



The Royal Society OF VICTORIA

Promoting science since 1854

PATRON: The Hon Linda Dessau AC
Governor of Victoria

PRESIDENT: Mr David Zerman

This Month's Events...



10th May: Katie Allen

"Why is Australia the Food Allergy Capital of the World?"



24th May: Cordelia Fine

"Testosterone Rex: Death of a Legend?"

June 2018 Advance Notice:

14th June: TBC

”



28th June: David Cantrill

**2018 Howitt Lecture: Joint
Presentation with the Geological Society
of Australia (Victoria Division)**

*"The Great South Land: Gondwanan Floras of the
Antarctic Fossil Record"*

May 2018 Newsletter

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rsv.org.au



Why is Australia the Food Allergy Capital of the World?

Thursday, 10th May 2018 at 7:00pm



Speaker: Professor Katie Allen

**Director, Australian Centre of Food & Allergy Research
Murdoch Children's Research Institute, Royal Children's Hospital Melbourne**

As humans we are obsessed with food. And why not? We need to eat food safely in order to survive; but many people now find food is not always their friend. For a small but growing proportion of the community, something as benign as eating a peanut could result in a tragic yet preventable death. Why is food allergy on the rise, and why does Australia appear to be the worst affected?

Professor Katie Allen has spent the last 10 years describing the burgeoning problem of food allergy and anaphylaxis in Australia and has discovered a number of hypotheses for why food allergy is becoming increasingly common in the Western World. This overarching theory – dubbed “the 5Ds” – takes us from the internal milieu of our gastrointestinal tracts to the sunny climes of our holiday destinations. Professor Allen's work now underpins an exciting array of randomised controlled trials, all hot on the heels of an improved understanding of this puzzling phenomenon.

About the speaker:



Professor Katie Allen (MBBS (Hons), BMedSc (Hons), FRACP, PhD, FAHMS) is a practicing Paediatric Gastroenterologist and Allergist at the Royal Children's Hospital, leading a team of 30 researchers including 5 PhD students at the Murdoch Children's Research Institute. She has published more than 300 papers and book chapters and is the Director of the NHMRC-funded Australian Centre of Food and Allergy Research.

She is an inaugural Fellow of the Academy of Health and Medical Sciences and Fellow of the American Academy of Allergy, Asthma and Immunology. She holds a Professorial Chair at the University of Manchester UK and is Professor of Paediatrics at the University of Melbourne.

RSV Members: please also register to attend our Members' Briefing that precedes this lecture, and a Special General Meeting that follows (details next page).



Places limited, bookings essential! Register online now at <https://rsv.org.au/events/food-allergy-capital/>, call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au

Testosterone Rex: Death of a Legend?

Thursday, 24th May 2018 at 7:00pm



Speaker: Professor Cordelia Fine

Professor of History & Philosophy of Science

School of Historical & Philosophical Studies, The University of Melbourne

'Testosterone Rex' is the legend that tells us that risk-taking, competitive, promiscuous masculinity evolved in males to increase their reproductive success, and is therefore built into the male brain and fuelled by testosterone. We hear Testosterone Rex roar in some scientific articles, pop science and public debates about the reasons for gender inequalities. But how well does this familiar story fit with contemporary scientific understanding? This talk sketches the evolution of the science of sex/gender, and the implications for Testosterone Rex.

About the speaker:



Cordelia Fine is Professor of History and Philosophy of Science in the School of Historical & Philosophical Studies at the University of Melbourne, and the recipient of the inaugural Women's Leadership Institute Australia Research Fellowship.

Professor Fine's second book, *Delusions of Gender*, was short-listed for the Victorian Premier's Literary Award for Non-Fiction, the Best Book of Ideas Prize, the John Llewellyn Rhys Prize and the Warwick Prize. Her most recent book, [Testosterone Rex](#), was the winner of the prestigious 2017 [Royal Society Insight Investment Science Book Prize](#).

Full RSV Members: please also register to attend a Special General Meeting that follows (details page 4).



Places limited, bookings essential! Register online now at <https://rsv.org.au/events/testosterone-rex/>, call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au

Members' Briefing & Forum: The Future of the Royal Society of Victoria




All fully subscribed RSV members (including student members) are asked to attend this special briefing and discussion forum to address the future of the Society.

As canvassed at the Annual General Meeting held on 26 April, while we are making fantastic progress towards the goals articulated in our Strategy, [Concord & Progress](#), the Society's ambitions significantly outweigh its capacities. Thanks to the generous legacy of earlier members such as Dr Phillip Law, we have a small resource base to underwrite our activities for the medium term; however, our ability to serve the Victorian community and sustain our concern with science engagement and literacy beyond the next decade is contingent on securing a significantly higher revenue stream.

The RSV Executive Committee and Council have been working with partners over the past three years to develop a proposal to substantially improve the Society's capacities for impact in Victorian communities, as well as securing much-needed structural work, refurbishments and refitting of our lovely old building, which turns 160 next year.

Following this forum, we will be meeting again to deliberate on the plan at a [Special General Meeting](#) to be held on the evening of **Thursday, 24th May** (two weeks later). It would be terrific if you could make it to both forums.

Voting RSV members only please. Your subscription to membership of the Society must be current (financial members only). Please register below to attend the briefing – there is a function and lecture to follow from 6, featuring the charismatic Professor Katie Allen on the topic of "[Why is Australia the Food Allergy Capital of the World?](#)" We would be delighted if you can make a whole evening of it, and register to attend the function and lecture as well!


 **Places limited, bookings essential! Register online now at** <https://rsv.org.au/events/members-briefing-forum/>, call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au

Notice of Special General Meeting

Full RSV members (ie. with voting rights) are asked to register their intention to attend this Special General Meeting of the Royal Society of Victoria, noting a quorum of 50 will be required. If you cannot attend, please nominate your proxy [on the form provided by the RSV](#). A copy is included on the last page of this newsletter.

There will be a members' cocktail function from 6pm, after which the 2017 Royal Society (of London) Science Book Prize Winning author Professor Cordelia Fine will present to the Society on the subject of [Testosterone Rex: Death of a Legend?](#) from 7pm. The link provided is to a separate registration page to attend the lecture, which at the time of posting is almost booked out – please be quick if you would like to attend this also!

Voting RSV members only at the SGM please. Your subscription to membership of the Society must be current (financial members only). Please note that under our Rules student members are ineligible to vote in RSV Council elections or at our General Meetings, but all members are welcome to join us for the function at 6pm and Professor Fine's lecture from 7pm – we encourage our student members to register to attend the lecture so we can hold your place).

 **Places limited, bookings essential! Register online now at** <https://rsv.org.au/events/special-general-meeting-240518/>, call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au

From the President



Oh what a week the last week of April was!

The week started on Monday 23 April with the official Victorian launch of the Victorian Inspiring Australia program and a briefing for potential event holders during Science Week (to be held in August).

Then on 26 April I was delighted to Chair the 161st RSV AGM where we welcomed three newly elected Councillors, Dr Julie Boyce, Dr Catherine deBurgh-Day and Ms Rosie Stramandinoli who joined re-elected Councillors, Ms Sophie Frentz, Dr Kevin Orman-Rossiter and A/Prof Gavin Smith. Congratulations to all and welcome to the RSV as a Councillor for the next two years. At the AGM we also inducted Professor Lynne Selwood, AO, with the highest honour the RSV can bestow on a member - that of a Fellow.

If you haven't had the opportunity to read our Annual Report it is on our website. Also special congratulations to our CEO, Mike Flattley, for putting together the record of our activities during 2017. We were engaged in so many activities in 2017 and, by looking at our monthly newsletter you'll see this is continuing.

There was standing room only for the lecture after the AGM when Professor Elena Ivanova, of RMIT, gave a spectacular lecture on Fighting Superbugs with Biomimetic Nanostructures. Our May lectures look to be equally as exciting so book as soon as you can.

We have some exciting news to share with you and I hope to see as many members as possible at our briefing and Special General Meeting which are before our regular meetings' lectures this month. Please come along to hear about and discuss this news. Details elsewhere in this newsletter.

It is only with your support that we can continue to develop the RSV as a centre for promoting science in Victoria.

I look forward to hearing from any members either via my email president@rsv.org.au or by calling me on 0418 346 999.

- **David Zerman**

Nominations for RSV Membership

Nominations for membership of the Society have been received on behalf of:

Professor Rajan **RAMESH**, Dept of Physiology, Monash University

Miss Fleur Manumea **KELLENBACH**, Senior Advisor, Philanthropy

Mr Joel **YUHAN**, Student, Deakin University

Professor Elena **IVANOVA**, Nano-biotechnologist, RMIT University

Ms Gabriela Constanza **MARTINEZ ORTIZ**, PhD Student, La Trobe University

Mr Carlos Fernando **SANTOS MARTIN**, PhD Student, La Trobe University

Dr Brian James **SALTER-DUKE**, Adjunct Associate Professor of Chemistry, Monash University

Ms Adrienne **JONES**, Freelance Writer

Ian Graham **PITTOCK**, Pest Controller

Harry Ian **PITTOCK**, Student, University of Melbourne

Professor Christopher Frances **McCONVILLE**, Deputy Pro Vice-Chancellor (Research), RMIT University



Welcoming new member Spencer Vaughan to the Society on 26th April

Unless Members request a ballot, these will be considered for election by Council and if elected, will be announced at the Ordinary Meeting of the Royal Society of Victoria to be held on 24th May 2018. Recently elected members who have not

yet signed the Society's membership book are warmly invited to attend the 10th May meeting to be formally welcomed as members. **Please inform the office if you plan to attend, so we can prepare your membership certificate for collection.**

A number of established members have indicated they have never had an occasion to 'sign in' – again, please let us know at the office if you'd like to rectify the situation, and we'll make sure you get the opportunity!

Fundraiser: Garden & Flower Show Parking

Warm thanks to our entrepreneurial Business Manager and Caretaker, James McArthur for running a lean outfit this year, raising funds to support our Young Scientist Research Prizes in August in inclement conditions!

Donations totalled **\$2,360** over the weekend of 23 - 25 March.

2018 Program

Here are our confirmed speakers and topics through to May 2018; further details are being confirmed with speakers and partners, or are otherwise subject to the outcomes of our various awards and prizes. Most events through to the end of May are currently online at our website and available for bookings.

May

10th – “Why is Australia the Food Allergy Capital of the World?” with Professor Katie Allen.

24th – “Testosterone Rex: Death of a Legend?” with Professor Cordelia Fine.

June

28th – “Testosterone Rex: Death of a Legend?” with Professor Cordelia Fine.

As always, you can book our lectures as they become available online at <https://rsv.org.au/lecture-program/>.

Fighting Superbugs: Biomimetic Nanostructures

Following our 2017 AGM, we enjoyed a brilliant lecture on the evening of Thursday, 26th April 2018 from **Professor Elena Ivanova** from RMIT

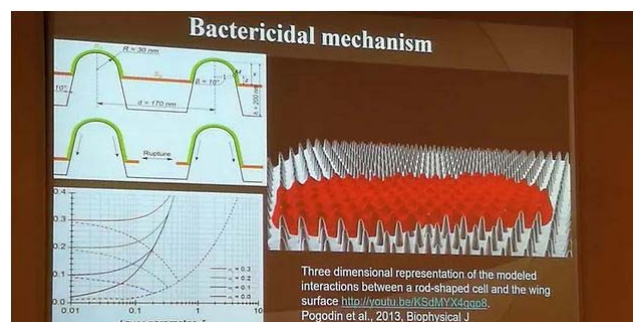
University on “Fighting Superbugs: Biomimetic Nanostructures.”

This review article was authored by [Monash Tech School](#) Director, **Ashley van Krieken**, reproduced here with permission.



Nature is a wonderful thing and scientists have long looked to nature and how it solves problems to guide their own research and discoveries. On Thursday 26th of April, Monash Tech School staff attended a presentation by Professor Elena P. Ivanova discussing her team's work on developing materials which fight Superbugs. She also noted her own journey from initially working on marine bio films to working and leading an interdisciplinary team at Swinburne University.

Professor Ivanova's research builds on the increasing risk caused by superbugs becoming resistant to antibiotics and traditional chemical treatments applied to surgical instruments and implants. After taking us through some rather sobering statistics about superbugs and antibiotic and microbial resistance, we were taken through the experimental journey of Professor Ivanova and her team.



Looking to nature for inspiration led to the investigation of the wings of cicadas and dragonflies given their ability to not carry or allow bacteria to grow. The group discovered that the wings are composed of nano pillared arrays and therefore, do not rely on a combination of physical and chemical properties to combat biofilm build up. These arrays when studied, were shown to have combined their structure, height and distribution to kill by tearing up bacterial cells. As the process is so quick, the bacteria are unable

to adapt to this unique defence mechanism and so cannot cluster, grow and develop colonies.

We were taken through a number of different structures, patterns and materials explored by Professor Ivannova and her team as they attempted to replicate this pattern in various materials. The most recent iteration used black silicon to replicate the nanostructures of the insect wings and the results showed it had a similar biocidal effect for gram-negative bacteria but did not damage larger, eukaryotic cells. This last finding is the subject of future research for the team.

The presentation was a fascinating example of science looking to nature for a solution. It also demonstrated the importance of incremental advances and building on successive failures. Finally and as depicted by her final slide it also demonstrated the diverse team, in both skills and geography responsible for undertaking the research. The project saw collaboration from biochemists, engineers and entomologists from Australia, Germany and Spain among others.

* * *

Many thanks for a wonderful evening Elena!



RSV President David Zerman with Professor Elena Ivanova

National Science Week Victoria: Seed Grants for Events



We warmly invite everyone interested in being a part of this state-wide celebration of all things Science in August to plan their event, and register it in this wonderful state-wide festival as soon as possible to get the full benefit of our publicity and audience engagement efforts.

To help community groups and organisations get started, we're offering 20 small grants to facilitate further support from host and/or partner organisations, as required. Please see our page at <https://rsv.org.au/science-week-victoria/> for full details.

RSV Medals, Awards & Prizes: All Open!

Our full suite of awards and prizes are currently open for submissions and nominations! Please follow the links below to learn more.

The Young Scientist Research Prizes

The Royal Society of Victoria has established four prestigious, competitive prizes, open to post-graduate, doctoral students in all areas of the Biomedical & Health Sciences, Biological Sciences (Non-human), Earth Sciences and Physical Sciences.

<https://rsv.org.au/awards-and-prizes/young-scientist-research-prizes/>

The RSV Medal for Excellence in Scientific Research

The award of the Medal is based on demonstration of the candidate's excellence and leadership in scientific research. Nominations are invited in **Category II: Biomedical & Health Sciences**. See <https://rsv.org.au/awards-and-prizes/research-medal/>

The Phillip Law Postdoctoral Award for Physical Sciences

This award was made possible from the generous bequest to the Society from the estate of the late [Dr Phillip Garth Law AC](#). The award is for excellence in scientific research by an early career researcher in the physical sciences. See <https://rsv.org.au/awards-and-prizes/dr-phillip-law-ac-post-doctoral-award/>



**PROXY Form for Voting at the Special General Meeting of
 THE ROYAL SOCIETY OF VICTORIA (INC)**

In accordance with the Rules of the Society, financial Members of the Royal Society of Victoria Inc. may vote in person or by proxy. Rule 21 (1) requires notice of the appointment of a proxy, who is a member of the Society, to be given or sent to the Honorary Secretary at the Society's Office no later than 5.00 pm on **Wednesday 23rd May 2018**, the last working day before the meeting, **which will be held at 5:00 pm on Thursday 24th May 2018** in the Society's Ellery Theatre.

To assist Members in lodging notice of the appointment of a proxy this form is provided.

I.....
(Block letters please)

being a Member of The Royal Society of Victoria Inc. appoint as my proxy

The Chairman of the Meeting*

.....*

(Name of the Member who is to be proxy, block letters please)

*Please tick one box.

My instructions are to vote for / against (circle one)

If direction to vote 'For' or 'Against' is not provided, the Proxy is considered undirected and so may be used at the discretion of the nominated Proxy holder.

That the plan to raise significant funds in support of the enduring mission of the Royal Society of Victoria, as presented by Council and discussed at the Members' Briefing convened on 10th May 2018, be endorsed in accordance with Rules 12, 13, 14 and 18.

Moved: D. Zerman

Seconded: A. Davison

For / Against / Proxy's Discretion

Signature

Date

Please return to:
 The Honorary Secretary
 The Royal Society of Victoria
 8 La Trobe Street
 Melbourne VIC 3000

To reach the Royal Society of Victoria office not later than 5.00pm on Wednesday 23rd May, 2018