



The Royal Society OF VICTORIA

Promoting science since 1854

PATRON: The Hon Linda Dessau AM
Governor of Victoria

PRESIDENT: Dr William Birch AM

Upcoming Events...



9th March: The 2017 J E Cummins Oration
Through the Microscope: Milk, Cheese and Dairy Products
A/Professor Sally Gras, Director, ARC Dairy Innovation Hub



23rd March: A Moonshot Approach to Cancer: what will it take to find the cures?
Professor Miles Prince AM
Director, Centre for Blood Cell Therapies, Peter MacCallum Cancer Centre
Director, Molecular Oncology & Cancer Immunology, Epworth Hospital



30th March – 2nd April: “Interacting with Eucalypts” Exhibition
Launch event on the evening of 30th March from 5.30pm.

April Advance Notice:



27th April: RSV Annual General Meeting
Keynote: Laureate Professor Peter Doherty AC
“Innovation, liberal education and the role of science in society”



30th April: Science for Science Fiction
A One-Day Conference for Writers of Science Fiction
In partnership with Aurealis Magazine and the Emerging Writers Festival

March 2017 Newsletter

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March Meetings

Through the Microscope: Milk, Cheese and Dairy Products

The 2017 J E Cummins Oration



Thursday, 9th March 2017 at 7:00pm.

Speaker: **Associate Professor Sally Gras**
Director, ARC Dairy Innovation Hub

What does milk look like under the microscope? How does Mozzarella stretch and why are these properties important for Australia's \$13 billion farm, manufacturing and export industry?

Researchers at the [ARC Dairy Innovation Hub](#) are examining the science behind these questions, as they help manufacturers to add value, reduce risk and increase sustainability. In this talk, we will take a journey from the dairy farm gate to your plate. We will explore familiar foods using advanced microscopic techniques, from the fat droplets in milk to the protein structure of Camembert. We will look at how research is linking this microscopic detail to the yield and profitability of manufacturing, as well as the way these products taste, feel, melt and stretch. Find out about Hub research programs solving scientific and engineering challenges and how these can have a positive impact on both industry and the consumer.

About the speaker:



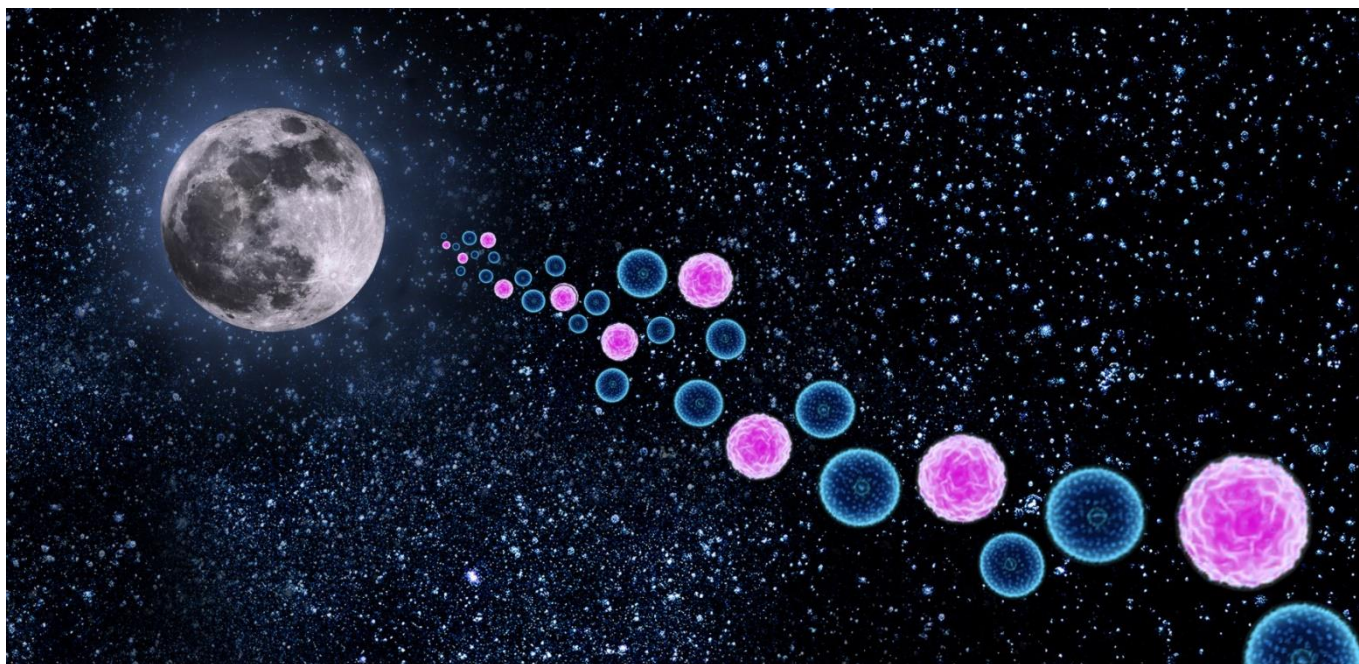
Associate Professor Sally Gras is Director of the ARC Dairy Innovation Hub, which brings together Australia's leading dairy research groups at the University of Melbourne and the University of Queensland in a five-year research program co-funded by the Australian Research Council, Dairy Innovation Australia Ltd and major dairy companies. The research program is engaging more than 30 researchers to address some of the major challenges identified as constraints to business growth and productivity in the dairy manufacturing sector.

A/Prof Gras is a Reader in the Department of [Chemical and Biomolecular Engineering](#) at the University of Melbourne, a leader of the Food and Agribusiness theme in the Melbourne School of Engineering and Associate Director of the Bio21 Molecular Science and Biotechnology Institute. Sally trained as a Chemical Engineer and Molecular Biologist and received her PhD in protein biophysics from Cambridge University, U.K.

Eventbrite

Places are strictly limited, bookings essential! Book online now at <http://ow.ly/hXTj309nU65> call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au.

A Moonshot Approach to Cancer: what will it take to find the cures?



Thursday, 23rd March 2017 at 7:00pm.

Speaker: **Professor Miles Prince AM**
Director, Centre for Blood Cell Therapies, Peter MacCallum Cancer Centre
Director of Molecular Oncology & Cancer Immunology, Epworth Hospital

In 1962, US President John F Kennedy made a remarkable speech outlining America's strategy to land on the moon. The 'stars aligned' over the next few years and the 1969 success of the Moonshot strategy relied on money, new innovations, the power of computers, determination and competition. The drive to 'dominate Space' focused much energy.

- In the 1970s, Nixon's attempt to 'cure cancer' failed. Why?
- Today, many say we may have what it takes to attack cancers we otherwise thought incurable. Is this true? What makes our time so different to the generation before?
- A Moonshot approach to cancer has been initiated by the Obama Administration and has been embraced by many. Will the momentum continue?

Join Professor Miles Prince, who will demonstrate how we are about to be catapulted into advances in our understanding and management of cancer that we never thought possible.

About the speaker:



Professor Miles H Prince AM is a specialist haematologist who manages all types of blood-related conditions which include anaemia, bleeding and blood clotting disorders, as well as cancers of the blood. He is a full professor at both the University of Melbourne and Monash University.

Professor Prince is involved in major research programs involving stem cell research and the mechanism of the immune systems control of blood and cancer growth. He is also involved in many clinical trials related to this research. He holds major Australian, American and European research grants and has published over 300 journal articles. Professor Prince is a member of Australian, American and European Societies of Haematology and Oncology, and is on the boards of International Society of cutaneous lymphoma, International Waldenstrom's macroglobulinemia Foundation and chairman of the Medical Scientific Advisory Group of Myeloma Australia.

Professor Prince is the Director of the Centre for Blood Cell Therapies at the Peter MacCallum Cancer Centre, and has recently been appointed Director of Molecular Oncology and Cancer Immunology at the Epworth Hospital.



Places are strictly limited, bookings essential! Book online now at <http://ow.ly/Z8Ea309nUAa> call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au.

Interacting with Eucalypts – Exhibition and Launch Event



Thursday, 30th March (plus launch event) to Sunday, 2 April, 10am – 4pm

Burke & Wills Room, The Royal Society of Victoria

To celebrate [National Eucalypt Day](#) in 2017, [Eucalypt Australia](#) is presenting a unique exhibition at the Royal Society of Victoria, an opportunity to encounter eucalypts as you've never seen them before. The beauty and majesty of the mighty Mountain Ash, the tallest flowering plant in the world, comes together with a retrospective on the commercial harvesting of plantation Mallee species for the production of Australia's iconic Bosisto brand of eucalyptus oil.

Tasmanian Tall Trees

Hot off display from the Tasmanian Museum and Art Gallery comes the Tasmanian Tall Tree Project's photographic tour of a stunningly grand Mountain Ash. Come and see first hand the images that have captivated viewers from around the world and marvel at the size and beauty of this magnificent tree.

Eucalyptus regnans (aka Mountain Ash and Swamp Gum) is found in Tasmania and Victoria and is home to a variety of animals, including Victoria's faunal emblem, the critically endangered Leadbeater's Possum. The Mountain Ash has also been a significant forestry species since the early 1900s. In Victoria, this species of tree also forms the basis of the vision for a [Great Forest National Park](#).

Take a tour of a mighty Mountain Ash from its base, up 83 metres to the tip of the canopy!

Bosisto's, the Journey of Eucalyptus Oil Manufacturing

The unique smell of eucalyptus oil is synonymous with the Australian bush. Take a journey through the production of eucalyptus oil in Victoria from the first commercial distillery in 1852, through the purchase of Antwerp Station near Dimboola in 1865, specifically for the harvest of Mallee gum leaves to produce oil.

See how the oil distillation process has changed from the early years and learn of the ground-breaking research underpinning plantation work designed to regain Australia's lost export markets and revive this important regional industry.

Join us for the exhibition launch, featuring talks and light refreshments, on the evening of 30 March. The exhibition will be open daily to the public from 10am to 4pm from 30 March until 2 April, coinciding with the Melbourne International Flower and Garden Show.

The "Encountering Eucalypts" exhibition is sponsored by Eucalypt Australia as part of the week-long program of events planned around National Eucalypt Day 2017 (23rd March). Proudly supported by the Royal Society of Victoria, [the Tree Projects](#), [Felton Grimwade & Bosisto's](#), and curated by [Magnet Galleries](#).



Please register to attend the launch event. Book online now at <http://ow.ly/TIs9309nUsR> call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au.



A one-day conference for new and established authors of science fiction.

Learn valuable writing techniques and draw inspiration from real science to hone your craft!

Science and Science Fiction: a Symbiosis?



How do we balance the frontiers of knowledge and the imagination?

Science fiction in all its forms is one of the best science engagement avenues at our disposal, yet to accommodate a readership frustrated with “pseudoscience,” it’s important for writers to draw inspiration for science fiction from science fact, particularly to satisfy the tastes of science-literate individuals who represent a large (and vocal!) proportion of the sci-fi audience.

Our writer-focused conference program is designed to provide the insights that all science fiction writers need to take their work to the next level. Featuring some of Melbourne's finest authors, scientists, publishers, communicators and educators, we will provide current and aspiring authors with expert insights on the finer points of the fiction writer's craft. Spend a day learning techniques for honing your manuscript and take the opportunity to learn to pitch your story to literary agents and publishers with some one-on-one coaching.*

We will also get your imagination firing from a foundation of solid science. The day will feature insights from working scientists (all with a taste for science fiction) to help dispel some common misunderstandings of scientific principles in classic mechanics, genetics and cloning, the mind-blowing nature of time, space, electromagnetism, quantum mechanics and the universe itself.

Come draw some inspiration from working writers and real science, with confidence in your sources!

All participants will receive:

- Insights and guidance on genres within science fiction; writing dystopias, climate-based scifi, 'hard' scifi, junior fiction
- Technical guidance on story creation; world building, "dos and don'ts"
- Industry insights to getting published, including digital storytelling and alternative platforms
- An opportunity to pitch your story idea to a publisher for coaching and feedback
- The ability to network with fellow science and speculative fiction writers. Share ideas, and even your work if you choose
- Insights and hot tips from Victorian scientists who share your enthusiasm for science fiction
- A limited edition, print copy of Aurealis Magazine's historic 100th edition



Fully catered for morning tea, lunch and afternoon tea. Register now for a great day of science for your science fiction, at Victoria's oldest learned society! The full program will be posted shortly: meanwhile, with only 110 places available, and limited discounted earlybird rates, be sure to secure your ticket fast.

**please note signing up for a pitch session or being asked to send your full manuscript is not a guarantee of finding representation or publication.*

Speakers, program and registrations are available online now at <http://ow.ly/2xSP309nUHp> call or email the RSV office to secure your place: 9663 5259, rsv@rsv.org.au.

Order of Australia



This is our earliest opportunity to advise of RSV members who were listed in the Australia Day 2017 honours! Congratulations are in order to:

Our Patron: Her Excellency the Honourable **Linda Marion Dessau AC**, for her eminent service to the people of Victoria through leadership roles in the judiciary, to the advancement of economic ties and business relationships, and as a supporter of charitable, sporting and arts organisations.



Dr Meredith Anne Doig OAM, for service to the community, to higher education, and to business.



Professor Michael John Ackland PSV, for outstanding public service through contributions to the health and wellbeing of people in Victoria.

Always such a pleasure to see the contributions of our members recognised in such an appropriate manner, well done to all. Apologies to anyone we've missed – please let us know, we can go a bit cross-eyed while cross-referencing!

Field Trips in 2017

Our first 2017 excursion on 21 March, to "Discover the Eucalypts of the Brisbane Ranges with Leon Costermans," has proved wildly popular and is now thoroughly booked out. Apologies to those who missed out this time, and thanks to Leon and our friends at Eucalypt Australia for bringing us this opportunity to learn more about our beautiful local eucalypts - we're very much looking forward to it.

We're following up with a further May excursion, closer to home at the RSV:

Explore the Collections of the Melbourne Museum



Thursday, 18 May 2017 @ 2.00pm

The wonderful collections and displays on show at the Melbourne Museum are but the tip of the iceberg; behind the scenes are curatorial and

research teams dedicated to the study, conservation and activation of a vast legacy collection of specimens, artefacts, devices and cultural objects that range across the many fields of science.

An exclusive offering to members of the Royal Society of Victoria and the Young Scientists of Australia (Melbourne Chapter). Join us for an exciting dive into the rich record of scientific collection held in trust by Museum Victoria for current and future generations.

Eventbrite

Places are free to members of both organisations, but strictly limited. Interest is already high, so **please book promptly!** Please register online with Eventbrite at <http://ow.ly/aKSr309nJJE>, call the office on 9663 5259, or email us at rsv@sciencevictoria.org.au.

Grateful thanks to the Museum's Acting Head of Sciences, Dr Dermot Henry and the Collections team for their very generous accommodation of our visit.

2017 RSV Council Elections

CONCORD and PROGRESS

Thanks to all members who have returned their ballot papers thus far. A reminder to all that ballot papers must be returned to the Returning Officer, care of the Royal Society of Victoria, sealed in the envelope provided. Ballot Papers must be received by no later than **3.30pm on Monday, 6th March 2017** to be considered valid.

Nominations for RSV Membership



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

Ms **Ella PLUMANN'S POUTON**, Student
Mrs **Arjumand KHAN**, Home Maker

Unless Members request a ballot, they will be considered for election by Council and if elected,

will be announced at the Annual General Meeting of the Royal Society of Victoria held on 27th April.

Recently elected members who have not yet signed the Society's membership book are invited to attend the 9th March 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.

Melbourne International Flower & Garden Show Parking @ RSV: Call for Volunteers



The Flower and Garden Show is with us once again from 29th March to the 2nd April, across the road from the RSV in the Carlton Gardens.

Each year we offer parking to Show patrons in return for a \$20 donation to our science programs. It's a great way to raise funds for the RSV and directing vehicles on site is actually a surprisingly enjoyable way to spend a morning or afternoon with your fellow RSV members!

This year we're offering parking from Friday, 31st March to Sunday, 2nd April. If you can offer a morning or afternoon of your time over this period, we'd be most grateful. Please contact James in the RSV Office for further details and to take a place on the duty roster: 9663 5259 or email james@rsv.org.au.

Joint Symposium

VICNATURE 2050

People helping nature adapt to a new climate

Building "climate future plots": designing trials to usefully inform management

A closed symposium was held on Friday, 17th February by the VicNature 2050 Partners – Victorian National Parks Association, RSV, the Arthur Rylah Institute, La Trobe University, Greening Australia, Bio21 @ the University of Melbourne and the Department of Environment, Land, Water and Planning.

The RSV participated in the organisation of this symposium, which is the third in the series, to try to assess what will be needed to address the changes in biodiversity as a result of climate change. David Morgan and I represented the RSV at the small workshop-style symposium which aimed to develop guidelines for developing future plots for long term trials in Victoria.

Future plots were first suggested about 30 years ago. Not surprisingly, Australia is behind the rest of the world with respect to developing and testing future plots, with Canada, Spain, Chile and the USA at least already testing plots to examine responses of plants species, chiefly trees. Most trials test a variety of species, across a temperature range of 3-4°C above current ambient temperatures, in various locations and in some cases different altitudes.

Speakers emphasised that use of plots overcome some of the risks of future plantings and outlined the need for use of multi-provenance in selection of seeds, genetic diversity in the seed stock, the importance of testing in the field rather than in glass houses, the need for adaptive capacity in the stock and the ultimate goals being restoration of communities.

Several speakers spoke of the need to involve the wider community. It was freely recognised that the progress will be difficult but attempts must be made. Recommendations from the Symposium will be placed on the VicNature 2050 website and links will be provided from the RSV website.

Professor Lynne Selwood
Immediate Past President
The Royal Society of Victoria

RSV Outreach Program

Migrant Science Communication Project



It was lovely to see one of our trainees, **Marija Pavela** (pictured) featured as a part of *The Australian* newspaper's coverage of our joint project with Cultural Infusion and the Australian Science Communicators. You can read the whole article online at <http://ow.ly/1QTd309nUnB>.

The program is in its fourth week now, and is progressing well.



Ellery Theatre, The Royal Society of Victoria, 8 La Trobe St, Melbourne

All lecture details and bookings are made available online from:

<http://www.royalsocietyvictoria.org.au/lecture-program/>

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9 th March –	J E Cummins Oration - A/Professor Sally Gras, “Through the Microscope: Milk, Cheese and Dairy Products”
23 rd March -	Professor Miles Prince, “A Moonshot Approach to Cancer: what will it take to find the cures?”
13 th April –	No lecture (Easter Break)
27th April –	RSV Annual General Meeting, featuring Professor Peter Doherty
11 th May –	Dr Mark Norman, “Meeting Conservation and Park Management Needs in a Changing World”
25 th May –	Ms Rose Hiscock, “The Science Gallery”
8 th June –	Panel Discussion – “Exoplanets and Extra-terrestrial Life”
22 rd June –	A W Howitt Lecture - Dr Andrew Tomkins, “Meteorites and Cosmic Dust: Insights to the Early Solar System and Earth” <i>Joint GSAV Meeting</i>
13 th July –	Joint ATSE Lecture – Professor Gordon Wallace, “Nanotechnology in Renewable Energy & Medical Science”
28 th July –	Professor James Warren & Professor Lynne Selwood, “Ripping Yarns: Two Lives in Science” (lunchtime)
17th August –	2017 Young Scientist Research Prizes (National Science Week)
24 th August –	Professor Kate Smith-Miles, “Maximising Impact through Mathematics... and having fun too!” (lunchtime)
8 th September –	Professor David Dunkerley, “Drylands and Water Management”
28th September –	Phillip Law Postdoctoral Award for the Physical Sciences Lecture
12 th October –	Dr Thomas Oxley, “Stendrode: Enabling Thought-Controlled Prosthetic Limbs”
26 TH October –	Professor Paul Sunnucks, “Adaptation of Animals to Climate Change – Natural or Induced?”
9th November –	Science Communication Lecture & Graduate Prize - Tanya Ha, “Science Writing: Finding the Balance between Head and Heart”
23rd November –	Very Young Scientists (Science Talent Search Bursary Recipients)
14th December –	RSV Research Medal Lecture & President’s Soiree