

Dr. Ken Ramos
Society of Toxicology President
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Dear Dr. Ramos:

We were intrigued to read your request for feedback about the National Research Council 2007 report, *Toxicity Testing in the 21st Century: A Vision and Strategy*, in your most recent SOT *Communiqué*. Since this report was released, we have had discussions with a wide range of toxicologists and non-toxicologists on the reports conclusions, and are pleased to be able to share our thoughts with you as well.

We hope the SOT views the NRC Vision as we did: a well informed, science-based wake-up call. The challenges facing the field of toxicology have never been greater. Those of us involved with regulatory toxicology know that toxicity assessment needs have outpaced the capacity of toxicity testing laboratories. Burgeoning concerns regarding the assessment of mixtures, synergistic effects, low-dose extrapolation and threshold considerations, and the susceptibility of sensitive subpopulations due to disease, stage of development, or genetic makeup should also be addressed and cannot be within the current paradigm. Calls for a more mechanistic approach to toxicity screening and testing have been steadily growing.

At the same time, public attention is focused on the human and environmental safety of chemicals, drugs, and consumer products perhaps more than it ever has been. This is not a threat to “business as usual” but an opportunity for the discipline of toxicology to take a giant leap forward—what the Manhattan Project did for physics or the Human Genome Project did for genetics, the NRC Vision can do for toxicology.

Over the past year, we have been encouraged to see a diverse range of stakeholders—all well-versed in toxicology—speak in support of this forward-looking proposal. Industry, government, and academic toxicologists all contributed to the report in some way and still more have been working since its publication to educate the wider scientific community. Research partnerships are forming. Some toxicity pathways have already been discovered and well-researched¹, and government regulators and scientists have begun to lay the groundwork to identify more. The EPA’s Office of Pesticide Programs—and all its toxicologists—are taking input into implementation and communication strategies to accompany a shift towards the NRC Vision.

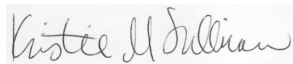
¹ Edwards S. and Preston R. 2008. *Tox Sci.* 106(2): 312-318.

We urge our fellow toxicologists to become real stakeholders in this process by sharing positive and constructive views and expertise, at the annual meeting and in everyday conversation. This will ensure that the evolution of human-based methods for toxicity assessment realize their full potential. Toxicologists can contribute to the evolution of toxicology by prioritizing research funding and activities, whether at their own laboratory or elsewhere, that contribute to this vision. Industry toxicologists can create CRADAs and other industry-government partnerships to conduct valuable research projects. Members not involved in direct research can lend expertise to funding organizations, members of congress, and regulatory agency panels. As SOT President, we urge you to lead by example and offer your thoughts as to how you may contribute to the reasoned implementation of the NRC Vision.

We should remind ourselves that our answer is only as good as the model that produced it—the NRC envisions a better model, and it is up to the Society to play a key role in making this vision a reality.

Thank you for your attention. We look forward to a lively discussion in March.

Best regards,



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