

# Georgian Life Scientists: Awareness on Conducting Responsible Research

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# Georgia State Agricultural University

- the leading Georgian institution of higher education for agriculture and related fields. Established in 1929
- Umbrella institution for 17 distinct research institutes (Institute of Biochemistry and Biotechnology, Institute of Plant Protection, Institute of Veterinary, etc.)
- Closely collaborates with the Ministry of Agriculture of Georgia, National Food Agency (NFA), Laboratory of the Ministry of Agriculture (LMA), National Center for Disease Control and Public Health (NCDC), Central Public Health reference laboratory (CPHRL), etc.
- Partner of the 20<sup>th</sup> world's leading universities (Universities of Maryland, Florida, Burgundy, Iowa, Kassel. etc.)



# In March, 2011, Agricultural University became a private university owned by the Knowledge Foundation

- Extensive renovations began immediately, and the University now houses 12,000 square meters of modern, fully-equipped classrooms, seminar rooms, and lecture halls. Besides, there are state-of-the-art research laboratories, rich library, cafeteria, culture center, athletic facilities, and administrative and faculty offices.



Research institutes, diagnostic and clinical laboratories, regional reference laboratories, medical facilities, and many other private laboratories and facilities in Georgia working on biological materials, components and their derivatives, are not supervised and controlled on compliance with biosafety standard provisions, thus creating possible risk for occupational health.

This is compounded by a pervasive deficit in biosafety/biosecurity management, a lack of accountability on risk assessment, a low level of biosafety/biosecurity awareness for scientists and technicians working in these environments.

Although no statistic data exists related to occupational damage within the institutions; we suppose that situation would not be enviable, since the country has neither a strong biorisk management culture nor a critical pool of specialists with specific biosafety education.

GeBSA/AUG had carried out survey in branches of life sciences in Georgian research and educational institutions on awareness on biosafety, biosecurity and misuse in biotechnology among scientists and administrative staff



- None of educational institutions had the course on biosafety/biosecurity in their curricula, there were some topics on bioethics in some disciplines included
- No courses or even lectures on bioterrorism prevention, dual – use of life sciences
- Tbilisi State University had used National Series in their Epidemiology and Public Health course



- What about bioethics, it was practically not studied, and in medical institutes only patients' rights were considered
- The concept of “Dual – Use”, codes of ethics of the researched, scientist even did not exist

# Georgian Women Always Were Leading...

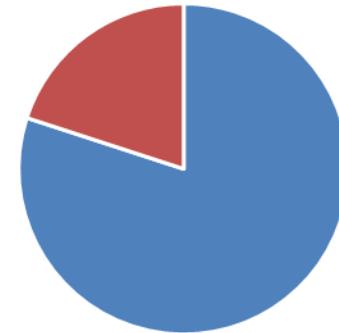


# In Science too...



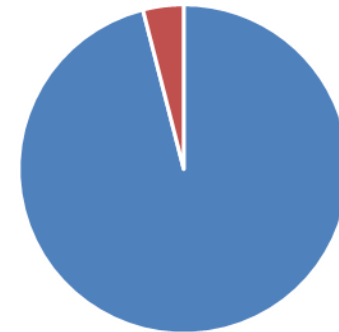
# Totally 85 persons were included

- Among them 68 scientists, 17 – administrative staff



■ Scientists ■ Admin. Staff ■ ■

- 77 – female, 8 - male



■ Female ■ Male ■ ■

# Women better understood the need of rising awareness on biosafety/biosecurity

- Though the term “responsible science” was not well understood, even in leading scientific and research institutions

# So How Can We Mitigate Biorisks?



Young scientists in the field of life sciences, biotechnology, etc., and professionals of public health must acquire the sense of responsible science at the very beginning of their professional education.

# Not Only Researchers who deal with EDPs Face Dual – Use Dilemma...

- There is only one institution preparing specialists in life sciences that had introduced the course of biosafety/ biosecurity – Agricultural University of Georgia
- In most of educational institutions, when they speak about “biosafety” and “biosecurity”, they mainly consider GMOs



# The Syllabus of the Course “Basics of Biosafety and Ethics of Life Sciences” at AUG

1. Basics of Biosafety. Laboratory Biosafety;
2. Biological Risk Assessment;
3. Personal Protective Equipment; Transportation of Infectious materials;
4. Criteria for laboratory biosafety levels: biosafety levels 1-2;
5. Criteria for laboratory biosafety levels: biosafety levels 3 – 4;
6. Criteria for animal laboratory biosafety levels, animal facilities, studies involving animals;
7. Principles of biosecurity, methodology for risk management, emergency situations management, Occupational health and immunoprophylaxis;





# The Syllabus of the Course “Basics of Biosafety and Ethics of Life Sciences” at AUG

8. Standards of biosafety and biosecurity: international and national regulations;
9. Occupational health legislation;
10. Laboratory biosafety during field works;
11. Import/export and transfer of pathogens; disinfection/decontamination;
12. Regulation of life sciences; dual – use of biological and biotechnological research. Dual – use dilemma;
13. Biotechnologies. Genetically modified organisms. Genetic engineering. international and national legislation related to genetically modified organisms / products;
14. Ethics in biomedical and veterinary research. human/ patients’ rights; animal use committees;
15. Bioterrorism: potential biowarfare agents, toxins; agricultural terrorism; history; biowarfare on different countries; international antiterrorist acts, agreements.



Now the course is to be launched  
at Tbilisi State Medical University





*Strength is in unity*

**Thank you!**

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