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Transparency, Transparency, Transparency

Gilles-Éric Séralini, molecular biology professor and President of the Scientific Board of the Committee for Research and Independent Information on Genetic Engineering (CRIIGEN), gives a conference at the Biological Sciences Department of UQAM (Université du Québec à Montréal) Tuesday February 18.

Séralini is a molecular biologist at the University of Caen, in France. But, he is better world-wide known as the scientist responsible, along with his team, for the recent study showing the impact of GMOs and Roundup on rats. No doubt, many of us have now seen the pictures of the sick, GMO-fed rats from his study.

Séralini is not a “rebel without a cause”, alerting humans about imaginary risks. Rather, he is himself a practitioner of genetic engineering, and has gained an appreciation for their ability to be used in the production of drugs, such as growth hormone or insulin. But, what he clearly warns us about is the lack of scientific credibility surrounding the GMOs developed and used in industrial agriculture. “The hidden reports and studies by Monsanto and by governments for the sake of confidentiality are pure “middle age” practices, unacceptable when it concerns what people eat in their everyday life”, says Séralini. He clearly opposes the attitude of both the biotechnology industry the authorities approving the use of GMOs. “We live in an era of fluid information, where scientists should share knowledge to make genuine research that is really useful for humanity. It is not a hide and seek game. We are talking about public health.” Séralini also spends a lot of time discussing protocols, especially given that he has had to face critics issued against his own study, and is now taking legal actions against researchers making false declarations and engaged in smear campaigns.

Séralini's study has created a furor of reactions. This is the first long-term study on laboratory animals fed with GMOs and Roundup, and the results are far from positive. Rats in this experiment developed severe hormone-dependant tumors, liver necrosis, and renal problems. Roundup was found to inhibit the production of testosterone was implicated in premature death. Dr. Séralini explains that these problems could be partly caused by the lower percentage of caffeic and ferulic acids, which act as protectors of the kidneys and liver, in the rat organs that are induced by the consumption of Roundup.

Séralini also has an interesting theory about what could explain some of the differences between his research and that of Monsanto or other institutions. He proposes that the glyphosate effect, taken alone, differs from the effect of Roundup, which is composed of the glyphosate and other adjuvants. These adjuvants allow the herbicide to penetrate the plant, so that the active principle ingredient (glyphosate) can be effective. Séralini observes that some adjuvants, that are supposed to be inert, can be more damaging even than glyphosate. Moreover, the list of adjuvants is another well-kept secret, as companies do not divulge this information. Séralini is so convinced that the glyphosate formulation (including adjuvants) are in reality more toxic than the glyphosate alone that he is now orienting his coming research towards this issue.

Séralini also highlights that which few people understand: a GM, Roundup-tolerant plant is a plant that absorbs the glyphosate, but will not be killed by it. So consumers eating the products of such plants may be swallowing the pesticide that the plant has assimilated. Furthermore, the GM plant is not designed to degrade the glyphosate, a fact that may explain why Roundup residues are found in each living organism. Séralini adds that is not so surprising when considering, that in North America, people eat GM food without being aware.

"It is strange to hear that, in the USA, plants that are different enough to be patented are not different enough to be labeled as such."

Séralini also pleads for long-term studies to be done with livestock. The GMO effects that were obvious in rats after two years may only be observable after two decades in cattle. Now, when farmers report health issues for their cattle, they don't know if the GM feed could be the cause, as there have yet to be any specific studies done on livestock fed with GM feed.

The manipulation of genes through genetic modification is a recent and major change in the scientific practice. Séralini pleads that we do not let GM products flow all over the planet. The use of GMOs in agriculture requires more research, done independently and in a total transparent manner. Yet, in many cases, this is not how studies are being done. In response to a student who asked what people could do to resolve this issue, Séralini answered, "Put pressure on your government to get a more serious and transparent assessment of the use of GMOs. GMOs are currently approved without any independent studies and this is unacceptable."