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## Strengthening Cooperation in Molecular Biomedicine between EU and Ukraine: the COMBIOM experience

The Institute of Molecular Biology and Genetics of NAS of Ukraine (IMBG) has a long-term history (about 40 years) of cooperation with European colleagues being very active in international collaboration now days. It has joint research projects with colleagues from Germany, France, Great Britain, Poland, Italy, Greece and others – about 80 countries. IMBG has been involved in several FP7 projects: FP7-INCO-2011-6, ERA-WIDE «Strengthening Cooperation in Molecular Biomedicine between EU and Ukraine», COMBIOM #294932, FP7-HEALTH «Improving diagnoses of mental retardation in children in Central Eastern Europe and Central Asia through genetic characterization and bioinformatics /-statistics» CHERISH # 223692, FP7 East-NMR program «Transnational Access to NMR», and 3 projects of FP7-PEOPLE-IRSES program. Among other international grants there are CNRS, NATO, STCU, SCOPES, etc. The strongest long-time bilateral relations IMBG has with the institutions of CNRS, France and Polish Academy of Science, Warsaw.

Since 2011 IMBG has implemented the COMBIOM #294932, won in strong competition among the FP7 INCO ERA-WIDE Call participants. This Call was aimed at expanding the European Research Area by discovering the most promising scientific centres in EU's neighboring countries and providing them with possibilities for fast development and acquiring the role of a leader in their countries and the status of equal partners in European scientific research.

COMBIOM is the only Ukrainian ERA-WIDE project in the field of life sciences. It is devoted to the development of the operational network of EU and Ukrainian scientists based on the different approaches to solve the problem of deciphering the molecular mechanisms of cancer and neurodegenerative diseases, with the special emphasis on the possible links between these two pathologies. IMBG is one of the leading research institutions in molecular biomedicine, oncogenomics and gene technologies in Ukraine. There are two EU partners, which are well recognized in the field of molecular biomedicine in their countries as well as in Europe, – the Gustave Roussy Institute of Oncology (France) and the International Institute of Molecular and Cell Biology (Poland). They are also very experienced in running projects of Framework Programs 5, 6 and 7. The EU partners developed special training programs to help the IMBG to build its competency in applying and running the European level projects.

For Ukrainian stakeholders in biomedicine area, strengthening IMBG competitiveness in corresponding research area represent a case of successful story of effective involvement in ERA, improving IMBG responses to the socio-economic needs of Ukraine. The following project results are the most important achievements of IMBG NASU and its partners:

1. Creation of the IMBG International Advisory Board, which was designed to provide annual international expertise of the Institute activities and achievements, to share experience in doing world level science.
2. SWOT analysis of the Institute strong and weak points, advices of the leading European scientists how to implement the best research and management practice in the nowadays Ukrainian realities. Rating of IMBG Departments in order to stimulate scientific competition, find out and share the good research practice.
3. Twinning with the best European research centres in biomedicine area. Enhancement of the role of IMBG in Ukraine in the development of fundamentals of biomedicine (increasing the number of application for National and European funding).
4. Increasing the visibility of the Institute in European Research Area (raising the number of invitations for participation in the European research program Calls).
5. Improving the management infrastructure in the Institute to meet challenges of higher level of science. Creation of the Supporting International Cooperation Group (SICOG) and planning of its further work in accordance with the unmet needs of IMBG scientists.
6. Creation of the PR-management group in the Institute, elucidation of the social role of biomedical research in Ukraine, the creation of conditions for mutual interest of scientists and society in the results of this research.
7. Encouraging scientists to publish in the world-renowned scientific journals and to share experience with foreign colleagues, holding scientific conferences, lectures, participating in exhibitions, inviting journalists to conferences, having round tables for mass-media to discuss the role of science in society, studying the needs of consumers of the results of biomedical researches – both medical workers and patients.
8. Receiving very important experience of coordinating the European level projects in Ukraine. Proving capability of IMBG of being an active participant in EU calls for scientific and technical programs, establishing international consortia for biomedical research, to win grants and to run projects smoothly, and to achieve maximal adjustment of the researches results to the level of actual needs of the society, thus enhancing the social relevance of biomedical science in Ukraine.

The main goal of IMBG now is to make sustainable the achievements obtained under fulfillment of the COMBIOM ERA-WIDE project. The second main aim is to overcome the existent problems and to improve the weak sides which appeared during twinning with European partners. The IMBG Biomed Research Strategy developed as the main project outcome shows the clear perspective, include all the project advantages and plan their further realization, keeping move in the direction of improvement of international cooperation and continuation of capacities building of being an active part in the European Research Area.

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