



Agenda

Peer Review of Draft NTP Approach to Genomic Dose-Response Modeling Expert Panel Meeting

Rodbell Auditorium, Rall Building
National Institute of Environmental Health Sciences
Research Triangle Park, NC
October 23–25, 2017

Day 1: Monday, October 23

Time	Agenda Item	Presenter
8:30 a.m.	Welcome and introductions	Dr. Carole Yauk (Panel Chair) <i>Health Canada</i>
	Conflict of interest statement	Dr. Mary Wolfe, DFO <i>NIH/NIEHS/DNTP</i>
8:45 a.m.	Meeting format	Dr. Yauk
9:00 a.m.	Background on NTP's proposed approach to genomic dose-response modeling and panel charge	Dr. Scott Auerbach <i>NIH/NIEHS/DNTP</i>
9:15 a.m.	Public comment	
Session 1: Approaches to Genomic Dose-Response Analysis		
9:45 a.m.	Genomic Dose Response: The Big Picture	Dr. Russell Thomas <i>U.S. EPA/ORD/NCCT</i>
10:15 a.m.	Overview of the NC State approach to genomic dose-response modeling	Dr. Fred Wright <i>NC State University</i>
10:45 a.m.	Break	
11:00 a.m.	Overview of the US Army approach to genomic dose-response modeling	Dr. Lyle Burgoon <i>U.S. Army</i>
11:30 a.m.	An automated method to identify dose-responsive genes and quantitate points of departure (PODs) from transcriptomic data	Dr. David Gerhold <i>NIH/NCATS</i>
12:00 p.m.	Lunch	
12:45 p.m.	Overview of NTP's proposed approach to genomic dose-response modeling	Dr. Auerbach
1:00 p.m.	Public comment (ad hoc)	
1:15 p.m.	Panel discussion of strengths and weaknesses of the different approaches and comparison to NTP's approach	Dr. Yauk
2:15 p.m.	Break	



Session 2: Filtering of Measured Features

2:30 p.m.	Some pertinent findings from MAQC related to reproducibility of gene expression	Dr. Pierre Bushel <i>NIH/NIEHS/Biostatistics & Computational Biology Branch</i>
3:00 p.m.	NTP's proposed approach to filtering unresponsive genes	Dr. Auerbach
3:15 p.m.	Public comment (ad hoc)	
3:30 p.m.	Panel discussion on filtering of unresponsive genes	Dr. Yauk
4:30 p.m.	Recap Day 1	Dr. Yauk
4:45 p.m.	Adjourn	



Day 2: Tuesday, October 24

Time	Agenda Item	Presenter
8:30 a.m.	Welcome and introductions	Dr. Carole Yauk (Panel Chair) <i>Health Canada</i>
	Conflict of interest statement	Dr. Mary Wolfe, DFO <i>NIH/NIEHS/DNTP</i>
Session 3: Fitting Features to Dose-Response Models		
8:45 a.m.	Interpreting the results of EPA dose-response models	Dr. Jeff Gift <i>U.S. EPA/ORD/NCEA</i>
9:15 a.m.	Fitting curves using non-parametric approaches	Dr. Keith Shockley <i>NIH/NIEHS/Biostatistics & Computational Biology Branch</i>
9:45 a.m.	NTP's proposed approach to curve fitting	Dr. Scott Auerbach <i>NIH/NIEHS/DNTP</i>
10:00 a.m.	Public comment (ad hoc)	
10:15 a.m.	Break	
10:30 a.m.	Panel discussion on fitting curves and determining potency	Dr. Yauk
Session 4: Gene Set-Level Potencies		
11:30 a.m.	When is a pathway changed?	Dr. Sorin Draghici <i>Wayne State University</i>
12:00 p.m.	Deriving points of departure using toxicogenomics for chemical risk assessment	Mr. Andrew Williams <i>Health Canada</i>
12:30 p.m.	Lunch*	
1:30 p.m.	NTP's proposed approach to estimating gene set-level potency	Dr. Auerbach
1:45 p.m.	Public comment (ad hoc)	
2:00 p.m.	Panel discussion on approaches to pathway-/gene set-level potency values	Dr. Yauk
3:00 p.m.	Break	

*A Lunch and Learn session on BMDExpress is available during lunch in the Rall Lake View Conference Room.



Session 5: Study Design

3:15 p.m.	Improving study designs for quantifying biological potency with genomics data	Dr. Woodrow Setzer <i>U.S. EPA/ORD/NCCT</i>
3:45 p.m.	NTP's proposed approach to study design for genomic dose-response analysis	Dr. Auerbach
4:00 p.m.	Panel discussion on study design	Dr. Yauk
4:30 p.m.	Public comment (ad hoc)	
4:45 p.m.	Recap Day 2	Dr. Yauk
5:00 p.m.	Adjourn	



Day 3: Wednesday, October 25

Time	Agenda Item	Presenter
8:30 a.m.	Welcome and introductions	Dr. Carole Yauk (Panel Chair) <i>Health Canada</i>
	Conflict of interest statement	Dr. Mary Wolfe, DFO <i>NIH/NIEHS/DNTP</i>
Session 6: Biological Interpretation		
8:45 a.m.	Using the AOP framework to aid in gene set identification	Dr. Stephen Edwards <i>U.S. EPA/ORD/NHEERL</i>
9:15 a.m.	Interpreting dose-dependent biological responsiveness through the lens of gene co-expression networks	Dr. James Stevens <i>Eli Lilly</i>
9:45 a.m.	NTP's proposed approach to biological interpretation of genomic dose-response results	Dr. Auerbach
10:00 a.m.	Break	
10:15 a.m.	Public comment (ad hoc)	
10:30 a.m.	Panel discussion on biological interpretations	Dr. Yauk
11:00 a.m.	Panel discussion on development of recommendations on the proposed NTP approach	Dr. Yauk
12:30 p.m.	Next steps	Dr. Auerbach
12:45 p.m.	Adjourn	