**OCCI Lecture**



**Speaker**: **Prof. Paul Turner, Maryland Institute for Applied Environmental Health, University of Maryland**

**Title**: **Exposure biomarker profiles for mycotoxins in Europe and Africa**

**Date, Time and Place**: **June 21, 2016, 1:30 pm SC 103**

**Abstract:** Agricultural products, especially cereals and some nuts are frequently contaminated with secondary metabolites of fungi, known as mycotoxins. While hundreds of mycotoxins exist only a handful are considered of significant public health concern, including the aflatoxins, fumonisins and deoxynivalenol. These mycotoxins are produced in the field during crop growth, and for the aflatoxins, prolonged crop storage can additionally allow accumulation of the toxin. In animals the diverse and complex toxicology of these mycotoxin families is clearly demonstrated; but with the exception of the aflatoxins the epidemiological data is modest or non-existent for other mycotoxins. My research approach has been the development and or use of exposure biomarkers to inform exposure estimates. In recent years I have been involved in developing such biomarker assays to better inform epidemiological studies, and here I will present some of these tools and data. In particular I will present urinary deoxynivalenol biomarker data that compares recent observations from Europe and Africa, and then some of the fumonisin and aflatoxin data, mainly from Africa. In addition I will demonstrate how the established aflatoxin biomarkers have been used to reveal strong associations between aflatoxin exposure and stunting in African infants. Finally I will highlight some useful approaches to restrict aflatoxin exposure in the highest risk settings.



