

TALL POPPY CAMPAIGN

Investing in Australia's Future

Young Tall Poppy Profile: Dr Peter Rutledge

Name: Peter Rutledge

Title: Dr

Research Field: Chemistry

More Specifically: Organic and biological chemistry

In other words: Antibiotics, organic synthesis, bio-inspired chemistry, green chemistry

Abbreviated Qualifications: BSc, MSc (Hons 1), DPhil

Current position: Senior Lecturer

University/Institution: The University of Sydney

What do you do?

My research applies the tools of chemistry to tackle important medical and environmental challenges. We are developing new antibiotics to combat superbugs, studying key biological processes used in the industrial manufacture of polymers and antibiotics, building improved technologies for detecting and cleaning up toxic pollutants, and designing new catalysts to drive important chemical transformations that are difficult or impossible using current methods.

Why is this research important? How is it relevant to society at large?

Environmental degradation, energy consumption and the spread of antibiotic-resistant 'superbugs' are all key issues faced by society today. Our chemistry can make a significant contribution to combat each of these challenges.

What's difficult about it?

Designing molecules to do the jobs we need them to, and then constructing those molecules from simple, cheap building blocks (chemical synthesis) are difficult and time-consuming challenges (the molecules don't always do what they're supposed to!) but also exciting and highly rewarding.

Why are you passionate about it?

Science in general and chemistry in particular have the capacity to really change our world for the better, and they do so every day. As scientists, we can tackle and solve the really big issues of our time, and make the world a better place to live in today, and for tomorrow.

Why share your research with high school students?

Two reasons: to engage and inspire those who will be the next generation of scientists and continue the push to solve tomorrow's problems, and to talk to those who aren't going to be scientists and share with them the power of science as a force for good.

Why study sciences?

Challenge ... excitement ... creativity ... the opportunity to understand the world around you, and apply that understanding to make it a better place.

Is it what you've always wanted to do?

Absolutely. The two main aspects of my job are research and teaching. Research is all about finding out interesting stuff that nobody knew before, and teaching is connecting with people and sharing knowledge (both the new things we've discovered, and the things that form the background to it all). Both are exciting, challenging and highly rewarding, and no two days are ever the same.

What else are you into?

Travelling, hiking and the outdoors, cricket, music ... and spending time with my baby son.

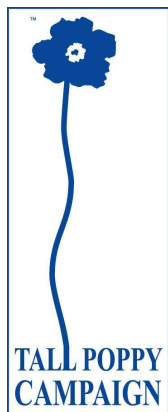
Public profile:

As the Royal Australian Chemical Institute (RACI) *Nyholm Youth Lecturer*, I have presented my lecture *Chemicals Are Good for You* to hundreds of Year 10 students across New South Wales. My lecture includes demonstrations, a quiz game and a high level of interactivity. I have previously delivered numerous outreach lectures and workshops to school students in Dublin (2003-2006) and Oxford (1997-2002), and contribute regularly to University open days and workshops.

Founded by the Australian Institute of Policy and Science

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The Tall Poppy is a metaphor for excellence and endeavour and symbolises Australia's pride in its outstanding achievers - in all fields.



Your achievements - How did you get where you are today?

Your HSC subjects: Chemistry, Biology, Maths (with Calculus), Physics, Latin, Classical Studies, English (as HSC equivalent in NZ).

Degrees: BSc (Chemistry & Biochemistry) The University of Auckland, NZ; MSc (Chemistry, Hons 1) The University of Auckland, NZ; DPhil (Bio-organic chemistry) The University of Oxford, UK.

Some of your previous position/s: Post-Doctoral Fellow (Dyson Perrins Laboratory, Oxford, UK); Lecturer (Magdalen College, Oxford, UK); Lecturer in Chemical Biology (University College Dublin, Ireland); Lecturer in Chemistry (University of Sydney).

Current position: Senior Lecturer, School of Chemistry, The University of Sydney

Relevant awards and prizes you have received as part of your studies/research/work: University of Auckland Senior Scholarship in Chemistry (1994) and Masters/Honours Scholarship (1994); Rhodes Scholarship (1995); Edward Chapman Prize for Research (Magdalen College, Oxford, 2000); President's Award for Research (University College Dublin, Ireland, 2004); Royal Australian Chemical Institute Organic Division Lectureship (2007) and Nyholm Lectureship (2008).

Summary of published works: I have published 20 peer-reviewed journal articles, book chapters and invited reviews, and delivered more than 50 invited lectures and conference presentations.

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