

46 **Introduction**

47 The Office of Research and Development (ORD) at the U.S. Environmental Protection  
48 Agency (U.S. EPA) sponsored a symposium on perfluoroalkyl acids (PFAAs) on June 8-10, 2010  
49 at the Research Triangle Park, NC. The goals of the symposium were to share and review the latest  
50 research on PFAAs, to address the issues that are critical to support the health risk assessment of  
51 these chemicals, and to encourage interactions among participants that will promote future  
52 research collaboration. There were five main themes for the platform sessions: (i) PFAAs in the  
53 environment; (ii) PFAA exposure; (iii) PFAA epidemiology; (iv) PFAA toxicities; and (v) nuclear  
54 receptor involvement in PFAA actions. This report summarizes the highlights of the meeting.

55 **1. PFAAs in the Environment**

56 PFAAs have been found worldwide and are a global issue. Many PFAAs are persistent in  
57 the environment, are widely distributed in humans and wildlife, have long half-lives in humans,  
58 and can cause adverse effects in laboratory animals, including cancer, developmental,  
59 reproductive, and systemic toxicity. The presentations at the symposium discussed the latest  
60 studies on these various topics.

61 Dr. Scott Mabury from University of Toronto reported on the newly recognized  
62 perfluorophosphonic acids (PFPAs) that were discovered in human blood, surface waters, and  
63 wastewater treatment plant effluent, and which do not have any known precursors [1]. Such  
64 findings lent support to previous concerns and a decision made by the U.S. EPA to remove these  
65 chemicals from the “inert ingredient list”[2]. These findings would indicate the need for additional  
66 research to evaluate the potential adverse effects of PFPAs, in view of those already associated  
67 with perfluoroalkyl carboxylic acids (PFCAs) and perfluoroalkyl sulfonates (PFASs), compounds  
68 that share similar chemical structures. Regarding the exposure issues of PFCAs, Dr. Mabury