



PréCiS

Spring 2022

Bringing Christian faith and science together

Issue no. 103

**Similarities AND differences
in Biology**

**Spring Conference
Local Group News**



So much has happened in the last couple of years, but we are looking again at some of the changes that have occurred in Science during "our" life time. This time we are looking at Biology and have listed the answers of 3 CiS members from across a few generations. To keep it anonymous, we have used just their initials. These are their thoughts:-

Similarities and differences in *Biology*

Approximately how long ago did you graduate in Biology?

JM: 50+ years

AJ: 30+ years

RC: Less than 10 years

A brief description of your personal background.

JM: I am a US citizen, born and raised in the state of North Carolina in a small town with a population of 8-9000. It was a cross between urban and country. My older brother also went to college after a 22 year military tour of duty, as well as most of our cousins. Our generation were the first in our extended family to go to college.

AJ: I grew up in a working class family in south Manchester and I was the first to attend university.

RC: I grew up in Bedford, a town in

South East England. My brother and parents attended university before me. My grandfather was the first in his family to go to university.

Why did you choose Biology?

JM: I have always had a fascination with the world around me and left high school with an interest in becoming a medical missionary.

My undergraduate training was at a small church supported institution, where the staff were dedicated to the students' education, accomplishments and overall well-being. In between undergraduate school and graduate, I worked at a regional medical laboratory operated by the state health department. This was an opportunity to expand my view of the practical realities of the biological world from viruses, bacteria, fungi to parasites.

I graduated from University of Georgia in 1970 with a PhD in microbiology with a speciality in immunology and immunochemistry. The journey continued to a NIH postdoctoral fellowship appointment in a Hospital Medical Institute in California studying not only the structure of antibodies, but relationships of structure and function (antibody specificity) and also the application of diagnostic capabilities of antibodies.

AJ: I guess I was (and still am!) quite a 'nerdy' boy and, while every other Mancunian was into soccer, I was more

interested in natural history and spent my summer holidays studying and collecting insects. I was single-minded in my determination to continue my hobby for as long as possible (without thought for career prospects) and managed to gain a place at New College Oxford to study zoology.



RC: I was obsessed with animals as a child, so biology seemed like a natural choice.

When I was studying for my GCSEs, my mother took me to a talk by Jane Goodall at a nearby zoo. I think this was the first time I realised that you could have a career studying animals. The head of biology at my upper school also made a difference to my decision to study biology at university.

My family was supportive though surprised - my mother still says to people 'I don't know how we have a scientist in the family'. I also had teachers at school encouraging me in all directions, with one senior tutor saying in an assembly that you needed a weird brain to study science at A Level.

What was it like at University?

JM: I lived in residence halls during my undergraduate studies and by the time I entered the University of Georgia, I was married and lived off campus.

There were tuition and book fees associated with attending graduate training and I was able to gain support teaching basic microbiology in laboratories during my 5 years in graduate school.

AJ: I was lucky enough to stay mollycoddled in college for my full three years, and was even more lucky to find that my college and CU attracted a high percentage of female students, one of whom was to become my wife.

I decided to do an industrially-sponsored PhD in biomaterials science at Reading University, with the view to settling down in a secure, well-paid job, rather than staying in academic zoology on endless short term post-docs. It was not an easy decision as my heart still lay in entomology, but my risk-aversion won out over my passion for insects.

RC: I loved being at university surrounded by other people who also cared about studying and learning biology. It was a hands-on course which required extensive fieldwork at the beach. I used government loans for both tuition and maintenance fees.

On my course (Animal Behaviour), it was roughly 50:50 male and female though in some modules (shared with other bioscience courses) there were a lot more female students than male. I stayed in halls for all of my degree, though I moved off campus after my first year.



CHRISTIANS · IN · SCIENCE

TM

SCIENCE, FAITH AND PUBLIC ENGAGEMENT

10.00am - 4.45pm, Saturday May 7th 2022
St John's College, Durham and Online



A day conference to gather, exchange ideas and best practices around engaging audiences with science and faith.



**Science
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What was a typical annual starting income after graduation?

JM: \$US 15,000

AJ: £ 10,000 to £ 15,000

RC: I haven't managed to get a job yet, but I'm mostly looking at fulltime Lab positions around the £10,000 mark at the moment.

During your career has there been an increase in women in your work place?

JM: In undergraduate years, the relationship was probably close to 50/50 but there was a tendency to seeing males and females pursuing traditional career paths.

AJ: For most of my career I worked in medical device Research & Development and I don't remember there being any significant change in the gender ratio.

RC: Haven't started my career at the moment.

At the start of your career, what was the prevailing attitude of Christian churches to science?

JM: There was the traditional fundamentalist view surrounding the conflict of literal days for creation and the issues it raised concerning the age of earth and the universe. For me, I always felt that faith and science was totally integrated. Just because I did not see the integration, that was ok.

AJ: In the evangelical churches I attended throughout my career, the

attitude towards science and scientists has generally been very positive. I often wonder if scientists have a mindset 'preadapted' to evangelical environments and so fit those niches quite well!

RC: I've been in several different churches, particularly while studying down in Falmouth. Most didn't mention science. However, I did stop attending an evangelical church after a sermon, which promoted astronomy while saying that science fiction was as bad as magic.

The Christian Union at my university was led by a Biology student when I first started attending, but was dominated by humanities and arts students, despite the large community of bioscientists on campus. I was aware of one science-related CU event, which I attended in my first year at university. It turned out to be a logically incoherent explanation of young Earth creationism. I remained involved with the Christian Union through the rest of my degree, but events were only related to humanities or arts after that.

During the first 10 years of your career what were some of the major developments in Biology?

JM: The development in our understanding of immunology and immunochemistry. This includes many genes in one protein and the genetic

code. It has been quite a journey.

I remember a time when we thought we knew all we needed to know about the identifies of different classes of antibodies, plus when the “T” and “B” cells were identified. It did not take us long to begin to realize the complexity of the system.

AJ: There were many developments in the kind of biology of interest to my employers, such as in tissue engineering. However, if I’m honest, I was always more interested in developments in evolutionary biology, which I kept an eye on from time to time.

RC: Not applicable

How has being a Christian influenced your studies/career?

JM: As I look back over my life and career, it reflects little on my plans, but heavy on opportunities and capabilities the Creator provided.

My training in immunology and cancer antigen was foundational in my personal life. In the late 1970s one of my 4 sons was seriously ill with an undiagnosed disease. Extensive number of medical tests were conducted, even bone marrow assessment. The initial assessment by a pathologist was normal bone marrow. A veterinarian haematologist friend insisted I request the smear be reviewed by a haematologist, and my son was diagnosed with acute lymphocytic

leukaemia. I was able to help and clarify to the family my son’s three year therapy with radiation and chemicals. He is still with the family.

Sadly my wife was diagnosed with colon cancer. I could walk with her with all the certainty needed, following surgery and chemotherapy to relapse and additional treatment until she lost her battle in 2017. I have never been more convinced that our Father pursues us in every turn and twist of life. He is always there sustaining us by revealing new things as we are able to see and accept.

AJ: It took a long time, but eventually, my long standing passion for zoology and theology have been realised in my return to university to study again as a mature student.

RC: Despite all my earlier secular reasons for studying and pursuing Biology, the biggest one for me is from my faith. I want to learn more about God’s creation to learn more about Him (I’m sure I’m not the first one to say that). When I first went to university, a flatmate was confused by me being a Christian and a scientist. I don’t see the conflict. I see evolution as a way to understand the world God made.

What has your involvement with CiS been like?

JM: It has been a breath of fresh air. The perspective taken in addressing scientific issues is not held captive to

fundamentalist biases that does not permit an open conversation. I find less judgemental attitudes and more openness to see science as God-given tools to understand His creation.

AJ: I haven't had much direct involvement with CiS though I always enjoy reading Science and Christian Belief.

RC: I have been a member of Christians in Science for about 4-5 years. Last year I went to my first conference, and it was great. I hope to be more involved (when I can) in the future.

What is/was life in the lab like?

JM: Life in the lab was an opportunity to work with a team of colleagues and staff, often with different disciplines, to formulate a hypothesis, test it and observe the response. One of the secrets in doing so, was to be honest in what you see and not skew the results toward supporting your hypothesis. It was a time to allow staff to "get to contribute" to the how a study will be executed.

AJ: I wasn't in the lab for long but, from what I can remember, it was an enjoyable experience because experiments generally went as planned. But that is only because dealing with biomaterials is a lot easier than dealing with living cells, organs, or organisms.

RC: At the moment I haven't done lab



Balancing how you spend your time?

work.

What have been the biggest pressures in balancing work/family/church life?

JM: The difficulty was not having a view of seeing the integration of all of these activities. The pressure really related to thinking I was in charge, and not our God. It has taken a long time to get past the world driven views of success, compared to the gentle life with Jesus leading. Most of my life I was driven by seeing a glass half empty and not a glass half full.

AJ: There was a period when I did an enormous amount of travel (flying to the US every month). It was not easy for the family, but the children looked forward to the presents I brought home with me, and I benefited from the long periods of uninterrupted reading time (mostly zoology and theology I have to admit!).

RC: I struggled with this when first at university, and I've been learning the importance of giving enough time to relaxing as well as work.

LOCAL GROUP NEWS

BRISTOL

Thursday 5th May, 7pm: *Exoplanets, aliens and God*
Speaker : Prof David Wilkinson

Location: Christ Church Clifton, BS8 3BN

For more information please contact Andrew Halestrap - ahalestrap@hotmail.com

DUNDEE

For more details on Dundee events please contact christiansinsciencedundee@gmail.com

EDINBURGH

For more information please email cisedinburgh3@gmail.com

HARROW

For details of future events in Harrow please contact Revd Lyndon North - revlnorth@aol.com

HUDDERSFIELD - students

For details please contact Omololu Fagunwa on fagunwaomololu@yahoo.com

IPSWICH

For more information about future events please contact Dr John Ling - jjling@btopenworld.com

IRELAND

For details please contact Dr Neville Cobbe - neville.cobbe@yahoo.co.uk for more information.

MANCHESTER

For details please contact sec.cismanchester@yahoo.co.uk

NORWICH

Please contact sfnorfolk@gmail.com for more details.

OXFORD

For more information, please contact Diana Briggs at diana.briggs@wolfson.oxon.org

READING

Please email Dave Law to discuss restarting this group at dave@readingatwork.org

SHEFFIELD

For more information please email rhoda.hawkins@sheffield.ac.uk

Details of all events are also available on the CiS App and at www.cis.org.uk/events.

If you wish to start a Local Group in your area, please get in touch with our Development Officer, at do@cis.org.uk



SOUTH WEST

For more information on events please email cissouthwest@gmail.com

SOUTHAMPTON

For information about the group please email Peter May (southampton@cis.org.uk)

ST ANDREWS

For information about the undergraduate group, please contact Dr Andrew Torrance (abt3@st-andrews.ac.uk).

For information about the postgraduate group, please contact Dr Rebecca Goss (rjmg@st-andrews.ac.uk).

SURREY

For information please contact Joy Perkins at joyeperkins@googlemail.com

TYNESIDE & NORTHUMBERLAND

For information on Newcastle events, please contact Bill Clegg at bill.clegg@ncl.ac.uk

WORCESTER

For more information please contact Jim Smith on jgsmith29@aol.com

YORK

For more information please email christiansinsciencyork788@gmail.com