

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