

Project 633 “EDUCATION AND AWARENESS-RAISING IN UKRAINE”

UK Ministry of Defense

Science and Technology Center in Ukraine

Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine

Ukrainian Biosafety Association

3<sup>rd</sup> INTERNATIONAL SYMPOSIUM

**“Awareness Raising and Education on Biosafety and Biosecurity in Ukraine”**

Wednesday, 5 – Friday 7, April, 2017, Kyiv, Ukraine

House of Scientists of NAS of Ukraine, 45-a, Volodymyrs'ka Street, Kyiv

### **Brief Report**

At the Third international symposium in the framework of the P633 Project 63 participants took part including 40 delegates from 26 Ukrainian universities and 15 delegates from Ukrainian life sciences research institutes and governmental organizations, 6 participants from other countries (UK, US and Finland) and 2 STCU representatives.

The Symposium Chairman - Academician-Secretary of the National Academy of Science of Ukraine and Director, Palladin Institute of Biochemistry Professor Serhiy Komisarenko, Minister of Education and Science of Ukraine Dr. Liliia Hrynevych, the Project Partner – Mr. James Harrison from the UK Ministry of Defense and the STCU Executive Director Mr. Curtis Bjelajac welcomed the attendees of the final international meeting in the framework of the Partner Project P633 between the UK Ministry of Defense, STCU and Palladin Institute of Biochemistry.

The symposium was aimed to demonstrate the main project achievements and results in the field of Biosafety and Biosecurity education in Ukraine. In the framework of the project implementation, a network of scientists and lecturers was created and supported, including a web-based platform to facilitate the communication between the specialists. Furthermore, as a part of the project, the international best information materials on Biosafety and Biosecurity developed at WHO, Bradford University (UK) etc. were translated and distributed among Ukrainian Universities' lecturers. Education module on Biosafety, Biosecurity and Bioethics was developed in this project. This module is based on the module of "National Series", Bradford University, UK. The teachers will use this curriculum for life sciences students covering the subjects of Biosafety, Biosecurity, and

Bioethics. In order to facilitate the rollout of the new curriculum, nine (9) seminars and two (2) testings were successfully held in different regions of Ukraine to present the developed education module and to share international best teaching practices on the topic.

The following foreign experts and Ukrainian lecturers presented their lectures and reports:

1. Prof. Malcolm Dando, University of Bradford, United Kingdom  
*"Raising Awareness of Dual Use: A Case Study to the EU Human Brain Project"*.
2. Prof. Vladimir Zaviyalov, University of Turku, Turku, Finland  
*"Bioethics as a Barrier against the Dual Use of the Last Breakthrough Discoveries in Molecular Immunology and Microbiology"*.
3. Dr. Caitriona Saba, University of Sussex, UK  
*"Notes from a Classroom: Dual Use Awareness Rising"*.
4. Prof. Serhiy Komisarenko, National Academy of Sciences of Ukraine, Kyiv, Ukraine  
*"Biosafety and Biosecurity in Ukraine. Problems and Tasks"*.
5. Dr. Galyna Gergalova, Ukrainian Biosafety Association, Kyiv, Ukraine  
*"Project P633 Education and Awareness-Raising in Ukraine"*.
6. Dr. Iaroslava Maksymovych, Ukrainian Biosafety Association, Kyiv, Ukraine  
*"Biosafety, Biosecurity and Bioethics: Educational Module"*.
7. Dr. Maksym Pogorielov, Sumy State University, Sumy, Ukraine  
*"P633: From Casual Meeting to Successful Cooperation and Awareness Rising"*.
8. Dr. Irina Kirpicheva, Lugans`k National Agrarian University, Kharkiv, Ukraine  
*"Basics of Biosafety, Bioethics and Ecoethics"*.
9. Prof. Tatiana Ascheulova, Kharkiv National Medical University, Kharkiv, Ukraine  
*"Experience of Teaching of Discipline 'Basics of Bioethics and Biosafety' "*.
10. Dr. Tetyana Tolokova, Ivan Horbachevsky Ternopil State Medical University, Ternopil, Ukraine  
*"On Teaching of Biosafety, Biosecurity and Bioethics Ivan Horbachevsky Ternopil State Medical University and Participation of Department of Medical Bioethics and Medical Ethics in Project P633 'Education and Awareness Rising' "*.
11. Dr. Viktoriia Holubnycha, Sumy State University, Sumy, Ukraine  
*"Team Based Learning of Biosecurity and Biosafety"*.

12. Dr. Tetyana Melnyk, Cherkasy Bohdan Khmelnytsky National University, Cherkasy, Ukraine  
*"Implementation of Project P633 'Education and Awareness Rising in Ukraine' Results in Cherkasy Bohdan Khmelnytsky National University"*.
13. Dr. Denys Yanovych, Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies, Lviv, Ukraine  
*"Biosafety and Biosecurity Teaching in Stepan Gzhytskyj Lviv National University of Veterinary Medicine and Biotechnologies (2009-2016)"*.
14. Prof. Hanna Fotina, Sumy National Agrarian University, Sumy, Ukraine  
*"Basics of Biosafety, Bioethics and Veterinary Ecology in Sumy National Agrarian University"*.
15. Dr. Mykola Velichko, National Academy of Security Service of Ukraine, Kyiv, Ukraine  
*"Biological Security and Biological Defense in Ukraine"*.
16. Dr. Irina Koshova, State Establishment "Dnipropetrovs'k Medical Academy", Dnipro, Ukraine  
*"Department of General and Clinical Pharmacy"*.
17. Prof. Iryna Kupnovytska, Ivano-Frankivsk National Medical University, Ivano-Frankivsk, Ukraine  
*"Proposals for Optimizing of Teaching of Biosafety in Universities"*.
18. Prof. Lyudmyla Pylypenko, Odesa National Academy of Food Technologies, Odesa, Ukraine  
*"Exogenous and Endogenous Risk Factors of Food"*.
19. Prof. Oleg Pokotylo, Ternopil Ivan Puluj National Technical University, Ternopil, Ukraine  
*"Features of Teaching on Biosafety and Bioethics in Ternopil Ivan Puluj National Technical University"*.
20. Dr. Antonina Reshetnyk, State Agrarian and engineering University in Podila, Kamyanets Podolsky, Ukraine  
*"Biosafety and Biosecurity in State Agrarian and Engineering University in Podila"*.
21. Prof. Tetyana Satarova, Oles Honchar, Dnipro National University, Dnipro, Ukraine  
*"Teaching on Biosafety and Bioethics in Oles Honchar Dnipro National University"*.
22. Dr. Dmytro Stepanskyi, State Establishment "Dnipropetrovs'k Medical Academy", Dnipro, Ukraine  
*"Teaching on Educational Module 'Biosafety, Biosecurity and Bioethics' in State Establishment 'Dnipropetrovs'k Medical Academy' "*.

23. Prof. Olena Fedota, Karazin Kharkiv National University, Kharkiv, Ukraine  
*"Biosecurity and Human Genetics"*.
24. Prof. Tatiana Fotina, Sumy National Agrarian University, Sumy, Ukraine  
*"Biosafety in Sumy National Agrarian University"*.
25. Dr. Iryna Furtat, National University "Kyiv-Mohyla Academy", Kyiv, Ukraine  
*"Experience of teaching of "Bioethics and Biosafety of new technologies" at the Department of Biology of National University "Kyiv-Mohyla Academy"*".
26. Dr. Olha Shevchenko-Makarenko, State Establishment "Dnipropetrovs'k Medical Academy", Dnipro, Ukraine  
*"Experience of Teaching on Biosafety and Biosecurity at the Department of Infectious Diseases of State Establishment "Dnipropetrovs'k Medical Academy" "*.
27. Dr. Taras Shevchuk, Vinnitsa National Pirogov Memorial Medical University, Vinnitsa, Ukraine  
*"Features of teaching of Basics, Bioethics and Biosafety in Vinnitsa National Pirogov Memorial Medical University"*.

The presentation of participants' reports will be publishing on the Project website upon author's authorization.

The universities' teachers presented the aspects of teaching on biosafety, biosecurity and bioethics, including usage of selected elements of developed educational module, and Guide 'Preventing Biological Threats: What You Can Do' and team-building learning.

It was strong discussing during the *ROUND TABLE I General discussion of presented Presentations of the universities of Ukraine*. The universities' teachers supported the team-based learning, but they provided some reasonable remarks and additions that would be considered during the further development of materials for submission to the Ministry of Education and Science of Ukraine. The representatives of the universities where the pretesting of the educational module had need performed (Cherkasy Bohdan Khmelnytsky National University, State Establishment "Dnipropetrovs'k Medical Academy", Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies, Sumy State University) provided formal documents supporting the implementation of the developed module into the teaching and learning activities.

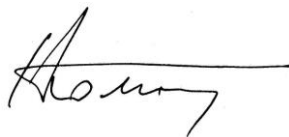
Main conclusions of the *ROUND TABLE II General discussion on the Educational module 'Biosafety, Biosecurity and Bioethics'* discussion:

The participants confirmed that medical universities, biological departments of the universities and veterinary departments of the agrarian universities did teach Biosafety/Biosecurity and Bioethics issues. But the curriculums are different in

different institutions and some institutions do not have developed guidelines or books for teaching. Participants of the Symposium suppose that development and publishing Ukrainian textbooks on Biosafety/Biosecurity and Bioethics are the high-priority problem. The lecturers, which teach Biosafety/Biosecurity and Bioethics at different universities, suggested that the curriculums on Biosafety/Biosecurity and Bioethics should be harmonized for all life sciences students.

Some participants noted that capacities of the Ukrainian Biosafety Association could be used for the knowledge dissemination on Biosafety, Biosecurity and Bioethics.

The participants of the meeting emphasized high level of the event organization and high professional level of the Symposium coordinators. At the end of the meeting Universities' teachers obtained the appropriate certificates.

A handwritten signature in black ink, appearing to read 'Komisarenko', with a long horizontal stroke extending to the right.

The Symposium Chairman  
Professor Serhiy Komisarenko