Agenda

All events, unless specified otherwise, are scheduled at:

The Grumman Auditorium
The William and Ida Friday Center for Continuing Education
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

December 5, 2004 (Sunday)

8:00 – 9:00 p.m. **Welcoming reception** (Carolina Inn)

December 6, 2004 (Monday):

7:00 - Registration begins at the Friday Center

7:30 – 8:00 a.m. Continental Breakfast (provided with registration)

8:00 – 8:25 a.m. **Welcoming Remarks:**
William Kaufmann, PI UNC Program in Toxicogenomics
Kenneth Olden, Director, NIEHS

8:30 – 9:15 a.m. **Keynote address: *Toxicogenomics and Mechanisms of Toxicity***
Roger Ulrich
Senior Scientific Director
Rosetta Inpharmatics

9:15 – 10:45 a.m. **Presentations by the University of North Carolina-Chapel Hill**

- 9:15 – 9:25 a.m. Introduction: William Kaufmann, PI UNC Program in Toxicogenomics
- 9:25 – 9:45 a.m. Charles Perou
  Gene Expression Signatures of Toxicant-Exposed Human Mammary Epithelial Cells
- 9:50 – 10:10 a.m. William Kaufmann
  Profiles of Genetic Susceptibility to Oxidative Stress
- 10:15 – 10:35 a.m. David Threadgill
  Mouse Strain-Specific Molecular Profiles in Response to Toxicants

10:45 – 11:00 a.m. Coffee Break

11:00 – 12:00 p.m. **Presentations by the NIEHS/NCT**

- 11:00 – 11:10 a.m. Introduction: Richard Paules, PI NIEHS Microarray Group, TRC Toxicogenomics Program

11:10 – 11:30 a.m. Richard Paules
The Use of Gene Expression Analyses to Investigate ATM Function and Signaling Responses to DNA Damage

11:35 – 11:55 a.m. Raymond Tennant
Analysis of Tumor-Specific Differentially Expressed Genes in Skin Papilloma Development

12:00 – 1:30 p.m. Lunch (provided with registration)

1:30 – 2:15 p.m. **Keynote address: *Disease Mechanisms and Susceptibility***
David Botstein
Director, Lewis-Sigler Institute for Integrative Genomics
Princeton University

2:15 – 3:15 p.m. **Oral Presentations from outside the TRC**
(4 presentations selected from submitted abstracts)

3:15 – 3:30 p.m. Coffee Break

3:30 – 5:30 p.m. **Presentations by Fred Hutchinson Cancer Research Center and the University of Washington**

3:30 – 3:40 p.m. Introduction: Helmut Zarbl, PI FHCRC/UW Program in Toxicogenomics

3:40 – 4:00 p.m. Elaine Faustman
Toxicogenomic Pathway Analysis of Sensitive and Resistant Mammalian Models for Neurodevelopmental Toxicology

4:05 – 4:25 p.m. Clement Furlong
Effect of the Human Paraoxonase (PON1) Polymorphisms on the Consequences of Developmental Exposure to the Organophosphorus Insecticide Chlorpyrifos Oxon

4:30 – 4:55 p.m. Curtis Omiecinski (Pennsylvania State University)
Species and Zone-Specific Hepatic Gene Expression

5:00 – 5:20 p.m. Helmut Zarbl
Response of Mammary Cells from Sensitive and Resistant Rat Strains to Carcinogens

5:30 – 7:30 p.m. **Poster Session and Reception**

6:30 – 7:30 p.m. **Break-Away Session (Sunflower Room, Friday Center): *Bioinformatics and Computational Biology Tools***

6:30 – 6:50 p.m. Michael Waters (NIEHS)
Chemical Effects in Biological Systems (CEBS) Knowledge Base

6:50 – 7:10 p.m. Russell Wolfinger (SAS Institute)
SAS Scientific Discovery Solutions

7:10 – 7:30 p.m. Robert Williams (University of Tennessee – Memphis)
WebQTL: An Open Internet Resource to Explore Complex Interactions of Toxins and Drugs with Normal Genetic Variation

8:00 – 9:30 p.m. Toxicogenomics Research Consortium Steering Committee meeting (closed session at the Carolina Inn)

December 7, 2004 (Tuesday):

7:30 – 8:00 a.m. Continental Breakfast (provided with registration)

8:00 – 8:30 a.m. **Special Presentation:**
Rebecca Fry (Massachusetts Institute of Technology)
Standardization of Microarray Analysis Across Platforms and Laboratories – Efforts by the Toxicogenomics Research Consortium

8:30 – 10:00 a.m. **Presentations by Oregon Health & Science University**

- 8:30 – 8:40 a.m. Introduction: Peter Spencer, PI OHSU Program in Toxicogenomics
- 8:40 – 9:00 a.m. Charles Roberts
  Growth factor action in neurodegenerative disease
- 9:05 – 9:25 a.m. Sri Nagalla
  Role of Gene Expression in Brain Injury
- 9:30 – 9:50 a.m. Jeffrey Miller (Boston Biomedical Research Institute)
  Evaluating the significance of apoptosis in neuromuscular pathology

10:00 – 10:15 a.m. Coffee Break

10:15 – 11:15 a.m. **Presentations by Duke University**

- 10:15 – 10:25 a.m. Introduction: David Schwartz, PI Duke Program in Toxicogenomics
- 10:25 – 10:45 a.m. David Schwartz
  The Genetics of Innate Immunity
- 10:50 – 11:10 a.m. Elwood Linney
  The Genetics of Neural Tube Development

11:15 – 12:15 p.m. **Presentations by Commercial Vendors**

- 11:15 – 11:30 a.m. Agilent Technologies
- 11:30 – 11:45 a.m. Affymetrix
- 11:45 – 12:00 p.m. Applied Biosystems
- 12:00 – 12:15 p.m. GE Healthcare

12:15 – 1:45 p.m. Lunch (provided with registration)

1:45 – 3:15 p.m. **Presentations by Massachusetts Institute of Technology**

1:45 – 1:55 p.m. Introduction: Rebecca Fry, MIT Program in Toxicogenomics

1:55 – 2:15 p.m. John Essigmann
Differential Expression of Genes Following Exposure of Mice to Aflatoxin B_1

2:20 – 2:40 p.m. Lisiane Meira
Transcriptional Responses of Mice to Alkylating Agents

2:45 – 3:05 p.m. Linda Griffith
Liver MicroBioreactors: A New Tool for Toxicology

3:15 – 3:30 p.m. Coffee Break

3:30 – 6:10 p.m. **Presentations of "STAR" Collaborative Research Projects**

3:30 – 3:40 p.m. Introduction: Brenda K. Weis, NIEHS

3:40 – 4:00 p.m. Ivan Rusyn (UNC – NIEHS - MIT)
Genomic profiling in nuclear receptor-mediated toxicity

4:05 – 4:25 p.m. Helmut Zarbl (FHCRC – UW - Duke)
Mechanisms of selenium-induced chemoprevention

4:30 – 4:50 p.m. Terry Kavanagh (UW – Duke – NIEHS - UNC)
Analytic cytology enhancements to toxicogenomic analyses

4:55 – 5:15 p.m. Jon Freedman (Duke – MIT - UW)
Comparative genomic responses to environmental toxicants

5:20 – 5:40 p.m. Peter Spencer (OHSU – MIT – FHCRC)
DNA alkylation in neurodegenerative disease and cancer

5:45 – 6:05 p.m. Peter Spencer (OHSU – FHCRC - UW)
Genetic modulation in hydrocarbon solvent neurotoxicity

7:30 – 9:30 p.m. **Banquet** (open to attendees with a reservation)
Spice Street, 201 S. Estes Drive, Chapel Hill, NC

December 8, 2004 (Wednesday):

7:30 – 8:00 a.m. Continental Breakfast

8:00 – 10:00 a.m. **Special Session:**
Emerging Issues and Technology Development in Toxicogenomics
Chair: Ivan Rusyn, UNC

8:00 – 8:25 a.m. William Greenlee (CIIT, RTP, NC)
Application of Functional Genomics to Toxicology Research

8:30 – 8:55 a.m. Stephen Naylor (MIT and BU, Boston MA)
Systems Biology

9:00 – 9:25 a.m. David Walt (Tufts University, Boston, MA)
Nanotechnology

9:30 – 9:55 a.m. Kenneth Paigen (Jackson Labs, Bar Harbor, ME)
Inbred Mice as a Resource in Toxicology

10:00 – 10:30 a.m. Coffee Break

10:30 – 11:45 p.m. **Panel Discussion**
Emerging Issues and Technology Development in Toxicogenomics
Chair: William A. Suk, NIEHS

11:45 – 12:00 p.m. Concluding Remarks: William Suk, NIEHS

12:00 – 1:30 p.m. Lunch (@ the Friday Center, provided with registration)

2:00 p.m. - Participants depart