

Dear BCNet Members,

The last few months have demonstrated the importance and need of coming together in different networks, as a foundation to responding to complex scientific questions, in particular in healthcare. For example, the exposome-related meetings in Washington DC, USA and in Brussels, Belgium, demonstrated the need to bring together the scientists and the policymakers in a sustained and systematic manner. The successful Joint Biobanking Conference in South Africa, brought together many key players from across the world, GGBN, ISBER, SANBI, MBIISA, BBSA and was attended by the BBMRI-ERIC Director, in the heart of the iconic Kirstenbosch National Botanical Garden, Cape Town, South Africa! In Cairo, Egypt, the Arab Biobanking Conference in July 2025, brought together different stakeholders of the local and regional healthcare ecosystem, from biobanking to public health policy and diagnostics manufacturing. These meetings were reflected in the United Nations General Assembly Science Summit in NY, USA, in September, and will be followed next month by the AORTIC meeting in Tunisia, where a similarly high turnout is anticipated.

Beyond the need for meeting like-minded professionals, such inclusive meetings demonstrate the necessity for bringing different skillsets together and creating a common understanding that can then provide the foundation for synergies that respond to the current complexities. This need is more acute than ever in Low- and Middle-Income settings, where healthcare continues to be subject to intense pressures. We also anticipate new networks to emerge. For example, the Lusophone Biobank Network (based in Portugal) and the Pan-African Biobanking Network (based in Uganda) are taking their first steps, providing different networking opportunities for increasing the skills-base and collaboration.

The BCNet members are well-aware of the benefits of such networks. As BCNet itself is entering the second decade of its operations, the results and impact of this network-based effort are becoming increasingly clear. Over the last decade, BCNet has delivered 72 on-site workshops in different parts of the world, has provided input to 5 guidelines and standards, has directly contributed to 8 scientific publications (as a collective BCNet membership), and has supported its members to participate in many more scientific publications. BCNet has embraced the digital opportunities post-pandemic, offering the attendance to more than 20 webinars, as sole organizer or co-organizer with other partners.

These successes motivate us to continue working as hard and as inclusively in the future and in our second decade. The BCNet work will be summarized in the IARC/WHO international conference in celebration of the 60th Anniversary year of the Agency that will take place in May 2026.

The strength of the BCNet comes from the engagement of its members, and we invite our members to feel free to contact us at any time – your comments and input are always welcome.

Zisis Kozlakidis and Tracy Wootton

BCNet Coordinators



Zisis Kozlakidis at the UN general assembly science summit in New York City.

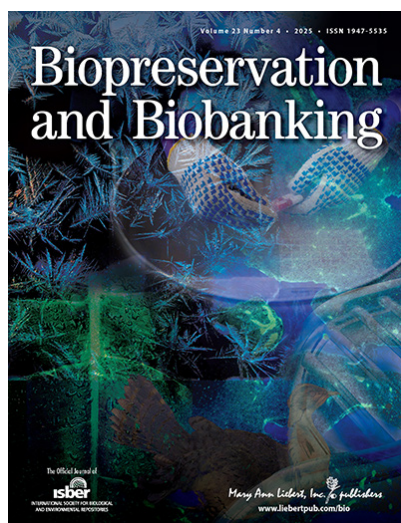


How is AI Transforming the World of Biobanking?

Artificial intelligence (AI) is reshaping the way we live and work, with healthcare and medical research among the fields most profoundly affected. From diagnostics and precision medicine to imaging, drug discovery, and genomics, AI is accelerating progress on multiple fronts.

Biobanks—once seen primarily as repositories of samples—are evolving into powerful data-driven resources. With the integration of AI, their potential to advance research and improve public health is greater than ever. But with these opportunities come important questions about ethics, equity, and governance.

A recent 'Expert Speaks' article in *Biopreservation and Biobanking*, entitled "[Transforming Biobanking with AI: Perspectives from Leading Experts](#)", explores these themes as part of a special issue on *Biobanking in the Age of Advanced Technologies*.



The article was co-edited by BCNet member **Ahmed Samir Abdelhafiz** (National Cancer Institute, Cairo University) and **Marianne K. Henderson** (U.S. National Institutes of Health), and brings together insights from experts across the USA, UK, Japan, and China.

Among the contributors was Zisis Kozlakidis from IARC and BCNet, who highlighted both the opportunities and challenges of implementing AI in biobanking, particularly in low- and middle-income countries (LMICs).

Ethical considerations

Dr Kozlakidis underscored critical issues such as:

- **Data privacy, security, and transparency**
- **Risks of bias**, where AI tools may favour high-income settings and widen global inequities
- The urgent need to prepare LMIC biobanks for AI integration through training and infrastructure

In this context, BCNet's efforts to strengthen capacity in LMICs are not only practical, but also an ethical imperative.

Looking ahead

The editors emphasized that **robust governance and ethical frameworks** will be key to unlocking AI's full potential in biobanking. Organizations like ISBER, guided by AI specialists, are well placed to help set global standards.

By investing in infrastructure, professional training, and a commitment to equity, biobanks can harness AI to advance science—while safeguarding privacy, fairness, and security for all.

Exposome Roadmap

We would like to thank all of the BCNet members who provided input to the Interim roadmap focused on exposome research in Europe. This roadmap originated by the International Human Exposome Network ([IHEN](#)), and supported by several international networks on the exposome and biobanking (e.g., NEXUS, BCNET), is the first such detailed approach towards designing an exposome research policy in Europe. The motivations and importance for researching the exposome were presented in the European Parliament by IHEN members in early 2025 – and is anticipated that this roadmap will inform policymakers in a similar event in early 2026 and ongoingly – providing a reference point and guidance for a coordinated scientific response.

[With thanks to our BCNet colleague, Ahmed Samir Abdelhafiz, for contributing this article.]



Upcoming meetings



AORTIC 2025

"Advancing Cancer Care Across Africa: Equity through Empowering Research and Education. Harnessing African Partnership to Drive Quality of Cancer Care and Patient Outcomes".

AORTIC 2025 will take place from **2-5 November 2025**.

For more information contact:

aortic2025@aortic-africa.org



ISBER Global Biobanking Congress - "Global Collaboration for Advanced Technology and Innovation."

ISBER is proud to partner with the Biobank Branch, China Medicinal Biotech Association (BBCBMBA), and BGI for the first ISBER Global Biobanking Congress. This exciting 3-day conference will be held at the BGI Centre in Shenzhen, China on **April 21-23, 2026**.



Europe Biobank Week 2026, May 19-22nd 2026, Prague

Join the most important event of the year in the global biobanking community from 19-22 May 2026 at the Prague Congress Centre.

The congress will highlight state-of-the-art biobanking innovations and research. This action-packed congress will feature keynote presentations, panels and workshops organized by ESBB and BBMRI-ERIC.

Opportunities for funding, training & collaboration

Call for Collaboration – Provide Sequencing Data to Support a Breakthrough Algorithm for T-cell Clonality Analysis

Gene-Diagnostic-Solutions (GDS) is seeking clinical partners, biobanks, and medical networks to collaborate with their team on the validation of a novel mathematical algorithm developed to improve the diagnosis of T-cell lymphoproliferative diseases (LPD) through massive parallel sequencing (MPS) data analysis:

Background & Rationale

Accurate identification of T-cell monoclonality is essential for diagnosing T-cell LPDs, including T-cell lymphomas. Current methods such as conventional PCR suffer from interpretive ambiguity, leading to false positives and false negatives due to limited sensitivity and specificity.

Although MPS allows for nucleotide-level analysis of T-cell receptor (TCR) sequences, existing computational approaches to clonality detection often produce inconsistent results.

To overcome these limitations, our team has developed an innovative algorithm, based on rigorous mathematical and statistical modelling in

close collaboration with the Centre for Environmental and Occupational Health, School of Public Health, Université libre de Bruxelles (ULB), Brussels, Belgium

Objective & Impact

Our goal is to work jointly with partners to validate and refine this algorithm using a diverse and extensive collection of sequencing datasets. Through this collaborative effort, we aim to:

- Establish a more robust and reliable method for T-cell clonality detection.
- Improve diagnostic accuracy and clinical decision-making in T-cell LPD.
- Lay the groundwork for broader applications, including in B-cell lymphoproliferative disorders.

What We Are Looking For

We invite collaboration from institutions willing to work directly with our team and contribute to the development and validation process. Specifically, we are seeking:

- Massive parallel sequencing datasets (FASTQ or processed) from patients with T-cell LPD and from healthy donors. Associated clinical and morphological data would also be highly valuable.
- Partners open to scientific collaboration, with mutual input on data interpretation, analysis, and publication.

Important: we are not requesting physical specimens (e.g., blood, cells, or tissues). Our work is entirely data-based, and we rely exclusively on digital sequencing files.

Why Collaborate with Us?

- Contribute to the advancement of diagnostics in hematopathology.
- Participate in a collaborative, interdisciplinary effort with direct clinical relevance.
- Gain early access to a novel algorithm and contribute to its refinement and validation.
- Co-author potential publications resulting from the joint research effort.

If you are interested in contributing data or joining this collaborative effort, please contact:

Dr. Valéry Daubie, MD, PhD, MSc: vda@gene-diagnostic-solutions.com

Valéry Daubie brings together expertise in hematology (ULB, Belgium), engineering (UMons, Belgium), and molecular biology (ULB), with a strong focus on mathematical modelling and diagnostic innovation in hematopathology. Valéry is GDS's co-Founder and Chief Scientific Officer.



GDS

Gene Diagnostic Solutions

www.gene-diagnostic-solutions.com

Recent publications from our Members



[Ruperao P, Tiwari K, Rai V, et al. Development of a composite core collection from 5,856 Sesame accessions being conserved in the Indian National Genebank. BMC Genom Data. 2025; 26 \(1\): 57. PMID: 40826006](#)

[Omutoko L, Chingarande GR, Botes M, et al. Understanding and processing informed consent during data-intensive health research in sub-Saharan Africa: challenges and opportunities from a multilingual perspective. Res Ethics. 2025; 21 \(3\): 503-518. PMID: 40809784](#)

[Valderrama B, Calderón-Romero P, Bastiaanssen TFS, et al. The South American MicroBiome Archive \(saMBA\): enriching the microbiome field by studying neglected populations. Nat Commun. 2025; 16 \(1\): 7371. PMID: 40783495](#)

[Yadav BK, Kozlakidis Z, Rani A, et al. Establishment of Automated Biobanking Systems: Technical Considerations. Rev Recent Clin Trials. 2025. PMID: 40755099](#)

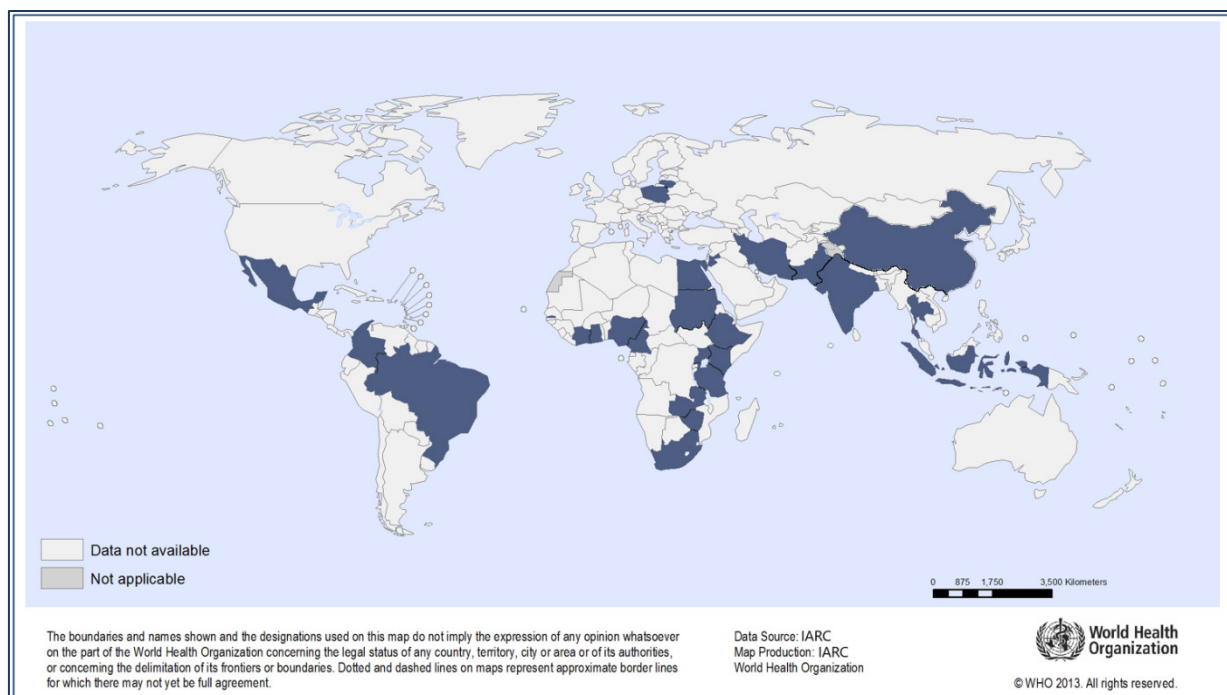
[Guan L, Feng L, Khoo ALY, et al. The SG90 cohort of the oldest-old in Singapore. Eur J Epidemiol. 2025. PMID: 40682752](#)

[Li Y, Bowen DJ, Yu JH. Informed consent in genetic and genomic studies in Sub-Saharan Africa: a systematic review of bioethical issues. BMC Med Ethics. 2025; 26 \(1\): 99. PMID: 40682008](#)

[Campos AHJFMC, de Dávila MTG. Biobanks in Latin America: Insights from a Multinational Survey Conducted in 2021 During the COVID-19 Era. Biopreserv Biobank. 2025. PMID: 40609527](#)

[Wei Q, Luong JHC, Cheong IH, Kozlakidis Z. The intersectoral challenges facing biobanking in One Health and Global Health. Frontiers in Tropical Diseases. 2025; Volume 6 - 2025.](#)

BCNet Members



BRAZIL: Banco de Células do Rio de Janeiro; Barretos Cancer Hospital; Instituto do Câncer do Estado de São Paulo/Fundação Faculdade de Medicina; **CAMEROON:** Faculty of Medicine and Biomedical Sciences, Université de Yaoundé; Université des Montagnes; **CHINA:** Macau Society for Health Economics; **COLOMBIA:** Clínica de la Costa Ltda; **CÔTE D'IVOIRE:** Institut Pasteur de Côte d'Ivoire; **EGYPT:** Aswan University; Children's Cancer Hospital Egypt – 57357; Faculty of Medicine, Cairo University; Integrated Biobank of Mansoura, School of Medicine, Mansoura University; Medical Research Institute, Ain Shams University; Medical Research Institute, Alexandria University; National Cancer Institute; National Liver Institute; National Museum of Egyptian Civilization; Shifaa Al Orman Hospital, Luxor; South Egypt Cancer Institute, Assiut University; Suez Canal University; Theodor Bilharz Research Institute; **ETHIOPIA:** Jigjiga University; **GHANA:** Breast Care International, University of Health and Allied Sciences; Noguchi Memorial Institute for Medical Research, University of Ghana; **INDONESIA:** Faculty of Medicine, Universitas Gadjah Mada; **IRAN:** Golestan Cancer Biobank; **JORDAN:** King Hussein Cancer Center Biobank; **KENYA:** Ampath Reference Laboratory; Maseno University; **LITHUANIA:** National Cancer Institute; **MEXICO:** Instituto Nacional de Cancerología; **NIGERIA:** College of Medicine, University of Ibadan; Irrua Specialist Teaching Hospital; Obafemi Awolowo University Teaching Hospitals Complex; **PAKISTAN:** Indus Hospital & Health Network; Liaquat University of Medical Health and Sciences; Shaikat Khanum Memorial Cancer Hospital and Research Centre; **PERU:** Instituto Nacional de Enfermedades Neoplásicas; **POLAND:** Biobank Lab, Department of Molecular Biophysics, University of Lodz; Wrocław Research Centre EIT+ Biobank; **SOUTH AFRICA:** National Health Laboratory Service, NHLS/Stellenbosch University Biobank; **SUDAN:** Institute of Endemic Diseases (IEND), University of Khartoum; Radio-Isotope Centre Khartoum; **THAILAND:** National Cancer Institute; **THE GAMBIA:** Medical Research Council (MRC) The Gambia Unit; MRC International Nutrition Group; **UGANDA:** Makerere University College of Health Sciences; **UNITED REPUBLIC OF TANZANIA:** Kilimanjaro Clinical Research Institute; **ZAMBIA:** Centre for Infectious Disease Research in Zambia; **ZIMBABWE:** African Institute of Biomedical Science & Technology; University of Zimbabwe College of Health Sciences.

BCNet Partners



Contacts:

Dr Zisis Kozlakidis
KozlakidisZ@iarc.who.int

Ms Tracy Wootton
WoottonT@iarc.who.int

+33 4 72 73 80 35

<http://bcnet.iarc.fr/>