SEPTEMBER | 2021

# **BIO-BABBLE**



#### Newsletter of the Australasian Biospecimen Network Association

**PRESIDENT:** Anusha Hettiaratchi **TREASURERS:** Valerie Jakrot, Catherine Kennedy, Helen Tsimiklis VICE PRESIDENT: Cassandra Griffin SECRETARY: Ussha Pillai

COMMITTEE MEMBERS: Nina D'Vaz, Samantha Higgins, Wayne Ng, Georget Reaiche, Leanne Wallace, Li Zhou

# WILL THEY BRING RESEARCH JOY? MARIE KONDO YOUR BIOBANK

'Collected for unspecified future research' and 'legacy collections' are not unfamiliar terms in biobanking with both holding potential for significant research contributions. In recent years however, the paradigm shift from measuring biobank success by collection size, as opposed to new metrics of measuring success by distribution, raises questions around legacy cohorts and their enduring scientific utility.

Given the evolving landscape of scientific exploration, many legacy samples may not be sufficient for modern or indeed future research protocols based on collection method, storage conditions, availability of annotating data, ambiguous labelling or appropriate patient consent... just to name a few.

The question of what to do with these samples is problematic. Understanding the vast investment associated with legacy collections leaves many of us reluctant to discard or destroy biospecimens, however realities regarding storage space and long-term storage expenses remain.



ABNA Sample Disposal Survey ABNA is interested in understanding how our members manage legacy collections and whether you have existing protocols in place to audit and maintain the integrity of long-term collections – discarding samples with expired or limited research utility and therefore preserving resources for future collections.

We'd love to hear your thoughts and welcome responses to our survey, the results of which we will share with our members in the November edition of Biobabble.

To access the survey scan the QR code from your mobile or click on the image. The survey will stay open until October 29.



ABNA 18<sup>th</sup> Annual Meeting 21 October 2021 Hybrid Event

#### TOGETHER APART: REDEFINING THE NETWORK

## **INVITED SPEAKER PROFILES**

#### **PROF CRAIG PENNELL**

Professor Craig Pennell is the Chair in Obstetrics and Gynaecology and Head of Discipline at the University of Newcastle, and Senior Staff Specialist in Maternal Fetal Medicine (John Hunter Hospital). In addition to his subspecialty training in maternal fetal medicine, he has a PhD in fetal physiology and completed postdoctoral training in molecular genetics in Toronto.

Professor Pennell has managed high risk pregnancies as a subspecialist for over 15 years in Canada, Perth, and now Newcastle and his clinical work focuses on preterm birth prevention and pregnancy care after stillbirth. In addition to research, teaching and clinical medicine, he is the Foundation Scientific Director of the Newcastle 1000 Family Study (NEW1000) and Chair of the National Scientific Advisory Group of Red Nose.



Professor Pennell's research is best categorised as personalised medicine in perinatal health and the developmental origins of health and disease. His research is focussed on the use of genetics and genomics to predict and prevent preterm birth and non-communicable diseases across the lifespan. Over his research career, he has published more than 250 papers, been cited over 16000 times and been awarded more than \$29M in competitive research grants.

#### **DR RYM BEN-OTHMAN**

Rym Ben-Othman is a researcher passionate about the impact of research in health and specifically on those who need it the most: the youngest and the poorest. Rym had a PhD in Cellular and molecular biology focused on host immune system and metabolism in the context of infectious disease.

She then switched her research interest towards infant vaccination, interventions in early life and implementing multi-omics cohort studies in low resources setting. She was involved in managing multi-sites projects, standardizing processes, and implementing clinical studies across different continents.



Rym co-founded "The Accelerator" a research service platform" with Professor Tobias Kollmann within Telethon Kids Institute in Perth with a mission to accelerate access to high throughput, cutting edge analytical pipelines and technologies to increase research outcomes, maximise progress, translation and impact of research findings.



#### **DR ROSE UPTON**

Rose Upton completed her Bachelor of Science (Honours I) majoring in Biological Sciences at The University of Newcastle in 2016. She has been working with the Conservation Biology Research Group at the University of Newcastle since 2014 where she completed her PhD titled, "Development of sperm cryopreservation and assisted reproductive technologies for the conservation of threatened Australian tree frogs" in 2020.

Amphibians are experiencing unprecedented declines worldwide, with recent studies estimating 40-50% of amphibians are at risk of extinction. Within Australia, 46 species (approximately 20% of all Australian frogs) are either extinct or threatened with extinction. Rose's work has had an emphasis on the conservation of the endangered green and golden bell frog, Litoria aurea, though she has worked with many Australian amphibian species. Rose was recently involved in a project funded by the federal department of Agriculture, Water, and Environment (DAWE) aiming to collect and store cryopreserved sperm from several amphibian species effected by the 2019/20 bushfires.

Rose has recently moved to Baton Rouge, Louisiana in the United States to begin her postdoctoral research at the Aquatic Germplasm and Genetic Resources Center at Louisiana State University Agricultural Center. Her research aims to develop germplasm repository capabilities for the aquatic biomedical models Xenopus laevis and Ambystoma mexicanum.

#### **SIMON DILLON**

Simon Dillon has been involved in agriculture and food production for 35 years with roles in research, extension, production, and management.

A research scientist in different fields, but for the last 20 years primarily a microbiologist in beverage fermentation (wine, vinegar and recently beer, cider and non-alcoholic beverages). His current role is the management of the largest microbial fermentation culture collection in the southern hemisphere, with some yeast dating back to the late 1930's. His team provides researchers and production companies with access to greater than six thousand yeast and bacterial strains predominantly from winemaking environments.



In 2015 the Australia Wine Microorganism Culture Collection was crucial in the isolation and characterisation of 3 species of yeast from a 220-year-old beer bottle that was retrieved from a ship that ran aground in 1797 and led to the development of a commercial beer product 3 years later.



## **DR MEGAN PENNO**

Dr Megan Penno is the National Project Manager for the Environmental Determinants of Islet Autoimmunity (ENDIA) study and Research Fellow at the University of Adelaide, Australia.

ENDIA is the first study in the world to explore how environmental exposures from pregnancy through early life may contribute to, or protect against, the development of childhood type 1 diabetes. Megan was appointed to manage ENDIA at the project's inception in 2012 and has played a central role in establishing and expanding the cohort, which completed recruitment of 1500 mother-baby pairs in December 2019.

Drawing on her experience in 'omics research, Megan was the first author of the published ENDIA protocol in 2013, and has developed the sample and data collection strategies that will underpin all future investigations involving ENDIA participants.

Megan is now leading her own research project within the ENDIA study aimed at identifying changes in the plasma proteins of mothers during pregnancy, and in babies during early life, that may indicate a child is at increased risk of developing type 1 diabetes – even before the destructive autoimmune process has commenced. This work is funded by JDRF Australia, the Leona M. and Harry B. Hemsley Charitable Trust, and Diabetes South Australia.

### **LEADERS IN BIOBANKING CONGRESS - OCTOBER 12**

Cambridge Healthtech Institute's 12th International Leaders in Biobanking Congress addresses innovations in biospecimen science and infrastructure to support expanding applications. Maintaining the integrity of biospecimens allows biomedical and biopharmaceutical researchers, regulators, biorepository managers, and practitioners to investigate the best strategies for effective use of biospecimens within today's cutting-edge biomedical research.

2021 Topics Include: Biospecimen Science: Maintaining Integrity Biobanking Management: Maximizing Investment Advancing Biomedical Research: Multiplying Investigations Why Flexibility and Functionality Are Important

Click on the banner below to go to the conference website







#### 11TH OCTOBER, MONDAY, 4:00 – 5:30PM (AEDT)

Biobanking has been widely acknowledged as a critical research infrastructure both on a national and international scale with the potential to impact many fields, most notably medical research. That said, Australia's biobanking industry operates largely in a siloed fashion that caters to local needs and limits the impact it could have on other research projects.

To fully unleash the potential of individual biobanks and the broader research community, a national strategy is required to establish a coordinated biobanking framework at national level to create a strong research and innovation ecosystem to tackle real-world complex questions. The strategy would need to also address the current barriers and challenges for forming a collaborative framework. This forum session aims to discuss considerations for the national biobanking strategy taking into account experience and perspectives from the European framework, health and medical research, national history collections and existing national conversations.

#### **Expert Panellists**



Professor Michael Hummel German Biobank Node



Dr Craig Willers



Professor Andrew Young <u>CSIRO</u>



Professor Jennifer Byrne <u>NSW Statewide Biobank</u>

## **REGISTER HERE**





If you have any suggestions for a short article for Bio-Babble, please contact: abna.biobabble@gmail.com Content deadline for October edition: 22.10.21