

**UNITWIN Interregional Network on PhD Education and Research in Biophysics,  
Biotechnology and Environmental Health as a tool for protection of scientific  
heritage**

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Modern educational, research and innovation programs in biophysics, biotechnology and environmental health are extremely important for promotion of social, economic and cultural systems of developing countries and their successful implementation can be achieved through integration of the research and educational potential of developing countries with the international one. Thus, UNESCO Chair in Life Sciences in partnership with Bogomoletz Institute of Physiology (Ukraine, Kiev), Cairo University (Egypt, Giza), Istanbul Medeniyet University (Turkey, Istanbul), Institute for Health and the Environment, University at Albany, (USA New York), Southampton University (England, Southampton) has decided to create a PhD Education and Research Capacity Building in biophysics, biotechnology and environmental health taking into consideration the needs of East European, South Caucasian, Minor Asian and African countries. The Network has an open participation character and intends to involve more universities. In order to realize the above presented vision, the Network has a three-fold focus, as it is presented below:

• Improve PhD Education • Empower Research Capacity • Promote Innovation and Exploitation of research Results

To achieve this aim, that is, to create PhD education and research capacity building in biophysics, biotechnology and environmental health, the following objectives have been identified:

• Setting-up communication and administrative structure • Creation of a PhD educational program • Identification of personnel, research and technical basis for realization of the educational program • Facilitation of Information Exchange • Implementation of Educational Program • Fostering Research and Innovation Capacity • Ensuring successful organization of Network activity

The target beneficiaries are PhD Students and Young Researchers

Types of activities include • Postgraduate teaching programme • Short-term training • Research • Visiting professorships • Exchange of PhD students and young researchers • Short-term fellowships to universities, laboratories not involved in the network • Institutional development - (implementation of DES and information service networks, establishment of innovation and technology transfer departments in participating institutions to commercialize research outcome in the market)

The successful realization of the initiative will result in establishing a contemporary system of preparing perspective science leaders by adjusting PhD educational programs of the developed countries to the laws and regulations, social and economic demands of participant countries. A special effort will be made with regard to the UNESCO Chairs and educational institutes in biophysics, biotechnology and environmental health from developed and developing countries to build a unique educational program for reduction of existing imbalance at the educational level of these disciplines in different countries. This will allow to significantly improve the level of PhD education in Life Sciences of participant countries as it will become possible for these universities to provide cheap and available education according to international standards in their home countries. As a result, the number of students will be increased, which will contribute to social and economic development of their countries. The successful activities of the network in the context of research, education and innovation will attract regional and international universities, laboratories as well as stakeholders to collaborate, in this way,

promoting relationship both at regional and international level. Educational capacity will be promoted due to the facts that PhD courses will be conducted by leading scientists both from home countries and western universities, while research and innovation capacity will be increased by integration of human resources, research and technical basis of participant institutions with international one. Moreover, high level research activity of PhD students will contribute to the enrichment of research capacity building e.g. by involving leading scientists from western universities in the Advisory Board of PhD students' dissertation. The sustainability of the Network will be ensured by preparing high level science leaders who will guarantee the promotion in fundamental and applied sciences, which predicts generation of a number of innovative ideas for promotion food processes, agrobiotechnology, dosimetry of environmental pollution, etc. The commercialization of these innovative ideas in home countries and outside will have a positive impact on economic and social development and the positive feedback from appropriate governmental agencies, private sector and international organizations interested in investing and supporting the activities of the Network will be received. The obtained profit will be used for the sustainable development of the Network. We strongly believe that the creation of the network will underpin the efficacy of research and education and serve as a unique tool for peace generation and softening relationship between countries and ethnic groups with different religious and social orientations. This will be a joint education and research collaboration serving to facilitate information exchange among researchers, promote Life Sciences in the countries of participant institutions.