



**Joint Advice Note**  
issued by the French national Academies  
of Agriculture, Medicine, Pharmacy, Sciences, Technologies, and Veterinary sciences  
in regard to a recent publication by  
**G.E. Séralini *et al.* on toxicity of a genetically modified organism (GMO)**

*The press release below summarises the Advice Note issued by the 6 French national academies.  
The full text is on-line at each Academy's web site.*

**The French national Academies of Agriculture, Medicine, Pharmacy, Sciences, Technologies and Veterinary sciences, became acquainted at the same time as the general public with the paper published recently<sup>1</sup> in the scientific journal *Food and Chemical Toxicology* by Gilles-Eric Séralini *et al.* where the authors claim that there is a strong tumorigenic and toxic effect in rats through consuming genetically modified NK603 maize or through low level exposure to the weed-killer Roundup® to which the maize has become tolerant. The 6 Academies signatory share the opinion that numerous methodological and interpretation shortcomings in the paper should not be held to invalidate previous research that concluded in favour of the sanitary innocuousness of NK603 maize and, in more general terms, of authorised, genetically modified plants consumed by both live-stock and humans.**

To summarise the detailed assessment posted on each academy web-site, we can assert here that : 1° the way the findings of the experiments are set out is largely inadequate, 2° classical statistics were not used to present the tumour occurrences, 3° the choice of animals for the tests is subject to caution and 4° lastly, the quantitative elements needed for a relevant interpretation of the results were not taken into account by the authors.

A standard statistical analysis of the results presented in the paper show that there is in fact no significant difference between the groups of test animals in terms of occurrence of tumours due to the GMO or to Roundup®, or to their association, contrary to what the authors assert or rather to what the public at large would deduce or infer from this.

Consequently, this research work does not lead to any reliable conclusions.

It is rare in France that a non-event (scientifically speaking) of this nature, elicits such a passionate debate, including mobilising Members of Parliament so swiftly. Orchestrating a scientist's notoriety or that of a research team constitutes, in itself, a serious demeanour when it contributes to generating and spreading fears in the general public that have no established, verifiable base.

Over and above our criticism of the actual contents of the paper, the way in which the communication aspects was managed raises numerous questions, notably through the concomitant publishing of two books, the screening of a film and publication of a scientific paper the contents of which were all exclusive property of a single weekly publication, with a black-out embargo clause (that included the scientific community) till the date of the press conference. These conditions of circulating the paper and/or its contents, *etc.*, to the press, who therefore were faced with an *a priori* impossibility to cross-check the findings and consequently unable to comment in good faith on the text and its conclusions, are simply unethical.

<sup>1</sup> Cf. <http://www.sciencedirect.com/science/article/pii/S0278691512005637>  
in *Food and Chemical Toxicology* Volume 50, Issue 11, November 2012, Pages 4221–4231.

We can also legitimately surmise if there are not any conflicts of interest for G.E.Séralini and members of his entourage, aware as we all are of their ecological stances and of the financial support they receive from major food distribution groups.

The Academies signatory to this Advice note were surprised by the way in which the paper was accepted by the journal and recall the principle that publication in a review with a committee of referees is not in itself a guarantee of the scientific quality of the paper. Some papers published in international journals, including the most prestigious, occasionally turn out to be mediocre and, worse, to be inexact in their conclusions *a posteriori*.

Moreover, the Academies recall the normal procedure whereby the scientific community proceeds – in view of advancement of our knowledge, techniques and technologies - to periodically re-assess the procedures adopted to determine if there is, or not, any remote source of toxicity and/or cancer genesis/development in food-stuffs going on the market.

Drawing on the early lessons of the emotion raised by the G.E.Séralini *et al.* paper, **the six Academies:**

**Express the desire** that Universities and research establishments adopt a corpus of ethical by-laws applicable to the communication of scientific results to members of the press or to the public at large, so as to avoid seeing research scientists openly privileging media debate (that they themselves deliberately initiate), to that which must necessarily take place first within the scientific communities;

**Recommend** that the Chairman of the French High Council for Audiovisual Affairs<sup>2</sup> should instate (reporting to FHCAA) a High Committee for Science and Technology whose remit would include reporting on a regular basis about the way in which scientific questions and issues are treated by the professionals of the audiovisual communications sector;

**Request** that public authorities and Parliament should do everything in their power to lend a high degree of confidence - as previously was the case and which today is too often refused - to collective, collegiate expertise and to assertions made by the scientific communities, at a time when there is a consensus that the future of France depends, partly at least, on the quality of its research.

---

<sup>2</sup> English rendering for the Haut Conseil de l'Audiovisuel – an advisory body created in 1972.