

 **NTP**  
National Toxicology Program

**Update - NTP Host Susceptibility Initiative**

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Research Triangle Park, North Carolina

 

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 **NTP**  
National Toxicology Program

ALL HANDS MEETING 21 April 2008

**Host Susceptibility Branch**

- Host susceptibility, a holistic term, encompasses the concept that susceptibility to a complex disease is influenced by **multiple host** (genetics, behavior, diet, life stage, etc.) **and environmental exposure factors** (cold, heat, infectious agents, environmental toxicants, etc.).
- The elucidation of the role of **environmental toxicant exposure in complex toxicity phenotypes** and the range of biological response in genetically diverse animal models is our primary focus.

 

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 **NTP**  
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**Host Susceptibility (HNV2E3)**

- 1) Responsible for the planning and conduct of research using genetically defined and/or genetically-engineered animal models to support hazard identification.
- 2) Determine the range of biological responses to toxic agent exposure based upon genetic variation and quantitative differences in toxicity, and
- 3) Analyze and provide data and samples to be used to identify the mode or mechanistic basis for action that is highly conserved between species to aid risk assessment.

*This effort provides the basis for multidisciplinary extramural and intramural research partnerships with scientists investigating environmental exposure to toxic agents and identification of the causally related genes that are linked to the exposure using genetic models.*

 

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## Research Projects

### In Progress (Lead Scientists)

- ADME (Cunningham)
- Cardiotoxicity (Dunnick & French)
- Cancer (French)
- Biomolecular Screening (French, Tice & Cheung)  
mouse LBCL and target tissue stem cells)

### Nominations

- Benzene (Smith & Rappaport, UC-Berkeley)
- Cardiotoxins & Hepatotoxins (Jacobson-Kram, CDER, FDA)




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Table 1. NTP Host Susceptibility Initiative Aims and Milestones

	Year I FY08	Year II FY09	Year III FY10	Year IV FY11	Year V FY12	Effort
#1	[Timeline bar from Year I to Year V]					(2-3 projects/yr)
#2	[Timeline bar from Year II to Year V]					(4-6 projects/yr)
#3	[Timeline bar from Year III to Year V]					(1-2 projects/yr)
#4	[Timeline bar from Year I to Year IV]					(Mouse-Human LBCL)
#5	[Timeline bar from Year I to Year V]					(Planned personnel replacements)

Milestones: EFFORT – #1: HSB Initiated Research; #2: R03/X01 collaborations; #3: R01 Collaborations; #4: BMS collaboration; #5 Positions vacated by retirement, resignation, or transfer to other research units




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## Questions/Discussion




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