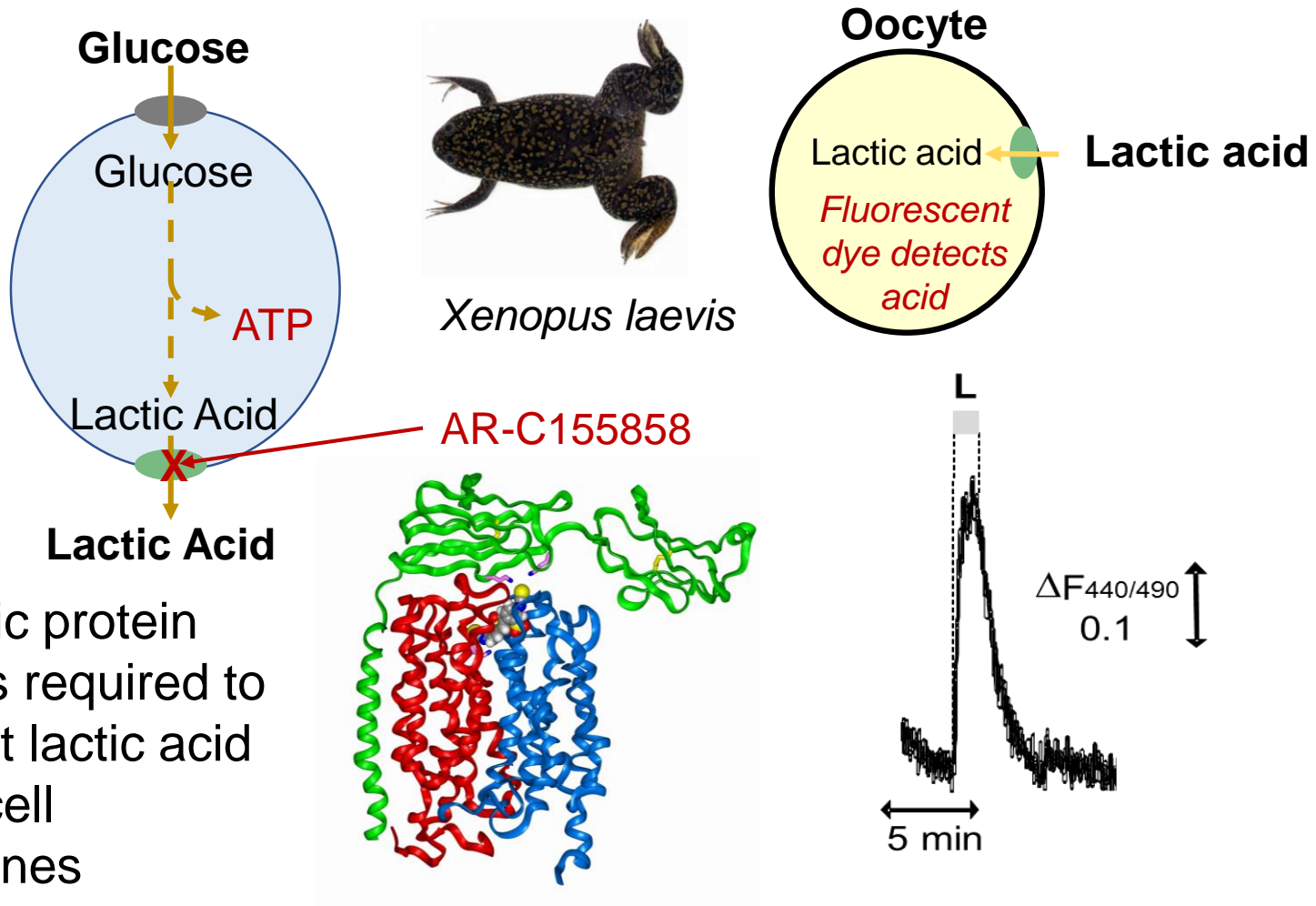
# Discovery of Monocarboxylate Transporters

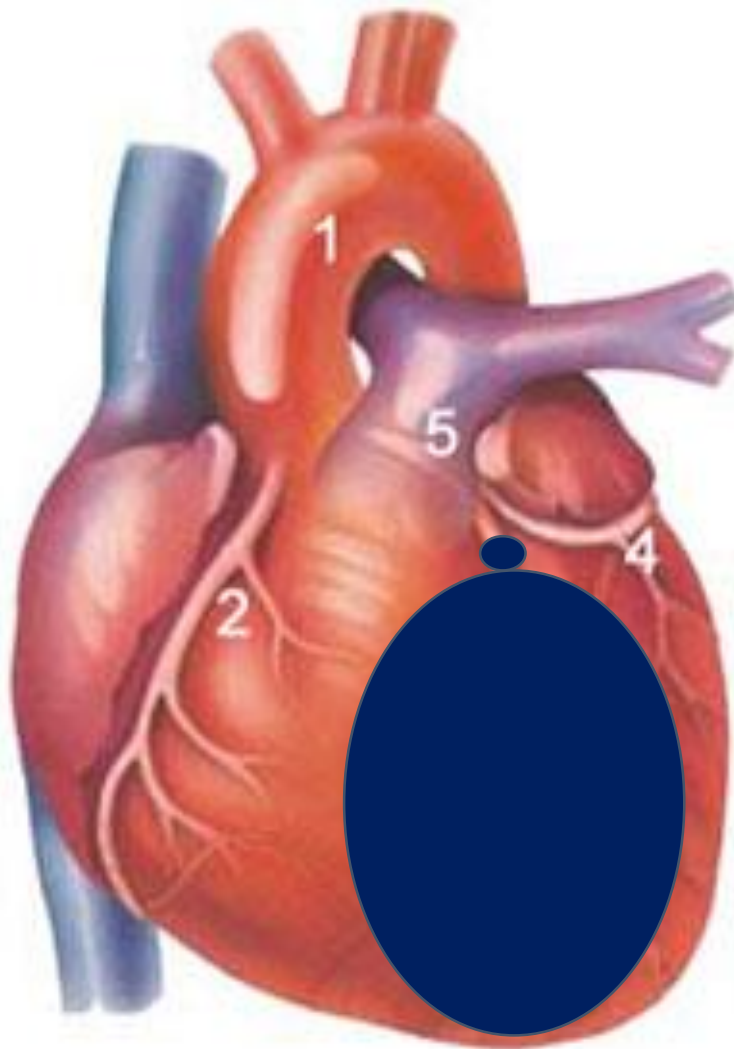


**MCTs are also required for gluconeogenesis in the liver and kidney for and lipogenesis in the liver and adipose tissue**



# Lactic acid transport into and out of cells





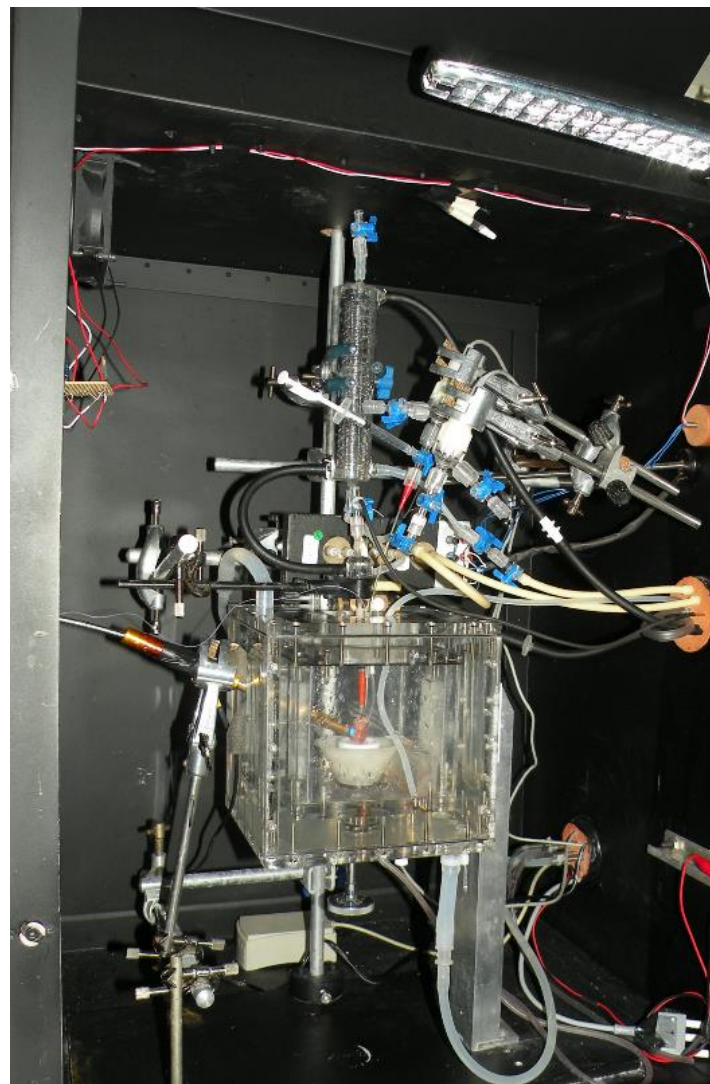
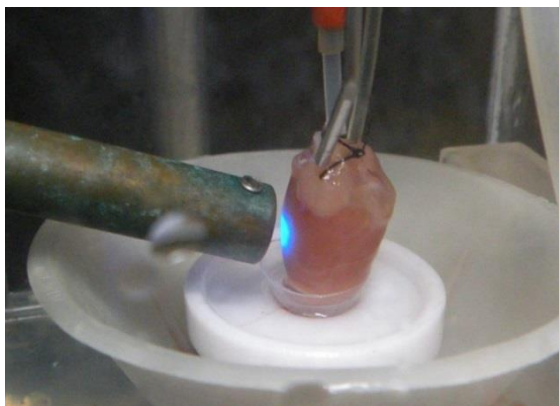
**1. Aorta**

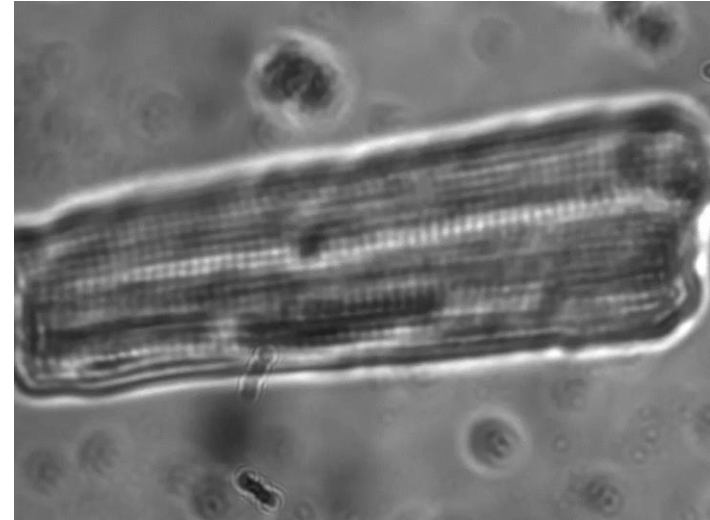
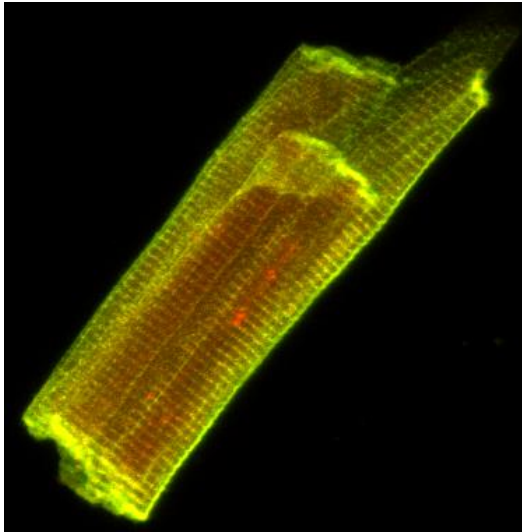
**2. Right Coronary  
Artery**

**3. Left Anterior  
Descending  
Coronary Artery**

**4. Circumflex Coronary  
Artery**

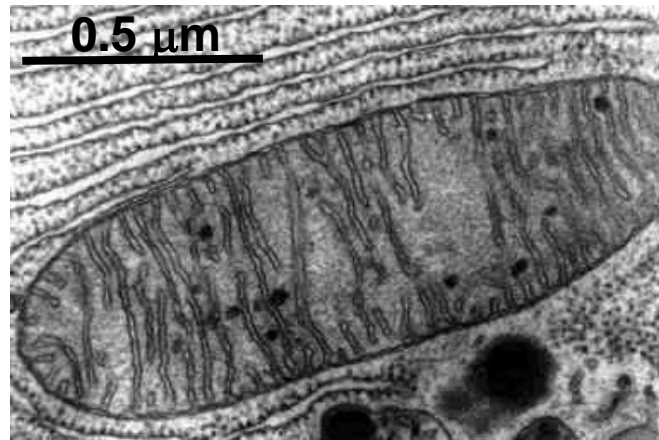
**5. Left Main  
Coronary Artery**





Normally the “power house” of the cell that supports all its energy-requiring functions

**Dr Jeckyll**



Mitochondrion

Reperfusion injury converts it into an agent of cell death

**Mr Hyde**

# **Challenges of being a Christian and a scientist**

Balancing the demands of a career in science while maintaining an active role in the Church and having time for family and friends can be a challenge!

The scientific workplace can be unsympathetic to religion, if not outright hostile and “Coming out” as a Christian is not easy especially for the early career scientist.

Churches do not always make it easy for scientists in their congregation!



# **Science as a Christian Vocation**

What is distinctive about being a Christian in Science and what opportunities does it bring to serve God?

1. Christians who are “mainstream” scientists are best placed to challenge the pervading atheism of the scientific world.

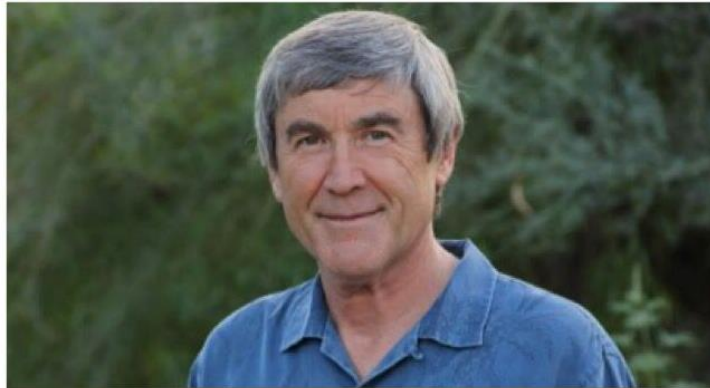
Pointing out why the improbable world we live in may reflect the work of a creator who reveals himself through his creation.

Scientists often use the word designed!

## Sir Fred Hoyle



A super-intellect has monkeyed with physics, as well as with chemistry and biology, and there are no blind forces worth speaking about in nature.



"There is for me powerful evidence that there is something going on behind it all. ...It seems as though somebody has fine-tuned nature's numbers to make the universe. ...The impression of design is overwhelming."

## Paul Davies – a post-doc of Fred Hoyle

*'Like the porridge in the tale of Goldilocks and the three bears, the universe seems to be "just right" for life, in so many intriguing ways.'*

## The Ancestor's Tale: A Pilgrimage to the Dawn of Life

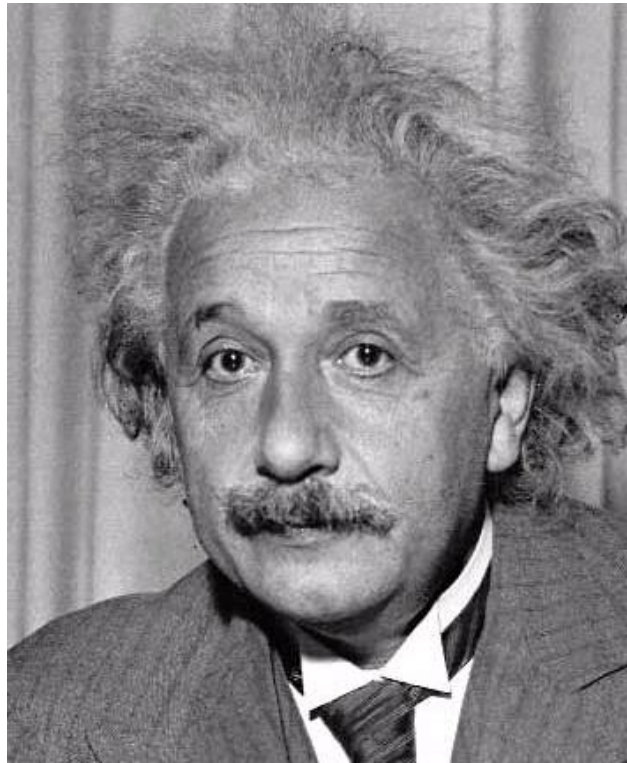


**Richard Dawkins**

*"The fact that life evolved out of nearly nothing ... is a fact so staggering that I would be mad to attempt words to do it justice. And even that is not the end of the matter. Not only did evolution happen: it eventually led to beings capable of comprehending the process, and even of comprehending the process by which they comprehend it."*



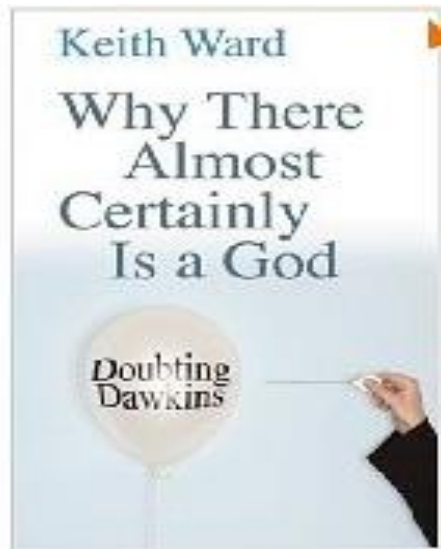
# Albert Einstein



*"The only incomprehensible thing about the universe is that it is comprehensible".*

**Occam's Razor (after William of Ockham**  
(c. 1288 – c. 1348) an English Franciscan  
friar and scholastic philosopher). ***"It is vain  
to do with more what can be done with  
fewer".***

**Is the introduction of God not  
contravening Occam's Razor?**

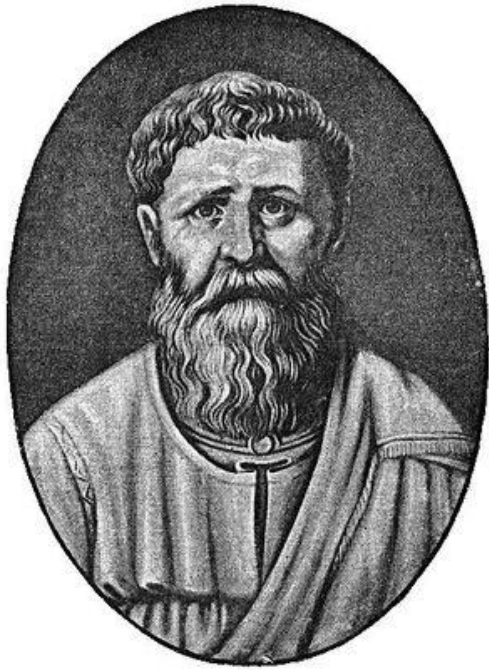


### **Professor Keith Ward**

A single incomprehensible  
mystery, the existence of  
God, offers an explanation  
for the whole creative  
process that science reveals  
is full of improbabilities.



**2.** Christians who are “mainstream” scientists are best placed to help their fellow Christians to see Science not as a threat, an enemy to be defeated, but a friend to be embraced as we seek to make God known in the world.



**Augustine of Hippo  
(354-430)**

*“Usually even a non-Christian knows something about the earth, the heavens, and the other elements of this world... and this knowledge he holds to as being certain from reason and experience. **Now, it is a disgraceful and dangerous thing for an unbeliever to hear a Christian, presumably giving the meaning of Holy Scripture, talking nonsense on these topics, and we should take all means to prevent such an embarrassing situation, in which people show up vast ignorance in a Christian and laugh it to scorn**”.*

**3.** Christians who are “mainstream” scientists play a key role in fulfilling the Biblical command in **Genesis 1:28** to be good stewards of God’s world, caring for it. We can use our Science for the benefit of humanity; e.g. the provision of better crop yields, improved medical care and disease prevention, and energy efficient and labour-saving technologies.

**Covid-19 vaccines and treatments!**



4. Christians who are “mainstream” scientists can play a key role in upholding Christian values in the public scientific arena. E.g.:

- Providing an informed Christian voice in committees and think tanks concerned with the direction and ethics of scientific research.
- Providing a science / evidence based lead on ecology and climate change in both the Christian and secular world.

**CRISPR** - **C**lustered **R**egularly **I**nterspaced **S**hort  
**P**alindromic **R**epeats

**5.** Christians can be “Christ’s Ambassadors” in the scientific workplace.

Paul instructs us all: “*Whatever you do, work at it with all your heart, as working for the Lord and not for men*” (**Col 3:23**). So the Christian scientist has the opportunity to provide a role model of how to pursue science to the highest ethical standards with honesty and integrity, giving due credit to others for their work and not being preoccupied with the desire to be first to publish or to receive accolades.

Questions  
Comments