MEETING OF THE STATES PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION

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Consideration of the content, promulgation, and adoption of codes of conduct for scientists

CODES OF CONDUCT AND THEIR APPLICATION IN THE LIFE SCIENCES AT UNIVERSITIES

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1. Rapid advances in life sciences research are essential for the fight against infectious diseases. However the same techniques used to improve health and protect against infections can be misused to produce new and more effective biological weapons. In this context, the dual use dilemma is absolute. Trying to exploit the benefits while minimizing the risks that these developments pose will be an enormous task in the future. A Code of Conduct for the Life Sciences could represent an effective element in preventing the hostile use of biological agents, if it is designed to promote awareness of the complex dual use dilemma and at the same time pro-actively obligate the research scientist to engage in reflective activities such as risk assessments and consideration of alternative approaches during the research process.

2. There are several types of codes that could be considered, including aspirational codes (codes of ethics), educational codes (codes of conduct) and enforceable codes (codes of practice), with the respective kinds of elements contained in each one of these types.[1]

3. A package of elements from these different types of codes could be most useful. From the viewpoint of life sciences researchers at universities, there are certain elements that definitely should or should not be included in this package. First of all, scientists participating in biomedical and bioscience research should agree not to engage knowingly in research for the production of biological agents for the purpose of their use in hostile conflicts.

[1] Rappert, B. (2004) *Towards a Life Science Code: Countering the Threats from Biological Weapons*, Bradford Briefing Paper no. 13, September 2004. Available at: http://www.brad.ac.uk/acad/sbtwc

4. This is a necessary element of a code, however, it does not address the real problem of dual use research and the inadvertent production of dangerous biological agents. Therefore, another element that should be included is the obligation to become informed and be aware of possible dual use aspects of biomedical and bioscience research, to carry out risk assessments at each stage of the research process as a reflective action and to consider alternative approaches as the risks demand.

5. Naturally, this code element can only be applied if the scientist engaging in biomedical and bioscience research is aware of the dual use problem and is well informed about ethical decision-making processes. Unfortunately, these subjects are not a part of the curriculum at many universities. Governments should therefore encourage universities to place such instruction into their biomedical and bioscience curricula as required courses. Special incentives should be offered to those universities that do so.

6. Many States issue licenses or permits to scientists allowing research in the areas of genetic engineering and work with pathogenic microorganisms. In this regard, the awarding of a license or permit should be contingent upon receiving instruction about the content of the Biological Weapons Convention and the obligations of the scientist under this treaty, as well as instruction about ethical decision-making and risk assessment[2] processes. Receiving a permit should further be contingent upon signing a code of conduct.

7. Elements that should not be included in a code are those that would prohibit research of any kind carried out with peaceful intent. This is in agreement with the report of the National Research Council of the National Academies in the US, that even those research activities that have the greatest potential for misuse might still have potentially beneficial uses for public health promotion and defence.[3]

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[2] Bender, W., Platzer, K. and Sinemus, K. (1995) On the assessment of genetic technology: reaching ethical judgments in the light of modern technology, *Science and Engineering Ethics* 1, 21-32.
[3] Committee of Research Standards and Practices to Prevent the Destructive Application of Biology (2003) *Biotechnology research in an age of terrorism*: *confronting the dual use dilemma*. Washington D.C. The National Academies Press.