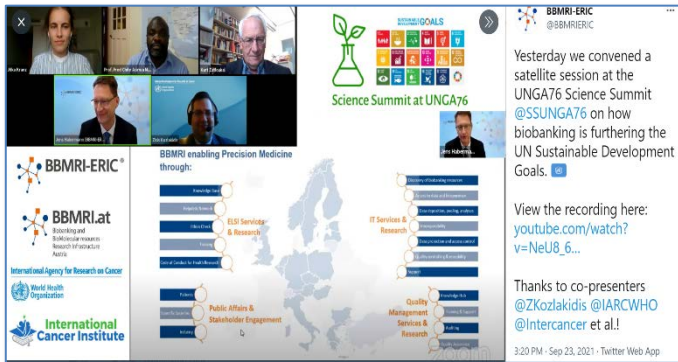


# BCNetter

Issue No. 16, October 2021



Dear **BCNet Members**,

The last September and October have been exceptionally busy periods, as our activities are slowly starting to acquire their pace in the 'new normal' world. As such, schools and universities have re-opened in most locations in the northern hemisphere, with social distancing and other viral transmission barrier measures incorporated as an integral part of our new reality. A number of meetings have also taken place in the recent past, with a forward-looking agenda, to the next months and years of biobanking activity.

In the photo you can see a picture from one such recent meeting. Importantly, this is the first time that biobanking has had an entire dedicated session as part of the United Nations General Assembly Science Summit, taking place in parallel to the General Assembly. Professor Fredrick Chite Asirwa and Dr Zisis Kozlakidis spoke on the need and impact of biobanking infrastructure based on their respective experiences. Professors Habermann (BBMRI-ERIC) and Zatlukal (Medical University of Graz) also participated in the session. This event showcases how far biobanking has come to being appreciated as a foundational research infrastructure for healthcare research, and how it links to and supports the Sustainable Development Goals.

Another such recent meeting was the ISBER and UHN Biospecimen Services virtual symposium, that took place in the first week of October 2021. During this meeting BCNet members Professor Keymanthri Moodley presented on Socio-Cultural considerations for biobanking in South Africa, Dr Rita Lawlor on data sharing and its impact, while Dr Kozlakidis described the artificial intelligence aspects of biobanking. Next month, our NCI colleague Marianne Henderson will lead a number of us on a workshop during the AORTIC conference.

The current Newsletter is distributed at the same time as a short questionnaire that would be a snapshot of your current activities. It also includes information on the inaugural biobanking university course in Egypt, as well as information on new, relevant scientific manuscripts and opportunities for potential collaborations. Last but not least, we are pleased to welcome the Shaukat Khanum Memorial Cancer Hospital and Research Centre in Lahore, Pakistan, to BCNet. This is the first institution from Pakistan taking part in BCNet and we hope that will become an example for others to follow in their steps.

Information on further meetings, as well as the many funding opportunities currently available are all included in the present newsletter.

The free access of BCNet members to IARC educational material continues through the dedicated online educational platform for biobanking available at <https://learning.iarc.fr/>

We are grateful for all our members' efforts during these difficult times, their contributions to research and healthcare, and remain keen to highlight much-needed success stories where possible.

Zisis Kozlakidis  
**BCNet Coordinator**

# A new Professional Masters degree in Biobanking.

*Fayek Elkhwsy, MScD, PhD, Medical Research Institute,  
Alexandria University, Egypt*



Biobanking is a rapidly developing discipline of biological sciences and has witnessed a rapid evolutionary improvement in equipment and procedures to become one of the gatekeepers for precision medicine. Starting from the research question at hand to the data collection, the biological sampling, processing, and downstream analyses should be subject to quality control(s) and Standardized Operational Procedures (SOPs) to allow harmonization and networking. Therefore, appropriate education and hands-on training should be an integral part for all steps of biobanking. The biobanking best practices and guidelines published by ISBER, NCI, IARC and OECD are now considered keys documents for the practice of biobanking. However, the current university post-graduate degrees in biobanking are all in high-resource regions.



Following 3 years of intense efforts, the Medical Research Institute (MRI) in Alexandria University, Egypt, received approval by the Egyptian Ministry of High Education for the creation of such a course, that would be targeted to the local and regional context.

We therefore decided to launch a professional Master's degree in biobanking (the first ever in Egypt) to provide biobankers and researchers in the region with educational and training background, through a well-designed, structured program in the form of lectures, workshops, seminars, quizzes, round-table discussions and videos to keep them abreast with developments at the leading edge of biobanking. Furthermore, our goal is to meet the increasing demand from a growing number of biobanks in Low- and Middle-Income Countries

(LMICs) regarding the challenges of high cost of overseas program fees and costly training equipment.

The new Master's degree will include 30 Credit Hours structured in 8 obligatory and 2 optional modules:

1. Establishing a biobank by type, function, minimal equipment, and scope.
2. Cryobiology; types, procedures
3. Tissue and fluid handling life cycles
4. Confidentiality, privacy, and types of consent (Ethical, Legal, and Societal Issues- ELSI)
5. Genetics and genomics; PCR- and NGS-based technologies and applications
6. Research Methodology; epidemiology and statistics,
7. Computer science and biosample tracing, data sharing and networking
8. Biobank stewardship, governance, and disaster planning.
9. Financial sustainability.
10. Automated biobanking, Biological Safety and Personal Protective Equipment.

The duration of the course will be 2 years, with a final exam (adapting to the appropriate COVID-19 safety procedures). The lecturers will be delivered by international and national experts and the IARC Technical Publication No. 44 (Common Minimum Technical Standards and Protocols for Biobanks Dedicated to Cancer Research) will be considered as one of the key reference materials for the course.

For any further information, please email Dr Fayek Elkhwsy directly ([felkhwsy@alexu.edu.eg](mailto:felkhwsy@alexu.edu.eg)).

## Recent publications from our Members



An interesting article on optimal biopsy tissue processing for genomic studies in an African setting: [Ferndale L, Moodley M, Chen WC, Wadee R, Wright CA, Parker MI, Willem P, Mathew CG. Processing and Analysis of Tissue Samples from Esophageal Cancer Patients in an African Setting.](#)

[Schmelz M, Sanderson-November M, Humeida R, Cloete M, Mims M, Castro P, Leong A, Wisner L, Silver S. A Plan for Emergency Shutdown and Reopening for a Consortium of Biobanks.](#)

[Kamulegeya R, Kateete DP, Bagaya BS, Nasinghe E, Muttamba W, Nsubuga G, Kigozi E, Katabazi FA, Nakwagala F, Kalungi S, Byamugisha J, Worodria W, Magala R, Kirenga B, Joloba ML. Biobanking: Strengthening Uganda's Rapid Response to COVID-19 and Other Epidemics.](#)

[Kyle M, Cortez D, Carbonell B, Masmila E, Molinolo A, Kausha S. Vulnerabilities of Cancer Patients and Their Effects on Informed Consent for Biobanking.](#)

[ElHafeez SA, Ahram M, Abdelhafiz AS, Ibrahim ME, Mostafa NT, Elgamri A, Mohammed Z, Abdelgawad F, Elsebaie E, Gamel E, Shahouri M, Adarmouch L, El Rhazi K, Silverman H. Development and Validation of a Biobank Questionnaire Intended for the Public in the Arab Region.](#)

[Niedermaier T, Bhatt M, Wallner S, Babel M, Burkhardt R, Brochhausen C. Biobanking of Specimens from COVID-19 Patients: An Economic Perspective from a Clinical Biobank.](#)

[Vodosin P, Jorgensen AK, Mendy M, Kozlakidis Z, Caboux E, Zawati MH, and on behalf of the BCNet members. A Review of Regulatory Frameworks Governing Biobanking in the Low and Middle Income Member Countries of BCNet.](#)

## H3Africa



H3Africa empowers African researchers to be competitive in genomic sciences, establishes and nurtures effective collaborations among African researchers on the African continent, and generates unique data that could be used to improve both African and global health. There is currently a global effort to apply genomic science and associated technologies to further the understanding of health.

The H3Africa quarterly newsletter reports on news and stories from across the consortium. It is produced by the H3Africa Fellows' Club and overseen by the H3Africa Education and Coordinated Training Working Group. The newsletters are available on the internet [here](#) and you can create a free account and subscribe to receive them regularly.

## Spotlight on Paediatric Biobanking



The International Agency for Research on Cancer (IARC) is supporting the Biobanking and BioMolecular resources Research Infrastructure – European Research Infrastructure Consortium (BBMRI-ERIC) in launching an initiative to better understand the landscape of paediatric biobanking, its needs, and future research opportunities.

BBMRI-ERIC and its Stakeholder Forum Patient Pillar, in collaboration with the Center of Excellence in Biobanking and Biomedical Research at the University of Cyprus, invited all actors in the paediatric community to participate in a survey to share viewpoints, exchange best practices, and engage in a dialogue about paediatric biobanking and its ethical, legal, and social implications (ELSI). This initiative includes those involved in translational research and paediatric biobanking in addition to patients, researchers, clinicians, ELSI experts, minor participants, and citizen groups. The first results from this initiative are anticipated in the second half of 2022.

**More information on:** [Paediatric Biobanking and Engagement: Join and Share Practices - BBMRI-ERIC: Making New Treatments Possible](#)

# Twinning for the Armenian Research Infrastructure on Cancer Research: the ARICE project



Over the last decade, the Center of Medical Genetics and Primary Health Care (CMG), at the Department of medical genetics at the Yerevan State Medical University has identified the research in hereditary cancer and personalized treatment of cancer as one of the major topics of research.

Beyond routine clinical activities in the diagnoses of tumours and hematological malignancies, the CMG has a unique role in the provision of pharmacogenetic testing of cancer patients for all of the oncological centers of Armenia. Thus, in order to support the development of cancer research and

subsequently cancer treatment and prevention, a consortium of partners was created including the Yerevan State Medical University (YSMU), the International Agency for Research on Cancer (IARC), the Medical University of Graz (MUG) and the Charles University (CU), initiating their collaboration for improving cancer research infrastructure in Armenia under the COST action EU-funded project ARICE (Grant Agreement Number 952417-ARICE).

We will be providing further details on how this project develops in future BCNetters.



**ARICE**

**Twinning for the Armenian Research Infrastructure on Cancer Research**

HORIZON2020 Twinning Programme



European Commission  
Funded by EC  
Research Executive Agency (REA)

Yerevan State Medical University after Mkhitar Heratsi

Medizinische Universität Graz

CHARLES UNIVERSITY

International Agency for Research on Cancer  
World Health Organization

# Opportunities for Funding, Training and Collaboration



## **Funding opportunity**

**NIH/NCI FOA:** [Implementation Science for Cancer Control in People Living with HIV in Low- and Middle-Income Countries](#)

## **Research Leadership Training Programme**

[Research Leadership Training Programme – IARC \(who.int\)](#)

## **Collaboration opportunity - Picterus**

The years of 2020/21 with the COVID-19 pandemic have become a landmark for the already growing demand on mobile health solutions. The pandemic increased even more the need for healthcare services that can be reached anywhere in the world, especially for people in risk groups and Low- and Middle-Income Countries (LMICs).

The start-up Picterus (<https://www.picterus.com/>), born at the Norwegian University of Science and Technology, has developed a novel approach for remote jaundice diagnostic and monitoring, bringing

biophysics and machine learning (AI) based solutions to healthcare. The overall ways to diagnose jaundice in newborns are either inaccurate, invasive or expensive.

The solution created by Picterus is a mobile app that captures images of the newborn skin and measures the bilirubin levels with the help of a calibration card. The application was designed to be easy to use, reliable, affordable and non-invasive, targeting both healthcare workers and parents. Picterus Jaundice app has shown to be a promising reliable tool with completed clinical studies in Airlangga University, Indonesia, in Mexico and Norway.

Picterus has a bold goal of making the tool available worldwide, focusing on LMIC-based communities, aiming to reduce the cost of newborn care worldwide with its promising technology. Do you think this would help your research efforts? Is it relevant to your practices? Please reach out for potential collaborations at: [contact@picterus.com](mailto:contact@picterus.com)



## Upcoming events



In 2021 AORTIC will host its 13th International Conference on Cancer in Africa. Recognised as the most significant cancer conference in Africa, AORTIC attracts participants from around the continent and the world for information sharing, the presentation of new data, and the establishment of collaborations."

[Read more in English...](#)

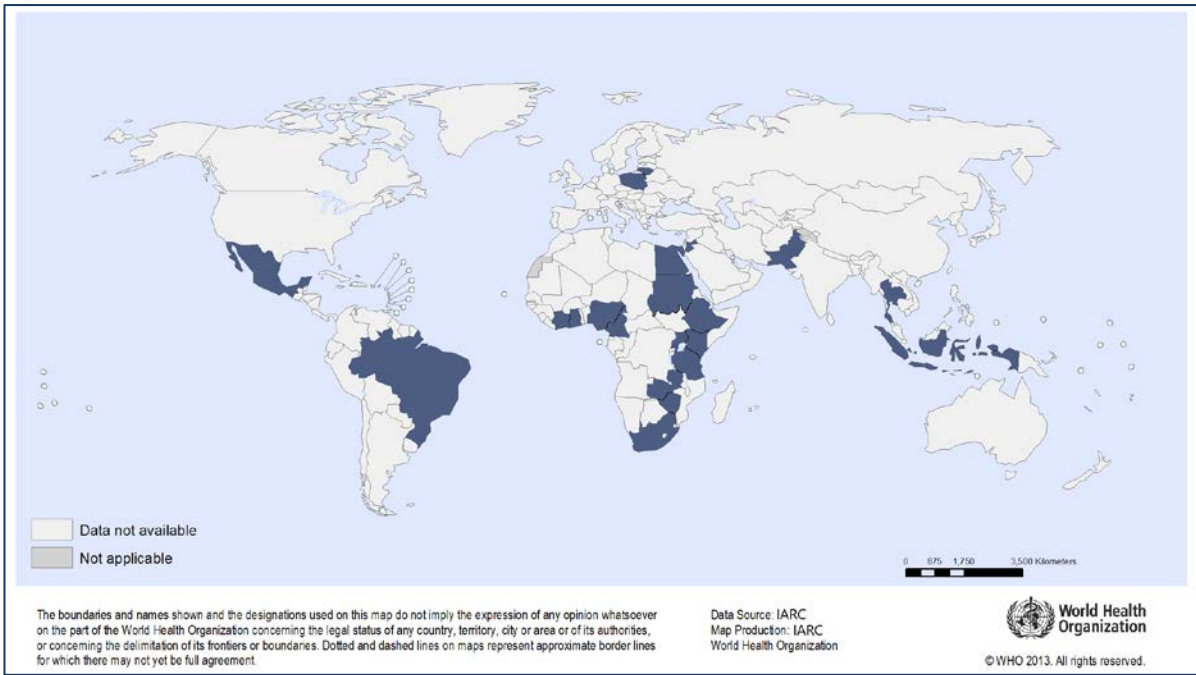
En 2021, l'OAREC accueillera sa 13e Conférence internationale sur le cancer en Afrique. Reconnue comme le plus éminent rassemblement sur le cancer en Afrique, la conférence OAREC attire des participants de tout le continent et du monde entier à la recherche d'opportunités de partage d'informations, de présentation de nouvelles données et d'établissement de collaborations

[Continuez à lire, en français...](#)

## Who Are We?

BCNet is the Low- and Middle-Income Countries (LMIC) Biobank and Cohort Building Network, which was established in 2013 to provide a platform for collaboration between its members, partners, IARC, and the international community. BCNet aims to support biobanking and cohort-building activities and to develop sustainable infrastructures for the management of high-quality biological samples and data for research, using best practice principles and guidelines.

# BCNet Members



**BRAZIL:** Banco de Células do Rio de Janeiro; Barretos Cancer Hospital; **CAMEROON:** Faculty of Medicine and Biomedical Sciences, Université de Yaoundé; Université des Montagnes; **COLOMBIA:** Clínica de la Costa Ltda; **CÔTE D'IVOIRE:** Institut Pasteur de Côte d'Ivoire; **EGYPT:** 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; Shifaa Al Orman Hospital, Luxor; South Egypt Cancer Institute, Assiut University; **ETHIOPIA:** Jigjiga University; **GHANA:** Breast Care International, University of Health and Allied Sciences; **INDONESIA:** Faculty of Medicine, Universitas Gadjah Mada; **IRAN:** Golestan Cancer Biobank; **JORDAN:** King Hussein Cancer Center Biobank; **KENYA:** Ampath Reference Laboratory; **LITHUANIA:** National Cancer Institute; **MEXICO:** Instituto Nacional de Cancerología; **NIGERIA:** College of Medicine, University of Ibadan, Obafemi Awolowo University Teaching Hospitals Complex; **PAKISTAN:** Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH&RC); **POLAND:** Biobank Lab, Department of Molecular Biophysics, University of Lodz, Wrocław Research Centre EIT+ Biobank; **SOUTH AFRICA:** National Health Laboratory Service (NHLS), 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



### Contact

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