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FQPA Science Review Board Biographical Sketches
July 23, 2010 SAP Meeting

1) Dr. Jane Alcorn is an Associate Professor of Pharmacy and Pharmacy Graduate Chair in the College of Pharmacy and Nutrition at the University of Saskatchewan. She received her M.Sc. from the University of Saskatchewan and her Ph.D. from the University of Kentucky. Dr. Alcorn's research interests encompass two principal areas. The first area involves investigations into the determinants of neonatal exposure risk when breastfeeding mothers require medications. Her laboratory focuses on the developmental maturation of drug elimination mechanisms and the elaboration of predictive models of drug elimination for *a priori* assessments of drug elimination capacity in the neonate. Research in the laboratory has moved towards investigations into drug-nutrient transporter interactions in the nursing mother-neonate dyad and the consequent outcomes of such interactions on breast milk nutrient composition and biochemical/ physiological development of the nursing neonate. Her second area of research involves investigations into the health benefits of flaxseed lignans and their underlying mechanism(s) of action. Specifically, this laboratory evaluates lignan pharmacokinetics and conducts investigations into the pharmacological mechanisms through which lignans affect cholesterol and glucose homeostasis. Her research utilizes a variety of pharmaceutical analysis, molecular biology and biochemical methods as well as cell culture systems and animal models in attempts to generate new understandings in these areas of investigation. She teaches Basic and Clinical Pharmacokinetics and Xenobiotic Metabolism in both the undergraduate and graduate Pharmacy programs. She received the 2007 Distinguished Researcher Award from the University of Saskatchewan. She has served as Chair of the Animal Research Ethics Board of the University of Saskatchewan and is a member of several professional societies including American Association of Pharmaceutical Scientists, International Society for the Study of Xenobiotics, Society of Toxicology of Canada, and Association of Faculties of Pharmacy of Canada. She is a member of CIHR Consortium on Drug and Environmental Safety.

2) Dr. Wendy Heiger-Bernays is an Associate Professor in the Department of Environmental Health at the Boston University School of Public Health where she is responsible for teaching graduate-level courses in toxicology and risk assessment and conducts research in these fields. Dr. Heiger-Bernays has a Ph.D. in Biochemistry from the University of Nebraska Medical Center and completed post-doctoral work at Cold Spring Harbor Laboratory and in the Program in Toxicology at the Massachusetts Institute of Technology. Her work began in molecular toxicology, focusing on genes responsible for detoxification of environmental chemicals and has evolved into issues relevant to regulatory toxicology. In the past few years, she has focused on the efficacy of exposure models for predicting human exposures to pesticides (in compliance with the Food Quality Protection Act (FQPA)) and the evaluation of approaches used to develop health-protective risk based concentrations of chemicals in the environment. Along with one of her doctoral students and a colleague at another academic institution, she has begun to gather data necessary for development of a Physiologically-Based Pharmacokinetic (PBPK) model for the organophosphate pesticide, chlorpyrifos. Dr. Heiger-Bernays has served on the USEPA Candidate Contaminant List Workgroup and as an *ad hoc* member of the Federal Fungicide, Insecticide, and Rodenticide Act (FIFRA) Scientific Advisory Panel. She is also a member of the Massachusetts Department of Environmental Protection Waste Site Cleanup Program Advisory and Safe Drinking Water

Act Assessment Committees. She has served as a consultant to many community groups on environmental health issues related to toxicology and risk assessment.

3) Dr. John F. Bowyer is a research pharmacologist with the Food and Drug Administration. He has been active in research related to the neurotoxicology of substituted amphetamines (*e.g.*, amphetamine, methamphetamine, ecstasy) and the role of catecholaminergic systems in neurotoxicity for over 20 years. His recent studies have focused on the characterization of the various aspects of the neurotoxicity produced by substituted amphetamines, which have previously been unknown or ignored by applying the techniques of immunohistochemistry, neurochemistry and gene expression to understand the mechanisms behind these neurotoxicities. For example, Dr. Bowyer applied the techniques of cDNA array technology (molecular biology) to determine how neurotoxic insults alter gene expression to find relevant biomarkers of neurotoxic insult and mechanisms involved in repair and adaptation to damage.

4) Dr. Abby Collier is an Assistant Professor of Pharmacology (tenure track) at the University of Hawaii's John A. Burns School of Medicine. She received both B.Sc., and Ph.D. degrees in Pharmacology from the University of Auckland Medical School (New Zealand) and performed Post-Doctoral Training in oxidative stress, bioreductive drugs and cancer under Dr. Chris Pritsos at the University of Nevada, Reno. Dr. Collier serves as the Mini-Reviews Editor for *Chemico-Biological Interactions* and as an *ad hoc* and formal reviewer for *Pharmacology, Toxicology, Pediatric Medicine* and *Obstetrics and Gynecology* journals. She maintains a strong extramurally funded research program in drug metabolism and pharmacokinetic research with particular emphasis on developmental pharmacology (and toxicity) in pregnancy and pediatrics. In addition to teaching Clinical and Basic Pharmacology to medical and graduate Students in the United States, Dr. Collier teaches an annual course to Prescribing Pharmacy Students at Misr International University (Cairo, Egypt) and has functional and pending collaborations with scientists and academics in Egypt, NAMRU, Scotland, and New Zealand.

5) Dr. Marion Ehrich is a Professor at Virginia-Maryland Regional College of Veterinary Medicine in Blacksburg, VA. Dr. Ehrich has a B.S. in pharmacy from South Dakota State University, a M.S. in pharmacology/toxicology from the University of Chicago, and a Ph.D. in pharmacology/toxicology from the University of Connecticut at Storrs. She teaches pharmacology and toxicology to veterinary and graduate students and has responsibilities in the Veterinary Medical Teaching Hospital Pharmacy and in the Toxicology Diagnostic Laboratory. She has been teaching at VMRCVM since 1980, the year in which she became a member of the Society of Toxicology and a Diplomate of the American Board of Toxicology. She was elected a fellow of the Academy of Toxicological Sciences in 1999. Dr. Ehrich's primary research activities are associated with the comparative neurotoxicities of antiesterase pesticides, with both *in vivo* and *in vitro* models used for study. Dr. Ehrich was the 2003-2004 President of the Society of Toxicology and their 2010 Merit Awardee. She served as Treasurer for the Board of Directors of the American Board of Toxicology (1985-89), Secretary for the Society of Toxicology (1992-94), and treasurer for the Academy of Toxicological Sciences (2006-09). She has also chaired SOT's Education Committee (1990-92, Regulatory Affairs and Legislative Action Committee (1997-98), and Neurotoxicology Specialty Section (2008-2009), as well as the Toxicology Education Foundation (2000-2001). In addition, she served on the Executive Board of the Council for Scientific Society Presidents. She currently serves on the National Research Council's Committee on

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Toxicology and editorial boards for the *International Journal of Toxicology, the Journal of Applied Toxicology*, and *NeuroToxicology*.

6) Dr. Penelope Fenner-Crisp is a private consultant. Her areas of expertise include human health and environmental risk assessment, toxicology, science policy and its integration into regulatory decision-making and familiarity with environmental regulatory programs and practices, all of which are a continuation of her activities and responsibilities during her 22 years at USEPA where she served as a staff toxicologist in the Office of Drinking Water followed by senior management positions in the Office of Pollution Prevention and Toxics and the Office of Pesticide Programs. She is the former Executive Director of the Risk Science Institute of the International Life Sciences Institute (ILSI), a global, non-profit, scientific organization dedicated to seeking scientific solutions to important public health issues related to food and nutrition, food safety, water quality, chemical safety and environmental health and assessment of human health and environmental risk.

7) Dr. Mari S. Golub is a staff toxicologist with the California Environmental Protection Agency (Cal/EPA) and Adjunct Professor of Environmental Toxicology at the University of California Davis (UCDavis). She is a diplomat of the American Board of Toxicology. At Cal/EPA, she specializes in risk assessment for reproductive and developmental toxicants and at UCDavis, she conducts NIH- and USEPA-supported research in the area of developmental neurobehavioral toxicology. She has served on a study section for the National Institutes of Health (NIH), as a member and chair of NTP review panels under the Center for Environment Research on Human Reproduction, on USEPA panels on Framework for Risk Assessment, Workshop on Low Dose Effects in Endocrine Disruption, and on a WHO/IPCS panel on Health Effects of Aluminum. She has published over 150 papers in the peer-reviewed literature and served as editor of two books.

8) Dr. Gaylia Jean Harry is Head of the Neurotoxicology Group in the Laboratory of Molecular Toxicology at the National Institute of Environmental Health Sciences, National Institutes of Health (NIH) in Research Triangle Park, North Carolina. She has adjunct appointments in the Toxicology Programs of both University of North Carolina/Chapel Hill and Duke University. Her research interests include developmental neurotoxicology, neuroimmunology, and assessing injury and repair responses of the nervous system. She has served on numerous national and international committees and working groups with reference to neurotoxicology including the World Health Organization, USEPA, International Life Sciences Institute, as well as state and local environmental agencies. She has served as an *ad hoc* member of numerous EPA Scientific Review panels.

9) Dr. Dale Hattis is a Research Professor with the George Perkins Marsh Institute at Clark University. He holds a Ph.D. in Genetics from Stanford University and a B.A. in biochemistry from the University of California at Berkeley. For the past three decades, he has been engaged in the development and application of methodology to assess the health, ecological, and economic impacts of regulatory actions. His work has focused on approaches to incorporate interindividual variability data and quantitative mechanistic information into risk assessments for both cancer and non-cancer endpoints. Recent past research has explored age-related differences in sensitivity to carcinogenesis and other effects, a taxonomy of different non-mutagenic modes of action for carcinogenesis with likely differential implications for age-related sensitivity, and PBPK modeling of acrylamide dose in rats and humans, and mechanism-based dose response modeling of carcinogenic effects from ionizing

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radiation. Current efforts are using PBPK modeling to better assess dose response relationships for human birth weight changes and developmental delays associated with exposure to the insecticide chlorpyrifos during pregnancy. He is a leader in efforts to replace the current system of uncertainty factors for non-cancer effects with distributions based on empirical observations. He has recently been a member of the USEPA's Clean Air Science Advisory Committee panel reviewing the Agency's efforts to reassess the National Ambient Air Quality Criteria for nitrogen oxides and sulfur oxides, and for several years, he has served as an *ad hoc* member of the FIFRA Scientific Advisory Panel. He has also been a member of the Environmental Health Committee of the USEPA Science Advisory Board. For 2007, he was the Chair of the Dose Response Specialty Group of the Society for Risk Analysis. He has also served as a member of the National Research Council Committee on Estimating the Health-Risk-Reduction Benefits of Proposed Air Pollution Regulations. He has been a councilor and is a Fellow of the Society for Risk Analysis, and serves on the editorial board of its journal, *Risk Analysis*.

10) Dr. Sastry Isukapalli is an Assistant Professor in the Department of Environmental and Occupational Medicine at the University of Medicine and Dentistry, New Jersey Robert Wood Johnson Medical School. He received an M.S. and a Ph.D. in Chemical and Biochemical Engineering from Rutgers University, and a B.Tech. in Chemical Engineering from the Indian Institute of Technology, Madras. His primary research areas are Exposure Modeling, Sensitivity and Uncertainty Analysis, and Physiologically-Based Pharmacokinetic (PBPK) Modeling. Dr. Isukapalli has over fifteen years of experience in the modeling and computational implementation of environmental and biological systems with a focus on modeling population exposures to multimedia environmental pollutants, and chemical/biological warfare agents. He has also developed novel, computationally efficient uncertainty analysis techniques that have been applied in multiple disciplines. Dr. Isukapalli has developed the Modeling ENvironment for TOtal Risk studies for Emergency Events (MENTOR-EE) for mechanistically consistent source-to-dose modeling. He has also developed novel, computationally efficient uncertainty analysis techniques that have been applied in multiple disciplines. He has also developed algorithms and tools for assessing risks to mixtures of chemicals, for studying heterogeneities within various organs. He also has experience in the software industry where he developed tools for efficient data mining and for fusing speech recognition with visual inputs. He has extended the USEPA SHEDS modeling system by linking SHEDS-based models with Physiologically-Based Pharmacokinetic (PBPK) components for estimating target tissue doses, as well as to consistently simulate simultaneous exposures to multiple, co-occurring pollutants. He has also linked the USEPA's multimedia modeling system, FRAMES-3MRA, with MENTOR for estimating site-specific multimedia exposures. His current research focus is on development of exposure modeling systems for informing emergency event analysis, computational fluid dynamics modeling for improved exposure assessments, and integrated toxicokinetic and toxicodynamic modeling.

11) Dr. Dallas Johnson is a Professor Emeritus in the Department of Statistics at Kansas State University. He received his B.S. degree in Mathematics Education at Kearney State College, a M.A.T. degree in Mathematics from Colorado State University, a M.S. degree in Mathematics from Western Michigan University, and a Ph.D. degree in Statistics from Colorado State University. He is the co-author (with George A. Milliken) of four books: *Analysis of Messy Data, Vol. I - Designed Experiments, Analysis of Messy Data, Vol. II - Nonreplicated Experiments, Analysis of Messy Data, Vol. III - Analysis of Covariance* and

Analysis of Messy Data, Vol. I - Designed Experiments 2nd Edition. He is also an author of *Applied Multivariate Methods for Data Analysts*. He has published extensively in the areas of linear models, multiplicative interaction models, design of experiments, and in techniques for analyzing messy data. He has also been an active presenter of short courses on Analysis of Messy Data and Applied Multivariate Methods, and he has been a statistical consultant for nearly 40 years. Dr. Johnson is a member and Fellow of the American Statistical Association and a recipient of a 2004 Founders Award from the American Statistical Association. In 1997, he received the Don Owen Award and in 2005, he received the Commerce Bank Distinguished Graduate Faculty Member Award. He is the founding editor of the *Journal of Agricultural, Biological, and Environmental Statistics*, a journal jointly published by the American Statistical Association and the International Biometric Society.

12) Dr. Teresa Leavens is a Research Assistant Professor in the Department of Pathobiology and Population Health at North Carolina State University. She received her B.S. in Chemical Engineering from North Carolina State University in 1990 followed by a Ph. D. in Toxicology from the University of North Carolina at Chapel Hill in 1996. The focus of Dr. Leavens' research is the pharmacokinetics of environmental contaminants and drugs with a primary focus on kinetic modeling, particularly physiologically based pharmacokinetic modeling. She has been involved with and published articles on both experimental and computational research in animals and humans for a wide range of compounds, including persistent environmental compounds, water contaminants, air contaminants, metals, nanoparticles, and veterinary drugs used in food-production animals. She has taught courses on pharmacokinetics and modeling and has provided technical expertise as a reviewer for the ATSDR Toxicological Profile for Styrene, as a member of an ILSI working group on establishing physiological parameters for early life stages, and as a consultant reviewing USEPA's PBPK model for methanol to be used for establishing reference doses and concentrations. Dr. Leavens is active in both the national and local chapters the Society of Toxicology national, and has served as the Councilor in the Risk Assessment Specialty Section and is currently the newsletter editor for the local chapter.

13) Dr. Nu-may Ruby Reed is a staff toxicologist with the California Environmental Protection Agency's (Cal/EPA) Department of Pesticide Regulation (DPR) where she is the lead scientist on risk assessment issues in the Health Assessment Section of the Medical Toxicology Branch. Her research interests are in evaluating health risks and developing risk assessment guidelines for pesticides. She has been on several Cal/EPA and DPR working groups that initiate, research, and revise risk assessment guidelines and policies, and represented her department in task forces on community concerns and emergency response, risk management guidance, and public education. Dr. Reed serves as an *ad hoc* member of the USEPA FIFRA Scientific Advisory Panel and as a member to committees of the National Academies' National Research Council.

14) Dr. Sonya K. Sobrian is Associate Professor of Pharmacology at the Howard University College of Medicine in Washington DC. Her current research focus is the life-span consequences of prenatal exposure to cocaine and/or nicotine, neurodevelopmental animal models of psychiatric diseases (*i.e.*, depression and autism), and a new interest in acupuncture/exercise and drug addiction. She was awarded an AAAS Congressional Science and Engineering Fellowship and spent one year on Capitol Hill. She is a member of several scientific societies devoted to understanding the behavioral and developmental alterations that result from genetic and environmental perturbations of the nervous system during the

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pre- and peri-natal period. She served as President of the Neurobehavioral Teratology Society from 2000-2001. She is a member of the NBTS Council and is their representative to the AAALAC, International, where she serves as Vice-Chair of the Board of Trustees, and is on the Editorial Advisory Board of NT&T.

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