The Biobank and Cohort Network (BCNet): activities and outcomes

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ABSTRACT: Biobanks, which facilitate the collection and storage of high-quality biological specimens and associated information, play a key role in scientific research on disease prevention, screening, and treatment. In contrast to the situation in high-income countries (HICs), biobank infrastructures and related standard guidelines and protocols are much less developed in LMICs. This constitutes a serious barrier to high-quality scientific research projects in disease control in LMICs. In line with IARC’s mission in contributing to worldwide cancer research and, in collaboration with US National Cancer Institute - Centre for Global Health (NCI-CGH) and other international partners, a biobank network (BCNet) was set up as an opportunity for LMIC to work together in a coordinated and effective manner and jointly address the shortfalls in biobanking infrastructure and other shared challenges, including ethical, legal and social issues (ELSIs). In addition, the network will facilitate the sharing of resources (e.g. expertise, protocols) and the development of joint projects, strengthening the competitiveness of the LMIC biobanks in applying for international funding.

The founding members of BCNet include 22 members from 17 LMIC from all the WHO regions and partners. Membership is not exclusive and is open to other LMIC biobank institutions that are willing and able to work together for common interest and agree with the principles and practice endorsed by the BCNet governance.

PURPOSE of BCNet
- Support Biobanking and Cohort Building activities
- Develop sustainable biobanking research infrastructures
- Facilitate the collection of high quality biological samples by utilizing best practice principles and guidelines
- Promote the sharing of biological samples and data for scientific research

BCNet Catalogue
- The BCNet catalogue (developed in collaboration with Karolinska Institutet, Sweden)
  - Assess the biological resources available in BCNet members’ facilities
  - Describe biological collections and associated data, including information on sample quality
  - Contribute to the visibility of BCNet members’ biobanks and sample collections
  - Leverage the collaboration between biobanks for medical research worldwide.

Information Technology Working Group
- Conduct LIMS Open Source Evaluation Project.
  - Objective: overview of the top open source biobanking systems available and assess them based on defined criteria to determine the most appropriate for use within BCNet. To develop an inventory of available core functionalities and key points for consideration of the top 5 open source biobanking systems.

Education and Training Group
- Organised face-to-face Training (3-5 November 2015, Lyon, France)
  - Attended by 27 participants from 16 countries
  - 12 presentations in IT, ELSI and Quality,
  - 4 break-out sessions for group discussions,
  - Poster sessions and video interviews.
- Participants had access to The Canadian Tissue Repository Network CTRNet online basic biobanking course through the ISBER website.
  - Biobanking: Governance; Ethics, Privacy and Security; Facility Design; Quality Management; Informed Consent; Specimen Collection and Processing; Storage and Distribution; Data Systems and Records Management.
- Posters prepared by the participants on guidelines, rules and laws specific to their country and organization
- Share experiences on site-specific challenges in LMIC settings

BCNet Members participate in EU-H2020 B3Africa Project as use case
- Have access the bio-informatics platform that will be developed for the project
- Participate in B3Africa training program for biobankers and Ethics Committee Members

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