

Don't mar legislation with pseudoscience

We are concerned that some of the European Union's processes for setting safety regulations for chemicals are being influenced by media and pseudoscience scaremongering. Pseudoscience has no place in such decisions, which should be based purely on well-defined and transparent evidence.

For example, endocrine disruptors are being blamed for obesity and type 2 diabetes (J. Legler *et al.* *J. Clin. Endocrinol. Metab.* **100**, 1278–1288; 2015) despite the absence of supporting evidence for this, and despite food and sugar over-consumption being established as a proven cause. As a consequence, the European Commission's criteria for regulating endocrine-disrupting compounds as a threat to human health are based on correlational, not causal, studies (see go.nature.com/29rjlik).

Conflicts of interest can contribute to the problem, beyond the commercial motivation of industry. Some non-governmental organizations might need to maintain public concerns to boost charitable donations. Decision-makers might prefer to disregard evidence-based data that contradict a precautionary viewpoint. And some scientists put securing research funds above objective appraisal of the evidence.

Acting on hazard identification alone relieves the scaremongering party of the burden of proof, when harm is simply assumed. As a result, regulations can become unnecessarily restrictive. They may even be damaging, for example if an agricultural ban were to be imposed on triazole fungicides because of their endocrine-disrupting potential. The risk to humans at such levels of exposure would be negligible (J. E. Chambers *et al.* *Crit. Rev. Toxicol.* **44**, 176–210; 2014).

It makes no sense to override such evidence with a blanket ban on potentially hazardous chemicals that ignore the public's demonstrable low level of exposure.

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