

Education & Training Community of Practice

A BI-ANNUAL INSIGHT ON REPOSITORY EDUCATION AND TRAINING

2024 Rising Stars: Next Generation Biobanker

ISBER's Rising Stars: Next Generation Biobankers showcases emerging talents in biobanking highlighting their milestones, achievements and advancements in new techniques along with the challenges they overcame to establish their biobanks. The 2024 ISBER Annual Meeting held in Melbourne, Australia welcomed Subasri Armon, Malaysia; Io Hong "Jack" Cheong, Macau; Esther Nabanoba, Uganda; and Yingyan Yu, China as the 2024 Rising Stars who presented their work during a symposium and roundtable.

The initiative's goal is to recognize the work of those new to the field of biobanking especially in the LMIC and provide opportunities to engage/network with other biobankers, encourage mentoring, and have access to vital resources. We are happy to announce that the Rising Stars Task Force is meeting with the 2025 Scientific Program Task Force to ensure presence at the 2025 Annual Meeting.



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ISBER has launched dedicated forum sections for affiliate members to engage with each Community of Practice (CoP). These opt-in sections provide a space to share updates, exchange ideas, and collaborate on key topics. We invite you to join the conversation today!

Interested in joining the Education & Training Community of Practice as an affiliate member?



CLICK HERE

Member Spotlight: Birendra Kumar Yadav

Hello Birendra,

Thank you for taking the time to let us get to know you better. You have now been a member of the E&T for 3 years. We are lucky to have your insight and experience as part of this E&T community.

As National Director of Biobank India Foundation (and Director of BBIF Virtual Biobank), I'm sure you are constantly busy. Can you tell us what a typical day is like at your Biobank?

Hello, and thank you for this wonderful opportunity to connect!

I've been with the E&T community for 2021, and it's been a truly enriching experience. The support and collaboration within E&T have been invaluable, and I'm thrilled to be part of it.

As the National Director of Biobank India Foundation and Director of the BBIF Virtual Biobank, my day involves a wide range of activities. I have established two biobanks in India. My Mornings often start with team briefings, covering updates on ongoing projects and research collaborations. I spend a lot of time overseeing operations, ensuring we adhere to high standards for sample collection, storage, and data security. Additionally, I dedicate time to consultancy, providing expert advice to organizations and researchers looking to establish or improve their biobanking practices. Strategic planning and networking with other biobank organizations are also key components of my day, as I manage collaborations both within India and internationally. Each day is diverse, blending hands-on management with future planning and consultancy efforts.

What drew you to this field?

My interest in biobanking was sparked during my PhD in South Korea, where I gained valuable exposure to the

field and its potential impact on research and healthcare. Upon returning to India, I noticed the limited presence of biobanks and recognized a significant opportunity to make a difference. This realization motivated me to establish a biobank in India, aiming to enhance research capabilities and support advancements in personalized medicine. I am passionate about bridging the gap in biobanking infrastructure and contributing to the development of a robust biobanking ecosystem in the country.

What skills are vital in your role?

In my role as National Director of Biobank India Foundation and Director of the BBIF Virtual Biobank, several skills are essential. Strong leadership and management abilities help guide my team and ensure smooth operations. Attention to detail is crucial for maintaining high standards in sample collection and data management.

I utilize strategic planning to set long-term goals and foster collaborations, while effective communication skills enable me to engage with stakeholders and advocate for biobanking. Networking is vital for building relationships with national and international organizations. My consultancy expertise allows me to guide others in establishing and optimizing biobanking processes.

Additionally, problem-solving skills help me address operational challenges, and a solid understanding of ethical and regulatory standards ensures compliance. Together, these skills enable me to navigate the complexities of biobanking and contribute to its growth in India.

Which has been more valuable in your career, your education or your experience?

While both education and experience have been valuable in my career, I believe my experience has had a greater impact. My academic background provided essential theoretical knowledge, but it was the hands-on

experience gained during my PhD in South Korea and my work in establishing biobanks in India that truly shaped my understanding of the field. Practical engagement has allowed me to navigate real-world challenges and build meaningful collaborations, making experience the most valuable aspect of my professional journey.

What intrigued you to become an ISBER Regional Ambassador?

I was intrigued to become an ISBER Regional Ambassador because it allows me to enhance collaboration within the biobanking community, promote awareness of biobanking's importance in research and public health, support education for local biobanks and researchers, expand my professional network, and contribute to initiatives that improve health outcomes through effective biobanking practices.

What organizational challenges have you faced?

In establishing two biobanks, I have encountered several challenges, including raising awareness about the importance of biobanking among stakeholders and securing adequate funding for operations. Navigating regulatory compliance has also been complex, requiring strict adherence to ethical and legal standards. Building trust with participants and stakeholders is crucial, especially in handling sensitive biological samples. Additionally, there is often insecurity regarding career opportunities in biobanking, which can hinder talent attraction and retention. Addressing these challenges involves ongoing education, advocacy, and strategic planning to ensure the biobanks' success.

What advice do you have for someone starting out at a biorepository?

For someone starting out at a biorepository in India, my advice would be to first gain a solid grasp of the fundamentals of biobanking—especially sample handling, quality control, and data management, as these are essential for maintaining high standards in a developing biobank sector. Emphasize compliance with both local and international ethical guidelines, as India has specific regulatory requirements for biological samples and data. Developing strong organizational skills is crucial, as precise record-keeping and adherence to protocols are non-negotiable. Additionally, take advantage of local and regional networking opportunities by engaging with biobanking communities like the Biobank India Foundation and other initiatives. This will not only broaden your knowledge but also connect you with experts in the field who can provide guidance and support as biobanking continues to grow in India.

I used to have a cow and a dog, and they brought me so much joy and comfort after long, busy days. While I don't have any pets now, the memories of those times still fill me with warmth and happiness.

Thank you once again for connecting, and I look forward to staying engaged with the E&T community.

Warm regards,

Birendra Kumar Yadav



Q&A with Dayong Gao, *PhD, BSc, President-of-the-Board 2024-2025*

Today, we are interviewing Dr. Dayong Gao. Thank you Dayong for taking the time to answer some questions for us in the E&T newsletter.

From your vantage, why should ISBER focus on education and training of the membership?

Education and training of the membership is very valuable and especially helpful for the global biobanking community for the standardization, quality control, and management of biological and environmental specimen repositories, covering either evidence-based or consensus-based practices for collection, processing, long-term preservation, retrieval and distribution of the specimens and their information.

Do you have suggestions of specific educational topic areas that should be in focus, as part of the ISBER strategic plan over the next 5 years?

One of the specific educational topic areas that should be in focus is cryobiology and cryopreservation principles as well as the advanced-novel technology and methods for cryopreservation of biomaterials (including DNA, RNA, living cells/tissues, etc.).

What current activities of the Education and Training CoP do you think are most important?

Currently ongoing activities of the Education and Training CoP are excellent! Please march forward!

Currently, the ISBER member participation has been structured as Communities of Practice. Do you see that the goal of stronger member engagement can be achieved through CoPs? If not, how could engagement of the membership be enhanced?

Yes! The goal of stronger member engagement can be achieved through CoPs.



Biobanking 101 Workshop Recap

The 2024 ISBER Biobanking 101 workshop was held on September 11 and 12, at convenient times for biobankers across the globe. The workshop began with an overview of the ISBER Tool highlight on the Essentials of Biobanking Course presented by Jodi LeBlanc and Kate Lawrence (CA). The course was developed and is managed by the Canadian Tissue Repository Network (CTRNet). The 9-module course is a useful tool for biobankers and their stakeholders. The main topic "Information Management (IM) in Biobanking: Implementing the 5th Best Practices" was taught by Greg Grossman (USA), Chris Battison (CA) and Marianne Henderson (USA). The workshop focused on the changes to IM across the 5th Edition BPs and implementation considerations in various biobank settings. Thank you, presenters. The recorded workshop is available to purchase on ISBER.org. Stay tuned for the Biobanking 201 workshop, entitled: Demystifying the Black Box of Certification and Accreditation of Biobanks, coming winter 2025.

Educational Opportunities in your Region

Prepared by the Directors-At-Large and Regional Ambassadors

Americas

The 2024 ISBER Regional Meeting brought over 160 participants from the biobanking community, representing 96 organizations, and 12 countries to sunny St. Petersburg, Florida on November 5th and 6th. This year, speakers were invited to address 4 symposia topics focused on the **Importance of Biobanking Collaborations, Biorepository Sustainability, Intersection between Environmental Science, Biobanking & Human Health** and **Early Applications of AI in Biobanking**. From the 15 posters accepted, oral presentations from 7 featured topics on **Biobanking Structure and Management, Informatics, and Innovative Technologies**. Other meeting activities included an ISBER Membership Update by the President and some board members, a workshop on Patient Centric Sampling and the meeting ended with a tour of the Johns Hopkins All Children's Pediatric Biorepository. Collectively, the 2-day meeting provided attendees with an interactive opportunity to learn and shape the future of biobanking to impact healthcare and the environment.

Europe, Middle East, and Africa Region

Elné Conradie (DAL: EMEA, South Africa); Sandra Nanyonga (France); Anna Michalska-Falkowska (Poland); Judita Kinkorova (Czech Republic); Rocío Aguilar-Quesada (Spain).

Africa

Biobanking educational opportunities in Africa are expanding through various initiatives. **Alexandria University in Egypt** offers a Master's program in Biobanking, preparing students in specimen management and ethical considerations. The **ABLE** (African Biobank and Longitudinal Epidemiological) Ecosystem strengthens Africa's biobank leadership, focusing on One Health data

integration for research across health and environmental fields. **H3Africa**, another key leader, provides biobanking training for genetic research across multiple African countries. These programs, alongside partnerships like **B3Africa** and **Africa CDC**, drive capacity building and advance health research across the continent. **MBirSA** (Medical Biorepositories of South Africa) has also recently been established and is continuously providing educational opportunities by means of webinars and summer schools (www.mbirsa.org.za).

Europe

In Europe, biobanking educational opportunities are rapidly expanding. Educational activities in the field of biomedical research in relation to the biobanking activities are realized by training and educational programmes organized by European Research infrastructures connected in European Research Infrastructure Consortium (ERIC), that is a specific legal form that facilitates the establishment and operation of Research Infrastructures with European interest.

The **Université Côte d'Azur** in France offers a Master's in Biobanks and Complex Data Management, focusing on essential technical and data management skills.

The **Medical University of Graz** in Austria provides a Master of Science in Biobanking, covering structure, quality management, and ethics. Additionally, **UCLy** offers a Master's in Biobank Management, combining biology and management training. The **European Master in Biobanks and Complex Data Management** enhances cross-institutional training. development. The **SCIBIOEU project** promotes awareness through online platforms, and the **Institut Pasteur** provides free biobanking training via a MOOC, covering governance and management.

BBMRI-ERIC (Biobanking and Biomolecular Resources Research Infrastructure) improves the accessibility and interoperability of existing comprehensive collections

of biological samples from different (sub)populations of Europe and offers various education and training programs, for example [Quality Management - BBMRI-ERIC](#) and [ELSI - BBMRI-ERIC](#)

The Medical University of Bialystok offers a state-funded postgraduate program, “MBA in Healthcare Integrated with Clinical Research and Biobanking,” through the Medical Research Agency. This interdisciplinary program combines healthcare management with clinical research and biobanking, targeting individuals interested in merging management, economics, and business with the healthcare sector.” <https://www.umb.edu.pl/mbabb>

The **ISCIII Spanish Platform Biomodels and Biobanks** (<https://www.isciii.biobanksbiomodels.es/en/hub-biobank/>) organizes annual national meetings and recapitulates the local training opportunities in Spain.

Indo-Pacific Region

We welcomed our new Regional Ambassador (RA), Nida Jawaid who runs biobank at Indus Hospital & Health Network, Karachi, Pakistan. Just like many of us, she aims to enhance the biobanking landscape by focusing on international collaborations, quality improvements, and modern technological advancements.



Moving to Indonesia, the Ministry of Health through BGSi is developing a national biobank that will enable streamline specimens and data management across all the 10 reference hospitals (hubs) and network to support biomedical innovation in Indonesia. Dr Jajah Fachiroh, our RA was the biobank technical advisor for this initiative.

In India, our partner, the BioBank India Foundation (BBIF), has launched a powerful tool: the BBIF Virtual Biobank. This catalogue allows member biobanks to share their available specimens, enabling researchers to easily locate and

access these samples, thereby improving their visibility and accessibility.

Upcoming activities:

- BBIF Annual conference 2025, 24 – 25 Feb, 2025, Delhi, India

China Region

In the China Region, educational opportunities in biobanking are provided by major players in the field through various international and domestic conferences, workshops, and a bunch of special training programs. Biobankers are exposed to the detailed aspects of biobanking and getting chances to communicate with the experts in these events. For instance, the China Holistic Integrated Biobankology Conference held by BBCMBA focuses on a specific theme each year and attracts thousands of attendees worldwide. In addition, a series of online and onsite training programs organized by CNAS, CAPHST, BGI-Research, CNGB, and others are providing professional knowledge and insights concerning legislations, ethics, security, equipment operation, quality management, data application, internal audit, and others. These special training programs usually last for 2-4 days, attracting attracts hundreds of biobankers, professors, research scientists, and students every term.

The host organizations will publish details about upcoming training programs on their official websites. For instance, BBCMBA and CMBA have already listed their upcoming events on their respective sites:

- [BBCMBA](#)
- [CMBA](#)

Additionally, WeChat is a widely used social media platform in China. WeChat users can find announcements and updates on upcoming training programs in posts from these organizations.