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Keywords of research topics: experimental toxicology, cytotoxicity, plant protection products, heavy metals, exposure and risk assessment

Title of my PhD Doctor of biology, toxicology

(i) What are the wider implications of the area of research that you are working on?

My research field

I am a scientific worker, and the main area of my interests is the evaluation of the **Health** hazardous properties of chemical substances and mixtures.

Starting with the year 2001 and till 2013 I have worked as an expert of the State Centre for Certification and Approbation of Phytosanitary Means and Fertilizers. I have acquired permanent toxicological studies of short- and long-term toxic effects of chemicals (including PPP and POPs) on mammals in experimental conditions, assessment of cytotoxicity properties of chemicals *in vivo* and *in vitro* conditionals. During the period 2011-2012 I was a local Consultant - Expert of health within the UNDP project “Mainstreaming of Sound Management of Chemicals in National Development Planning Processes”.



I was the project manager/lead researcher over 20 institutional and national projects, During the implementation of these projects, I was involved in assessing the level of soil, water, air and food contamination of the chemical pollutants (pesticides, including POPs, heavy metals) and the sources of intake; exposure and risk assessment. The one of the last such studies were carried out within the framework of the bilateral Moldova-Romania project “*Human health risk assessment of some contaminants in local foods of plant and animal origin*” (2016-2018).

As can be seen from the above mentioned, my field of activity has been directly related to food safety, food security, environment and human health

(ii) How do you see issues of responsible science relating to your work?



I believe that the responsibility of a toxicologist for the results of his research is one of the highest. In our country, as in many countries of the world, the conclusion of a toxicologist about the danger or safety of substances and products, nor technologies is fundamental when deciding whether to admit them to the market, for wide use or for production. This responsibility is even higher when assessing some emergencies or global problems (POP's, chemical weapons etc.) .

And the quality of toxicological research and assessments directly depends on both the professional skills and knowledge of a specialist and his moral qualities.

I know that during last years there hasn't been carried out any assessment of exposure to toxic substances, toxicological studies were superficial and at a low level. But it brings in a very good income and nobody cares about the details. Ministry of Health has a monopoly in this area.

I have always considered it completely wrong that only one structure conducts research and certifies products for the sale. A toxicological laboratory that evaluates chemicals, biocides, pesticides, perfumery and cosmetic products and much more (all this is exclusively on animals !!) is the only one in our country. Although there are opportunities to engage in toxicological research at the medical university and at the state university and in the institutes of the Academy of Sciences. In the field of chemistry, radiology, microbiology a number of structures not subordinate to the MH are accredited in RM. When there is no alternative or concurrency it breeds irresponsibility.

STCU projects that allow the development of infrastructure could help improve the material and technical base of scientific laboratories, expand the range and improve the quality of research, and the most importantly moment – to be accredited according to GLP.

(iii) Were there any additional topics that could have been covered in this online seminar series and why would it have been useful to cover them?

Since the main scope of the seminars is the responsibility of the scientist, then there are enough topics for these 4 days. The only wish is, of course, to take into account the specifics of the Eastern Partnership countries. We are all from the former USSR. Our science is traditionally concentrated at the academies of sciences (medical, agricultural, etc.). Unlike universities, we do research 100-150% of our working time. At universities, of course, you need to give the basics of ethics for students.

But a young person can really understand the extent of the impact of his/hers research only when he or she starts engaging in science professionally. In all our job descriptions there is a mandatory clause on the adherence of scientific ethics.

I personally would be interested to know the following. There are a lot of private research laboratories in Europe. For example, such large companies as Bayer, BASF, Syngenta etc. have their own huge research centers, which conduct toxicological assessment of new chemical compounds and products. How do these laboratories function in terms of scientific research? Should they also follow the general rules of scientific responsibility? Or is corporate responsibility dominating here?



(iv) Is there anything that the seminar team could do that would be useful to promote thinking about responsible science in the work of you and your colleagues

Of course, the workshop team can help a lot in the Promoting Responsible Science.

I think that both beginner scientists and already professionals would be interested to receive information (in the form of video clips, promotional materials) with examples of how the irresponsibility of scientists / scientist influenced people's life and the environment. In 2012, I participated in a WHO-funded seminar with a series of lectures on chemical safety. And I was always asked - where did the scientists look, why did they allow this? What do scientists suggest to avoid such situations? I think that such seminars must be held on an ongoing basis. And of course, examples from your presentations, your practice would be very interesting for presentations on this seminars/workshops.

