

29th January 2016
Moscow

Russian scientists have not proven safety of GMOs

In January 2016 [an editorial](#) by Russian scientists from the Institute for Information Transmission Problems (IPPI RAS) was published in Critical reviews in biotechnology, declaring that all the previous published GMO safety studies find no evidence of harm to living organisms.

In response Russia's National Association for Genetic Safety (NAGS) experts released a statement, which was signed by a number of prominent scientists and activists.

The statement provides strong evidence as to why this editorial does not confirm the safety of GMOs.

- The article by scientists is a statistical analysis of scientific papers devoted to toxicological research on GMOs, as well as a critical assessment of individual studies that have found the negative effects of GMOs. Statistical analysis was conducted using the Bonferroni method, which is considered to be conservative and can show a lack of an effect which is present in reality. NAGS experts consider the application of this method in toxicological studies of GMOs as incorrect, since this method does not allow to identify the toxic effects of the objects, but on the contrary the method hides the toxic effects.
- The conclusions of the mathematical experts are based on criticism of the data - just seven published scientific articles were studied by the IITP authors. The following question arises in this connection: on what basis were these articles selected from dozens of other studies reporting negative effects of GMOs on warm-blooded animals?
- In the article the IITP representatives criticized the work of Professor Seralini et al. In the 2-year study Seralini had the same number of rats (10 in each group), that Monsanto analysed for blood and urine chemistry to confirm the safety of GMOs in their 90-day study. Thus Monsanto at the end of the experiment examines a sample just 10 of the 20 animals of the general group, explaining the need to avoid error. A reasonable question arises: Does Monsanto choose to assess the most healthy animals or quite deliberately limit the research duration so as not to see negative results?

- This information is not objective: only re-staging of the experiments in compliance with similar conditions, but with the scale and integration-depth study methods of valuation parameters increase, can refute or confirm the conclusions of any scientific studies.
- When it comes to the assessment of the risk of the toxic effects of GMOs on living organisms, to draw an analogy with the medical field is appropriate: the use of statistical methods to ignore significant medical discoveries can lead to serious negative consequences.
- The tragic episode, which occurred in January of this year in France – the death of one of the 90 volunteers who tested the new drug, proves an incorrect use of statistical methods for analysis in assessing health risks for living organisms. In this case the scientists did not wait to achieve statistically significant results of death, and the study was terminated immediately. Following the same logic, that use the authors of the editorial about the comparison of GMO safety studies, the research of potentially dangerous drug had to continue until the death of 10, 20 or 30 people or more people for a statistically significant sample.

The only way to dot the «i» in the matter of GMOs safety for living organisms' health - is to carry out a large-scale independent multigenerational and toxicological studies. Such experiments must not only comply with the strictest international academic standards, but also the principles of openness, and to ensure the absence of any vested interests. It will provide objective data on the possibility of GMOs having a negative impact on human and animal health.

The statement was signed by:

- Dragavtsev V., PhD, professor, academician of the Russian Agricultural Academy, chief scientist of the Agrophysical Scientific Research Institute
- Kopeikina V., secretary of the CIS Alliance for Biosafety
- Kramarenko K., PhD, head of the voluntary certification system “Biologically Safe”
- Maletskiy S., PhD, head of the population genetics laboratory of Institute of Cytology and Genetics, academician of the Russian Academy of Natural Sciences
- Razbash O., expert-consultant on ecologic right of the Civic Chamber of the Russian Federation
- Tsydendambaev V., PhD, head of the lipid exchange laboratory of the Russian State agricultural University (Timiryazev Institution of the Plant Physiology)
- Sharoykina E., co-founder and director of the National Association for Genetic Safety