CROSS-ORD POST-DOCTORAL FELLOWSHIP PROGRAM

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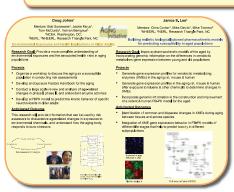
USEPA Office of Research and Development, National Exposure Research Laboratory, RTP, NC

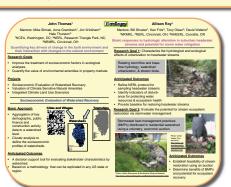
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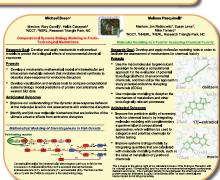
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PROGRAM OVERVIEW

he EPA's Office of Research and Development (ORD) is comprised of several different laboratories and centers which share the common goal of providing research that can be applied to better protect the environment and human health. Partnerships and collaboration between labs and centers serve as an effective mechanism for the exchange of ideas and the understanding of research perspectives between related scientific disciplines. In the summer of 2005, EPA-ORD initiated a new cross-ORD post-doctoral fellowship program, which is designed to promote greater collaboration between ORD's labs and centers. After a nation-wide search, the cross-ORD post-doctoral fellows were selected in both the human health and ecosystems research areas and assigned primary, secondary, and tertiary mentors based upon the interdisciplinary nature of their specific research focus. Each cross-ORD post-doctoral fellow developed a detailed research plan jointly with his or her mentors. These research plans outlined collaborative research projects to be conducted during the four year fellowship, along with the anticipated impact that each project would have on supporting the mission of the EPA. Research topics of the nine cross-ORD fellows include: 1) Computational systems biology modeling to predict toxicological mechanisms (Michael Breen), 2) Characterization of environmental exposures and associated health risks in aging populations (Doug Johns), 3) Applications of exposure analysis tools in environmental epidemiology (Mary Johnson), 4) Building realistic biologicallybased pharmacokinetic models for predicting susceptibility in aging populations (Janice Lee), 5), Molecular modeling of the interaction between environmental chemicals and targets for chemical toxicity (Melissa Pasquinelli), 6) Predictive ecological niche modeling in aquatic systems (Kristina McNyset), 7) Quantifying key drivers of change in the built environment and their interaction with changes in the natural environment (Johns Thomas), 8) Biotic responses to hydrologic alteration in suburban headwater streams and potential for storm water mitigation (Allison Roy), and 9) Effectiveness of best management practices in mitigating storm water runoff and water quality (Yu Zhang). In addition to providing excellent interdisciplinary scientific training for the post-doctoral fellows, it is anticipated that the findings of each of these projects will result in the publication of several peer-reviewed journal articles. EPA envisions that this program will foster further collaboration between the different ORD labs and centers, thereby leading to more focused research strategies and a better understanding of the relationships between environmental pollution, exposure, and human and ecological health.

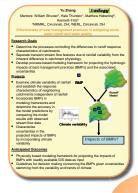












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