

# Come and ask a Biologist!

Our members are the lifeblood of the Royal Society of Biology.  
Over the 4 days of New Scientist Live, we'd love you to meet them.

Find our stand in the Earth Zone of the Exhibition.  
Read on to find out who you will be meeting and what to ask them!

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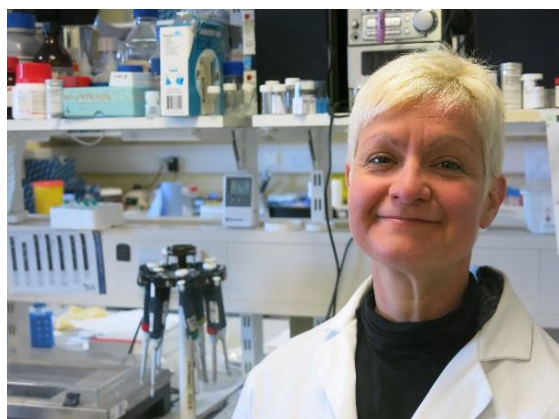
 Tweet @RoyalSocBio #NSLive #askabiologist



ask a  
biologist



10:00 – 13:30, Thursday 28 September (morning session)



**Ask me: “What can my blood teach me about my health?”**

Dr Charlotte Lawson FRSB  
Director of BSc/MSci Biosciences Programmes, Royal Veterinary College

 @drchlawson

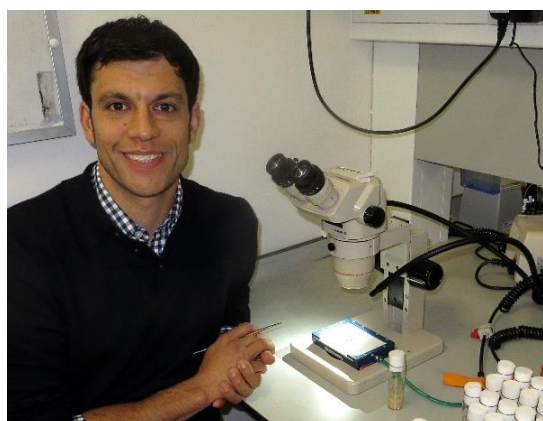
*Since graduating with a degree in Animal Sciences I have been studying the importance of inflammation in chronic diseases. My lab investigates the interaction between the immune system and the cardiovascular system and how this can lead to heart disease. We measure a number of different factors that can be released into blood, recently becoming interested in the role of extracellular vesicles, tiny cell-derived packages that can carry genetic material and proteins and influence cells in distant parts of the body.*

**Ask me: “What happens to the brain in Parkinson’s disease?”**

Dr Radha Desai MRSB  
Research Associate, Royal Veterinary College

 @radhadesai

*During my degree in Physics, I built a microscope which could study serotonin, an important molecule in the brain which is low in depression.. I have worked as a scientist in pharmaceutical research - making new medicines, as well as in academia - asking fundamental questions. After my PhD from UCL in neuroscience, I am now a post doctoral fellow working on mitochondrial research: looking at why energy is at the root of major illnesses such as Parkinson's disease and Cancer.*



**Ask me: “How does a single cell develop into an animal?”**

Dr Tim Weil MRSB  
Senior Lecturer, University of Cambridge

*I am fascinated by developmental biology: how a single, symmetric cell can divide, differentiate and develop into a highly organised and fully functioning organism. I have explored this fundamental question as a PhD student at Princeton University, as a postdoctoral fellow at the University of Oxford and now as a Senior Lecturer in the Department of Zoology at the University of Cambridge.*

13:30 – 17:00, Thursday 28 September (afternoon session)

## Ask me: “What can lakes teach us about climate change?”

Dr Evelyn Keaveney MRSB  
Postdoctoral Research Fellow, Queen's University  
Belfast

 @ceibheannaigh

*I use radiocarbon to investigate the impact of climate change on lakes, and the role they play in storing carbon or contributing to the greenhouse gas effect. I use radiocarbon in a new way to look at carbon sources and find out what happens to carbon in lakes – is it buried or does it enter the food web and return to the atmosphere as CO<sub>2</sub>?*



## Ask me: “What is nanotechnology and what can it do for me?”

Professor Richard Handy FRSB  
Professor of Environmental Toxicology, and Author,  
Plymouth University

 @rdhandy2

*I am an author and scientist. I have spent the last decade researching the safety of novel nanomaterials with respect to wildlife, the environment and human health. I am interested in responsible innovation with new technology. I also write fiction: my nanotech-based thriller ‘The Reich Device’ explores the risks of ‘high tech’ science going off the rails and our collective responsibility for looking after ‘big science’.*



## Ask me: “Why is chlorine in my drinking water?”

Miss Natalie Lamb MRSB  
PhD Student, Anglian Water and University of Sheffield

 @Natnotgnats

*I am a PhD researcher at The University of Sheffield and work with Anglian Water, who supply water to the east of the UK. My research is all about the chemicals we use to treat drinking water and I am investigating whether we could, one day, produce excellent quality water without using any chemicals at all.*





10:00 – 13:30, Friday 29 September (morning session)

## Ask me: “Can biology make shopping more sustainable?”



Dr Yvonne Armitage FRSB  
Bioeconomy Specialist, Knowledge Transfer Network

*I studied chemistry, then did a PhD in microbiology and biochemistry and spent the next 15+ years in the chemical industry developing bioprocesses and bio-based products using enzymes as catalysts and renewable starting materials. This gives more ‘environmentally friendly’ products and processes that are safer with less waste. I’m passionate*

*about using bioscience for everyday products and in my current job I work with companies in the UK to help them to use biology as well.*

## Ask me: “How do our brain cells communicate?”

Professor Roland Jones FRSB  
Professor of Neuropharmacology, University of Bath

*I am a neuroscientist and have worked on the brain for over 40 years. I study how brain cells communicate with each other, and how this communication is affected by drugs. As well as being interested in how the brain works normally, I also study how activity is changed in disorders of the brain such as epilepsy, Alzheimer’s disease and schizophrenia. My main aim is to help develop new and better drugs to treat these disorders.*



## Ask me: “Where do poison arrow frogs get their toxins from?”

Dr Karen Siu-Ting MRSB  
Postdoctoral Research Fellow, Aberystwyth University

[@telmatobita](#)

*I am an evolutionary biologist from Peru specialising in amphibians. My research combines field work in the Amazon rainforest with laboratory and computational analyses to*

*address biological questions. I currently work on a project on poison arrow frogs between Dublin City University (Ireland) and Aberystwyth University (Wales). I investigate how these frogs acquire their toxins through their diet and what adaptations they have evolved to resist toxicity and re-use these toxins as defences.*

13:30 – 17:00, Friday 29 September (afternoon session)

## Ask me: “What is a stem cell and how can it help treat disease?”

Mr Damilola Aboyeji MRSB  
Group Laboratory Manager, WideCells Group PLC

*I trained as a microbiologist, but I have specialised in stem cell biology. As a laboratory manager, my job is to process, identify stem cells from cord blood, cord tissue and conduct research. The stem cells from cord blood are used in routine transplants for the treatment of blood cancers. Working in WideCells allows me to collaborate with other researchers looking for new and unique ways of treating diseases using stem cells.*



## Ask me: “Can we feed 9 billion people?”

Dr Andrew Crossthwaite MRSB  
Group Leader, Syngenta

*I have been involved in agri-science now for over 12 years at Syngenta’s research centre in Jealott’s Hill, near Bracknell. I work as a part of a global team finding new ways to help crops defend themselves against insects, fungal diseases and competing weeds. Innovation in plant protection, seed varieties and farming technologies is essential to deliver food in a sustainable manner while preserving biodiversity.*

## Ask me: “Why should I care about antibiotic resistance?”

Ms Rachel Rowe MRSB  
PhD Student, Cardiff University

 @peachrowe

*I am a final year PhD student at Cardiff University, and my research area is antibiotic discovery. I worked in the pharmaceutical industry for 6 years before beginning undergraduate life, and then obtained a BSc Genetics degree. In my lab I combine microbiology, chemistry and genetics expertise to identify antibiotic compounds, and the genes which make them. In university I am a ‘Wellbeing Champion’ for student peer support groups, as well as a proud STEM Ambassador.*



10:00 – 13:30, Saturday 30 September (morning session)



### Ask me: “Could microwaves save my life?”

Dr Lovleen Tina Joshi MRSB  
Lecturer in Molecular Microbiology, Plymouth University

 @tinaljoshi

*My research focuses on the development of a hand held detector able to rapidly detect antibiotic resistant bacteria within infected patients/environment. Antibiotic resistance in microorganisms is a global crisis as we have fewer and fewer ways left to treat dangerous infections.*

*The approach we use utilises bespoke microwave technology to break open bacteria in five seconds and electrochemistry to detect the bacteria itself.*

### Ask me: “How does tracking animals help protect them from human impact?”

Mr William Kay MRSB  
PhD Student, Swansea University

 @willpkay

*I am a marine biologist specialising in animal movement, with a focus on seabirds and marine mammals. I use miniature tracking devices to study if and how wild animals are affected by human impacts. My PhD project investigates the potential impacts of marine renewable energy developments on seals in Britain. I love to engage with the public and teach people of all ages about my research. I'm also a SCUBA diving instructor and you will often find me in my drysuit!*



### Ask me: “How can we do medical research without using animals?”

Professor Robin Williams FRSB  
Professor of Molecular Cell Biology and Head of Biomedical Sciences, Royal Holloway University of London

*I graduated with a PhD at the University of Melbourne (Australia) in 1994, then moved to the UK to continue research at the University of St Andrews and University College London, including a prestigious Wellcome Trust fellowship. My research looks at neuroscience and drug*

*development, with a focus on approaches that can help refine, replace or reduce the use of animals in research.*



13:30 – 17:00, Saturday 30 September (afternoon session)

## Ask me: “How do pet cats and bird feeders affect urban wildlife?”

Professor Mark Fellowes FRSB  
Professor of Ecology, University of Reading

 @BaobabJ

*I'm an ecologist. My group works on species that range from leopards to pathogens, but much of our research is focused closer to home. Around 90% of us live in towns and cities, where we make individual decisions that collectively affect the abundance and diversity of wildlife. For example, we choose to feed birds, own pets, or mow lawns. Each has consequences, and my group tries to understand these so we can help turn urban areas into havens for nature.*



## Ask me: “What happens when I pick a scab?”

Dr Jim Pritchett MRSB  
Lecturer, Manchester Metropolitan University

 @jimpritchett

*I completed my PhD and post doctoral research in Developmental Biology at the University of Manchester and am now a lecturer at Manchester Metropolitan University. I study organs like the liver, kidney and lung and my research aims to understand what happens when healing goes wrong: Why do we scar and how does fibrosis (scarring) develop in response to injury? The only treatment for severe fibrosis is organ transplant, so we urgently need to develop new treatments.*

## Ask me: “Why do we need to develop new drugs?”

Dr Wendy Rowan FRSB  
Manager, GlaxoSmithKline

*Since I was very young, I have wanted to make a difference to people's lives. I trained as a biologist and then specialised in immunology. This led me to work in drug discovery where I help develop new and better medicines to treat diseases such as asthma and rheumatoid arthritis. In my spare time, I like to be outside and enjoy being surrounded by nature.*



10:00 – 13:30, Sunday 1 October (morning session)



### Ask me: “How can you travel the world as a microbiologist?”

Mrs Julie Roberts FRSB QP  
Quality Director, J Roberts Associates Ltd

*During my 27 year career in pharmaceuticals, I have helped commercialise the first HIV treatment, multi-drug resistant antibiotics, vaccines, many cancer treatments, insulin, and other life sustaining drugs. I’ve visited 50 countries as a microbiologist, including 11 months living in India where I inspired future microbiologists and a generation of young women who saw that it’s possible to be a ‘wife, homemaker **and** have a career’.*

### Ask me: “What do barnacles have to do with the economy?”

Ms Miranda Lowe FRSB  
Museum Scientist/Principal Curator, The Natural History Museum

 @NatHistGirl

*As a museum scientist and Principal Curator at the Natural History Museum, I am responsible for many important oceanographic specimens, including those collected during the historic Discovery and Challenger expeditions, and Charles Darwin’s barnacles. My specialist area of interest is marine invertebrates, especially Crustacea and Cnidaria (corals and jellyfish). I love to communicate my science, and have appeared on BBC Radio 4, BBC Four and CBBC. I am passionate about the role that science and museums play in our understanding of the natural world.*



### Ask me: “How do our nerves connect and grow?”

Professor Guy Tear FRSB  
Professor of Molecular Neurobiology and Head of Genetics Education, King’s College London

*I have been fascinated by science since I was very young. I am particularly interested in understanding how we build our bodies, what genes are involved and how this takes place as we develop. My main interest is to discover how nerve cells grow and connect with one another to ‘wire-up’ our nervous system and whether we can use this knowledge to repair neural damage.*



13:30 – 17:00, Sunday 1 October (afternoon session)

## Ask me: “What can I do to attract wildlife into my city life?”

Mr Ian Boyd FRSB  
Director, Artecology

 @artecologyltd

*I'm an ecologist and in my youth, spent years living in sheds on remote nature reserves - great fun! Now I'm really interested in urban environments, the places we share with the natural world. I am engaged in an unusual collaboration between biologists and artists, designing new habitats for people and wildlife alike. We are finding ways to make biologically favourable building materials, creating new textures and complex surfaces that can be decorative, even beautiful, but ecologically functional and useful at the same time.*



## Ask me: “Why do we use crystals to design new medicines?”

Professor Naomi Chayen FRSB  
Professor of Biomedical Sciences, Imperial College London

*I specialise in crystallizing proteins and other biological molecules to help in the design of new medicines. My research involves nanotechnology and nanomaterials for designing and developing unique methods to obtain crystals.*

*My lab is currently working on proteins related to cancer, HIV, diabetes and heart disease. I have also sent experiments into space with NASA, the European and Russian Space Agencies, and onto the International Space Station.*

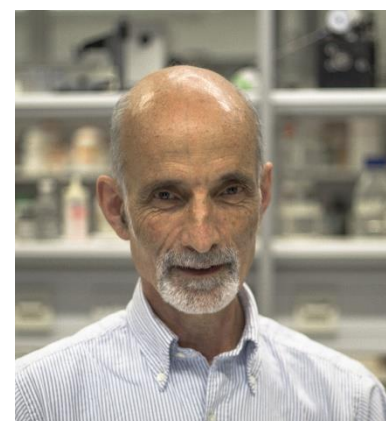


## Ask me: “What do hairs have to do with hearing?”

Professor Jonathan Ashmore FRSB FRS  
Bernard Katz Professor of Biophysics, University College London

 @jflashmore

*After completing my PhD, I left theoretical physics to become a biologist when I realised that it was going to be ages before the Higgs boson was found. I became a cell neurobiologist just at the time when we were beginning to understand how the cells of the inner ear work. The attraction is that hearing research involves many interdisciplinary ideas. Moving to UCL as a professor after working at Bristol, I was one of the founder members of the UCL Ear Institute.*





# Royal Society of Biology

**We are the Royal Society of Biology,  
A single unified voice for biology**

**Our vision** is of a world that understands the true value of biology and how it can contribute to improving life for all.

**Our mission** is to be the unifying voice for biology, to facilitate the promotion of new discoveries in biological science for national and international benefit, and to engage the wider public with our work.

**Our 17,400+ members** include Nobel laureates, practising scientists, students at all levels, professionals in academia, industry and education, and non-professionals with an interest in biology

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or visit [rsb.org.uk/join](http://rsb.org.uk/join)**

