May 2026 | Issue 4

News

Snow Medical

Tom Snow, 2026 Snow Fellows Dr Deborah Burnett, Dr Ira Deveson and A/Prof Sudarshini Ramanathan, and Georgina Byron (from left to right)

In this issue

And the 2026 Snow Fellowships go to...

The new 2026 Snow Fellows; Dr Deborah Burnett, Dr Ira Deveson and A/Prof Sudarshini Ramanathan (from left to right).

We are thrilled to announce **three outstanding new Snow Fellows** for 2026, whose work spans autoimmune brain diseases, Indigenous genomics and vaccine safety: **A/Prof Sudarshini Ramanathan** from the University of Sydney, **Dr Ira Deveson** from the Garvan Institute of Medical Research and **Dr Deborah Burnett** from the University of New South Wales.

This brings Snow Medical's cohort of Snow Fellows to 17, and our total investment into the Fellowship Program to over **$130 million**, reflecting the Foundation's deep commitment to supporting exceptional scientific leaders whose original research has the potential to transform patient outcomes.

Each Fellowship provides **$8 million over eight years**, enabling the new Fellows to pursue ambitious programs, build world-class teams and accelerate new diagnostics, therapies and technologies. Importantly, two of the three new Snow Fellows are conducting **research relevant to First Nations health**, an area that is also a core theme of the Snow Foundation.

The Snow Fellows were officially announced at a **Fellow Award Ceremony, hosted by UNSW on 31 Mar 2026**, and attended by Tom Snow and his sister Georgina Byron, the new Fellows, key members from their teams and institute leaders.

The Snow Fellowship 2027 round is now open

The EOI submission deadline is **4 June 2026**. Invitations to submit full applications will be announced in early August, and will close 1 October 2026. Interview invitations will be announced in December 2026, and interviews will be held in early February 2027, with Fellows announced shortly after.

Application information can be found here:

A/Prof Sudarshini Ramanathan

Sudarshini Ramanathan is a neurologist and clinician scientist at the University of Sydney, specialising in **autoimmune neurological disorders**. Darshi's research has resulted in recognition of novel neurological syndromes, including antibody-mediated demyelination and autoimmune encephalitis.

The 2026 Snow Fellowship will allow Darshi and her team to uncover **underlying drivers of immune dysfunction in autoimmune brain injury**. Her work will define characteristic immune profiles to develop a globally available web-based tool, enabling rapid and accurate diagnosis of demyelination.

Her research program will also develop consensus treatment guidelines for demyelinating disorders.

"The Snow Fellowship provides an extraordinary opportunity to accelerate research that can transform the lives of people affected by devastating neurological diseases worldwide," Darshi said.

Darshi was the recipient of the 2022 Early Career Researcher of the Year (Biological Sciences) NSW Premier's Prize for Science and Engineering, and the 2022 Leonard Cox Award for Excellence in Neuroscience Research.

Dr Ira Deveson

Ira Deveson is a genomics researcher at the Garvan Institute of Medical Research. His team specialises in **'long-read' DNA sequencing, and development and application of new technologies** to decode the most complex genetic regions. Ira led a landmark Nature study **characterising the genetic diversity of Indigenous Australians**, laying the groundwork for more equitable genomic medicine.

The Snow Fellowship will allow Ira to expand this work into a **national program**, partnering with Indigenous communities around the country to build **equitable, comprehensive genomics resources**. Ira and his team will translate these advanced tools into clinical practice, mapping genetic variation to identify cancer biomarkers and deliver more effective diagnostic outcomes for rare inherited diseases.

"This fellowship is a wonderful recognition for my team and a true gamechanger that will accelerate the delivery of genomic medicine," Ira said.

Ira was the Early Career Researcher of the Year (Biological Sciences) in the 2024 NSW Premier's Prizes for Science and Engineering, and recipient of the 2025 Australian Academy of Science Ruth Gani Medal for outstanding contributions to genetics.

Dr Deborah Burnett

Dr Deborah Burnett is a Scientia Senior Lecturer and Laboratory Head at UNSW, where she leads a multidisciplinary research program spanning immunology and vaccinology. Her work focuses on understanding how immune responses can protect against infectious threats while avoiding the harmful self-reactivity that can drive autoimmune disease.

Debbie's research, published in major research journals including Science and Immunity, has helped redefine how self-reactive B cells contribute to protective immunity and is now shaping new approaches to prevention and cure of infections linked to autoimmunity.

"The Snow Fellowship will enable my team to develop new approaches to safer, more effective vaccines and therapies for infections that can trigger unintended autoimmune diseases, helping better protect vulnerable communities," said Debbie.

Debbie was awarded the NSW Premier's Prize for Early Career Researcher of the Year 2023, Research Australia's Discovery Award and the Australian L'Oréal-UNESCO For Women in Science Fellowship.

Deborah Burnett (right) with postdoctoral researcher Annalise Spek (left).

Snow Program for Liver Health

Snow Medical backs major national effort to tackle deadly liver disease

Prof Simone Strasser, Prof Jacob George, Hon Ryan Park MP (Minister for Health), Prof Geoff McCaughan, Ginette Snow, Tom Snow and Prof Antje Blumenthal at the launch event (from left to right).

Lived-experience patient Beverley Ryan, Ginette Snow, Georgina Byron and Sally Castle (CEO, Liver Foundation) (from left to right).

Members of the Snow Family with female investigators in the Snow Program for Liver Health, including Dr Heather Medbury and Prof Simone Strasser (4th and 5th from left), and Prof Antje Blumenthal (right).

Inken Martin (Snow Medical) with Fatema Safri and Dr Tracy Liu, early career researchers in the Snow Program for Liver Health (from left to right).

Tom Snow speaking at the Liver launch.

In March, Snow Medical were proud to launch the **Snow Program for Liver Health**: a landmark, nationally coordinated research initiative established to tackle one of Australia's most significant and rapidly growing health challenges – **metabolic associated fatty liver disease (MAFLD)**. Backed by a **7-year, $15.5 million commitment from Snow Medical**, the program brings together Australia's leading liver researchers, clinicians and institutions to **accelerate breakthroughs in prevention, diagnosis and treatment.** The Snow family has a close personal connection to this work. Terry Snow lived with liver disease, so the family knows firsthand how devastating and how poorly understood these conditions can be.

Led by **Professor Jacob George** and headquartered at the **Storr Liver Centre** at the **Westmead Institute for Medical Research (WIMR)**, the program unites a consortium of partners including **Professor Geoff McCaughan** at the Centenary Institute, **Professor Stephen Simpson** at the University of Sydney, Professor Simone Strasser at the Royal Prince Alfred Hospital and others nationwide. This collaborative, team-based approach enables largescale, interdisciplinary research that is not achievable through traditional short-term funding models.

The Snow Program for Liver Health focuses on urgent priorities in fatty liver disease – from **earlier detection** and improved non-invasive diagnostics to **better treatments** and prevention strategies. MAFLD currently affects up to one in three Australian adults, yet remains under-recognised and poorly understood despite being a leading cause of cirrhosis, liver failure and liver cancer. By integrating clinical expertise, metabolic and immune research, and large patient cohorts, the program aims to **translate discovery into real-world impact** for patients and communities.

Equally central to the program is its commitment to people and culture. Gender equity, inclusive leadership and structured mentoring for emerging and midcareer researchers are embedded across all research streams, ensuring sustained research capacity and future leadership in liver health. Lived experience also plays a critical role, keeping patient outcomes firmly at the heart of the science.

The Snow Program for Liver Health was officially launched on 5 March 2026 at WIMR and brought together research leaders, clinicians, community and government representatives including the NSW Minister for Health, the Hon Ryan Park MP, and the Snow family, including Ginette Snow, Tom Snow and Georgina Byron.

Snow Fellows across Australia

Epigenetic plasticity in development and cancer

Melanie Eckersley-Maslin (2021),
Peter MacCallum Cancer Centre

Understanding and targeting therapy-induced senescence in breast cancer

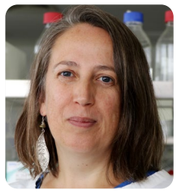
Shom Goel (2021),
Peter MacCallum Cancer Centre

Discovering and targeting novel molecular regulators of transcription in cancer

Stephin Vervoort (2022),
Walter & Eliza Hall Institute of Medical Research

Innovative tools to transform RNA biotechnology

Gavin Knott (2022),
Monash University



Towards malaria elimination - from biological insight to clinical impact

Michelle Boyle (2023),
Burnet Institute

Exploiting the Wnt Pathway for novel cancer therapies

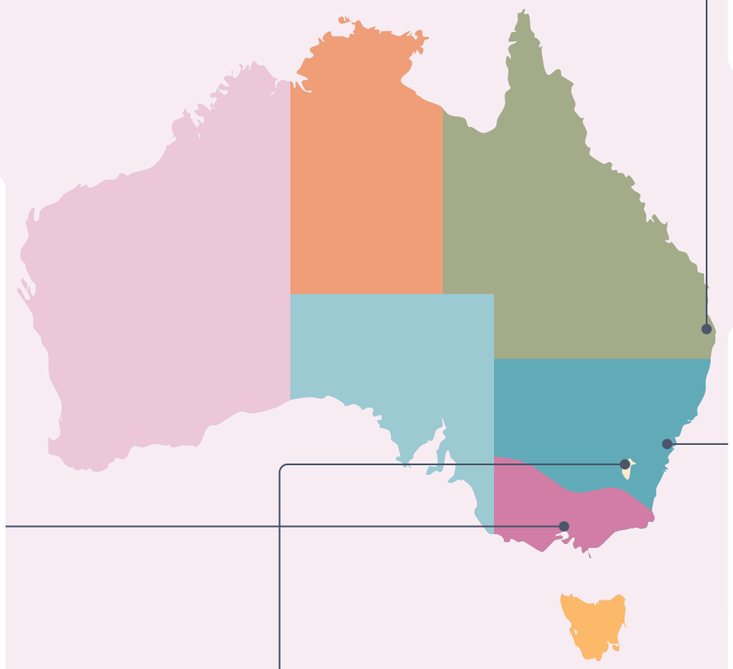
Alisa Glukhova (2025),
Walter & Eliza Hall Institute of Medical Research

Overcoming immunotherapy resistance in cancer

Marian Burr (2020),
Australian National University

Peptide therapeutics: Next-generation antibiotics, antimalarials and anticancer agents

Lara Malins (2024),
Australian National University



Scan here for more information about our Snow Fellows.

Using human cardiac organoids to identify new heart failure therapeutics

James Hudson (2020),
QIMR Berghofer Medical Research Institute

Harnessing genetic variation to transform the prevention and cure of common disease

Loïc Yengo (2024),
University of Queensland

Role of inherited and acquired mutations in immune and eye diseases.

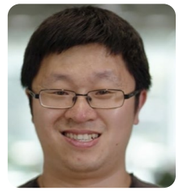
Owen Siggs (2020),
Garvan Institute of Medical Research

Precision oncology to improve pancreatic cancer treatment

Marina Pajic (2021),
Garvan Institute of Medical Research

Decoding the dark genome to transform the diagnosis and treatment of cardiovascular disease

Emily Wong (2022),
Victor Chang Cardiac Research Institute



Mechanobiology inspired anti-thrombotic strategies to prevent heart attacks and stroke

Arnold Ju (2023),
University of Sydney

Unlocking rapid and precise diagnosis and treatment in autoimmune neurological disorders

Sudarshini Ramanathan (2026),
University of Sydney

An innovative and inclusive genomics disease research program

Ira Deveson (2026),
Garvan Institute of Medical Research

De-risking vaccine development to prevent infection associated autoimmune diseases

Deborah Burnett (2026),
University of New South Wales

News from Snow Fellows and their teams

And the award goes to…

Prof Lara Malins (second from left) and Prof Richard Payne (CAPE director, third from right) alongside their CAPE team members prior to their interview.

Newly announced ARC Centre of Excellence for Advanced Peptide and Protein Engineering (CAPE)

Prof Lara Malins is part of the team that received **$35 million** in funding from the **Australian Research Council (ARC)** for the newly announced **CAPE** Centre, to study advanced biomolecular engineering. The centre aims to **uncover unique molecules** and transform the engineering and translation of peptides and proteins. Led by the University of Sydney, CAPE will unite diverse research leaders from over 40 national and international organisations, to create translational impact across **agriculture, conservation and biotech.**

A/Prof Alisa Glukhova (right) alongside fellow NHMRC Research Excellence awardee Dr Tom Weber (left), at the award presentation.

NHMRC Research Excellence Awards

A/Prof Alisa Glukhova was recently awarded the **2025 NHMRC Peter Doherty Investigator Grant Award** for the Emerging Leadership category, as part of the **NHMRC Research Excellence Awards**. This award is given annually to the highest ranked Investigator Grant applicant, for Alisa's research into the structural biology of the cell signalling Wnt pathway, which regulates cell growth, division and specialisation during embryonic development.

Alisa was also awarded the **2026 Commonwealth Health Minister's Award for Excellence in Health and Medical Research** for her outstanding scientific contributions – Congratulations Alisa!

A/Prof Owen Siggs (second from right) alongside Genomics of Rare Disease registry co-director A/Prof Jodie Ingles (centre), at the Ramaciotti Award presentation.

2025 Ramaciotti Biomedical Research Award

A/Prof Owen Siggs, A/Prof Jodie Ingles and their teams were recently awarded the 2025 **Ramaciotti Biomedical Research Award**, for **The Genomics of Rare Disease Registry**. This $1 million award is presented every two years by Perpetual on behalf of the Clive and Vera Ramaciotti Foundation, to outstanding biomedical researchers. This program is the first Australian **national registry of individuals with rare inherited diseases**, aiming to connect participants with researchers to help identify genetic causes of diseases.

Other Fellow Highlights

A/Prof Gavin Knott received the **Sparrow Award** at the **Lorne Protein 2026 Conference**, which recognises outstanding group leaders from Australia or New Zealand.

In December, **Prof James Hudson** won **The Ralph Doherty QIMR Berghofer Prize for Outstanding Achievement and Leadership in Medical Research** for his global leadership in cardiac organoid research and advances in heart disease treatment.

Prof Arnold Ju was awarded one of three **2025 European Biophysics Journal Prizes** at the Rome 2025 EBSA Congress.

Prof Marina Pajic, A/Prof Michelle Boyle, A/Prof Melanie Eckersley-Maslin, Prof Lara Malins, A/Prof Emily Wong, Prof Arnold Ju and their teams have collectively been awarded over **$17.5M** in funding from NHMRC, MRFF, ARC and other highly competitive government funding. These grants will fund research ranging from clinical trials in **pancreatic cancer**, to the study of **malaria** in spleens collected from children in Uganda, development of **spatial proteomics systems**, **breast cancer plasticity**, personalised **cardiovascular risk assessment tools**, and **precise gene therapies** for **heart disease**. Congratulations to all Fellows and their teams on these wonderful successes.

2025 Jenny Tatchell Awards for Blue Sky Research recipients. Dr. Dáire Gannon (second from right) and Dr. Lin Liu (right).

Dr Wessel Burger.

Snow Team Awards

2025 Jenny Tatchell Awards for Blue Sky Research

Both **2025 Jenny Tatchell Awards for Blue Sky Research** have been awarded to Snow Postdocs! These awards support the most exciting, original and promising research ideas and solutions from WEHI postdoctoral researchers, providing $40K in funding.

Congratulations to **Dr Wessel Burger** (Glukhova lab), for his team's project *"Genetic Chimeras as tools for unravelling cellular signalling pathways"*. Congratulations as well to **Dr Dáire Gannon** and **Dr Lin Liu** from the Vervoort lab, for their project *"Discovering novel mechanisms of drug resistance using cutting-edge prime editing screens."*

Dr Dáire Gannon was also recently awarded **The Peter Humphries Research Award**, by the Department of Genetics, Trinity College Dublin for his PhD publication. Three of A/Prof Arnold Ju's postdoctoral researchers celebrated successes: **Dr Mike Wu** was awarded a **$1.85M NHMRC Ideas Grant**, to study red blood cell mechanosensing for innovative stroke prediction and prevention. Mike also won the **2025 Charles Perkins Centre Best Interdisciplinary Publication Award**, and received the **GRC Vascular Biomechanics Young Investigator Award**. **Dr Alex Dupuy** was awarded a NSW Cardiovascular Capacity Early Career Research grant ($450k), and **Dr Yao Wang**, won the **2025 Sydney Nano Kickstarter Grant** ($50k), for applying the INVADE microfluidic system in cancer thrombosis.

Left: Dr Phil Nashar and Dr Isabella Palombi at their PhD graduation ceremony. Right: Dr Yingqi (Kaitlyn) Zhang, recent PhD graduate. *Image credit: University of Sydney.*

Snow Student Graduations and Awards

Congratulations to the many **PhD** and **Honours students** who have recently graduated from our Snow labs!

PhD Graduations:

- **Dr Isabella Palombi** (Malins lab), for her research into synthesis and biological testing of peptide drug conjugates as new therapeutic compounds.
- **Dr Phil Nashar** (Malins lab), for his research into the relationship between chemical structure and the biological activity of small molecules, and the modification of peptides in medicinal chemistry.
- **Dr Yingqi (Kaitlyn) Zhang** (Ju lab), for her research into the development of lab-on-a-chip endothelialised microfluidic platforms for cancer invasion and thrombosis.

PhD Completion Talks

Final year PhD students **Laura Corso** and **Oliver Ozaydin** from the Vervoort lab, and **Juliane Hamelinke** (Boyle lab) presented their PhD completion seminars at their host organisations – where they presented many years of novel research, dedication and hard work.

PhD Student Laura Corso (centre) at her PhD completion seminar, alongside her supervisors, including Dr Stephin Vervoort (right).

Honours Graduations

- Honours student Ananya Ravi (Malins lab) was awarded the University Medal as the top chemistry undergraduate student in 2025.
- Honours graduate, Nicole Alexis Yap (Ju lab) received the University of Sydney Highly Commended Thesis Award.
- Olivia Voulgaris, co-supervised by A/Prof Shom Goel and Dr Stephin Vervoort, won the Lundie Prize for most outstanding Honours student at Peter Mac in 2025. Olivia has also been awarded a Theory@EMBL fellowship to support her 1-month exchange to the Petsalaki lab in Cambridge later this year.

Honours graduate Nicole Yap (second from left) receiving the University of Sydney Highly Commended Thesis Award.

Olivia Voulgaris (third from left), receiving the Lundie Prize for best Honours Student, alongside the judges, including A/Prof Melanie Eckersley-Maslin (right).

Left: Catherine Chen (second from left) receiving the University of Sydney Researcher Excellence Award. Right: Saurabh Ahirwar alongside supervisor Prof Lara Malins, with his best student talk prize at the RACI Symposium.

Student Prizes

- PhD candidate Catherine Chen (Ju lab) was awarded the Researcher Excellence Award (HDR) by the USyd Centre for Drug Discovery Innovation, for her work on shear-dependent platelet aggregation by the COVID-19 vaccine.
- Saurabh Ahirwar (Malins lab PhD student) won the best student talk prize at the Royal Australian Chemical Institute (RACI) Annual One-Day Synthesis Symposium, in December.
- Kristia Lam received the poster prize at the Faculty of Medicine, Dentistry and Health Sciences Honours Conference, ahead of commencing her PhD with A/Prof Melanie Eckersley-Maslin this year.
- Jerry Wang (Ju lab) was awarded the 2026 Tour-De-Cure PhD Scholarship in the cancer field, to support his PhD studies.

Snow Fellows attend International and National Conferences

Snow Fellows Prof Lara Malins (left) and Prof Arnold Ju (right) at the 2025 Pacifichem meeting in Hawaii.

Our Fellows and their team members are Snow Ambassadors as they travel the world to present their research, discuss groundbreaking ideas and form exciting new collaborations. Some recent highlights of their travels include:

Pacifichem 2025 Meeting, Hawaii

The Pacifichem 2025 meeting was held in Honolulu, Hawaii in December by the International Chemical Congress of Pacific Basin Societies. This major chemistry conference is only held every 5 years, and was attended by over 10,000 researchers across all areas of chemistry.

A/Prof Alisa Glukhova presented a speech highlighting the use of cryo-electron microscopy to understand the Wnt signalling pathway, whilst **Prof Lara Malins** presented not one but two invited talks discussing peptide modification chemistry in drug discovery, and inspiration from nature. **A/Prof Arnold Ju** presented his research on a 'Digital Twin' for stroke prevention.

Prof James Hudson and his collaborator Dr Cathy Wilson enjoying the photo booth at the New Cardiobiology EMBL Conference in Heidelberg.

EMBL New Cardiobiology Conference Heidelberg, Germany

Prof James Hudson was invited to speak at the **EMBL New Cardiobiology** conference in Heidelberg, in February 2026. James presented his team's **CardioLigand Atlas**, which maps the functional and transcriptional landscape of heart signalling. This led to a collaboration with **Prof Julio Saez-Rodriguez**, Head of Research at the European Bioinformatics Institute (EMBL-EBI), who will integrate the Atlas dataset into a bioinformatics package which all researchers can use to analyse their data, greatly broadening the impact of this atlas.

Caitlin Gare, collaborator Professor David Craik and Prof Lara Malins at the Gordon Research Conference in California.

Other international conferences:

A/Prof Melanie Eckersley-Maslin gave a talk at the keystone symposia on **Epigenetics and Gene Regulation in Health and Disease**, held in Geneva, Switzerland, whilst **Dr Stephin Vervoort** spoke about genetic interactions at the **2nd Genome Regulation through RNA conference** in Playa Mujeres, Mexico.

Over in California, PhD student **Caitlin Gare** and **Prof Lara Malins** attended the **Gordon Research Conference** on the Chemistry and Biology of Peptides, where Caitlin presented a poster and Lara chaired the opening plenary session.

Dr April Watt, a postdoctoral researcher in the Goel lab, gave an oral presentation at the **International 2025 San Antonio Breast Cancer Symposium, Texas, US**. This was the only basic science talk selected for an oral presentation at this prestigious meeting, which is the largest breast cancer symposium in the world, and was attended by over 11,000 scientists.

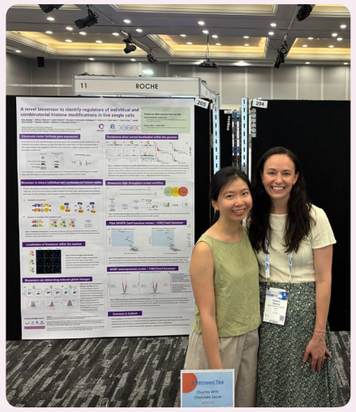
A little closer to home - Australian Conferences

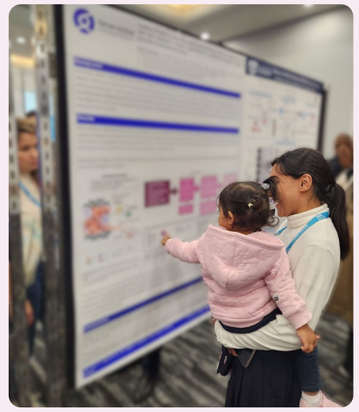
CryOz Conference, Wollongong
A/Prof Alisa and **A/Prof Gavin Knott** arrived in style at the **CryOz** conference in November 2025, hosted at the University of Wollongong. This conference is an annual meeting for the Australian **cryo-electron microscopy community**, showcasing recent advances in structural biology, method developments and facility capabilities. **Alisa** presented a **keynote** speech, and **Gavin** gave an invited talk, while **Dr Nick Kirk** from Alisa's lab gave a talk on the structure of the PINK1 protein.

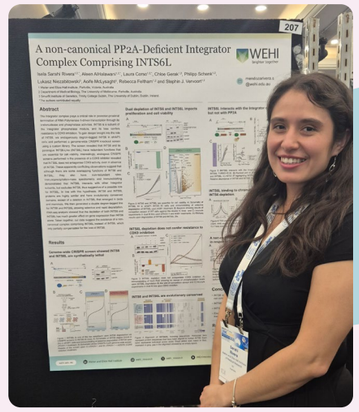
A/Prof Alisa Glukhova and A/Prof Gavin Knott arriving at the Australian CryOz conference, with a custom "CryoEM" numberplate, and matching Snow Medical hoodies.

2026 Lorne Conferences

February was a busy month for conferences in Lorne, Victoria, hosting both **Lorne Cancer** and **Lorne Genome** in February, with many Snow teams presenting talks and posters, on topics ranging from pancreatic cancer clinical trials to cancer genetics. At **Lorne Genome, A/Prof Marian Burr** was an invited speaker, and PhD student **Tongtong Wang** (Eckersley-Maslin lab) gave an oral presentation. Over at **Lorne Cancer, April Watt**, a PhD student from the Goel lab, also presented a flash talk for her work on the retinoblastoma tumour suppressor gene.







Lorne Poster Presentations (L to R): Dian Kwang and Dr Eleanor Glancy (Eckersley-Maslin lab), Dr Bratati Karmakar (Pajic lab) and Dr Sarahi Rivera (Vervoort lab).

At the 53rd Annual Scientific Meeting of the Australian and New Zealand Society for Immunology (**ASI**) in Perth, December 2025, **Dr Chelisa Cardinez** was selected as a finalist in the New Investigator session, and presented her research on epigenetic regulators in small cell lung cancer.

Dr Chelisa Cardinez presenting at ASI 2025.

Snow Research Translation News

New startup accelerating treatments for heart disease

Ibnova Therapeutics, co-founded by **Prof James Hudson** and Prof Enzo Porrello (Murdoch Children's Research Institute), recently launched in March. Heart failure affects more than 60 million individuals worldwide each year, yet the only treatment currently is heart transplantation. This collaboration between Australia and Denmark will develop **stem cell-based treatments** for **heart failure**. The team behind Ibnova has demonstrated that **lab-grown human heart muscle patches** can restore heart function following a heart attack, and the company hopes to deliver this heart patch technology into human **clinical trials** within three to five years.

"The technology was developed on the backing of over a decade of research into creating multicellular bioengineered tissues," said James. "The mechanistic science underpinning this technology is pivotal to its substantial improvement in heart function."

Ibnova Therapeutics, headquartered in Copenhagen, Denmark, is supported by the Novo Nordisk Foundation (NNF) Centre for Stem Cell Medicine (reNEW). Find out more at the Ibnova Therapeutics website, www.ibnovatx.com

Prof James Hudson, co-founder of Ibnova Therapeutics.

Clinical use approved for macular degeneration risk score

Seonix Bio, co-founded by **A/Prof Owen Siggs**, is now delivering its **age-related macular degeneration (AMD) polygenic risk score** for **clinical use**. This follows a rigorous accreditation process by National Association of Testing Authorities (NATA), assessing the quality, accuracy and reliability of the risk score. This major milestone places Seonix Bio one step closer to advancing precision eye health.

Prof Arnold Ju (left) and Dr Charles Zhao (right) with The Hon Tim Ayres, Minister for Science, Industry and Innovation, with their chip-on-a-vessel device.

Showcasing the latest devices in stroke management

Prof Arnold Ju and **Dr Charles Zhao** shared their innovative **3D printed blood vessel** device, which creates a physical twin of blood vessels to aid with personalised stroke recovery, with The Hon Tim Ayres, Minister for Science and Minister for Industry and Innovation.

Snow Fellow lab retreats and outreach

Smiles all around from the Pajic Lab, dressed in purple for World Pancreatic Cancer Day, after breaking out in record time from a game-show themed escape room.

Snow Fellow Labs are highly encouraged to hold annual retreats to discuss research strategy and strengthen ties within the team. Most recently, the Pajic and Burr labs held retreats, whilst the Eckersley-Maslin lab celebrated the lab's 5th birthday.

The Burr lab on a research retreat in March 2026, pictured here in the Australian National Botanic Gardens.

The Eckersley-Maslin lab on a hike recelebrating the lab's 5th birthday.

Dr Marjan Hadian-Jazi and Dr Andrew Perry from the Knott lab participated in the Monash and NVIDIA spearheaded AI hackathon to supercharge scientific projects. The hackathon connected researchers and AI experts, with teams racing to use AI to accelerate scientific projects across structural biology, quantum chemistry and climate modelling.

Hot off the press

A selection of latest publications from Fellow Laboratories

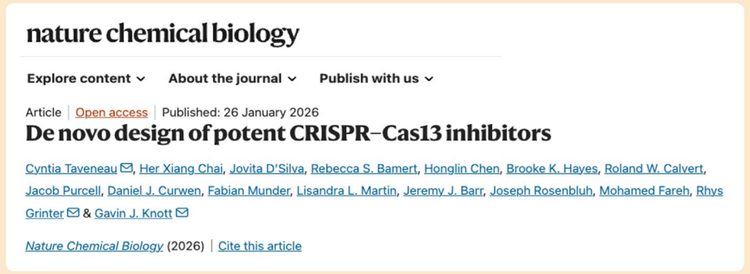
Phase 3 clinical trial of secondary treatment for breast cancer patients

Research by **A/Prof Shom Goel** and his team has led to a **global randomised phase three trial** recently published in the prestigious New England Journal of Medicine.

The study investigated the effect of adding palbociclib, a select inhibitor of cyclin dependent kinases 4 and 6 (CDK4/6), to standard first line treatment for Human Epidermal Growth Factor Receptor 2 (HER-2) positive metastatic breast cancer. **Palbociclib significantly increased progression-free survival** by an additional 15 months, compared to the standard therapy group. As a result, the regimen is being incorporated into standard practice in the US and Europe. Shom is translational principal investigator for the trial, with his previous research demonstrating synergy between CDK4/6 inhibition and standard anti-HER2 therapy forming the basis for the study.

New gene editing tools: Novel CRISPR-Cas13 inhibitors

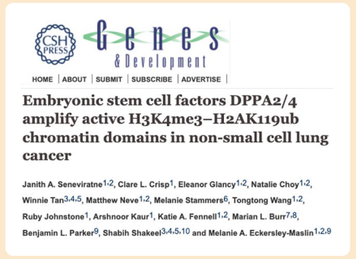
CRISPR-Cas systems are **precise gene editing tools** now widely used in science to alter genetic material. Anti-CRISPRs (Acrs) are genetic elements which inhibit the activity of CRISPR-Cas machinery, however they are rare and challenging to discover in nature. Using artificial intelligence, **A/Prof Gavin Knott** and his team **have developed new Acr proteins to fine-tune CRISPR-Cas tools**. Recently published in Nature Chemical Biology, the researchers outline a comprehensive workflow for design validation and demonstrate the functionality of these novel proteins to control CRISPR-Cas13 activity in human cells. The ability to design these customised CRISPR-Cas tools will contribute to diverse applications across research, medicine, agriculture and microbiology.



Insights into how embryonic proteins promote lung cancer

A/Prof Melanie Eckersley-Maslin and **Dr Janith Seneviratne** in collaboration with **A/Prof Marian Burr** have published a recent study in Genes and Development, uncovering the effect of **non-typical reactivation of embryonic factors** in **lung cancer**. **Expression of a pair of embryonic proteins** (DPPA2/4) in patients with non-small cell lung cancer resulted in more **aggressive tumours** and **worse survival outcomes**.

The researchers also discovered that in lung cancer cells, the embryonic factors changed the **DNA packaging structure (chromatin)** in cells to make certain genes more accessible, including cancer promoting genes. This resulted in the cancer cells adopting a "stem-cell like" state, which may explain their aggressiveness. By providing insight into how embryonic factors promote cancer, this discovery will help pave the way for new therapeutic strategies.

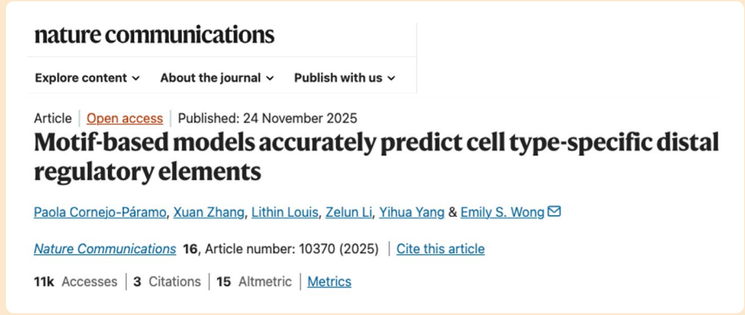


New combination therapy to improve clinical outcomes in malaria

Malaria infection leaves individuals more susceptible to subsequent infections, due to an inflammatory response preventing development of protective antimalaria immunity. **A/Prof Michelle Boyle, Dr Damian Oyong** and collaborators inoculated volunteers with the malaria causing parasite, then treated them with **ruxolitinib**, which inhibits an immune signalling pathway (JAK/STAT). The researchers found that **ruxolitinib treatment** in combination with antimalarials **reduced inflammation after malarial infection**, and enhanced immunity after a second malarial infection. This suggests this drug could be used alongside standard treatment to improve clinical outcomes.

New computational framework to understand genetic regulatory elements

Gene expression is controlled by a complex regulatory network, including genetic elements such as **enhancers** and promoters. Enhancers are crucial in establishing cell identity but are often located far away from the genes they regulate, making it challenging to understand how these enhancers function. To address this, **A/Prof Emily Wong** and her team have developed a new framework, **Bag-Of-Motifs (BOM)**, to **accurately predict sequences representing cell-type specific enhancers**. This computational framework takes the simplistic approach to focus on motifs, yet is able to outperform more complex models, and can be used across mouse, human and other datasets. The researchers validated the BOM predictions experimentally, and revealed a highly predictive sequence code at regulatory regions far from the genes they regulate, in vertebrates. This model will help with **mechanistic understanding of cell-type specific enhancers**, and practical applications.



News from the Snow Centre for Immune Health

Snow Centre for Immune Health symposium attendees.

2nd Annual Symposium celebrates science, collaboration and community

The **2026 Snow Centre for Immune Health Annual Symposium** brought together researchers, clinicians, partners and consumers with a shared mission: **accelerating breakthroughs in immune-mediated disease.**

Snow Centre Director **Professor Jason Tye-Din** outlined an ambitious vision for the next phase of the centre's growth, emphasising the power of uniting scientific excellence, data-driven capability, and patient lived experience to transform how immune-related conditions are understood, diagnosed, and treated.

"The Symposium is more than a scientific gathering - it's a celebration of bold ideas, collaboration, and the power of research to transform lives," Tom Snow, Chair, Snow Medical.

The program featured:

- International keynote Dr Francisco Leon shared how translational immunology can deliver bold, life-changing therapies
- Inspiring patient perspectives, underscoring the real-world impact of research
- Updates on major initiatives, including the Clinical Research Unit, Biogrid/Aridhia data platform, and progress on the Cyton2 cell timer model
- Emerging leaders across research, clinical science, and the centre's soon-to-launch consumer program.

Professor Ken Duffy (left), Northeastern University and the Snow Centre's Professor Phil Hodgkin (right).

Global collaboration aims to decode how genetics controls immune cell fate timers

The Snow Centre is proud to announce its first international collaboration with **Professor Ken Duffy**, Chair and Professor of Mathematics and Professor of Electrical and Computer Engineering at Northeastern University, Boston, USA.

This partnership builds on 18 years of research and 12 co-authored papers, combining science and mathematics to **transform our understanding of immune cell behaviour.** The team are developing a **population-scale mathematical model** to simulate and **predict how complex immune diseases are inherited** - advancing predictive immunology and personalised care.

By combining immune cell data with genetic sequencing, the team are working to understand why some people are predisposed to immune disorders and how risk can be better predicted.

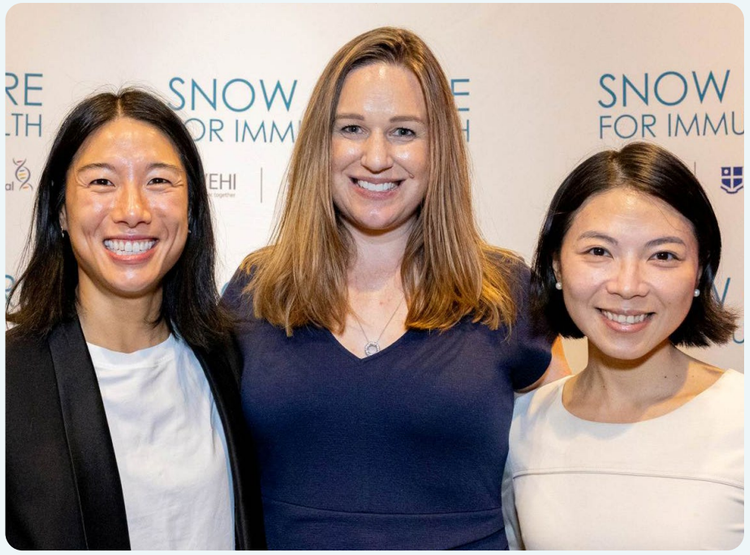
A new hub connecting research and care

The Snow Centre for Immune Health has a new home. **Spanning both WEHI** and the **Royal Melbourne Hospital (RMH)**, the Snow Centre's new space is purposefully designed to bring researchers and clinicians closer than ever before.

Inside, **state-of-the-art, purpose-built laboratories** provide researchers with the facilities they need to advance scientific discovery. Adjacent to these labs is a dedicated clinical area, thoughtfully designed to welcome patients participating in research studies, ensuring research is grounded in patient experience.

The new space also houses the **Snow Centre's Assay Hub** and supports closer integration with its Digital Hub, helping connect high-quality biological data with advanced analytics to support discovery and translation.

Together, these connected spaces embody the Snow Centre's mission: uniting people, ideas, and expertise to drive breakthroughs that improve health outcomes.



Snow Clinician Scientists (L to R): Dr Samantha Chan, Dr Jayne Moxey and Dr Stephanie Kuo

Meet the Snow Centre Clinician Scientists

Snow Centre Clinician Scientists bring research and patient care closer together.

These **Royal Melbourne Hospital (RMH) doctors** act as ambassadors for their specialities: rheumatology, immunology, and kidney transplant.

They work together with scientists to turn discoveries into real-world treatments that matter for patients.

By asking the questions that matter most in the clinic, Snow Centre Clinician Scientists **help shape research that's truly patient-centred.** They also play a key role in connecting patients with clinical studies, ensuring that research stays grounded in real-life needs.

Dr Stephanie Kuo.

Dr Stephanie Kuo: Snow Centre Clinician Scientist – Kidney Transplant

Stephanie Kuo is investigating **mechanisms that influence organ survival after transplantation** and how patients can maintain long-term health. She aims to use this knowledge to improve the treatment plans patients receive after a transplant and to support more effective, evidence-based transplant care.

She is committed to bringing what she learns through research into everyday medical decision-making to support high-quality patient care.

Dr Samantha Chan.

Dr Samantha Chan: Snow Centre Clinician Scientist - Immunodeficiency and Allergy

Samantha Chan is bridging the gap between the lab and the clinic to **deliver faster, more personalised answers** for patients with primary immunodeficiencies. These are inherited genetic disorders where the immune system is absent or doesn't function correctly, resulting in an increased susceptibility to infections.

The ultimate goal is to enable more personalised diagnosis and treatment prediction. This will mean patients won't need to go through a diagnostic odyssey of testing multiple medications and enduring unintended side effects in the search for the best treatment.

Dr Jayne Moxey.

Dr Jayne Moxey: Snow Centre Clinician Scientist – Rheumatology

Jayne Moxey works in rheumatology, the area of medicine that diagnoses and treats conditions that cause pain and inflammation in the joints, muscles, and immune system.

Her research focuses on **vasculitis**, a group of diseases in which the immune system attacks blood vessels. She is helping to **develop a blood test to show whether vasculitis is active**, how well treatment is working, and whether flares can be predicted before they happen.

This is important because treatment needs to prevent organ damage while avoiding unnecessary side effects.

Understanding immune health through healthy volunteers

The Snow Centre for Immune Health is building a cohort of healthy volunteers to support research aimed at deepening our understanding of how the immune system functions in both health and disease.

These volunteers contribute valuable information, including blood samples, relevant medical history and periodic follow-up. This enables researchers to explore immune system profiling, early disease detection, improved diagnostics and the development of future treatments for immune and allergic conditions.

Healthy volunteer cohorts are essential for establishing high quality baseline data, helping accelerate clinical discoveries across the centre's research programs.

Scan here for more information.

Professor James McCluskey AO.

Welcoming Professor James McCluskey AO to the PSTAC Committee

We are pleased to announce that Professor James McCluskey AO has joined the Provisional Science and Technical Advisory Committee, which provides independent guidance on the strategic scientific direction and operations of the Snow Centre for Immune Health.

Professor McCluskey is a highly respected leader in immunology and academic governance, serving as Assistant Vice-Chancellor and Redmond Barry Distinguished Professor at the University of Melbourne. His career spans major contributions to T-cell biology, autoimmunity and antigen presentation, alongside significant leadership roles across Australia's medical research sector. His expertise will be invaluable in helping shape the centre's future.

News from the Snow Vision Accelerator

Snow Vision Accelerator Team.

Inaugural Snow Vision Accelerator conference

The **Snow Vision Accelerator** held its inaugural Annual Conference on 1–2 December 2025 at the **University of Sydney**, bringing together more than 88 attendees, including members of the Independent Scientific and Technical Advisory Committee, Snow Medical, Snow Vision Accelerator collaborators, Glaucoma Australia, Sydney Local Health District, Snow Centre for Immune Health's Centre Director and Centre Manager, NSW-based Snow Fellows, and prominent leaders and members from the University of Sydney and wider community.

The conference marked a major milestone celebrating the first five months of the Snow Vision Accelerator and showcasing **early progress, strategic roadmap and future priorities** in its mission to transform approaches to glaucoma, the leading cause of irreversible blindness. Participants heard updates from the Centre Director, program leads, and research teams, and contributed to discussions shaping Snow Vision Accelerator's strategic roadmap and priorities for the coming year.

Sessions spanned Snow Vision Accelerator's core research streams—**Biology, Bioinformatics, Translation Accelerator, and Clinical Trials**—and featured presentations from emerging researchers, including PhD and undergraduate students. It was a forum for open, inclusive discussion, inviting contributions from attendees, collaborators, researchers, and students to shape ideas and advance scientific innovation together.

Deb Wilcox AM, Dr Derek Van Dyk, Tom Snow (L to R).

Tom Snow (left) and Professor Jonathan Crowston (right), Director of the Snow Vision Accelerator.

Growing collaborators

The University of Sydney and its national and international collaborators signed a Memorandum of Understanding in January 2026 establishing a high-level framework for cooperation on the Snow Vision Accelerator. This agreement sets out how partners will work together to advance Snow Vision Accelerator's mission, with project-specific agreements now being developed with each signatory. The Memorandum of Understanding partners include the University of Adelaide, Monash University (Monash Institute of Pharmaceutical Sciences), University of California Davis, University of Pittsburgh, Johannes Gutenberg University Mainz, and the Advancing Sights Network, based in Alabama, United States, reflecting a strong global alliance committed to accelerating innovation in glaucoma research.

Success for SVA team

Congratulations to Associate Professor Benjamin Sivyer on being awarded a NHMRC Ideas Grant for $1million along with Dr Morven Cameron (Western Sydney University) and Associate Professor Ronald Brown (Washington State University) for their project "From eye to brain: how retinal dopamine shapes the visual highway during development".

Research clinic sites identified

Preparations for the Snow Vision Accelerator research clinics are gathering momentum, with four study sites now identified —three in Australia and one in New Zealand. All sites are progressing through contracting and set-up, marking an important step toward study commencement. Ethics approval is already in place at an institutional level for recruitment at all Australian sites.

Making headlines for healthy vision

The Snow Vision Accelerator was recently featured in mivision, a leading ophthalmic journal for eye care professionals across Australia and New Zealand. Published during World Glaucoma Week, the article highlighted Snow Vision Accelerators' four research platforms and explored why the partnership between the University of Sydney and Snow Medical is so impactful. The common goal of Snow Medical and the University to support high-risk, high-reward research underpins the Snow Vision Accelerator's bold, agile and milestone driven approach to advancing new solutions for glaucoma.

You can check out the article in the March 2026 edition of mivision magazine on their website at: https://mivision.com.au/

Research publications by Snow Fellow laboratories from November 2025 – April 2026

These peer reviewed publications are important in disseminating Snow Medical funded science to the international scientific community

April 2026

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