



National Toxicology Program
Department of Health and Human Services

Announcement

Title: “Genetically Modified Rodent Models for Cancer Hazard Identification: Selecting Substances for Study and Interpreting and Communicating Results”

Date: February 21, 2003

Place: Hamilton Crowne Plaza Hotel, 14th and K Street, NW, Washington, DC

Time: 8:30 AM - 4:30 PM (Registration begins at 8:00 AM)

Synopsis

The National Toxicology Program (NTP) has invested considerable time and resources in addressing whether cancer bioassay results from studies conducted in genetically modified or “transgenic” rodent models are useful for identifying chemicals presumed to be of carcinogenic risk to humans, in order to determine whether these models might be integrated into NTP research and testing activities. Transgenic mouse cancer assay results have been compared with the International Agency for Research on Cancer (IARC) and NTP Report on Carcinogens classifications for select chemicals as to their carcinogenic potential for humans. Evaluations of the predictability of a variety of potential testing strategies ranged from using individual transgenic rodent models to combinations of these models with each other and with traditional 2-year rodent cancer bioassays in either rats or mice. Although the transgenic models had a high percentage of correct calls, they failed to identify a number of “known” or “probable” human carcinogens, whereas, the traditional 2-year rodent bioassay missed none of these chemicals. The “mixed” strategies using transgenic models and the rat bioassay yielded ~85 % correct calls, missed no carcinogens, and reduced the number of positive calls for predicted human non-carcinogens by 50%. Overall, the transgenic models performed well; however, important issues of experimental design and data interpretation need further attention to enable future regulatory acceptance and eventual use in human risk assessment. In order to move forward on these issues, the NTP will hold a workshop to address the following immediate objectives.

Objectives

- Solicit comment on a process for selection of appropriate nominated substances to undergo cancer hazard evaluation in genetically modified or “transgenic” models
- Solicit comment on issues related to the proper interpretation of results of “transgenic” cancer models, the implications of these findings for public health decisions, and the most appropriate interpretive language to describe the results of such studies to the scientific/regulatory communities and the public

Attendance: The workshop is open to the public with attendance limited by space available.

Additional meeting information, as available, is on-line at <http://ntp-server.niehs.nih.gov> or contact Ms. Diane Spencer, NTP Liaison and Scientific Review Office (T: 919-541-2759; email spencer2@niehs.nih.gov).

This workshop is sponsored by the National Toxicology Program & being organized by the National Institute of Environmental Health Sciences/National Institutes of Health.