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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.

by Nicole Boudreau

Séralini is a molecular biology at the University of Caen, in France. But he is better world-wide known as the scientist responsible, with his team, for the recent study showing the impact of GMOs and Roundup on rats; we have all seen those pictures of rats becoming dead sick when fed with GMOs.

Séralini is not a kind of “rebel without a cause” alerting humans about imaginary risks; he is himself a practitioner of genetic engineering that he appreciates for the production of drugs such as growth hormone or insulin. But what he clearly warns us about the lack of scientific credibility surrounding GMOs mainly developed and used in occidental 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 the biotechnology industry and of 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.” But Séralini spends a lot of time discussing about protocols, having to face critics issued against his own study and now taking legal actions against researchers making false declarations and smear campaigns.

The study of Séralini has created a vague of reactions. That is the first [long-term study](#) on laboratory animals fed with GMOs and Roundup and the results are far from positive: the rats of this experiment developed severe hormone-dependant tumors, liver necrosis, and renal problems. Roundup was found to inhibit the production of testosterone and rats died

prematurely. Dr Séralini explains that these problems would be partly caused by the lower percentage of caffeic and ferulic acids in rat organisms induced by the Roundup, those acids acting as protectors of kidneys and liver.

Séralini also has an interesting theory about what would explain some differences between his research and the ones of Monsanto or other institutions: the glyphosate effect taken alone differs from the effect of the Roundup that is composed of the glyphosate plus the adjuvants. The adjuvants allow the herbicide to penetrate the plant where the active principle (glyphosate) can be effective. Séralini observes that some adjuvants, that are supposed to be inert, are more damageable than the glyphosate. Moreover, the list of adjuvants is another well-kept secret as companies do not divulgate what they are. But Séralini is so convinced that the glyphosate formulation (including adjuvants) are really more toxic than the glyphosate alone that he is orienting his coming research towards this issue.

Séralini also highlights what few people understand: a GM tolerant plant is a plant that absorbs the glyphosate but will not be killed by it. So consumers eating this plant swallow the insecticide that the plant has assimilated. And the GM plant is not designed to degrade the glyphosate. That explains why Roundup residues are found in each kg of each living organism. That is not so surprising when considering that in North America, people eat GM food without being aware, adds Séralini.

“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 effect on rats that were obvious after two years would only be observable after two decades at the level of cattle. And now, when farmers report health issues for their cattle, they don't know if the GM feed could be the cause as there are no specific studies done on livestock fed with GM feed.

The manipulation of genes is a major change in the scientific practice and Séralini pleads for not letting GM products flow all over the planet. The use of GMOs in agriculture requires more research, done independently in a total transparent background. And that is not what the current situation is about. To a student asking what people could do to resolve this issue, Séralini answered: “Make pressure on your government to get a more serious and transparent assessment of the use of GMOs. The GMOs are currently approved without any independent studies and it is unacceptable.”