

# Journal editors trade blows over toxicology

Debate flares around European regulation of bisphenol A and other endocrine disrupters.

Daniel Cressey

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Dozens more researchers this week joined the fray in a row over how regulators should assess the risks of potentially dangerous chemicals used in everything from plastics to pesticides.

The leading toxicologists and endocrinologists have been trading barbs in the pages of respected journals over 'endocrine disrupters' — chemicals, such as bisphenol A (BPA), that affect the endocrine system and have been [linked to developmental problems in humans](#).

The row erupted after a report by the European Commission reviewing its policy on endocrine disrupters was leaked, prompting a group of researchers to write a scathing editorial in *Food and Chemical Toxicology* in July attacking the assumptions underpinning the report's proposals<sup>1</sup>.

But now, other groups of experts, including dozens of journal editors and scientists, have published strongly worded responses to the original editorial. This week's addition calls the original criticism "a profound disservice" to public health<sup>2</sup>.

Andrea Gore, editor-in-chief of *Endocrinology* and a toxicology and endocrine researcher at the University of Texas in Austin, calls the spat "possibly the most remarkable experience in my career" in a piece<sup>3</sup> accompanying the latest response, which was published this week in the journal *Endocrinology*. "It's definitely been more confrontational than most scientists are used to," she says.

## Regulation, interrupted

Endocrine disrupters, which include some drugs and pesticides as well as BPA, are used in many everyday items, such as plastic bottles, foods, detergents and toys. Exposure to them, mostly by ingestion, has been linked to certain cancers and to developmental toxicity in fetuses and children. Their use is not specifically regulated in the European Union (EU), although they are covered by general laws, such as the US Toxic Substances Control Act, on the use of potentially dangerous chemicals.

The European Commission is reviewing its policy on the chemicals and plans to have a new strategy in place by the end of 2013. The leaked draft report that sparked the controversy was part of this review.

The July editorial in *Food and Chemical Toxicology*, signed by 18 editors of various journals, accused the European Commission of preparing a regulatory system for "so-called endocrine disrupting chemicals" that was "based on virtually complete ignorance of all well-established and taught principles of pharmacology and toxicology". The authors, along with other researchers, also wrote an open letter to Anne Glover, EU chief scientific adviser, making similar points. That letter has been republished in numerous other journals<sup>4-6</sup>.

Daniel Dietrich, head of the environmental toxicology research group at the University of Konstanz in Germany and editor-in-chief of *Chemico-biological Interactions*, was the primary author of the July editorial and the letter to Glover. He told *Nature* that he and his co-authors fear that the Commission is preparing a regulatory system that assumes data on these chemicals — for example from animal studies — is relevant to humans in the absence of data showing non-relevance.

This might mean companies having to prove their products are not endocrine disruptors. "The idea you have to show a product is not an endocrine disrupter is ludicrous," says Dietrich. He and his co-authors also take issue with the idea that endocrine-disrupting chemicals should be regulated with the assumption that there is no threshold below which they are safe. They say that the Commission ignores the "weight of scientific evidence" demonstrating that there is a safe threshold for compounds, including endocrine disrupters.

But other scientists argue that endocrine disrupters have 'low-dose effects', meaning the classic linear relationship between dose and response is altered and [very small amounts can actually have a greater impact than higher amounts](#).

In response to the editorial by Dietrich and his colleagues, 41 scientists published their own commentary in *Environmental Health* in August<sup>7</sup>. The authors wrote that the July editorial “confuses and conflates several aspects of the current debate” and noted that “the existence of a threshold for endocrine disrupters ... remains under debate”.

Others supported Dietrich *et al.* An editorial in *Toxicological Science* published 5 September approvingly cites their piece while criticising toxicologists for being “mostly bystanders” in debates on safety<sup>8</sup>.

Gore says that it is vital that the two communities work together on the issue. But, she admits: “It’s hard to imagine these two groups sitting down and having a pleasant conversation.”

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## References

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