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# Next generation of Superstars of Stem to promote roles for women and girls

Superstars of STEM, created in 2017, tackles the gender inequity of visible diverse role models in the media.



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Six of University of Adelaide's Superstars (From left) Associate Professor Tara Pukala, Dr Melissa Humphries, Dr Jessica Bohorquez, Dr Alice Jones, Dr Rachelle Kernan and Dr Tatiana Soares da Costa Absent Pic: University of Adelaide.

## Full list of recipients below

The next family of 60 “Superstars of STEM” has been unveiled, reflecting the strong diversity of women and non-binary people in Australian science and technology, this year including three First Nations scientists, six from regional Australia, and others from a wide range of economic, social and cultural backgrounds.

Federal Industry and Science Minister, Ed Husic, congratulated the group, who in 2023 step into the public arena to help inspire the next generation of diverse young Australians into STEM.

“The need to boost diversity in our science, technology, engineering and mathematics sector is urgent,” said Husic. “There are huge skills shortages that can be addressed if we put our minds and collective effort to it – which means we have to draw deeply on our nation’s expertise from all corners of the community.”

[Hudson Institute of Medical Research](#) in Melbourne introduced its “Superstar,” Dr Jaclyn Pearson, as “a microbial mastermind and rock star researcher”.



*Dr Jaclyn Pearson*

Pearson is Research Group Head in Hudson’s Centre for Innate Immunity and Infectious Diseases.

“The need to understand how ‘superbugs’ evolve is now critical. People are dying from infections that antibiotics can no longer treat, and the problem will only get worse until we find a solution,” Pearson said.

“As well as my family and my research, music is my other passion in life.”

The [University of Adelaide](#) had seven people in the national intake.

Professor Katrina Falkner, Executive Dean of the Adelaide University Faculty of Sciences, Engineering and Technology, said having more than 10 per cent of the national intake was a fantastic result for the University. “We are extremely proud of our seven Superstars of STEM, who are amazing role models for women and non-binary people by increasing the visibility of STEM as a career of choice.

“They will be smashing stereotypes and leading the way for the next generation of STEM Superstars.”

Science & Technology Australia Chief Executive Officer, Misha Schubert, said the program gave women and non-binary talent in STEM, crucial skills and confidence to step into expert commentary roles in the media.

“We know it’s really hard to be what you can’t see,” said Schubert. “That’s why this game-changing program is helping to smash stereotypes of what a scientist, technologist, engineer or mathematician looks like.”

“By becoming highly visible role models in the media, these Superstars of STEM are showing our diverse next generations of young people – especially our girls and non-binary kids – that STEM is for them.”

**To read more stories about previous Superstars of Stem search “Superstars” in Cosmos**

## The full list of Superstars 2022

### ACT

- ANU marine palaeontologist Dr Sarah Kachovich studies tiny ocean fossils to predict future changes to the earth and its oceans.
- ANU hydroclimatologist Dr Chiara Holgate investigates how floods and droughts begin.

### NEW SOUTH WALES

- Museum Educator Sally Hurst transforms complex scientific information into fun and engaging stories to inspire the next generations (Australian Museum)



- Carbon Data Scientist Dr Melanie Zeppel helps farmers measure the carbon in their soil to make their farms more drought resilient (Carbon Link)
- Technologist Neelima Kadiyala develops new technology to help customers in banking (Challenger Limited)
- Radio astronomer Dr Vanessa Moss is using AI to automate telescopes so we can better explore our place in the Universe (CSIRO)
- Defence scientist Priscilla Thwaites leads a team that builds underwater drones to protect Australia's national security (Defence Science and Technology Group)
- Cancer epigeneticist Dr Amanda Khoury maps the 3D structure of DNA to see how it changes when people get cancer (Garvan Institute of Medical Research)
- Marine scientist Professor Kirsten Benkendorff is working to secure the future of our seafood industries by managing marine environments (Southern Cross University)
- Physicist Dr Karen Livesey uses tiny magnets to help treat cancer (University of Newcastle)
- Pharmacist Anna Barwick's startup company is bringing telehealth pharmacy services to rural communities (University of New England)
- Psychologist Dr Caitlin Cowan studies how the bugs in our gut influence our brains and behaviour (University of Sydney and UNSW)
- Behavioural ecologist Caitlyn Foster studies bees to find clever new ways to improve pollination for crops (University of Sydney)
- Christina Maher is a biomedical engineer using AI to map the brain's highways and predict disease (University of Sydney)
- Ecologist Dr Eliza Middleton studies insect behaviour as an early warning sign for damage to our ecosystems (University of Sydney)
- Geoscientist Dr Nicky Wright reconstructs Earth's surface through deep time to explore past changes in climate (University of Sydney)
- Synthetic biologist Dr Taylor Szyszka engineers plant proteins to improve crop yields (University of Sydney)
- Anatomist Dr Theresa Larkin is teaching the next generation of medical students about the human body (University of Wollongong)
- Cognitive neuroscientist Professor Emily Cross is collaborating with robots to understand how the brain learns complex new skills (Western Sydney University)
- Science commercialisation expert Natalie Chapman's company, gemaker, helps scientists turn their breakthroughs into new deep tech startup companies.

## **SOUTH AUSTRALIA**

- Space weather expert Dr Kate Brand predicts solar flares that can disrupt satellites that power our mobile phones (Bureau of Meteorology)
- Kuarareg Torres Strait Islander wildlife conservation biologist Tiahni Adamson combats climate change in her company's work to develop emissions-slashing seaweed for use in livestock feed and in partnerships with First Nations communities (CH4 Global)

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**SUBMIT**

- Alywarr woman Sophie Gilbey is an ecohydrologist working to understand how animals, plants and people can share water in our fragile environments (CSIRO)
- Sleep scientist Dr Grace Vincent is helping shift workers, emergency responders and new parents to battle chronic sleep deprivation (CQUniversity)
- Biomedical engineer Dr Dhani Dharmaprani uses maths to model the heart to help prevent heart attacks (Flinders University)
- Dr Kelsi Dodds is a neurophysiologist who studies how our organs – like the uterus and gut – talk to our brain (Flinders University)

- Ecologist Dr Alice Jones uses science to help our coastal wetlands store carbon to combat climate change (University of Adelaide)
- Engineer Dr Jessica Bohorquez who uses technology to maintain water pipes to make sure we all have clean water (Inside Infrastructure & University of Adelaide)
- Statistician Dr Melissa Humphries creates tools that help people understand data so they can make better decisions (University of Adelaide)
- Dr Rachelle Kernen is a geoscientist finding solutions to fight climate change so we can reach net-zero (University of Adelaide)
- Laser Physicist Dr Sarah Scholten makes laser-based clocks to improve the next generation of GPS satellites (University of Adelaide)
- Biochemist Dr Tara Pukala is trying to uncover the molecular machinery in our cells that controls health and disease (University of Adelaide)
- Dr Tatiana Soares da Costa uses science to develop new weed killers to safeguard future food production in a growing world (University of Adelaide)
- Geoscientist Associate Professor Caroline Tiddy is developing new ways to find the metals needed to build clean energy technology. (University of South Australia)

## **QUEENSLAND**

- Commercialisation Expert Associate Professor Cori Stewart helps manufacturers use digital technology to transform their business (Advanced Robotics for Manufacturing Hub)
- Sleep Researcher Dr Grace Vincent is helping shift workers and emergency responders fight chronic sleep deprivation (CQUniversity)
- Composite Materials Engineer Dr Tatheer Zahra makes high performance materials to protect buildings and bridges from earthquakes (Queensland University of Technology)
- Ngemba, Wayilwan and Wiradjuri computer scientist Susan Beetson is building culture hubs on Country to help Aboriginal communities digitally translate Indigenous knowledges (University of Queensland)
- Dr Sophie Andrews is a neuroscientist working to boost brain health and protect against dementia (University of the Sunshine Coast)

## **TASMANIA**

- Dr Indrani Mukherjee uses the chemical information stored in rocks to understand Earth's ancient ocean chemistry (University of Tasmania)
- Computer Scientist Mars Buttfield-Addison is monitoring space debris using machine learning (University of Tasmania)
- Dr Samantha Sawyer helps food companies become resilient to climate change by making more sustainable foods (University of Tasmania)

## **VICTORIA**

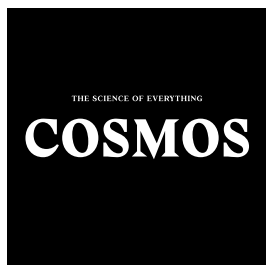
- Dr Susi Seibt shoots X-rays at tiny nanomaterials to look at their chemistry and physics to make clever new products. (ANSTO)
- Conservation scientist Dr Lily van Eeden uses the science of psychology to motivate people to protect our environment. (Arthur Rylah Institute for Environmental Research)
- Engineer Stef Cola leads a team of software engineers to create computer programs used by businesses all over the world (Clear Dynamics)
- Marine scientist Dr Prue Francis is a scientist developing new technologies to restore our underwater seaweed forests (Deakin University)
- Dr Ana Baburamani works on next-generation science and technology to safeguard Australia's defence forces. (Defence Science & Technology Group)
- Microbiologist Dr Jaclyn Pearson is discovering new ways of fighting life-threatening superbugs (Hudson Institute of Medical Research)
- Engineer Patricia Kerin helps leaders to improve their company's safety by challenging the status quo (Institution of Chemical Engineers)
- Roboticist Dr Elahe Abdi builds robots to help people doing demanding or dangerous jobs. (Monash University)
- Penguin expert Paula Wasiak investigates the secret lives of penguins to protect them and our environment (Phillip Island Nature Parks)
- Astrophysicist Dr Sara Webb uses AI to explore the universe and beyond (Swinburne University of Technology)
- Clinical biostatistician Dr Anurika De Silva uses maths to help doctors decide which treatments work best for patients (University of Melbourne)

- Optometrist Dr Flora Hui is finding new ways to diagnose eye diseases earlier and prevent blindness (University of Melbourne & Centre for Eye Research)
- Mathematical epidemiologist Dr Camelia Walker uses maths models to curb the spread of infectious diseases (University of Melbourne)
- Medical educator Dr Sathana Dushyanthen is using new technologies to bring education to life for Australia's doctors and nurses. (University of Melbourne)

## WESTERN AUSTRALIA

- Radio astronomer Dr Laura Driessen is a scientist searching for stars using Australia's biggest radio telescope (CSIRO)
- Dr Dona Jayakody helps people to fight dementia using hearing aids (Ear Science Institute Australia)
- Data scientist Megan Born uses data to transform businesses and communities to be more climate-resilient (Energetics)
- The Public Relations Manager for Sharks Dr Charlotte Birkmanis is finding new ways humans can coexist with wildlife like sharks (Hydrobiology)
- Astrophysicist Dr Adelle Goodwin studies what happens when stars are destroyed by supermassive black holes to better understand our Universe (International Centre for Radio Astronomy Research)

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## Cosmos

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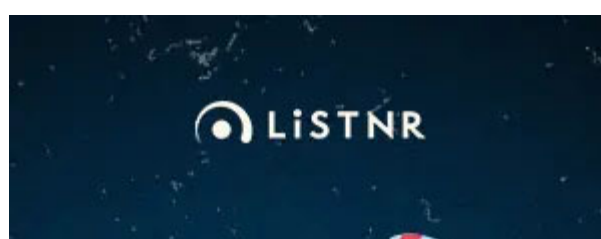
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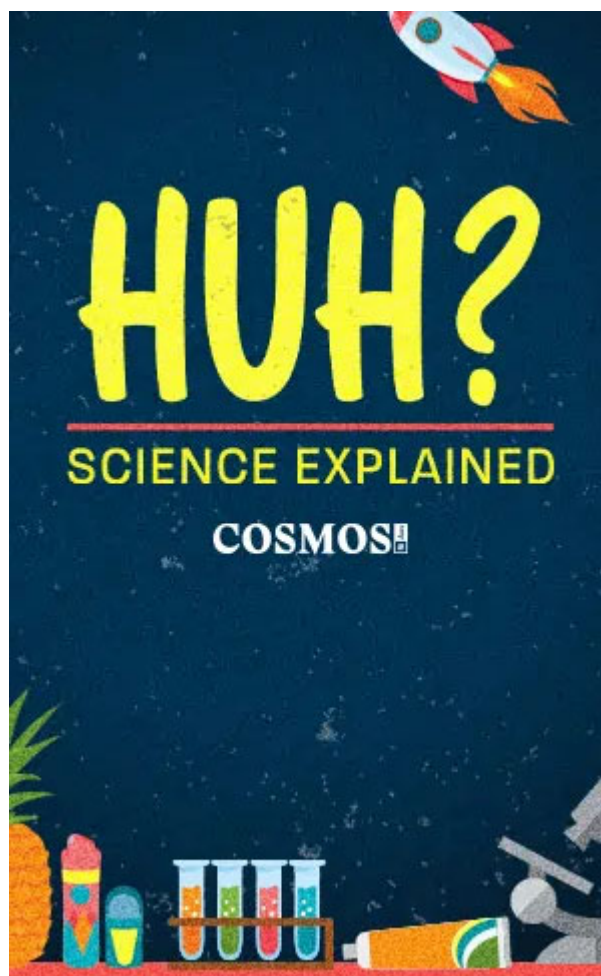


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