

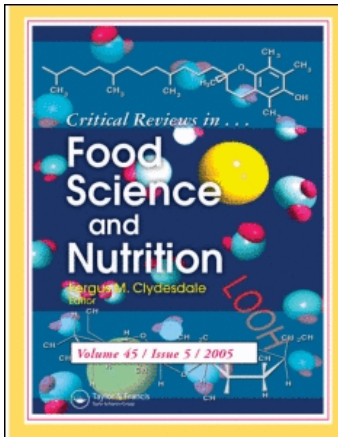
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## Critical Reviews in Food Science and Nutrition

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### Editorial Comment

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## Editorial Comment

**This is a very special issue on an extremely important concept and** I encourage you to take time to read the five papers that comprise this special issue of *Critical Reviews in Food Science and Nutrition*. The authors argue for a new approach to risk assessment for compounds with low-dose exposure, one that is based on the fundamental biology of the compound's effect on the human organism and the likelihood that a threshold exists below which no adverse effect occurs.

Given that food science and nutrition is replete with examples of compounds being identified in foods at very low concentrations thanks to the evolution of highly sensitive analytical methods, this line of thinking is intriguing. The authors suggest using a "Key Events Dose-Response Framework" to document the determinants of evidence-based thresholds for adverse effects of chemicals, and they uniquely extend the Framework to consideration of pathogenic organisms, allergens and elevated exposure to nutrients. They present the idea and offer case studies, using available data to support the plausibility of this approach.

The focus on biology and dose-response at each step (key event) addresses the threshold of response for an individual and offers the basis for characterizing the threshold for a population, a "pragmatic threshold," if you will. Since regulation usually relies on thresholds, this Key Events Dose-Response Framework provides a possible pathway forward that moves regulatory decision-making along scientific pathways rather than relying on the precautionary principle. Where data are lacking, this evidence-based approach systematically identifies the critical research needed to fill the gaps.

Read these papers and see what you think. I believe you will be at least motivated to think differently and I suspect you will be hearing more about the Key Events Dose-Response Framework in the future with these papers giving you a basis from which you can contribute to the discussion.

Sincerely  
Fergus M. Clydesdale  
Editor in Chief