

Results of the 2020 AGW Fellowships

We congratulate the winners of the 2020 AGW Fellowships, **Jessica Hadlow, Tara-Lyn Camilleri-Carter and Lara Nicholls**. Our Association is proud to support the work of these early career researchers, whose work is characterised not only by its academic excellence but also by its relevance to such major contemporary concerns as understanding obesity, correcting the androcentric focus of reproductive physiology and evaluating the status of women artists.

Barbara Hale Fellowship



Jessica Hadlow is a doctoral candidate in the Centre for Evolutionary Biology at the University of Western Australia. She has a keen interest in sexual selection, sperm competition, and the evolution of sperm and egg cells (gametes), and is currently researching the dynamic factors that influence fertilisation success in a broadcast spawning marine invertebrate. Studying gamete interactions in these organisms provides critical insight for evolutionary and clinical reproductive biology.

The study of sexual selection on gametes is increasingly focused on the vital role females play in determining the outcomes of sperm competition and fertilisation. Jessica's recent research has shown that sperm responses to female reproductive fluids are critical for determining the characteristics of sperm that make them 'good fertilisers'.

The AGW Barbara Hale Fellowship will support a new research component which will innovatively integrate evolutionary biology and cutting-edge reproductive science. Through collaboration with fertility experts at Monash University, Jessica will acquire pioneering clinical techniques unavailable in Western Australia, techniques that will enable her to explore the mechanistic basis underlying fine-scale changes in sperm flagella waveform patterns, Sleep Education for psychologists: from Training to Practice provide unprecedented clarity into female control of fine-scale patterns of individual sperm cell behaviour, and promote the importance of female reproductive physiology in a field of research that has typically had an androcentric focus.

Barbara Hale Fellowship



Tara-Lyn Camilleri-Carter is undertaking her PhD studies in the School of Biological Sciences at Monash University. The Barbara Hale Fellowship validates the determination with which she has pursued an interrupted academic career. After receiving a degree in Psychology from the University of Ballarat (now Federation University) in 2005, she entered the workforce in a variety of jobs, although it was a management position in IT that she abandoned in 2014 to study biology at Monash University before moving to the Australian National University, where in 2017 she completed with honours the Master of Biological Anthropology (Advanced) degree that secured her a PhD place in a Biological Sciences at

Monash. There, according to her supervisor “she set her sights on a PhD research program that seeks to push new boundaries in the study of obesity”.

Her research to date has involved subjecting female and male fruit flies and their offspring to diets that differ in sucrose content and monitoring the consequences for longevity, fertility, and body composition (whole-body fat and protein). This has already produced new information supporting “the existence of a parent-offspring evolutionary ‘conflict’ over optimal diet”, whereby the same dietary combination that is beneficial to the longevity and fecundity of the parents can have opposing effects in the offspring, despite the parentally-inherited genetic characteristics present in those offspring. In the new set of experiments to be funded by the Fellowship, Tara-Lyn hopes not only to demonstrate more extensively the modification of inherited genetic characteristics by changes in environment, but also to unravel the largely unidentified causal molecular mechanisms at work.

While acquiring the necessary techniques and methodologies of molecular biology will be important to Tara-Lyn’s personal career, this work offers important possibilities for understanding how to manage the serious problem of human obesity because the genetic networks she will explore in fruit flies are analogous to those in mice and in humans.

Jennifer Strauss Fellowship in the Humanities



Lara Nicholls is a curator at the National Gallery of Australia and a researcher specialising in the work and status of women artists. The theme of her current PhD at the Australian National University is the professionalisation and the transnational experience of women artist in the late nineteenth-early twentieth century.

Her Fellowship project, *Impression Fever: Australian Women Impressionists and their circle*, proposes a substantial extension, not only of the content of her research but also of its reach into the public sphere. Fellowship funds will be used to research and produce an exhibition blueprint, draft catalogue essay and entries, checklist of works of art and budget for a

travelling exhibition that could be displayed in State and regional galleries in 2022-23.

The exclusion of these women from recognition in an art world dominated at the time by fixed and often highly masculinist views of landscape and culture has led to years of neglect and deaccession. Fresh research bringing together ignored works and well-known treasures in an innovative and illuminating exhibition may change that and give Australians a new and accessible way of viewing the images that make their histories.

This ambitious project requires not only time-out from paid employment, but also visits to State Galleries and Libraries in order to access undigitized artist archives from the late nineteenth century and enable formation of the necessary canon of forgotten and unknown work by women artists of the period. Fellowship funding will make this possible.

Highly Commended

Four applicants from among the very competitive field were Highly Commended:

Rebecca Bunn of the School of Social and Political Sciences, the University of Melbourne, whose thesis topic is *Advocacy Strategies in Post-Release Contexts: How NGOs advocate on behalf of people leaving prison.*

Hailey Meaklim of the School of Psychological Sciences, Monash University, whose thesis topic is *Sleep Education for Psychologists: From Training to Practice.*

Nora Trompeter of the Department of Psychology at Macquarie University, whose thesis topic is *The Role of Emotion Dysregulation in Eating Disorders among Adolescents.*

Yinglai (Kathy) Wei of the School of Pharmacy and Pharmaceutical Science at Monash University, whose thesis topic is *Pain-on-a-chip: towards a cell-based microfluidic sensor for pain modulation.*