

# Undergraduate Research News Australasia

Australasian Council for Undergraduate Research – Issue 19 • May 2021



Photos from ACUR's Images of Research competition

## Editorial

**COVID-19 continues to disrupt and impact our work, research and our lives and has transformed how we navigate our personal and professional lives. Undergraduate research stories in this issue attest to this. These stories, however, also attest to the resilience and adaptability demonstrated by our students and the ACUR Council in order to succeed in the new normal.**

This issue is filled with inspiring stories, intriguing imagery, and novel findings from the world of undergraduate research. First up, the student-led ACUR photography competition under the theme 'Celebrating our natural and cultural landscapes' reminds us of the power of

imagery. Besides presenting the winning images of the research competition, Molly Turnbull explains how photography and illustration can be used to successfully promote, celebrate and advance the spread of student research.

Next, we invited short-listed ACUR Great Writing Project 2020 participants to share their submissions regarding COVID-19 impact on their research topic or discipline. In sharing their research, Tian from the University of Wollongong emphasises the importance of a shared group mentality in combating the crisis in addition to vaccinations, while Hao from Western Sydney

University points to the value of Chinese Medicine in breast cancer treatment.

In this issue, we are proud to introduce to you the ACUR Student Committee which has made significant progress and achievements since 2020 as well as the ANU student committee who are working to host the ACUR 2021 conference online (see the event announcement below). Finally, the Chair of ACUR, Emeritus Professor Angela Brew, reflects on significant ACUR development and recent initiatives.

**Dr Lilia Mantai**  
The University of Sydney

## Abstract submission is now open for the ACUR@ANU 2021 Conference!

**We are delighted to announce that the 2021 ACUR Conference will be hosted online by the Australian National University from the 15<sup>th</sup>-17<sup>th</sup> September 2021. The online modality of this year's Conference was decided upon in consultation with the ACUR Executive and Student Committee, and promises the greatest possible equality of access for student presenters and their supporters, as well as university staff and ACUR representatives from wherever they may be located.**

The theme for this year's Conference is 'Your Search, Our Future', and we warmly invite eligible students from all academic disciplines to submit an abstract which illustrates how their research offers greater insight into our future, whether through a more thorough understanding of the

past, a solution to a current problem, or the identification of a future challenge. Abstract submission is currently open and will close on 28<sup>th</sup> June 2021.

As indicated last year, we have extended eligibility at this year's conference to students who intended to present in 2020. Therefore, if in 2020 you were eligible to present as a '2019 or 2020 undergraduate, Honours or first Master of Research student', you will still be eligible to present this year. The abstract submission portal and further information is available on the Conference page via the ACUR website: <https://www.acur.org.au/acur/events-and-conferences/2021-conference-acuranu/>. The Conference Committee is looking for reviewers to review submissions.

We welcome all inquiries via email, and look forward to welcoming you to ACUR@ANU 2021 in September!

**Rubay Tessema and Caitlin MacDonald**  
The Australian National University

Email: [ACUR.2021@anu.edu.au](mailto:ACUR.2021@anu.edu.au)

Conference Facebook page: <https://www.facebook.com/ACURANU2021>



# ACUR Images of Research Competition

## Competition Coordinator's Message

Images are an essential research tool that supplement written data and offer new, critical dimensions that support the further acquisition of knowledge. Images can be used as a research method to prompt a connection between the researcher and the audience, facilitating meaningful rapport with communities. Effective research images serve as articulated visual statements, subject observations and explanatory models. Viewing research images is an interactive and interpretative activity which incites contextual reasoning and accesses areas of human interpretation that is otherwise unobtainable in strictly written quantitative reasoning (See Caldarola 1988).

Photography and illustration have been two of my lifelong interests (despite my very amateur expertise) but something I never considered relevant to my interests in research. This was immediately disproven when I became involved in archaeological research projects as an undergraduate. I was formerly introduced to the world of research images when producing micrographs of phytoliths (microscopic plant silica cells, usually ~1–100µm in size) during a summer research scholarship and illustrating archaeological diagrams during my Honours thesis.

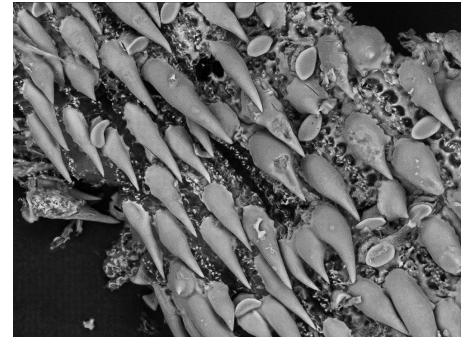
These early experiences stimulated my interest in research images, and how they can be used to successfully promote, celebrate and advance the spread of student research. Many conversations around this inspired the 2021 ACUR Images of Research theme; 'Celebrating our natural and cultural landscapes'. A theme designed to encapsulate all undergraduate research efforts, across disciplines and the unique contributions it makes to people and places. Undergraduate

research takes place in many landscapes such as laboratories, offices, homes, deserts, mountains, oceans and towns, and this was an opportunity to visually celebrate this. We especially wanted to celebrate the processes involved in making research happen during challenging times this year and last.

This year was our first ACUR Images of Research Competition. I have been impressed with the great array of submissions ranging from scientific field illustrations to cultural landscape photography. I was particularly impressed with how entries elaborated on the interaction between people and place involved in research. As place and people can never fully be removed or ignored in the research process, even in what we may consider "hard sciences". Research methods need to remain critical as part of the scientific process (even humanities and cultural studies follow the scientific process), but our interpretations exist in a very human world. Claiming "research is apolitical" in itself is deeply political, when research exists and participates within our contemporary social and political environment. This year and last, we continue to be humbly reminded that research does not exist in a vacuum – a theme I am proud is evident in our competition, notably with submissions exploring the impacts of COVID-19 and highlighting ancient Indigenous landscapes.

Submissions were assessed based on image quality, composition and creativity; demonstrated knowledge of current thinking, research, policy and/or practice; stimulating interest and discussion; communicating the relevance/importance of the ideas presented; and image relevance to respective research field and competition's theme.

Many thanks to our competition assessors: Lachlan Deimel (ACUR Student Outgoing Head; PhD-c Oxford), Olivia Jessop (ACUR



Scanning electron micrograph (SEM) of domestic barley (*Hordeum vulgare*) phytoliths from the inflorescence (the husk/glume encasing the grain). Authors' own.

Student Head; PhD-c UQ), Max Kirkby (ACUR Student Deputy; BPhil Hons-c ANU), Melody Hoefdraad (ACUR Student Careers; BS-c Anton de Kom Suriname), Megan Faith (ACUR Student Competitions; BPharm-c Monash), Foti Paradisis (ACUR Student Welfare and Diversity; BA-c UQ), Diana Kazakov (ACUR Student Publications; BPsych-c Macquarie), Sai Campbell (ACUR General Student Committee; BPhil Hons-c ANU), Toby Hardcastle; BPhil Hons-c ANU), Selah Dimech (ACUR General Student Committee; BOT Hons-c UQ) and Bonnie Wu (ACUR General Student Committee; BEnvMan Hons-c UQ). Thanks are also extended to Professor Eric Pawson (University of Canterbury) for his great support of this competition from the beginning.

**Molly Turnbull**  
ACUR Student Digital Media Officer  
BA - Hons Archaeology UQ

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## NEW in URNA!

Knowing that many of you read URNA in digital form, we are introducing interactive elements that link you to further information without disrupting the current URNA reading experience that you so enjoy!

For example, click on the images on the next page to go to [acur.org.au](http://acur.org.au) to see the bigger image or follow the underlined hyperlinks throughout this issue.

## First Place

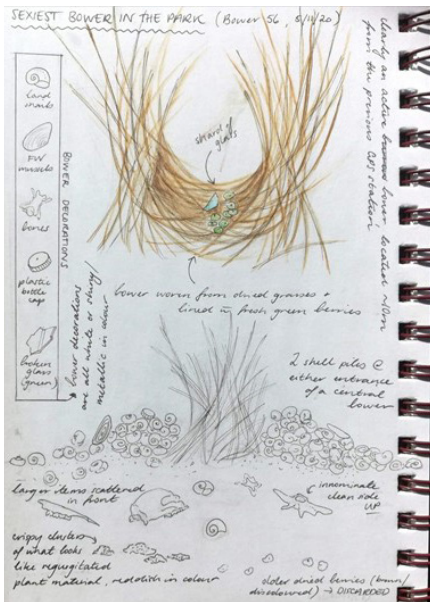
\$100 prize sponsored by ACUR Executive Committee

ACUR Australasian Council for Undergraduate Research

### Eleanor (Nellie) Pease

*Credentials: Honours in Palaeontology, School of Earth and Environmental Sciences, The University of Queensland*

Image description: I wrote this page of notes when I was in Taunton National park, helping with research on spotted bowerbirds. These amazing birds build elaborate grass “bowers” to attract a mate, decorating them with shiny and colourful treasures they find around the forest. These bowers are perfect little museums of the birds’ natural and cultural landscapes – you’ll see natural trinkets like shells, berries and bones mixed in with rubbish and detritus taken from nearby towns. The birds even learn from each other, developing bower fashions from year to year. I couldn’t help drawing this fascinating interplay of animal and human worlds!



## Second Place

\$30 prize sponsored by Biome

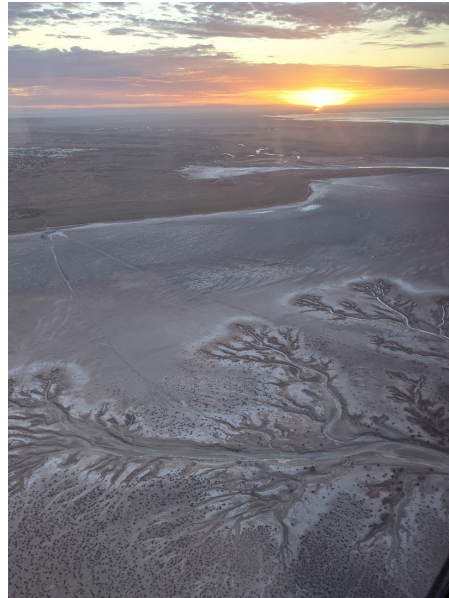
biome eco stores

### Abby Cavanagh

*Credentials: Honours in Archaeology, School of Social Sciences, The University of Queensland*

Image description: ‘Discovering the landscapes around Wickham in the Pilbara WA’

Not only is the Pilbara characterised by its red earth and iron ore industry but the traditional landscapes and stories that have lived since some 30,000 years ago. The Ngarluma people of Ngarluma Country, where this photo was taken, believe the vast landscapes of the ocean, rivers systems and mountain ranges were created by beings that used a supernatural force or spirit (manggan). This photo overlooks a dendritic drainage pattern in the mudflats looking south towards Karratha.



## Honourable mention

### Charne Crous

*Credentials: Bachelor of Science - Chemistry major, inorganic chemistry laboratory volunteer, The University of Queensland*

Image description: This image was taken after attempting to grow long, needle-like crystals of a bis(acetylacetonato)copper(II) derivative. The size of these crystals were too small and weren't single, so they weren't of use for our purposes, but they sure looked cool! This purple moss looking formation wasn't around for too long before attempting yet again at growing the desired crystal, this time with better good-luck rituals to help! I've learnt growing the right crystal is more of a dark art than an exact science.



## Third Place

### Ellie Sweet

*Credentials: Bachelor of Environment and Sustainability, Australian National University.*

Image description: This photo is from a series of photos I produced for an art course last semester.

The work was inspired by feelings stemming from a 14-day period of mandatory quarantine during the COVID-19 pandemic. This photo illustrates a misguided connection with, and a longing for, the environment. It also represents a warped perspective of the environment due to societal norms and standardised work ethics. It is my observation of modern interactions with the environment. 2020 definitely taught me to celebrate the natural landscapes around me more often, something I'm sure many others can relate to.



## Honourable mention

### Ismariv Irokromo

*Credentials: Bachelors of Sociology, Anton de Kom universiteit of Suriname*

Image Description: Suriname is a small country, with so much nature and beauty to offer. This picture, from an expedition, is

the view from the top of one of the mountains in Suriname, called Brownsberg. A place far from the city. On the way up, you can experience what nature really has to offer you. From a big whiff of clean air, to the tiniest colorful butterfly. But the best part awaits you at the top. No benches, no gates. Just you and your emotions, being vaccinated by a view that can change your mood in a second.



# The Great Undergraduate Research Writing Project

**URNA invited ACUR Great Writing Project 2020 short-listed participants to share their submissions regarding COVID-19 impact on their research topic or discipline. Olivia, Zaata and colleagues and Celeste share their short essays.**

## The Unusual Growth of Old-Style Communication in the Wake of a Pandemic

**Celeste Gibbs  
University of  
Canberra**

Letter writing, whilst deemed as old-fashioned or archaic, can be used as a



fundamental tool to help prevent loneliness in the wake of global isolation. It represents substantially more effort than a text as well as the thought the penman has for the recipient. This, plus the physical weight of the letter, become tangible reminders that there is someone out there who cares, combatting loneliness (Novotney, 2019; Taylor et al., 2016).

2020 has brought forth a wave of new style communication tools to counter the isolating effects of COVID-19. Centralised communication has become key in managing business and has required swift adaptation and since the normalisation of online dependent modes of communication, it has been well acknowledged that these forms of communications vary by several dimensions; by July 2020, the software Zoom was seeing up to 300 million meetings each day, becoming one of the main sources of video communication (Baynes, 2015; Iqbal, 2020). Even entertainment entered the mainstream, with applications like Houseparty and Netflix Party reaching over 50 million downloads by the peak of the global lockdown (Perez, 2020). However, in the wake of physical isolation, these tools do not combat the loneliness that is caused by isolation.

Over the course of Canberra's isolated lockdown, a study was conducted consisting of 24 people aged between 18-21, with equal representation of both men and women. The participants sent letters to one another in conjunction with mainstream technological communication. It was hypothesised that participants would reinforce the argument that letter writing combats loneliness. It is acknowledged that this is a small, narrow sample size, and the results are reflective of this.

In April, participants randomly received a letter from a mutual friend. The letter explained why

the writer wrote the letter, offered an engagement of correspondence, and ensured that participants were not obligated to participate. As such, engagement by the participants was voluntary, demonstrating an authentic response. During the course of the experiment, every letter was handwritten, and other forms of communication were not discouraged as sustaining the mental health of the participants was paramount. 91.67% of the participants responded enthusiastically, stating that they would write replies and engage in letter writing. However, of this percent, only 39.13% followed through. Out of those who did respond and sustained communication, 77% were women, whilst only 23% were men.

When asked why participants did not reply, despite stating otherwise, there were varied responses (Figure 1). These responses were most commonly attributed to mental health and mental fatigue, brought on due to the

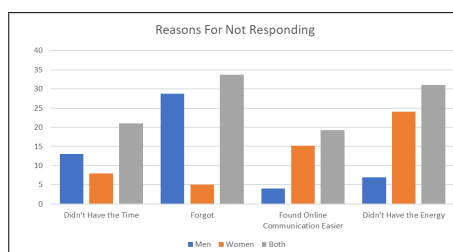


Figure 1

culminative effects of isolation, with one participant stating "I honestly went to write it, but I just didn't have the energy. I didn't have the energy to do anything during iso". These are heavily supported by evidence found in other research. Amy Novotney, for example, found that social isolation leading to loneliness can result in poor sleep hygiene, depression, and impaired executive functions, all of which are likely causes as to why participants did not respond (Novotney, 2019). In contrast, participants who did respond (Figure 2), reported overwhelming feelings of connection, a growing satisfaction of quality of life, and a decreased sense of loneliness. They specifically cited letter writing as a major cause, with one participant stating "it made me so excited, I was going to my letterbox every day to see if there was anything new. It gave me a reason to get out of bed". These participants

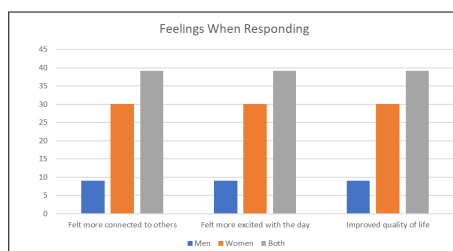


Figure 2

acknowledged that whilst they still used other forms of communication, they preferred the letter writing as it gave them a sense of something to do.

It is important to acknowledge that whilst digital communication is in no way detrimental to communication, existing in an era where it cannot be substituted with physical communication has proven that online forms of communication cannot replace substantive physical contact (Baynes, 2015). Letter writing, however, is a tool to get there. Therefore, letter writing, whilst not as mainstream as other forms of modern communication, can be used as a tool to curb physical loneliness and improve mental health, which has been seen during the COVID-19 pandemic.

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*If you would like to look at the winners, featured in issue 18 (Nov 2020), please go to our [website](#)*

## The Psychological Impacts of COVID-19 on Older Adults

**Olivia Rose Maurice  
Macquarie University**

[Click on the image on the next page to see a bigger version of Olivia's poster](#)



# Indonesian Health Behaviour during The New Normal Era

Zaata Yamni, Nilovar Zalsabillah, Azra Batrisyia with D.E. Kusumawardhani, and A.A. Aryanto, Universitas Indonesia, Indonesia

Indonesia COVID-19 confirmed cases have reached 1.527.524 cases per April 3rd, 2020 with an average increase rate of 5091 cases per day for the most recent week. In response to COVID-19, the government implemented Large-Scale Social Restrictions (PSBB) on July 8th, 2020. However, due to the problem of the economic and social sectors, the government has been implementing the New Normal, a phase in which the PSBB is loosened and the public sector is allowed to

resume its normal activities with several health protocols restrictions (Lestari, 2020; Satuan Tugas Penanganan COVID-19, 2020). These changes affect Indonesian lives in many ways, especially in their health behaviour. This article outlines the factors underlying those changes.

One of the psychology theories, the Health Belief Model (HBM), proposed four factors that can be utilized to increase health behaviour, including COVID-19 preventive behaviour. These factors are the perceived threat of COVID-19, belief about their own capability to prevent it, belief about the effectiveness of health protocols, and cues to action, especially regulation from the government (Clark et al, 2020; Eldredge, 2016). Our study in mid-September 2020 with 1243 participants from several islands in Indonesia found that perception of COVID-19 threat,

beliefs in the new health protocols, and belief in governments' regulation do improve Indonesians' health behaviour (Yamni et al, in press).

To date, the Indonesian government has created websites and apps, broadcasting press release updates every day, and coordinating the task force down to every region in Indonesia to improve Indonesians' knowledge about COVID-19. This strategy is effective as the majority of people receive sufficient knowledge about COVID-19 symptoms, transmissions, and prevention methods. However, our study found that there are still specific misconceptions regarding the knowledge of mask usage. Ninety-seven per cent of respondents believe that wearing a mask outside is only obligated for certain people. This belief is the opposite of what the government has been campaigning for the last few months, which emphasizes that every person must wear a mask whenever they go outside (Satuan Tugas Penanganan COVID-19, 2020).

Moreover, our survey showed that significant others, such as families and close friends, have a strong impact on Indonesians. For Indonesians, those significant others are perceived as non-threatening, therefore they tend to decrease their health protocols behaviours even if they have enough knowledge and the right attitudes toward COVID-19. Besides, these significant others also can affect how Indonesians perceive government regulations as preventive behaviour tends to decline when their social environment does not follow the health protocols.

In conclusion, the governments, practitioners, and academics should maintain the programs that emphasize four factors of HBM and evaluate the reality of the public's comprehension of those programs to ensure there is no misinformation among Indonesians. Moreover, there is a need to conduct a family and small group intervention, the most significant group for Indonesians, to maintain the health protocol behaviour even in the smallest unit of society.

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## The Psychological Impacts of COVID-19 on Older Adults

The coronavirus pandemic has affected people profoundly across the world, but has had particularly marked ramifications for the elderly. This resource is devoted to identifying areas of concern regarding older adults' (aged 60+) wellbeing in response to COVID-19, and providing information and support guided by reliable scientific evidence.



### Older Adults Are More Likely to Contract COVID-19

International epidemiological data indicates that the elderly are the most at-risk group for COVID-19 severity and mortality (Gardner et al., 2020). This owes to physical, psychological, social, and environmental vulnerabilities influenced by the ageing process.

This can include a decreased immune response, disabilities or poor mobility, cognitive and sensory deficits, greater comorbidities and hospitalisations, which may heighten the chance of contracting or experiencing complications related to COVID-19 (Gardner et al., 2020). Congestive cardiac failure, sepsis, and respiratory complications like pneumonia and mechanical ventilation are the among the most prevalent of these (Banerjee, 2020).

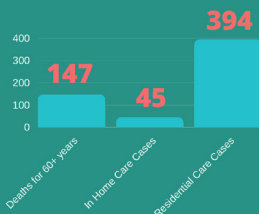
### Existing and/or Developing Mental Health Conditions

The aforementioned vulnerabilities can have extreme implications for mental health, and can contribute to heightening older adults' susceptibility to mental health problems, as well as worsening existing conditions (Banerjee, 2020). During the COVID-19 pandemic, pervasive misinformation and mass hysteria has given rise to amplified health anxiety, panic, adjustment disorders, depression, chronic peritraumatic stress, and insomnia (Strutt et al., 2021). In particular, extant research has identified that one-third of older adults have experienced depression, and 1 in 5 experienced elevated anxiety and/or psychological distress during the March-May lockdown (Strutt et al., 2021).

Despite measures like social distancing reducing transmission, they have also prevented participation in pastimes, socialisation, and instilled feelings of loneliness and isolation among the elderly. This is compounded by generational technological incompetence, which prevents use of alternative communication like video chat or email to contact family and friends. Strutt et al. (2021) corroborates this, as specific emotion regulation strategies, social and family engagement, and adoption of new technologies have been associated with better emotional health and quality of life.



### Aged Care Facilities as a Risk to Wellbeing



Living in aged care facilities has been linked with anxiety disorders, depression and suicide, as well as cognitive decline, mood disturbances, wandering and psychotic symptoms (Javed et al., 2020). This can worsen paranoia, stress and panic caused by the pandemic, and lead to mistrust and avoidance of public health protocols like quarantine, social distancing and general hygiene.

Mistreatment and worker misconduct in aged care facilities can also add to this by increasing mistrust, paranoid tendencies and trauma (Javed et al., 2020). This can have serious consequences if there is a COVID-19 outbreak, and can also cause severe distress for those affected by conditions such as Alzheimer's. Between January and July, 2020, 394 Australian cases emerged from residential aged care, while 45 came from in home care.

### Implications and Resources for Older Adults During COVID-19

To minimise or manage the marked detrimental impacts of COVID-19 on elderly people's mental wellbeing, strategies such as the following should be implemented: accessible telephone counselling services and COVID-19 resources, distanced but regular interactions with family and friends, developing an adjusted routine with exercise and leisure activities, ensuring good hygiene and wearing a mask to reduce health anxiety, etc.

Older adults, individuals caring for the elderly, or other service providers can access mental health and wellbeing support through the following resources:

Lifeline Australia (13 11 14), Beyond Blue (1800 51 48 or [coronavirus.beyondblue.org.au](https://coronavirus.beyondblue.org.au)), Black Dog Institute (9582 2991), The National COVID Older Persons Information Line (1800 171 866), Carers Australia (1800 242 636).

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Olivia Rose Maurice, Macquarie University Department of Psychology

# Beating the pandemic with a positive common mindset

**Vaccinations are key to eradicating many diseases. But what if a vaccination has not been discovered? Can a shared group mentality towards following government interventions that aim to reduce the spread of disease curb infection rates?**



For well over a year, the COVID-19 pandemic has transformed the way we live, with over one hundred million infections and two million deaths (Worldometer, 2021). In a world where free thought and individual choices are encouraged, the outcome of a pandemic can either be forgiving or devastating. To counteract the negative ramifications that contagious diseases bring to society, such as the flooding of the healthcare system with a rapid influx of infected patients, a government may enforce interventions that minimise the interaction of individuals through various forms of social media. Interventions have the main objective of reducing the basic reproduction number of a disease and the effectiveness of certain interventions. Common interventions include social distancing, proper hand hygiene, and the mandatory wearing of cotton masks. Of these, the most effective intervention is mask enforcement with a 60% reduction rate (Eikenberry, et al., 2020) in the transmission rate of the virus, followed by proper hand hygiene

with a 30% reduction rate (Rundle, et al., 2020), and social distancing with a 20% reduction rate (VoPham, et al., 2020).

In relation to the COVID-19 pandemic, population heterogeneity refers to the idea that differences in choices made by different groups of individuals result in different outcomes (IIASA, 2016). In this project, the SIR (susceptible-infected-recovered) model was used to model the transition rates between susceptible, infectious and recovered individuals within a closed population. Using MATLAB simulations, specific quantities were calculated: the maximum number of infections, time to maximum infections, eradication time of the disease, and the total number of recovered individuals. Through the use of MATLAB, changes in the four quantities were investigated, where the extent of these changes depended on the type of intervention introduced and the time at which an intervention is introduced within the population, as well as the level of compliance with interventions by members of the population. Results stated that when interventions are introduced earlier on, the total infection count is reduced by 93% when everyone follows interventions as compared to when no one follows interventions.

Beating a pandemic in a quick and effective manner requires the government and the media to raise awareness on methods that prevent disease transmission among the general public at the earliest possible time, such as promoting personal hygiene, restricting unnecessary

travel or contact between members of the public, and enforcing masks. Furthermore, it is of paramount importance to note that the negative ramifications of a pandemic can only be effectively mitigated if there exists a shared group mentality towards establishing correct pandemic etiquettes that benefit the community as a whole, at the earliest possible time.

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**Tianze Wei**  
University of Wollongong

## Meet the ANU Undergraduate Research Society



**For many undergraduates interested in exploring the world of research, be it in science, the humanities or elsewhere, it can be terrifying to be thrust into a complicated world with little formal training or preparation. Students can feel overwhelmed by what appears to be an insurmountable volume of work that is vastly different from the structured teaching in a typical undergraduate course.**

For this reason, the ANU Undergraduate Research Society (URS) was formed in 2020 which aims to support and represent research-minded undergraduates at the Australian National University.

For many years now, the ANU has excelled at encouraging undergraduate research through a number of degree programs and courses, namely,

the Bachelor of Philosophy (PhB) and Bachelor of Engineering. Research and Development (R&D) programs have been a pathway for many eager Year 12 students with a keen interest in exploring research. These programs implement compulsory research projects into the degree structure which aim to encourage students to explore different areas and get a taste of research. Beyond these programs, for-credit research as an undergraduate at ANU is also available to students through specialized research courses and Summer Research Scholarships.

With the breadth of opportunities available for undergraduate researchers, there is, therefore, a need for a systematic approach to supporting these students. From personal experience and anecdotal evidence, we have found that a barrier

for students has been a fear of asking for help in the lab, particularly when the student is commencing a project for the first time. Students can struggle with what may appear to be basic skills such as conducting a literature review, expectations in the lab, writing a dissertation or even finding research opportunities. The value of the URS comes from the fact that it brings students from different disciplines and year levels together in casual, social environments so that we can learn from our older students. Peer mentoring provides the space for younger students to ask the questions that they feel they can't ask their supervisors or lab colleagues. We have run first year and inter-year social events which have allowed students to connect with each other and has been an important way that

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# When traditional philosophy and practice of Chinese Medicine meets challenges in modern medicine

**Traditional philosophy and therapy such as Traditional Chinese Medicine (TCM) faces challenges in the modern era. By interpreting its core essence in a language that is more relevant and understood by modern people offers more opportunities to create scientific breakthrough in the challenging and evolving field of medicine. Taking breast cancer as an example, it is reported one in five Australian women use Chinese Medicine (CM) to manage their symptoms, but how best to manage breast cancer using CM remains unknown. Therefore, researchers are interested in knowing whether CM can strengthen immunological functions in women with breast cancers or at risk of breast cancer recurrence.**



Over the summer holiday period from 2020 to 2021, I undertook the Western Sydney University Summer Scholarship Research Program. Being guided by my supervisors, I gained research experience by conducting a Cochrane Systematic Review of publications on the topic of Chinese

herbal medicine for immunological function in women with breast cancer or a history of breast cancer.

The scope of my work was identical to the process of conducting a real Cochrane Systematic Review. The first step involved analysing background information, coming up with a research question and defining eligible criteria. The latter were already defined and published in a research protocol. Next, I conducted a literature search and identified eligible studies in Chinese databases. In the second part of the research project, I performed data extraction and conducted risk of biases assessment by designing a data extraction form and entering results in Review Manager 5. The final step consisted of writing a final report for submission and giving a three-minute presentation followed by a Q&A session on Presentation Day.

This research project challenged me in multiple ways. The first challenge was to refine my search terms when conducting a literature search in databases. It was not until I spoke with my supervisors and received feedback and guidance from them that I was able to find errors and improve my search terms and eventually produce

eligible studies. The second one was maintaining a positive mindset and wellbeing. Meetings with my supervisors once a fortnight helped me to raise concerns and gain immediately feedback. This also taught me the importance of teamwork and communication with one another.

TCM has always being part of my personal life. Personal experiences of life and death in the hands of TCM doctors in China earlier in my life sparked my curiosity and interest in Chinese Medicine. I never thought I would have the opportunity to study Chinese Medicine in Australia. Twenty years later, I am on my way to become a TCM doctor and serve my community and country.

Chinese Medicine has come a very long way from East to West, and modern research gives evidence to showcase therapeutic effects of Chinese Medicine in modern healthcare. This research program gave me the foundation for the remaining study of my undergraduate TCM degree, and prepared me for the lifelong journey of study, practice, and research in Chinese Medicine.

**Hao Sun**  
Western Sydney University

**Did you know?** that there are quite a few academic journals keen to particularly publish research done by undergraduate researchers? Check out the list of journals on the ACUR website <https://www.acur.org.au/acur/about-undergraduate-research/undergraduate-journals/>

first year undergraduates are able to learn from their later year peers.

Beyond the social aspects of the society, we have been able to form partnerships with the university that allow us to develop unique workshops and programs that have previously been available for only higher degree research students. These workshops cover the skills that first-time research students may be lacking and are often facilitated often by experienced older students. This society has also been a means by which academics communicate the areas of support they feel their undergraduate students may need to better prepare them for their placements. We have also been able to use the society as a platform to advertise opportunities and profile later year students to raise awareness of the research options for interested undergraduates.

The URS initially began as the PhD Society but its membership

was expanded in 2020 to reflect the broader diversity of research-minded students in the ANU undergraduate community. We have seen a 25% increase in membership and a reinvigoration of the interdisciplinary and inter-year camaraderie.

A society that specifically supports undergraduate researchers can be enormously beneficial for any institute in pursuit of research

excellence and improving the undergraduate learning experience. We are excited to see where the URS goes for this year and beyond.

ANU is hosting the ACUR 2021 conference online on 15<sup>th</sup>-17<sup>th</sup> September 2021 (please refer to conference announcement on page 1 for details).

**Sai Campbell**  
ANU URS President 2021



# Report of the Chair



When I reflect on the past few months, I'm aware of how busy we have been. Our high levels of activity attest to the fact that ACUR is growing. Earlier this year, the Executive Committee engaged in a Strategic Planning process and identified some new challenges. Since that time, it has been a pleasure to work with members of our vibrant Student Committee on projects that we have collectively devised. We have also been pleased to support projects that they have initiated, such as the wonderful "Images of Research" competition which is featured in this issue.

The opportunities that ACUR provides enable students to build on their research, initially to gain confidence in presenting their research at an ACUR conference, but then to build their capacity for leadership through becoming ambassadors of undergraduate research within their own universities, and then internationally by working as members of the Student Committee.

In recent months, we have substantially updated our website to provide a range of strategic and other resources to assist our members with their endeavours to advance undergraduate research. Our Conference Committee has been working to provide a vibrant and interesting online conference in September, and we are hoping to bring you an online colloquium later in the year.

Efforts to share the benefits of being part of the ACUR Community and to gain more members are ongoing. In addition, we plan to seek sponsorship to enable us to extend the range of activities designed to advance undergraduate research. A new ACUR sponsorship framework specifies a number of ways in which ACUR can work with other organisations to our mutual benefit and we hope this will result in some fruitful collaborations.

We are now working to support scholarly endeavours in gaining recognition for undergraduate research, and have begun to do

some collaborative research. For example, a project to understand how undergraduate research is being assessed is now being pursued in collaboration with Deakin University's Centre for Research on Assessment and Digital Learning (CRADLE).

Finally, I would like to take this opportunity to farewell and thank Eric Pawson and the University of Canterbury NZ, for stewardship of URNA over the past 4 years. Under Eric's editorship, URNA has become a radiant quality mouthpiece for student research in Australia and New Zealand. It is a hard act to follow, but our new editor, Lilia Mantai is, as you see from this splendid issue, a worthy successor. URNA is now produced in the ACUR Office.

**Angela Brew**  
Macquarie University

# Student Committee Report



The 2021 ACUR Student Committee is lively this year, consisting of 15 undergraduate students from around the world. Even though we can't set up some of the events we'd have liked to in an alternate, non-pandemic-ridden world, the committee has really come through driving some important development. In addition to our online engagement we're currently setting up infrastructure for future years' committees. This will lay the ground-work for some excellent events in the future. Some of the national and international projects we're working on include (as well as their drivers):

- Social media outreach on Facebook and Instagram (Molly). We post regularly and spotlight students to profile their work and enthusiasm.
- Website development (Selah).
- Video development (for the 2021 conference (Sai and Toby), Instagram, a South American conference, and also the one in this newsletter! Everyone contributed but the heart of the videos has been fuelled by Diana).
- Collating student opportunities and facilitating international networking for both students and academics (Melody).
- The 2021 conference (Oliver). This year we coordinated a panel, and each of our members will engage in training in order to act as session moderators.
- Diversity and minority engagement (Foti and Donna).

- Development of documents. These include a competitions handbook (Megan), ambassador program (Yastika), advertising lists (Bonnie) and sponsorship prospectus (Gurmaan). It's been amazing to see the high quality of professional communication.

I'm consistently impressed to see the enthusiasm and sheer creativity. It's been amazing to talk with the other committee members at our monthly meetings and on our Slack channel, and our Deputy Head Max has been fantastic at coordinating this. We've had a solid few months of collaboration, idea-sharing, and gaining feedback on projects that have actual impact on Australasia's undergraduate researchers. I'm really excited to see where the rest of the year takes us.

In this video a few of us share why we are involved with ACUR and engaged in undergraduate research, what we get out of it and what drives us. Follow this link: [shorturl.at/uMY18](https://shorturl.at/uMY18) or click on the image below that will take you to the ACUR website to watch the video.



The video features the following students:

Selah Dimech, UQ, Occupational Therapy  
Max Kirkby, ANU, Philosophy (Science) Honours  
Yastika Banerjee, UQ, Biotechnology  
Olivia Jessop, UQ, Biomedical Science  
Toby Hardcastle, ANU, Philosophy (Science)  
Gurmaan Kaur, Federation University, Psychology  
Foti Paradisis, UQ, Psychology  
Sai Campbell, ANU, Philosophy (Science)  
Diana Kazakov, Macquarie University, Psychology  
Melody Hoefdraad, Anton de Kom University of Suriname, Sociology and Science  
Oliver Hervir, ANU, Philosophy (Science)  
Megan Faith, Monash University, Pharmaceutical Science

**Olivia Jessop**  
The University of Queensland

## Contact us

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URNA is a publication of the Australasian Council for Undergraduate Research, appearing in May and November of each year.