JUNE 2025



# ABNA EXCHANGE

australasian biospecimen network association

OFFICIAL NEWSLETTER OF THE AUSTRALASIAN BIOSPECIMEN NETWORK ASSOCIATION

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# Submit your abstract now!

Abstract submissions for ABNAs 2025 annual conference are open until September 8.

We will be accepting abstract submissions in the following categories:

Biobank Profiles
Technology, Al, Innovation, Emerging
Technologies and Automation
Ethical Legal Social Issues and Governance
Consumer Engagement and Citizen Science
Cryopreservation
Government and Industry partnerships

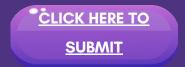
Prizes will be awarded for Best Poster and Best Rapid-Fire Presentation - so get your abstracts in to be in the running.

#### THE FINE PRINT:

Abstracts must be 300 words or less (excluding title, authors and references). Figures and tables are not permitted.

Abstracts can be submitted through the Currinda portal which can be accessed through the conference website.

You will be able to edit your submitted abstracts until midnight on the day submissions close.



# Happy Winter Solstice!

As we shiver our way through winter (in parts of Australia) and celebrate the southern hemisphere's winter solstice, the good news is the days are finally getting longer but sadly, not warmer just yet! While we wait for the sun to do its job, we've got plenty to keep us busy.

**VICE PRESIDENT:** Louise Ludlow

SECRETARY: Carmel Quinn

**EDITOR:** Anusha Hettiaratchi

We would like to take this opportunity to remind you that the Emerging Leader Scholarship and the Asia-Pacific Travel Grant applications are now open for the 2025 ABNA Annual Conference, if you or someone you know could use a little help getting there, now's the time to apply. Please contact the ABNA secretary for application forms. Nominations for ABNAs Achievement in Biobanking Award close on July 3rd, so get in quickly to recognise a colleague's outstanding work.

Seminar 2 of the 2025 ABNA Seminar Series has been and gone! A big thank you to our wonderful speakers; A/Prof Daniel Gough, Dr Sophie Holland and Prof Wojtek Goscinski for their amazing contribution. Seminar 3 speakers will be announced soon! On the topic of contributions, we're currently seeking expressions of interest for the role of ABNA Editor. If you've got a flair for communication, an eye for detail, and a love of all things biobanking, we'd love to hear from you.

We hope you enjoy this month's edition including 5 Minutes with a Biobanker, a feature article on Swedish biobanking and a new Careers in Focus column by Prof Jennifer Byrne along with our curated list of upcoming conferences relevant to the biobanking community and biobanking in the news!

Stay warm, stay curious, and thank you for being part of the ABNA community.



## 5 Minutes with a Biobanker

We approach a different professional in the biobanking arena with the same five questions each month.



This month Dr William (Billy) Schleif, Scientific Director and Assistant Professor, Pediatrics at Johns Hopkins All Children's Pediatric Biorepository answers our questions.

Billy is also the ISBER Director-at-Large, Americas and a guest speaker at I<u>SBERs</u> <u>Argentina Regional Meeting</u> in Buenos Aries, September 12-13, 2025.

#### THE QUICK QUESTIONS

Are you left or right handed?

Right

#### Would you rather play it safe or risk it all?

Play it safe - I just spent a week whitewater rafting and need a few months of "playing it safe" to let my adrenaline levels return to normal

#### Should pineapple go on pizza?

Yes - All depends on the ratio to ham!

Do you prefer to type or hand-write meeting notes?

Hand-write

Dark vs milk chocolate, which one would you chose?

Milk chocolate

#### 1. What was your first job in biobanking?

While at the same institution, I moved from a hospital laboratory to a supervisor role tasked with building a new biorepository from the ground up. Although I knew how to run an accredited laboratory, a role exclusive in biobanking was new to me. Thankfully I had great mentors within Johns Hopkins Medicine, ISBER, and the international community.

#### 2. How long has your biobank been operating and what is your 'elevator pitch' for your biobank/job?

We started officially in 2013. Our ability to impact research missions through the improvement of specimen quality and availability in all manners of disciplines – particularly in pediatric rare disease and oncology for me personally – is unheralded. It may not ever be recognised for what it truly is, but for those of us in the field, we know how important it is.

#### 3. What is the craziest thing you have done to save a sample/s?

In grad school, I had to drive through a hurricane (I live in Florida) so as to not disrupt behavioral testing in a mouse cohort. If I didn't do this, I'd have to restart a 6-week battery of cognitive tests and would have missed my graduation. Hope this counts, as the mice weren't samples "yet."

#### 4. What has been your favourite moment (so far) in your biobanking career?

Meeting anyone from Australia. You all have the best energy. I do love interacting with former patients who come back to healthcare and research with potential career goals in mind, and showing them what we do. Seeing an acknowledgement for our biorepository team in manuscripts is also tops.

Newcastle Conference



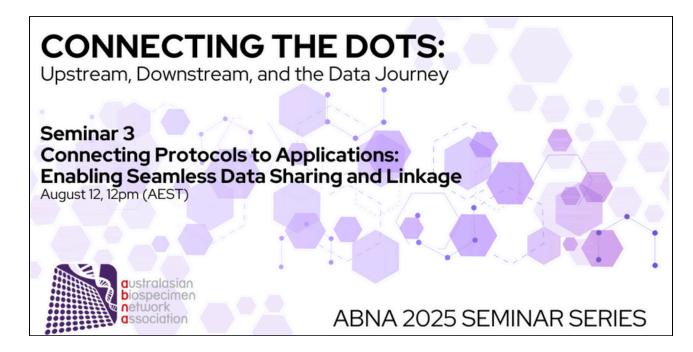
Never mind all the warnings that winter is coming. Winter is well and truly here, at least on the Australian east coast and in our 2025 host city. But never fear, by the time October comes around the winter chill will be nothing but a memory.

For those of you looking to plan their travel itineraries this month the blog looks at some of the higher adrenaline tourist offerings in and around Newcastle. If you have some time before or after the conference these are defiantly worth keeping in mind.

Another reminder that abstract submissions are now open and we are looking forward to reviewing your submissions. If you are not sure if your abstract is the right fit, just get in touch with us through the ABNA secretary and we are happy to work with you to make sure your submission is in the best possible shape.

Click the link below to read the June blog!





# Stockholm Calling!

#### By Anusha Hettiaratchi & Carmel Quinn

The National Day of Sweden was observed earlier this month on June 6<sup>th</sup>. Prior to 1983, the day was celebrated as Swedish Flag Day. It was officially named the Swedish National Day by the parliament of Sweden in 1983 and only became a public holiday in 2005. The day is celebrated in honour of the election of Gustav Vasa as King of Sweden in 1523 and of the adoption of the constitutions of 1809 and 1974. While many of us may have our own image of what Sweden is known for (please excuse the nod to Eurovision in the article title), how much do we know about Swedish biobanking?













#### The Swedish Biobank Act

The Swedish Biobank Act of 2003 (SFS 2002:297) was the original legislation regulating the handling of human biological samples in Sweden. The current Swedish Biobank Act (2023:38) updated in 2023, broadens the definition and applicability of biobank regulations around the collection, storage, and use of human biological samples (including from foetuses) that are intended to be preserved and that can be linked to an individual. It aims to:

- Protect the integrity and rights of sample donors.
- Facilitate medical research and healthcare development by enabling better access to biobank samples.

Key features of the Swedish Biobank Act (2023:38) include:

- Scope: Applies to all identifiable human biological material intended for preservation.
- **Legal Responsibility**: Shifts focus from where samples are collected to why they are collected. For example, if samples are collected for research, the research institution (a university for example) becomes legally responsible, even if the collection occurs in a healthcare setting.
- **Simplified Processes**: Removes outdated concepts like "primary" and "secondary" sample collections, making it easier to; start new sample collections, access and share samples for research, and send samples abroad for analysis and long-term storage.
- International Collaboration: Enables long-term storage of samples sent abroad, which was previously restricted, thus supporting global research partnerships.
- Ethical Safeguards: Includes restrictions on using samples originally collected for healthcare from individuals unable to consent, emphasises the need for informed consent and data protection, ensuring ethical standards are upheld.

As part of the Swedish Constitution, municipalities and regions, which are responsible for much of the country's healthcare infrastructure, have the right of independent and free self-determination. Thus, establishing a common understanding and application of the Swedish Biobank Act (2023:38), such as the development of national principles regarding biobanking, joint national documents and harmonised instructions regarding how to manage biobank applications, is done through Biobank Sweden.

#### Biobank Sweden

Paradoxically, 'Biobank Sweden' is not actually a biobank - but is a nationwide infrastructure for biobanking, interweaving key players from healthcare, academia, industry and patient advocacy to facilitate high quality biobanking for better health outcomes. Biobank Sweden is self described as a 'bridge' between healthcare and research (which brings to mind another thing that the Swedes do so well - Scandi Noir thrillers). Biobank Sweden is the Swedish node of the BBMRI-ERIC, the Europe-wide infrastructure network for biobanking.





#### The National Network with Local Control

The country of Sweden is comprised of regions, each of which practices local, self-government, with self-determination fundamental to their identity. Aligned with this, each of the 21 regions, or counties, has at least one major biobank with a specific Biobank Coordinator to assist with e.g. research planning. In addition, Biobank Sweden facilitates a Regional Biobank Centre (RBC) in each of the six healthcare regions within the country.

An overarching role of Biobank Sweden is to ensure that the Swedish Biobank Act is understood and applied consistently throughout the country, which is done through the RBCs. Although each RBC is responsible for their local organizations that are impacted by the Swedish Biobank Act as well as areas such quality management, as a group they cooperate broadly, ensuring a high level of nation-wide consistency, for example in regulatory matters. Biobank Sweden provides national principles for the RBCs to utilize, as well as harmonized guidelines for different aspects of biobank management.

Biobank Sweden has also established a network for individual biobanks within Sweden to join, promoting education and knowledge exchange; they also facilitate a national network of the respective 'Biobank Coordinators' – the regional 'go to' resources for local biobank services.

### Karolinska Institute Biobank (KIBB) Core Facility

The KIBB in Solna is a core facility with the mission to provide researchers with professional services regarding sample handling, storage and withdrawal of human biological samples collected in ethically approved research studies.



The KIBB is able to offer advice throughout the different phases of a research study, from prior to collection commencement, including help with ethics applications, consent forms and sample donor information. They are able to establish the necessary agreements under the Biobank Act, such as extradition treaty, multi-center agreements and Material Transfer Agreement.

The KIBB provide services for collection, handling, and formatting of biobank samples and support customers both within and outside of Karolinska Institute. They offer automated DNA extraction from whole blood, cord blood, saliva, buccal swabs and cervical cells including full UV spectrum concentration measurement. As well as manual extraction, the KIBB is able to offer an automated high-throughput service with the capacity to extract 768 samples per day based on a 400  $\mu$ L blood protocol, and 72 samples per day on a 4 mL blood protocol. Their storage services cater to a wide range of needs, offering customisable solutions to accommodate almost any type of sample.

Samples processed at the KIBB can be kept at RT, -20°C, -80°C, or -180°C as recommended by the customer. They have a state-of-the-art automated sample storage and retrieval system which can store samples at -80°C and is convenient for quick retrieval protocols.

### Other Karolinska Institute Biobanks & Registries

**Dental Biobank** - located at the Department of Dental Medicine in Campus Flemingsberg and consists of registered sample collections of biological material including blood plasma/serum, saliva samples, gingival crevicular fluid, plaque samples and microdialysis samples obtained from patients with various oral diseases.

**The Developmental Tissue Bank Core Facility** - provides research groups with defined human embryonic and fetal tissue ("prenatal tissue"), derived from routine terminations, through a collaboration with various clinics. Once the tissue is transferred to the facility, they determine the developmental stage, identify the retrieved tissue, perform any necessary dissection, and process the tissue as per their agreement with the user.

**LifeGene** - a national collaborative project, designed to build up a resource for research in all medical disciplines by combining a biological perspective with e-epidemiology. The project will include several hundred thousand research subjects over a period of 30 years, enabling new findings and better understanding of the relationship between heredity, lifestyle and the environment as regards to the most common diseases.

**National E-infrastructure for Aging Research (NEAR)** - a consortium of 8 Swedish universities, including the Karolinska Institute, and is financed by the Swedish Research Council. This research infrastructure coordinates 15 databases from major population-based longitudinal studies on aging and health in Sweden. NEAR data are collected by trained nurses, psychologists, physicians, and interviewers.

**Swedish Twin Registry (STR)** - a unique database and (inter)national resource. Established in the 1960s, this registry contains information about some 85,000 twin pairs for which zygosity is known, both mono- and dizygotic pairs. The STR is available to collaborate with academic and industry-based researchers.

#### Swedish National Gene Bank



In June 2016, the Swedish National Gene Bank for Vegetatively Propagated Horticultural Crops was inaugurated. The Gene Bank contains a unique collection of older horticultural cultivars from all over the country. It is the result of inventories carried out over several years under the Program for Diversity of Cultivated Plants (Pom).

Between 2002 and 2011, Pom issued an appeal to the public for older fruit, berries as well as vegetables and ornamental plants. After collection and trial cultivation, the most interesting specimens were selected to be preserved in the Gene Bank together with information about their cultivation and cultural history. The duty of the Gene Bank is to preserve, document, distribute and research the plants.

The Gene Bank is located at the Swedish University of Agricultural Sciences (SLU) and acts as a field gene bank; the material is preserved as living plants. In addition to the premises on SLU's Alnarp Campus, the Gene Bank also consists of protected berry cultivations and 32 local clonal archives around the country and is funded by the government. The Gene Bank currently preserves 2,300 historic varieties of fruit, berries, vegetables, and ornamental plants. These varieties have been cultivated in Sweden since before 1940, 1950, or 1960 – depending on the plant type.



VEGETABLES: This includes considerable collections of hops, rhubarb, onion and horse radish, but also smaller collections of medicinal plants such as rose root, southernwood and masterwort.

FRUIT AND BERRIES: Apples and pears dominate the fruit collection, which also includes plums and cherries. Among the berries, strawberries and currants dominate.



PERENNIALS: The gene bank has over 70 different genera of perennials. Peonies, phloxes, irises, asters and other hardy perennials traditionally used in herbaceous borders make up a considerable part of the collection.

BULBS AND CORMS: The largest group in the gene bank consists of narcissi, followed by tulips, dahlias and lilies. It also contains colchicum, crocuses and montbretia.



POTTED PLANTS: The largest group of potted plants includes geraniums and leaf cacti. In total, the gene bank contains potted plants from about one hundred different species.



Sweden exemplifies a well-coordinated and comprehensive biobanking system, underpinned by a national infrastructure that seamlessly integrates healthcare, academia, and industry. With organizations encompassing human, agricultural and environmental biobanking, the Swedish models not only advance scientific research but also reflect Sweden's enduring commitment to sustainability and innovation.



### Careers in Focus

by Jennifer Byrne

Director of Biobanking-NSW Health, Professor of Molecular Oncology, University of Sydney

This month, we're launching a new column, to focus on how we can promote and develop careers in biobanking and for biobankers. We'd like to kick-start conversations about careers, in preparation for the ABNA 2025 conference in Newcastle, where we plan to hold another dedicated careers session. We've also listened to your feedback from ABNA 2024, so this session will be held during the conference programme, allowing more people to attend. In the meantime, let's start talking about careers in biobanking, what's working now and what we can all do to make change.

For our first column, I'm going to start with my three top tips in terms of applying for new roles.

My number one tip is to always, always keep your CV up to date. This means that when you see an advertised position where there are only days (or even hours) left to apply, you're more than half-way there. Don't let opportunities slip by just because you don't have an up-to-date CV! How many readers have updated their CV since the 2024 ABNA conference?? If you haven't updated your CV in a while, put aside some time this week and get to it.





My second tip for this month is to set aside some time to think about your career. Everyone needs at least a short and medium term career plan, so start thinking about what this looks like for you. Somewhat ironically, this type of reflection is often best done outside work. Perhaps this coming weekend, go for a walk, and think about where you'd like to be in a few years' time. This will help you to identify the roles that you really want to apply for.

My last tip for this month is to set up regular job alerts so you receive those to your inbox each week. Even if you're not applying for roles right now, it's good to keep an eye on new opportunities. This way, you know who's hiring, for what roles, and what types of skills are in demand.



Having set aside some time to think about your career, next month we'll start talking about how to turn those dreams into reality.

If you'd like to suggest a topic, or share your career story or ideas, please write to me at: jennifer.byrne@health.nsw.gov.au or info@abna.org.au



Professor Jennifer Byrne leads the NSW Health biobanking program, including oversight of the NSW Health Statewide Biobank. Professor Byrne has extensive experience in health biobanking, both as a researcher who has employed biospecimens throughout much of her research career, and by establishing, overseeing and networking cancer biobanks. She has led several statewide cancer biobanking projects, including a collaboration to adapt and implement the first biobank certification program to be introduced to Australia. Professor Byrne is currently co-chairing a national biobanking working group supported by several NCRIS facilities, and is a member of the Victorian Cancer Biobank Scientific Advisory Board.

Professor Byrne is conjoint Professor of Molecular Oncology within the School of Medical Sciences, Faculty of Medicine and Health, University of Sydney.



## ISBER 2025 Argentina Regional Meeting

ISBER is pleased to partner with the Garrahan Foundation and the British Hospital of Buenos Aires on a regional meeting in Buenos Aires in September 2025.

Don't miss this opportunity to connect with the Latin American biobanking community. This meeting is expected to bring together a diverse audience of biobankers, biologists, clinical chemists, researchers, basic scientists, pathologists, students/fellows, and more!

The program will cover topics such as quality and best practices, ethical considerations, sustainability, national and international policies, and collaborative programs among biobanks and biorepositories.

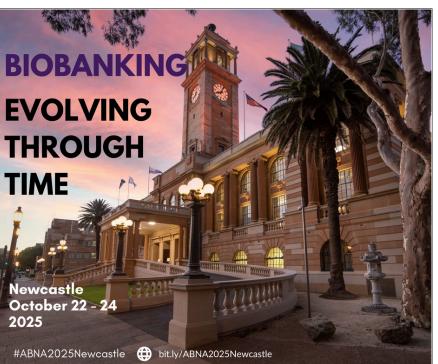




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# International Society for Seed Science



ralling all seed scientists, researchers, seed conservation and restoration practitioners, and seed enthusiasts! r

The International Society for Seed Science (ISSS) Conference 2025 is coming to Kings Park and Perth, Western Australia this September and you're invited!

This combined event marks a historic moment, bringing together two of the society's premier events for the first time. Get ready for:

- from global seed science experts
- 🚅 The latest breakthroughs in seed science research
- 烤 Engaging workshops and field trips showcasing the role of seeds in ecological restoration and sustainable agriculture
- Unparalleled networking opportunities with local, national and international delegates

Don't miss this chance to connect with leading professionals and explore the future of seed science!





# Biobanking in the News

### Cryptobiotix

Cryptobiotix is a next-generation preclinical research organisation pioneering microbiome modelling through its proprietary SIFR platform.

Cryptobiotix's offering is their ability to simulate the gastrointestinal tract of humans across many ages and physiologies (healthy, diseased) as well as animals. Their gastrointestinal simulation models include infant & toddler, child & adult, elderly, disease & dysbiosis, cat, dog, poultry and swine. They have extensive experience investigating all types of products in vitro and ex vivo.

Interestingly, the company now offers biobanking services for the microbiome industry. Starting from specific needs, they are able to source matching donor microbiomes to help further understand and potentially de-risk product development.

The biobank fits seamlessly into Cryptobiotix's ex vivo modular SIFR platform, which simulates the entire gastrointestinal tract to understand the interplay between test products and the gut microbiome across individuals.

They envisage that this will allow their users to;

- · Create a vault with specific donors
- Skip donor sourcing and get results faster
- Understand donors and their microbiota

Cryptobiotix offer research services to customers in the area of functional foods and therapeutic products, across foodtech, biotech and pharma.



### Biobanking and Al

Transforming Biobanking with AI: Perspectives from Leading Experts

The paper "Transforming Biobanking with AI: Perspectives from Leading Experts", published in Biopreservation and Biobanking (June 2025), explores how artificial intelligence (AI) is reshaping the landscape of biobanking through insights from top experts in the field. The paper discusses how AI technologies are being integrated into biobanking operations to enhance data management, sample tracking, and predictive analytics. This includes automating sample classification, improving data quality, and enabling real-time decision-making.

While the transformative potential of AI in accelerating biomedical research, improving patient outcomes, and supporting precision medicine is undisputed, some challenges identified include:

- Data Standardisation: Ensuring consistency across diverse datasets remains a major hurdle.
- Ethical and Legal Concerns: Issues around data privacy, consent, and algorithmic transparency are critical.
- Infrastructure Needs: Many biobanks require significant upgrades in digital infrastructure to fully leverage Al capabilities

The paper envisions a future where Al-driven biobanks are central to global health research, fostering international collaboration and enabling more personalised healthcare solutions.

If you do not have access to the journal and would like a copy of the article, please get in touch with the ABNA Editor (anusha@unsw.edu.au).

If you have any suggestions for a short article for ABNA Exchange, please contact: info@abna.org.au Content deadline for July edition 25.06.25





