

Media release

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20 ways IRU members are supporting the battle against COVID

The Innovative Research Universities group has compiled a snapshot list of 20 ways its members are supporting the battle against Coronavirus in Australia and throughout the Asia-Pacific region.

The list illustrates the vital role IRU members are playing throughout the pandemic, including:

- development of SARS-CoV-2 (coronavirus) vaccines
- manufacturing face masks and other personal protection equipment (PPE) for frontline health workers
- medical experts providing COVID-19 advice to state and territory authorities.
- a broad range of coronavirus-related social research projects being undertaken at IRU institutions including studies into alcohol intake during the lockdown; the causes of panic buying; domestic violence during social isolation; and how families directly impacted by COVID-19 are coping with trauma and loss.

All Australian universities are taking action to tackle coronavirus. The below list represents a selection of the research and other activity by IRU members only.

See the full list below.

IRU Executive Director Conor King said:

"University researchers are playing a major role in Australia's COVID-19 recovery, whether developing vaccines, researching the social impact of COVID or literally heading to the frontline to help out in hospitals.

"The breadth of this activity highlights the vital and often under-appreciated role that researchers have in our everyday lives.

"The immediate job of these experts is to help get us through the pandemic. But with universities facing a major reduction in revenue in 2020, the longer-term future of Australian research appears less certain.

"The IRU is calling on the Australian Government to implement a research investment package across 2020 and 2021 to ensure researchers can continue doing their important work."

iru.edu.au

How IRU members are supporting COVID-19 recovery

Developing vaccines

1. **Griffith University** is running multiple research projects into COVID-19 vaccines and drugs, including through Griffith University's Menzies Health Institute Queensland¹, Griffith University's Institute for Glycomics² and the Griffith Institute for Drug Discovery (GRIDD).³
2. **Flinders University** professor Nikolai Petrovsky is heading up a team testing a vaccine candidate against the SARS-CoV-2 coronavirus. The team has partnered with Oracle cloud infrastructure to access an expanded research community and enable rapid design of the vaccine candidate.⁴
3. Academics at **James Cook University's** Australian Institute of Tropical Health and Medicine (AITHM) Professor John Miles have utilised an existing vaccine platform to identify a COVID-19 vaccine candidate. The group is now working on pre-clinical development with a view to clinical trials in 18 months and is seeking investment to continue work on this important project.
4. **Murdoch University's** Antimicrobial Resistance and Infectious Diseases Research Laboratory has launched research into known drugs that may be able to be rapidly redeployed for use in the current pandemic, "lost" antibiotics that are known to have antiviral activity but were never pursued commercially, and new antiviral candidates for the future.⁵

Preventing the spread

5. **Charles Darwin University** has partnered with technology developer SPEE3D to use 3D printing technology to coat door handles with copper in high traffic areas as a possible solution to help reduce the viability of viruses such as COVID-19. Studies have shown that copper is an effective antimicrobial material and items covered in copper could potentially reducing transmission by reducing the survival of the virus.⁶
6. **Flinders University's** International Centre for Point of Care Testing has partnered with UNSW's Kirby Institute to deliver a coronavirus testing program in remote Aboriginal communities considered to be at risk from the pandemic.⁷
7. **James Cook University** veterinary scientists have joined a consortium of experts from Australia, New Zealand and Asia-Pacific to train a new generation of 'animal disease detectives' in 11 countries across Southeast Asia and the Pacific to help strengthen detection, control and prevention of future animal disease outbreaks.⁸
8. **Western Sydney University's** Translational Health Research Institute is collaborating with Boston University and Virginia Modeling, Analysis and Simulation Centre (Old Dominion University) to

¹ <https://www.pharmaceutical-technology.com/news/griffith-university-iil-covid-19-vaccine/>

² <https://news.griffith.edu.au/2020/04/07/institute-for-glycomics-researchers-tackle-covid-19/>

³ <https://news.griffith.edu.au/2020/03/30/gridd-researchers-take-next-step-in-covid-19-vaccine-development/>

⁴ https://www.eurekalert.org/pub_releases/2020-04/fu-cio040220.php

⁵ <https://www.murdoch.edu.au/news/articles/murdoch-researchers-exploring-novel-cures-for-covid-19>

⁶ <https://www.cdu.edu.au/news/engineering-solution-help-fight-covid-19>

⁷ <https://www.adelaidenow.com.au/business/sa-business-journal/coronavirus-testing-program-supported-by-medical-communications-associates/news-story/4d00448ad9cb42c85b8b8c3dee9790f4>

⁸ <https://www.smh.com.au/national/australia-to-train-vet-detectives-to-stop-future-pandemics-in-the-asia-pacific-20200427-p54nn2.html>

model a simulation of the human factors responsible for viral spread such as social networks, fear and social contagion.

Supporting frontline health workers

9. **Western Sydney University** has fast-tracked exams for final year medical students to who want to start working in hospitals to support the fight against COVID-19. The students will be hired as "assistants in medicine" to work in non-COVID-19 wards, freeing up more experienced doctors to deal with the pandemic.⁹
10. **James Cook University** is similarly making its later year health professional students available to enter the health workforce in 2020, should there be a demand for surge health workforce capacity in response to COVID-19.
11. **La Trobe University** has donated PPE equipment to its partner health services, and the teaching ward at its Bendigo campus is being used by the local hospital.¹⁰
12. **Griffith University's** expertise and 3D printers are being used to help manufacture face shields and other personal protective equipment (PPE) for frontline health workers across Australia following a call-out by the state's health authorities.¹¹
13. **Charles Darwin University** is working with NT Health and members of the local ADF to produce 3D printed face shields to provide to frontline health workers amid the COVID-19 pandemic.¹²
14. **James Cook University's** College of Medicine and Dentistry and College of Public Health, Medical and Veterinary Science are developing a COVID-19 webinar series targeted towards health professionals, with JCU experts providing advice on topics such as virology; mental health first aid in a pandemic; disease control in regional and remote areas; and telehealth.
15. **Charles Darwin University's** Menzies School of Health Research is playing a critical role at the frontline of the pandemic in the Northern Territory and beyond, including establishing the Darwin Pandemic Clinic at Menzies' own clinical rooms and advising Queensland and Northern Territory Governments on their response to the pandemic. Menzies researchers who hold joint positions with Royal Darwin Hospital (including infectious diseases specialists) undertaking additional hours at the hospital to meet the increased demand for clinical care.¹³

Social research into COVID-19

16. **Flinders University's** Caring Futures Institute is undertaking dedicated research into grief and trauma caused by COVID-19. The Institute will study the physical and emotional toll the virus places on dying patients and distressed loved ones.¹⁴

⁹ <https://www.abc.net.au/news/2020-04-26/western-sydney-university-fast-tracks-medical-exams-coronavirus/12177008>

¹⁰ <https://www.canberratimes.com.au/story/6739099/universities-now-more-important-than-ever>

¹¹ <https://news.griffith.edu.au/2020/04/07/griffith-3d-print-experts-create-pps-for-frontline-workers/>

¹² <https://www.ntnews.com.au/business/volunteers-3d-printing-personal-protective-equipment-for-health-workers/news-story/51f3563684390c9b72b6b7d059169593>

¹³ <https://www.menzies.edu.au/page/Research/COVID-19/>

¹⁴ <https://www.adelaidenow.com.au/news/south-australia/coronavirus-flinders-university-researchers-launch-world-leading-studies-into-death-amid-covid19/news-story/3e260ecf66add4aed5c7391dc9c06bb6>

17. The Australian National Phenome Centre, led by **Murdoch University**, is researching why some young, healthy people are susceptible to COVID-19 but others in their peer groups are not. It is analysing data from local COVID-19 patients to predict how severe the disease will be for each individual and understand different responses to treatments.¹⁵
18. **James Cook University's** Centre for Disaster Studies is investigating what people know about COVID-19 and how they get that information. The study will help Australia to be better prepared for the recovery phase – and the next pandemic.¹⁶
19. **Griffith University** is undertaking various social research projects related to COVID-19, including:
 - how people prepare for the social and psychological impacts of COVID-19 lockdown
 - studies into domestic violence and abuse during social isolation
 - rebuilding tourism after COVID-19.
20. **La Trobe University** has begun multiple social research projects looking at the impact of COVID-19, including:
 - understanding panic-buying during the COVID-19 pandemic
 - measuring people's sentiments on social distancing during the pandemic
 - health, wellbeing and social connectedness during social distancing
 - innovative uses of technology for sex and intimacy during COVID-19 (under Ethics review)
 - alcohol consumption during the coronavirus pandemic.

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About the IRU

The IRU is a network of seven comprehensive universities committed to inclusive excellence in teaching and research in Australia. Its members are Charles Darwin University, Flinders University, Griffith University, James Cook University, La Trobe University, Murdoch University and Western Sydney University.

¹⁵ <https://www.abc.net.au/news/2020-04-06/coronavirus-mystery-why-does-it-affect-people-so-differently/12120842>

¹⁶ <https://www.miragenews.com/community-help-wanted-for-covid-study/>