

Scientist battles to 'stem onslaught of pseudoscience'

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A University of Leicester scientist has joined leading scientists from across Europe in raising an alarm over the 'pseudoscience' concerning regulation of compounds used in agriculture, healthcare and industry.

Professor Pat Heslop-Harrison, from the University of Leicester Department of Genetics, was among scientists meeting Dr Vytenis Andriukaitis, European Commissioner of Health and Food Safety earlier this month.

The scientists highlighted the fact that some people are being 'deliberately selective' in presentations of risks, including those from glyphosate herbicides, new plant breeding technologies and endocrine disrupting chemicals or EDCs.

Pat Heslop-Harrison brought his knowledge of environmental and agricultural genetics and risk analysis to the meeting, while others in the delegation had particular expertise in toxicology, endocrinology and human pathology. The characterization of risk determines the likelihood that effects will occur under real exposure conditions.

For chemicals, sound regulation requires comparison of exposure with potency, and risk characterization is required to enable the potential benefit of a chemical to be assessed against its potential to reduce harm. Professor Heslop-Harrison was joined by well-established and respected scientists Professors Sir Colin Berry, Alan Boobis, Wolfgang Dekant, Daniel Dietrich, Helmut Greim and Richard Sharpe.

Professor Heslop-Harrison said: "In the discussion, the concern was raised that public perceptions about scientific assessments are currently distorted by people, often from NGOs and well-funded pressure groups. The European Parliament and European Commission have access to robust scientific advice, but this is not always being used in legislation because of these strongly expressed opinions.

"The reality is that there is no robust, consistent [scientific evidence](#) to support these dogmatic stances, and indeed most of the robust evidence points in the opposite direction for some of the chemicals and techniques now being considered as subject to extra regulation."

In particular, the scientists in the delegation argued that the presentation of the issues to the public and to the Commission by some groups has been deliberately selective and has proposed courses of action that are not supported by a scientific evidence base. For EDCs, glyphosate and gene editing techniques for [plant breeding](#) for example, the regulation proposed runs counter to the huge database and detailed understanding of all aspects of the substances from their mode of action, to breakdown in humans and the environment to their effect in humans.

The group further highlighted that the current level of knowledge about EDCs and hormone action is such that it allows scientists and the regulatory bodies to identify compounds with potential endocrine activity and to address their potential to cause harm to humans or to the environment via well-established processes.

The group emphasised that management of chemicals and techniques should be based on robust scientific evidence, as is common to all legal procedures (not least including criminal law). This regulation ensure safe use of compounds in a range of applications. In the use of such scientific evidence, this will ensure protection of human health and the environment, while maintaining the sustainability and competitiveness of

the European economy.

Provided by University of Leicester

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