

Bio banking in Cyprus: Present and Future Prospects for Research

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Biobanks are organized collections of medical records and biospecimens, aimed to support biomedical research, serving as repositories and distribution centers. The use of Biobanks as research infrastructures has been in progress for many decades but during more recent years there has been intense effort to further develop Biobanking in Europe and create and sustain more Biobanks for promoting translational research and diagnostics projects. It has become clear that only the systematic archiving of records under high standard specifications and with quality management systems can take full advantage of the medical information and associated biological material for unraveling the mysteries of the rare monogenic disorders as well as the more frequent complex conditions. These include, among others, the conditions that consume most of us during aging, such as Alzheimer and related dementias, cardiovascular conditions, diabetes and diabetic nephropathy, rheumatic disorders, etc. Research that uses high quality trustworthy material and information from certified Biobanks aspires to improve existing and develop innovative approaches for diagnostics and novel drug discovery. A serious Pan-European effort for enhancing and at the same time raising the quality of Biobanking, was launched in 2008 within the framework of an FP7 program led by the Medical University Graz, which developed the preparatory phase of BBMRI (Biobanking & BioMolecular resources Research Infrastructure). Another important aim has been the harmonization of Biobanking procedures across Europe and across the globe. Subsequent

tly, BBMRI was upgraded to a European Research Infrastructure Consortium, BBMRI-ERIC, representing the largest family of Biobanks in Europe. BBMRI-ERIC has 19 members, 14 full members and 5 Observers. Upon our initiative, Cyprus has applied and become Observer to BBMRI-ERIC since April 2016, having participated already in several meetings of the Assembly of Members and the Management Committee. Cyprus started Biobank only 5-years ago, with competitive funding by the European Regional Development Fund and the Republic of Cyprus, through the Research Promotion Foundation. This was a 2m euro project to our group at UCY, with duration of 55 months, aimed at establishing the first Biobank in Cyprus and at supporting a major ongoing research project on inherited nephropathies. This led to the establishment of the Molecular Medicine Research Center (MMRC), which recently moved to its contemporary dedicated premises at the Shakolas Educational Centre of Clinical Medicine, next to the Nicosia General Hospital.

The activity of the UCY-Biobank, approved by the Cyprus National Bioethics Committee for Biobanking on all genetic disorders, monogenic and complex, served already several important research projects and several faculty in various medical fields, with high impact findings and peer-reviewed publications. It is anticipated that the infrastructure available and the momentum created shall foster further developments aimed at the delineation of the mysteries of inherited disorders, the study of multifactorial conditions, better diagnostics and foster collaborations with networks in Cyprus and abroad, to the benefit of all citizens..