Meet the Presenters... Michael K. Schultz, PhD

Dr. Schultz is an Associate Professor in the Department of Radiology at the University of Iowa, with secondary appointments in the Free Radical and Radiation Biology; Human Toxicology; and Medical Scientist Training Programs. Dr Schultz also co-directs the Radiochemistry Program in the Department of Chemistry. His research interests in environmental radioactivity focus on naturally occurring radioactive material (NORM) associated with liquid and solid waste resulting from unconventional drilling and hydraulic fracturing. This year, Dr. Schultz has been invited to speak on this topic at the American Chemical Society National Meeting, the National Environmental Monitoring Conference, and ASTM International. A recent article (Nelson et al., Env Sci Techn Let, March 11, 2014) was selected for an ACS Editor's Choice Award and the article, first authored by PhD graduate student and Presidential Fellow Andrew Nelson, is featured on the cover of the journal. Funded by the University



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of Iowa's Center for Health Effects of Environmental Contaminants, Dr. Schultz's laboratory (with collaborator Tori Forbes, Department of Chemistry) has begun field studies on the environmental geochemical behavior of NORM in natural surface water systems impacted by unconventional drilling and hydraulic fracturing operations and waste treatment facilities. Mike earned his PhD in Oceanography at Florida State University, studying the environmental radiochemistry of anthropogenic and natural radionuclides in terrestrial and aquatic systems.

Andy Nelson, MS



Andy Nelson earned a B.A. in biochemistry from the University of Colorado in 2009 and an M.S. in environmental engineering from the Colorado School of Mines in 2010. As a research assistant in the Department of Molecular, Cellular, and Developmental Biology (MCDB) at the University of Colorado, Mr. Nelson studied free radical signaling mechanisms relevant in aging and tumor progression. In 2012, Andy was awarded the University of Iowa Presidential Graduate Fellowship to pursue a PhD in the Interdisciplinary Human Toxicology Program. He is currently a doctoral candidate under the mentorship of Dr. Schultz, with whom he studies radioactivity associated with unconventional drilling (hydraulic fracturing and horizontal drilling) of shale gas. Much of Mr. Nelson's work to date has focused on developing methods that are suitable for monitoring levels of naturally occurring radioactive materials (NORM) present in wastes generated by unconventional natural gas exploration. Andy's research has helped develop partitioning models that will be used in the development of sound waste management strategies for solid and liquid wastes generated by unconventional drilling.