January 28, 2015
Environmental Stewardship Concepts

Memo: PCBs Literature Review 2013-2015

Introduction

Polychlorinated biphenyls (PCBs) are industrial chemicals that were manufactured under the trade name Aroclor for use in transformers, electrical equipment, motor oils, plastics, paint, and numerous other applications. Although banned thirty-five years ago, these contaminants are still widely detected in humans and the environment.

PCB's primarily accumulate in soils and sediment as a result of spills, leaking toxic landfills, or contamination from products containing the chemicals. While PCBs do pollute the air via volatization and dispersion, the contaminants are most problematic in soils and sediments where they adhere to organics and are very slow to degrade. The primary route of exposure for humans and wildlife is through the ingestion of contaminated dietary items. PCBs are highly lipophilic and dissolve in fatty tissues and bioaccumulate over an organism's lifespan. This property is important to both human and ecological toxicology because bioaccumulation leads to biomagnification, the process by which persistent toxins increase in concentration upward through the food chain (Faroon et al., 2003). As a result, the highest concentrations of PCBs are often observed in top predators with long life-spans and high fat deposits such as dolphins, whales, and humans.

In the United States, PCBs are regulated by several different agencies and regulatory frameworks. The Environmental Protection Agency (EPA) requires drinking water to have a maximum contaminant level (MCL) of 0.5 parts per billion (EPA, 1996); fish consumption advisory numbers are also maintained in contaminated waters. States are increasingly being urged by EPA to develop PCB total maximum daily loads (TMDLs)- goals for reducing PCB concentrations in affected waterways. Disposal and remediation of PCBs is regulated under the Toxic Substances Control Act (TSCA) (EPA 2005). Finally, the Federal Drug and Food Administration (FDA) publishes tolerances for PCB concentrations and residues in foods such as milk, eggs, and poultry and enforces bans on the use of the compound in product packaging.

Brief Review of Human and Ecological Toxicology

PCBs are a broad category of compounds consisting of 209 individual congeners differentiated by the position and number of chlorine atoms that make up the molecule (Lauby-Secretan et al. 2013). Part of the complexity of studying PCB toxicity is recognizing that the chemical, physiological, and ecological effects of these distinct congeners can vary. PCBs are classified as endocrine disrupters because of their ability to mimic hormones and activate, deactivate, and even damage receptors that modulate and control cellular and body systems (Lauby-Secretan et al. 2013). The specific receptors affected varies based on the congener or mixture of congeners involved and these multiple mechanisms of action result in a wide range of possible human and environmental effects. The following section provides an overview of toxicological effects of PCBs with the understanding that these general conclusions do not apply to all congeners.

Carcinogenic Effects

Increasingly the consensus points towards a strong link between cancer in humans and wildlife exposed to PCBs. In 2013 the International Agency for Research on Cancer (IARC) upgraded PCBs from "probable carcinogen to humans" to "carcinogenic to humans". This decision was made based on 70 epidemiological studies which showed elevated risks of melanoma in both individuals with occupational exposure and the general public; increased risks of breast cancer and non-Hodgkin's lymphoma were also noted (Lauby-Secretan et al. 2013). This report aligns and strengthens the position of EPA's 1996 report which concluded that PCBs are likely carcinogenic with evidence of increased risk of thyroid, liver, and gastrointestinal cancer from PCB exposure(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA 1996)(EPA, 1996)(EPA, 1996).

Non-Carcinogenic Effects

PCBS have been shown to affect most of the major body systems including the respiratory, cardiovascular, gastrointestinal, renal, endocrine, and musculoskeletal (Faroon & Olson, 2000). PCBs can also affect the reproductive system; studies on rats have documented decreased litter sizes and body weight, as well as reduced sperm count and conception rates (Faroon et al. 2003). In both humans and rats, neurological and developmental deficits have been observed in children with high *in-utero* exposure (EPA, 1996). Children exposed to PCB's at an early age have been reported to exhibit weaker reflexes, reduced memory, and a higher likelihood of attention deficit issues (Faroon et al, 2003). PCBs have also been linked to immunological effects that range from a weakening of the immune system to increases in inflammatory disorders such as tonsillitis and bronchitis (Faroon et al, 2003).

The toxicology of PCBs continues to be an area of extensive international research and each year brings numerous new studies on the contaminant.

2013-2015 Literature Search

The current literature search is an update of one conducted in August-September 2014 (Appendix B) that covered PCBs in the literature from 2013-2014 and one conducted in August-September 2013 (Appendix C) that covered PCBs in the literature from 2002 to 2013. The most recent review of the literature published in 2014 and 2015 on PCB toxicology returned over 100 relevant publications. These publications are listed in Appendix A for the reader's convenience. While it is not within the scope of this memo to address them all, a few key studies are discussed in brief below.

Carcinogenic Effects
As stated above, IARC's 2013 classification of PCBs as carcinogenic is significant and several recent studies support this classification. Dong et al. (2014) found some PCBs are both cytotoxic and genotoxic in liver cells and increased DNA and chromosome breaks were observed in cells exposed to this congener. Ruder, Hein, Hopf, & Waters (2014) examined a cohort of 24,865 workers exposed to PCBs at manufacturing plants in the U.S. and found elevated overall mortality and an increased risk of melanoma and stomach, prostate, and nervous system cancers. Similar studies conducted by Li et al., (2013) and Onozuka, Hirata, and Furue (2014) examined workplace exposure cohorts and found decreased net survival rates primarily caused by increased cancer rates. PCB exposure was also linked to chemoresistance of liver cancer, resulting in a poorer prognosis in patients with the disease (An et al., 2014).

Non-carcinogenic Effects
Several new studies have addressed the link between PCBs and neurological effects. Gaum et al. (2014) studied individuals with work-related exposure to PCBs and found a significant relationship between PCB burden and increased depression and psychosomatic symptoms. Wigestrand, Stenberg, Walaas, Fonnum, & Andersson (2013) found PCBs can inhibit uptake of dopamine in the same manner as cocaine; the researchers suggest this mechanism is a likely factor in PCB neurotoxicity and behavioral effects such as depression.

The effects of PCB's on human development have been well-documented but several new studies provide an international scope to the literature. A 2014 study of toddlers in Japan found a relationship between prenatal exposure of PCB congeners in cord blood and decreased IQ (Tatsuta et al., 2014). This is significant because prenatal exposure continues to be a significant exposure pathway in the U.S.; Nanes et al. (2014) surveyed 43 human placentas from several U.S. locations and found PCBs in all specimens. Dallaire et al. (2014) studied a cohort of Inuit children and found a correlation between concentrations of PCB 153 in blood and lower weight, shorter height, and smaller head circumference across a range of ages and suggest PCBs are disrupting thyroid function. Decreased motor coordination was also positively correlated with PCB exposure; a study of 97 Dutch infant-mother pairs found high PCB 107 and 187 blood concentrations were associated with decreased motor coordination (Berghuis, Soechitram, Hitzert, Sauer, & Bos, 2013).

Finally, a 2014 paper corroborates previous epidemiological studies that suggested a link between exposure to PCBs and auditory impairment in children and adults; data surveyed from 1999-2004 indicated a positive relationship between serum PCB levels and hearing impairment in U.S. adults (Min, Kim, & Min, 2014).

Environmental and Ecological Effects

PCBs are potent contaminants in the environment as well; many of the same effects seen in humans have been documented in wildlife. However, international bans and cleanup efforts have resulted in a reduction of PCB levels in soils and sediments in some cases. Everaert et al. (2014) report two to threefold reduction in PCB concentrations between 1991 and 2010 in an open water ecosystem near Belgium; no significant decrease was observed in an industrial estuary receiving no remediation. As Bruckman et al. (2013) indicate in their survey of PCB soil depositions in Germany, PCB congeners have long half-lives and can be retained in sediment for decades unless the PCBs are cleaned up.

Remediation of PCB contamination has been shown to be effective in many cases. A 2013 study by Ficko, Luttmer, Zeeb & Reimer compared PCB concentrations in vegetation and field mice on an abandoned Air Force station before and after PCB remediation work was conducted; the study found vegetation concentrations were four times lower while concentrations in deer mice were three times lower.

Several new studies add to the well-established ecotoxicological profile of PCBs. A 2013 study of six arctic birds found that migration and opportunistic feeding increased PCB burden equivalent to one full increase in trophic level (Baert, Janssen, Borgå, & De Laender, 2013). Evidence of these effects on migratory birds reinforces the international scope of PCB contamination. Persson & Magnusson (2014) surveyed 101 wild mink and found that PCBs alter the size and shape of mink reproductive organs, likely leading to reproductive effects. Similarly, Carpenter et al. (2014) found high PCB concentrations in Illinois river otters and concluded the species is at risk of PCB toxicity.

Marine mammals such as whales and dolphins have been shown to retain high PCB concentrations decades after the PCB ban. Dorneles et al. (2013) found high accumulation of PCBs in false killer whales and rough-toothed dolphins off the coast of Brazil. Similarly, a survey of beluga whales found moderate levels of PCB exposure and confirmed the contaminant can disrupt vitamin profiles in the large mammals (Deforges et al., 2013). As Kubo et al. (2014) report in their study of Steller sea lions, marine mammals are also at risk of PCB exposure through maternal-to-fetal transfer.

Summary

As investigations into all aspects of PCBs continue around the globe, new information continues to reveal several trends:

- PCBs are toxic at lower levels than previously believed
- PCBs cause a wider range of toxic effects on wildlife and humans, including cancer
- Remediating PCB contamination is effective in reducing the PCB burdens

PCB contamination is a local, regional and global problem- the PCBs in one locality will contaminate the living and non-living environment, contribute to the regional PCB burden, and add to the global PCB burden for generations to come.

Appendix A
Literature Search and References –2014-2015 Publications on Toxicology of Polychlorinated Biphenyls

The following is a reference list of materials resulting from a literature search conducted in January 2015 on the toxicology of Polychlorinated Biphenyls (PCBs), individual PCB congeners, and frequently associated compounds. This reference list is an update and addition to prior literature searches conducted on the toxicology of PCBs, which are listed below in Appendices B and C. Included in the search are references pertaining to the effects of PCBs on both human health and the environment, including persistence, fate and transport, and specific effects on ecological systems and organisms.

A number of studies focused specifically on early exposure to PCBs and effects on development in both humans and animals. In human health, Casas et al. (2015) studied prenatal exposure to PCB-153 and *p,p'*-DDE in order to evaluate the relationships between organochlorine compounds and birth outcomes. These authors observed an inverse linear exposure-response relationship between prenatal exposure to PCB-153 and birthweight, even at low levels of exposure. The association was modified by maternal smoking and ethnicity; the most susceptible subgroup was girls with mothers who smoked while pregnant. Elnar et al. (2015) conducted a study on juvenile male mice and found that lactational exposure to low levels of the six indicator non-dioxin-like (NDL) PCBs led to over expression of genes involved in the repair and response to DNA damage as well as repression of neuronal activity. The level used in the study was lower than the guidance level for human consumption of contaminated fish. Lastly, Poon et al. (2015) investigated the effects of a PCB mixture composed of Aroclors 1242, 1248, 1254, and 1260 on developmentally-exposed rats and observed that they were more susceptible to audiogenic seizures when exposed to loud noise as adults; female rats were also more susceptible than males.

The literature search was conducted through the Virginia Commonwealth University Library System using the VCU multi-database search tool as well as the specific database Science Direct. All of the following materials are peer-reviewed journal articles.

ESC, LLC makes no claims about the research in these citations in terms of validity and does not necessarily agree with the conclusions within. We note that readers need to confirm that authors of scientific papers are free of conflicts of interest, financial or otherwise. We advise readers to determine if the authors receive funding from the industries or companies that may be affected by the results of their research.

References are cited in Chicago format and numbered for convenience.

1. Ampleman, M., K. Hornbuckle, P. Thorne, J. DeWall, D. Rawn, and A. Martinez. 2014. “Inhalation and Dietary Exposure to PCBs in Urban and Rural Cohorts via Congener-Specific MeasurementsAmpleman, M., K. Hornbuckle, P. Thorne, J. DeWall, D. Rawn, and A. Martinez. 2014. “Inhalation and Dietary Exposure to PCBs in Urban and Rural Cohorts via.” *Environmental Science and Technology*, 33. doi:10.1021/es5048039.

2. Andersen, Martin S, Eva Fuglei, Max König, Inka Lipasti, Åshild Ø Pedersen, Anuschka Polder, Nigel G Yoccoz, and Heli Routti. 2014. “Levels and Temporal Trends of Persistent Organic Pollutants (POPs) in Arctic Foxes (Vulpes Lagopus) from Svalbard in Relation to Dietary Habits and Food Availability.” *The Science of the Total Environment* 511C (December): 112–22. doi:10.1016/j.scitotenv.2014.12.039.

3. Annamalai, Jayshree, and Vasudevan Namasivayam. 2015. “Endocrine Disrupting Chemicals in the Atmosphere: Their Effects on Humans and Wildlife.” *Environment International* 76C (March): 78–97. doi:10.1016/j.envint.2014.12.006.

4. Arrebola, Juan P, Amalia González-Jiménez, Constanza Fornieles-González, Francisco Artacho-Cordón, Nicolás Olea, Fernando Escobar-Jiménez, and María Luisa Fernández-Soto. 2015. “Relationship between Serum Concentrations of Persistent Organic Pollutants and Markers of Insulin Resistance in a Cohort of Women with a History of Gestational Diabetes Mellitus.” *Environmental Research* 136 (January): 435–40. doi:10.1016/j.envres.2014.11.007.

5. Artacho-Cordón, F, H Belhassen, J P Arrebola, R Ghali, D Amira, I Jiménez-Díaz, R Pérez-Lobato, Boussen H, Hedili A, and N Olea. 2015. “Serum Levels of Persistent Organic Pollutants and Predictors of Exposure in Tunisian Women.” *The Science of the Total Environment* 511C (January): 530–34. doi:10.1016/j.scitotenv.2014.12.093.

6. Ax, Erika, Erik Lampa, Lars Lind, Samira Salihovic, Bert van Bavel, Tommy Cederholm, Per Sjögren, and P Monica Lind. 2015. “Circulating Levels of Environmental Contaminants Are Associated with Dietary Patterns in Older Adults.” *Environment International* 75 (February): 93–102. doi:10.1016/j.envint.2014.11.008.

7. Badea, Silviu-Laurentiu, Majid Mustafa, Staffan Lundstedt, and Mats Tysklind. 2014. “Leachability and Desorption of PCBs from Soil and Their Dependency on pH and Dissolved Organic Matter.” *The Science of the Total Environment* 499 (November): 220–27. doi:10.1016/j.scitotenv.2014.08.031.

8. Barone, Grazia, Roberto Giacominelli-Stuffler, Rita Garofalo, Domenico Castiglia, and Maria M Storelli. 2014. “PCBs and PCDD/PCDFs in Fishery Products: Occurrence, Congener Profile and Compliance with European Union Legislation.” *Food and Chemical Toxicology : An International Journal Published for the British Industrial Biological Research Association* 74 (December): 200–205. doi:10.1016/j.fct.2014.09.020.

9. Béchaux, Camille, Marco Zeilmaker, Mathilde Merlo, Bas Bokkers, and Amélie Crépet. 2014. “An Integrative Risk Assessment Approach for Persistent Chemicals: A Case Study on Dioxins, Furans and Dioxin-like PCBs in France.” *Regulatory Toxicology and Pharmacology : RTP* 70 (1): 261–69. doi:10.1016/j.yrtph.2014.07.004.

10. Beníšek, Martin, Petr Kukučka, Giulio Mariani, Gert Suurkuusk, Bernd M Gawlik, Giovanni Locoro, John P Giesy, and Luděk Bláha. 2015. “Dioxins and Dioxin-like Compounds in Composts and Digestates from European Countries as Determined by the in Vitro Bioassay and Chemical Analysis.” *Chemosphere* 122 (March): 168–75. doi:10.1016/j.chemosphere.2014.11.039.

11. Bouwman, Hindrik, Danny Govender, Les Underhill, and Anuschka Polder. 2015. “Chlorinated, Brominated and Fluorinated Organic Pollutants in African Penguin Eggs: 30 Years since the Previous Assessment.” *Chemosphere* 126 (May): 1–10. doi:10.1016/j.chemosphere.2014.12.071.

12. Bu, Qingwei, Matthew MacLeod, Fiona Wong, Leisa-Maree L Toms, Jochen F Mueller, and Gang Yu. 2015. “Historical Intake and Elimination of Polychlorinated Biphenyls and Organochlorine Pesticides by the Australian Population Reconstructed from Biomonitoring Data.” *Environment International* 74 (January): 82–88. doi:10.1016/j.envint.2014.09.014.

13. Buha, Aleksandra, Biljana Antonijević, Vesna Milovanović, Saša Janković, Zorica Bulat, and Vesna Matović. 2015. “Polychlorinated Biphenyls as Oxidative Stress Inducers in Liver of Subacutely Exposed Rats: Implication for Dose-Dependence Toxicity and Benchmark Dose Concept.” *Environmental Research* 136 (January): 309–17. doi:10.1016/j.envres.2014.11.005.

14. Casas, Maribel, Mark Nieuwenhuijsen, David Martínez, Ferran Ballester, Xavier Basagaña, Mikel Basterrechea, Leda Chatzi, et al. 2015. “Prenatal Exposure to PCB-153, P,p’-DDE and Birth Outcomes in 9000 Mother-Child Pairs: Exposure-Response Relationship and Effect Modifiers.” *Environment International* 74 (January): 23–31. doi:10.1016/j.envint.2014.09.013.

15. Casatta, Nadia, Giuseppe Mascolo, Claudio Roscioli, and Luigi Viganò. 2014. "Tracing Endocrine Disrupting Chemicals in a Coastal Lagoon (Sacca Di Goro, Italy): Sediment Contamination and Bioaccumulation in Manila Clams." *The Science of the Total Environment* 511C (December): 214–22. doi:10.1016/j.scitotenv.2014.12.051.

16. Champoux, Louise, Jean-François Rail, Raphael A Lavoie, and Keith A Hobson. 2014. "Temporal Trends of Mercury, Organochlorines and PCBs in Northern Gannet (Morus Bassanus) Eggs from Bonaventure Island, Gulf of St. Lawrence, 1969-2009." *Environmental Pollution (Barking, Essex : 1987)* 197C (December): 13–20. doi:10.1016/j.envpol.2014.10.030.

17. Chen, Xi, Jing-shan Chen, Lei Zhang, Jing-guang Li, Lena Yao, Steven G Self, Xin Sun, and Nai-jun Tang. 2015. "Levels of PCDDs, PCDFs and Dl-PCBs in the Blood of Childbearing-Aged Women Living in the Vicinity of a Chemical Plant in Tianjin: A Primary Study." *Chemosphere* 118 (January): 1–4. doi:10.1016/j.chemosphere.2014.05.026.

18. Chen, Yajie, Qiansheng Huang, Qionghua Chen, Yi Lin, Xia Sun, Huanteng Zhang, Maobi Zhu, and Sijun Dong. 2015. "The Inflammation and Estrogen Metabolism Impacts of Polychlorinated Biphenyls on Endometrial Cancer Cells." *Toxicology in Vitro : An International Journal Published in Association with BIBRA* 29 (2): 308–13. doi:10.1016/j.tiv.2014.11.008.

19. Chen, Yiqin, Xianyu Wang, Yan Li, Leisa-Maree L Toms, Michael Gallen, Laurence Hearn, Lesa L Aylward, Michael S McLachlan, Peter D Sly, and Jochen F Mueller. 2014. "Persistent Organic Pollutants in Matched Breast Milk and Infant Faeces Samples." *Chemosphere* 118C (October): 309–14. doi:10.1016/j.chemosphere.2014.09.076.

20. Couderc, M, L Poirier, A Zalouk-Vergnoux, A Kamari, I Blanchet-Letrouvé, P Marchand, A Vénisseau, B Veyrand, C Mouneyrac, and B Le Bizec. 2015. "Occurrence of POPs and Other Persistent Organic Contaminants in the European Eel (Anguilla Anguilla) from the Loire Estuary, France." *The Science of the Total Environment* 505 (February): 199–215. doi:10.1016/j.scitotenv.2014.09.053.

21. De la Casa-Resino, Irene, David Hernández-Moreno, Antonio Castellano, Marcos Pérez-López, and Francisco Soler. 2015. "Chlorinated Pollutants in Blood of White Stork Nestlings (Ciconia Ciconia) in Different Colonies in Spain." *Chemosphere* 118 (January): 367–72. doi:10.1016/j.chemosphere.2014.10.062.

22. Desvignes, Virginie, Jean-Luc Volatier, Frédéric de Bels, Abdelkrim Zeghnoun, Marie-Christine Favrot, Philippe Marchand, Bruno Le Bizec, Gilles Rivière, Jean-Charles Leblanc, and Mathilde Merlo. 2015. "Study on Polychlorobiphenyl Serum Levels in French Consumers of Freshwater Fish." *The Science of the Total Environment* 505 (February): 623–32. doi:10.1016/j.scitotenv.2014.10.024.

23. Di Bella, Giuseppa, Angela Giorgia Potortì, Vincenzo Lo Turco, Patrizia Licata, Luca Rastrelli, and Giacomo Dugo. 2014. "Donkey's Milk Safety: POCs and PCBs Levels and Infant Daily Intake." *Food Control* 46 (December): 210–16. doi:10.1016/j.foodcont.2014.04.021.

24. Di Leo, Antonella, Cristina Annicchiarico, Nicola Cardellicchio, Santina Giandomenico, Michele Conversano, Giacomo Castellano, Fabrizio Basile, Walter Martinelli, Giampiero Scortichini, and Lucia Spada. 2014. "Monitoring of PCDD/Fs and Dioxin-like PCBs and Seasonal Variations in Mussels from the Mar Grande and the Mar Piccolo of Taranto (Ionian Sea, Southern Italy)." *Environmental Science and Pollution Research International* 21 (23): 13196–207. doi:10.1007/s11356-014-2495-6.

25. Dupuy, Célie, Claire Galland, Alain Devaux, Sylvie Bony, Véronique Loizeau, Morgane Danion, Vianney Pichereau, Michel Fournier, and Jean Laroche. 2014. "Responses of the European Flounder (Platichthys Flesus) to a Mixture of PAHs and PCBs in Experimental Conditions." *Environmental Science and Pollution Research International* 21 (24): 13789–803. doi:10.1007/s11356-014-2563-y.

26. Elnar, Arpiné Ardzivian, Frédéric Desor, Fabian Marin, Rachid Soulimani, and Christophe Nemos. 2014. "Lactational Exposure to Low Levels of the Six Indicator Non-Dioxin-like Polychlorinated Biphenyls Induces DNA Damage and Repression of Neuronal Activity, in Juvenile Male Mice." *Toxicology* 328C (December): 57–65. doi:10.1016/j.tox.2014.12.011.

27. Fromme, Hermann, Michael Albrecht, Markus Appel, Bettina Hilger, Wolfgang Völkel, Bernhard Liebl, and Eike Roscher. 2015. "PCBs, PCDD/Fs, and PBDEs in Blood Samples of a Rural Population in South Germany." *International Journal of Hygiene and Environmental Health* 218 (1): 41–46. doi:10.1016/j.ijheh.2014.07.004.

28. Gabrielsen, Kristin Møller, Julie Stene Krokstad, Gro Dehli Villanger, David A D Blair, Maria-Jesus Obregon, Christian Sonne, Rune Dietz, Robert J Letcher, and Bjørn Munro Jenssen. 2015. "Thyroid Hormones and Deiodinase Activity in Plasma and Tissues in Relation to High Levels of Organohalogen Contaminants in East Greenland Polar Bears (Ursus

Maritimus).” *Environmental Research* 136 (January): 413–23. doi:10.1016/j.envres.2014.09.019.

29. Gadupudi, Gopi, Francoise A Gourronc, Gabriele Ludewig, Larry W Robertson, and Aloysius J Klingelhutz. 2015. “PCB126 Inhibits Adipogenesis of Human Preadipocytes.” *Toxicology in Vitro : An International Journal Published in Association with BIBRA* 29 (1): 132–41. doi:10.1016/j.tiv.2014.09.015.

30. Gascon, Mireia, Martine Vrijheid, Mercè Garí, Marta Fort, Joan O Grimalt, David Martinez, Maties Torrent, Mònica Guxens, and Jordi Sunyer. 2015. “Temporal Trends in Concentrations and Total Serum Burdens of Organochlorine Compounds from Birth until Adolescence and the Role of Breastfeeding.” *Environment International* 74 (January): 144–51. doi:10.1016/j.envint.2014.10.010.

31. Girolami, Flavia, Veronica Spalenza, Livio Manzini, Monica Carletti, and Carlo Nebbia. 2014. “Constitutive Expression of the AHR Signaling Pathway in a Bovine Mammary Epithelial Cell Line and Modulation by Dioxin-like PCB and Other AHR Ligands.” *Toxicology Letters* 232 (1): 98–105. doi:10.1016/j.toxlet.2014.09.013.

32. Guerra, Roberta, Andrea Pasteris, Seok-Hyung Lee, No-Jin Park, and Gon Ok. 2014. “Spatial Patterns of Metals, PCDDs/Fs, PCBs, PBDEs and Chemical Status of Sediments from a Coastal Lagoon (Pialassa Baiona, NW Adriatic, Italy).” *Marine Pollution Bulletin* 89 (1-2): 407–16. doi:10.1016/j.marpolbul.2014.10.024.

33. Hardy, Emilie M, Radu C Duca, Guillaume Salquebre, and Brice M R Appenzeller. 2014. “Multi-Residue Analysis of Organic Pollutants in Hair and Urine for Matrices Comparison.” *Forensic Science International* 249C (December): 6–19. doi:10.1016/j.forsciint.2014.12.003.

34. Hayashi, Lauren, Meghal Sheth, Alexander Young, Matthew Kruger, Gary A Wayman, and Allison B Coffin. 2014. “The Effect of the Aquatic Contaminants Bisphenol-A and PCB-95 on the Zebrafish Lateral Line.” *Neurotoxicology* 46C (December): 125–36. doi:10.1016/j.neuro.2014.12.010.

35. Helmfrid, Ingela, Samira Salihovic, Bert van Bavel, Gun Wingren, and Marika Berglund. 2014. “Exposure and Body Burden of Polychlorinated Biphenyls (PCB) and Metals in a Historically Contaminated Community.” *Environment International* 76C (December): 41–48. doi:10.1016/j.envint.2014.12.004.

36. Heo, Jongwon, and Gangwoong Lee. 2014. "Field-Measured Uptake Rates of PCDDs/Fs and Dl-PCBs Using PUF-Disk Passive Air Samplers in Gyeonggi-Do, South Korea." *The Science of the Total Environment* 491-492 (September): 42–50. doi:10.1016/j.scitotenv.2014.03.073.

37. Hoogenboom, Ron L A P, Michiel J J Kotterman, Marion Hoek-van Nieuwenhuizen, Martijn K van der Lee, Wim C Mennes, Suzanne M F Jeurissen, and Stefan P J van Leeuwen. 2015. "Dioxins, PCBs and Heavy Metals in Chinese Mitten Crabs from Dutch Rivers and Lakes." *Chemosphere* 123 (March): 1–8. doi:10.1016/j.chemosphere.2014.10.055.

38. Hoogenboom, Ron L A P, Marie Luise Stark, Markus Spolders, Marco J Zeilmaker, Wim A Traag, Guillaume Ten Dam, and Helmut A Schafft. 2015. "Accumulation of Polychlorinated Dibenzo-P-Dioxins, Dibenzofurans, and Biphenyls in Livers of Young Sheep." *Chemosphere* 122 (March): 137–44. doi:10.1016/j.chemosphere.2014.11.030.

39. Hoogenboom, Ron, Wim Traag, Alwyn Fernandes, and Martin Rose. 2015. "European Developments Following Incidents with Dioxins and PCBs in the Food and Feed Chain." *Food Control* 50 (April): 670–83. doi:10.1016/j.foodcont.2014.10.010.

40. Hosoda, Junki, John Ofosu-Anim, Edward Benjamin Sabi, Lailah Gifty Akita, Siaw Onwona-Agyeman, Rei Yamashita, and Hideshige Takada. 2014. "Monitoring of Organic Micropollutants in Ghana by Combination of Pellet Watch with Sediment Analysis: E-Waste as a Source of PCBs." *Marine Pollution Bulletin* 86 (1-2): 575–81. doi:10.1016/j.marpolbul.2014.06.008.

41. Huerta, B, A Jakimska, M Llorca, A Ruhí, G Margoutidis, V Acuña, S Sabater, S Rodriguez-Mozaz, and D Barcelò. 2015. "Development of an Extraction and Purification Method for the Determination of Multi-Class Pharmaceuticals and Endocrine Disruptors in Freshwater Invertebrates." *Talanta* 132 (January): 373–81. doi:10.1016/j.talanta.2014.09.017.

42. Jaacks, Lindsay M, and Lisa R Staimez. 2014. "Association of Persistent Organic Pollutants and Non-Persistent Pesticides with Diabetes and Diabetes-Related Health Outcomes in Asia: A Systematic Review." *Environment International* 76C (December): 57–70. doi:10.1016/j.envint.2014.12.001.

43. Johnson-Down, L, M E Labonte, I D Martin, L J S Tsuji, E Nieboer, E Dewailly, G Egeland, and M Lucas. 2015. "Quality of Diet Is Associated with Insulin Resistance in the Cree (Eeyouch) Indigenous Population of Northern

Québec." *Nutrition, Metabolism, and Cardiovascular Diseases : NMCD* 25 (1): 85–92. doi:10.1016/j.numecd.2014.08.002.

44. Julshamn, Kaare, Stig Valdersnes, Arne Duinker, Kjell Nedreaas, Jan H Sundet, and Amund Maage. 2015. "Heavy Metals and POPs in Red King Crab from the Barents Sea." *Food Chemistry* 167 (January): 409–17. doi:10.1016/j.foodchem.2014.07.003.

45. Jürgens, Monika D, Chakra Chaemfa, David Hughes, Andrew C Johnson, and Kevin C Jones. 2015. "PCB and Organochlorine Pesticide Burden in Eels in the Lower Thames River (UK)." *Chemosphere* 118 (January): 103–11. doi:10.1016/j.chemosphere.2014.06.088.

46. Klees, Marcel, Ernst Hiester, Peter Bruckmann, Karl Molt, and Torsten C Schmidt. 2014. "Polychlorinated Biphenyls, Polychlorinated Dibenzo-P-Dioxins and Dibenzofurans in Street Dust of North Rhine-Westphalia, Germany." *The Science of the Total Environment* 511C (December): 72–81. doi:10.1016/j.scitotenv.2014.12.018.

47. Kobayashi, Jun, Yuki Imuta, Tomohiro Komorita, Katsumasa Yamada, Hiroshi Ishibashi, Fumitaka Ishihara, Naoya Nakashima, Jun Sakai, Koji Arizono, and Minoru Koga. 2015. "Trophic Magnification of Polychlorinated Biphenyls and Polybrominated Diphenyl Ethers in an Estuarine Food Web of the Ariake Sea, Japan." *Chemosphere* 118 (January): 201–6. doi:10.1016/j.chemosphere.2014.08.066.

48. Labunska, Iryna, Mohamed Abou-Elwafa Abdallah, Igor Eulaers, Adrian Covaci, Fang Tao, Mengjiao Wang, David Santillo, Paul Johnston, and Stuart Harrad. 2015. "Human Dietary Intake of Organohalogen Contaminants at E-Waste Recycling Sites in Eastern China." *Environment International* 74 (January): 209–20. doi:10.1016/j.envint.2014.10.020.

49. Lake, Iain R, Christopher D Foxall, Alwyn Fernandes, Mervyn Lewis, Oliver White, David Mortimer, Alan Dowding, and Martin Rose. 2014. "The Effects of River Flooding on Dioxin and PCBs in Beef." *The Science of the Total Environment* 491-492 (September): 184–91. doi:10.1016/j.scitotenv.2014.01.080.

50. Lancz, Kinga, Irva Hertz-Picciotto, Todd A Jusko, Lubica Murínová, Soňa Wimmerová, Eva Sovčíková, Ladislav Dedík, et al. 2015. "Duration of Breastfeeding and Serum PCB 153 Concentrations in Children." *Environmental Research* 136 (January): 35–39. doi:10.1016/j.envres.2014.09.036.

51. Lancz, Kinga, Lubica Murínová, Henrieta Patayová, Beata Drobná, Soňa Wimmerová, Eva Sovčíková, Ján Kováč, et al. 2015. "Ratio of Cord to Maternal Serum PCB Concentrations in Relation to Their Congener-Specific Physicochemical Properties." *International Journal of Hygiene and Environmental Health* 218 (1): 91–98. doi:10.1016/j.ijheh.2014.08.003.

52. Lauby-Secretan, Béatrice, Dana Loomis, Yann Grosse, Fatiha El Ghissassi, Véronique Bouvard, Lamia Benbrahim-Tallaa, Neela Guha, Robert Baan, Heidi Mattock, and Kurt Straif. 2013. "Carcinogenicity of Polychlorinated Biphenyls and Polybrominated Biphenyls." *The Lancet. Oncology* 14 (4): 287–88. doi:10.1016/S1470-2045(13)70104-9.

53. Lesueur, Teddy, Céline Boulangé-Lecomte, Gwendal Restoux, Julien Deloffre, Benoît Xuereb, Karyn Le Menach, Hélène Budzinski, et al. 2014. "Toxicity of Sediment-Bound Pollutants in the Seine Estuary, France, Using a Eurytemora Affinis Larval Bioassay." *Ecotoxicology and Environmental Safety* 113C (December): 169–75. doi:10.1016/j.ecoenv.2014.11.033.

54. Li, Ming-Chieh, Hung-Pin Wu, Chiu-Yueh Yang, Pau-Chung Chen, George H Lambert, and Yue Leon Guo. 2014. "Gestational Exposure to Polychlorinated Biphenyls and Dibenzofurans Induced Asymmetric Hearing Loss: Yucheng Children Study." *Environmental Research* 137C (December): 65–71. doi:10.1016/j.envres.2014.12.002.

55. Lilienthal, Hellmuth, Merja Korkalainen, Patrik L Andersson, and Matti Viluksela. 2015. "Developmental Exposure to Purity-Controlled Polychlorinated Biphenyl Congeners (PCB74 and PCB95) in Rats: Effects on Brainstem Auditory Evoked Potentials and Catalepsy." *Toxicology* 327 (January): 22–31. doi:10.1016/j.tox.2014.11.004.

56. Liu, Changjiang, Lianbing Li, Mei Ha, Suqin Qi, Peng Duan, and Kedi Yang. 2015. "The PI3K/Akt and ERK Pathways Elevate Thyroid Hormone Receptor β1 and TRH Receptor to Decrease Thyroid Hormones after Exposure to PCB153 and P,p'-DDE." *Chemosphere* 118 (January): 229–38. doi:10.1016/j.chemosphere.2014.09.023.

57. Liu, Xin, Jun Li, Qian Zheng, Haijian Bing, Ruijie Zhang, Yan Wang, Chunling Luo, et al. 2014. "Forest Filter Effect versus Cold Trapping Effect on the Altitudinal Distribution of PCBs: A Case Study of Mt. Gongga, Eastern Tibetan Plateau." *Environmental Science & Technology*, November. American Chemical Society. doi:10.1021/es5041688.

58. Lopes, B, J P Arrebola, A Serafim, R Company, J Rosa, and N Olea. 2014. "Polychlorinated Biphenyls (PCBs) and P,p'-

Dichlorodiphenyldichloroethylene (DDE) Concentrations in Maternal and Umbilical Cord Serum in a Human Cohort from South Portugal." *Chemosphere* 114 (November): 291–302. doi:10.1016/j.chemosphere.2014.04.111.

59. Louis, Caroline, Adrian Covaci, Marie Stas, Daniel E Crocker, Govindan Malarvannan, Alin C Dirtu, and Cathy Debier. 2015. "Bioaccumulation of Hydroxylated Polychlorinated Biphenyls and Pentachlorophenol in the Serum of Northern Elephant Seal Pups (Mirounga Angustirostris)." *Environmental Research* 136 (January): 441–48. doi:10.1016/j.envres.2014.08.040.

60. Merhaby, Dima, Sopheak Net, Jalal Halwani, and Baghdad Ouddane. 2015. "Organic Pollution in Surficial Sediments of Tripoli Harbour, Lebanon." *Marine Pollution Bulletin*, January. doi:10.1016/j.marpolbul.2015.01.004.

61. Mull, Birte, Wolfgang Horn, and Oliver Jann. 2015. "Investigations on the Emissions of Biocides and PCBs under Low Volume Conditions." *Chemosphere* 118 (January): 65–71. doi:10.1016/j.chemosphere.2014.06.021.

62. Nellier, Yann-Michel, Marie-Elodie Perga, Nathalie Cottin, Philippe Fanget, Emmanuel Malet, and Emmanuel Naffrechoux. 2014. "Mass Budget in Two High Altitude Lakes Reveals Their Role as Atmospheric PCB Sinks." *The Science of the Total Environment* 511C (December): 203–13. doi:10.1016/j.scitotenv.2014.12.052.

63. Net, S., R. El-Osmani, E. Prygiel, S. Rabodonirina, D. Dumoulin, and B. Ouddane. 2015. "Overview of Persistent Organic Pollution (PAHs, Me-PAHs and PCBs) in Freshwater Sediments from Northern France." *Journal of Geochemical Exploration* 148 (January): 181–88. doi:10.1016/j.gexplo.2014.09.008.

64. Neugebauer, Julia, Jürgen Wittsiepe, Monika Kasper-Sonnenberg, Nina Schöneck, Axel Schölmerich, and Michael Wilhelm. 2015. "The Influence of Low Level Pre- and Perinatal Exposure to PCDD/Fs, PCBs, and Lead on Attention Performance and Attention-Related Behavior among German School-Aged Children: Results from the Duisburg Birth Cohort Study." *International Journal of Hygiene and Environmental Health* 218 (1): 153–62. doi:10.1016/j.ijheh.2014.09.005.

65. Nøstbakken, Ole Jakob, Helge T Hove, Arne Duinker, Anne-Katrine Lundebye, Marc H G Berntssen, Rita Hannisdal, Bjørn Tore Lunestad, et al. 2015. "Contaminant Levels in Norwegian Farmed Atlantic Salmon (Salmo

Salar) in the 13-Year Period from 1999 to 2011." *Environment International* 74 (January): 274–80. doi:10.1016/j.envint.2014.10.008.

66. Nunes, Margarida, Filipe Martinho, Anaïs Vernisseau, Philippe Marchand, Bruno Le Bizec, Henk W van der Veer, Henrique N Cabral, Fernando Ramos, and Miguel A Pardal. 2014. "Early Contamination of European Flounder (Platichthys Flesus) by PCDD/Fs and Dioxin-like PCBs in European Waters." *Marine Pollution Bulletin* 85 (1): 292–96. doi:10.1016/j.marpolbul.2014.05.042.

67. Omwoma, Solomon, Joseph O Lalah, Munir Virani, Karl-Werner Schramm, and Bernhard Henkelmann. 2015. "Dioxin-like PCBs and PCDD/Fs in Surface Sediments near the Shore of Winam Gulf, Lake Victoria." *Chemosphere* 118 (January): 143–47. doi:10.1016/j.chemosphere.2014.07.062.

68. Patiño, Reynaldo, Matthew M VanLandeghem, Steven L Goodbred, Erik Orsak, Jill A Jenkins, Kathy Echols, Michael R Rosen, and Leticia Torres. 2015. "Novel Associations between Contaminant Body Burdens and Biomarkers of Reproductive Condition in Male Common Carp along Multiple Gradients of Contaminant Exposure in Lake Mead National Recreation Area, USA." *General and Comparative Endocrinology*, January. doi:10.1016/j.ygcen.2014.12.013.

69. Pedersen, Kathrine Eggers, Bjarne Styrishave, Christian Sonne, Rune Dietz, and Bjørn Munro Jenssen. 2015. "Accumulation and Potential Health Effects of Organohalogenated Compounds in the Arctic Fox (Vulpes Lagopus)--a Review." *The Science of the Total Environment* 502 (January): 510–16. doi:10.1016/j.scitotenv.2014.09.050.

70. Peng, Lihong, Xuhong Dai, and Ang Yu. 2015. "Assessment of the Spatial and Temporal Distribution of Legacy Persistent Organic Pollutants and Recommendations for Sample Collection from the Surficial Sediments of Estuaries and Seas in China." *Chemosphere* 119 Suppl (January): S138–44. doi:10.1016/j.chemosphere.2014.04.004.

71. Persson, Sara, and Ulf Magnusson. 2015. "Environmental Pollutants and Alterations in the Reproductive System in Wild Male Mink (Neovison Vison) from Sweden." *Chemosphere* 120 (February): 237–45. doi:10.1016/j.chemosphere.2014.07.009.

72. Pittman, H Tyler, William W Bowerman, Leland H Grim, Teryl G Grubb, William C Bridges, and Michael R Wierda. 2015. "Using Nestling Plasma to Assess Long-Term Spatial and Temporal Concentrations of Organochlorine

Compounds in Bald Eagles within Voyageurs National Park, Minnesota, USA." *Chemosphere* 123 (March): 79–86. doi:10.1016/j.chemosphere.2014.12.043.

73. Poon, Emily, Suren B Bandara, Jont B Allen, Renee N Sadowski, and Susan L Schantz. 2014. "Developmental PCB Exposure Increases Susceptibility to Audiogenic Seizures in Adulthood." *Neurotoxicology* 46C (December): 117–24. doi:10.1016/j.neuro.2014.12.007.

74. Robinson, Jennifer M., Margaret R. Neff, and Satyendra P. Bhavsar. 2015. "Assessment of Contaminant Levels in Fish from the Toronto Waterfront Area." *Journal of Great Lakes Research*, January. doi:10.1016/j.jglr.2014.12.009.

75. Rose, Martin, Alwyn Fernandes, David Mortimer, and Christina Baskaran. 2015. "Contamination of Fish in UK Fresh Water Systems: Risk Assessment for Human Consumption." *Chemosphere* 122 (March): 183–89. doi:10.1016/j.chemosphere.2014.11.046.

76. Schwemmer, Philipp, Adrian Covaci, Krishna Das, Gilles Lepoint, Sven Adler, and Stefan Garthe. 2015. "Assessment of Contaminant Levels and Trophic Relations at a World Heritage Site by Measurements in a Characteristic Shorebird Species." *Environmental Research* 136 (January): 163–72. doi:10.1016/j.envres.2014.10.021.

77. Sforzini, Susanna, Michael N Moore, Marta Boeri, Mauro Bencivenga, and Aldo Viarengo. 2015. "Effects of PAHs and Dioxins on the Earthworm Eisenia Andrei: A Multivariate Approach for Biomarker Interpretation." *Environmental Pollution (Barking, Essex : 1987)* 196 (January): 60–71. doi:10.1016/j.envpol.2014.09.015.

78. Shrestha, Srishti, Michael S Bloom, Recai Yucel, Richard F Seegal, Qian Wu, Kurunthachalam Kannan, Robert Rej, and Edward F Fitzgerald. 2015. "Perfluoroalkyl Substances and Thyroid Function in Older Adults." *Environment International* 75 (February): 206–14. doi:10.1016/j.envint.2014.11.018.

79. Solaun, O, J G Rodríguez, A Borja, J Larreta, and V Valencia. 2015. "Relationships between Polychlorinated Biphenyls in Molluscs, Hydrological Characteristics and Human Pressures, within Basque Estuaries (northern Spain)." *Chemosphere* 118 (January): 130–35. doi:10.1016/j.chemosphere.2014.07.053.

80. Song, Mengke, Chunling Luo, Fangbai Li, Longfei Jiang, Yan Wang, Dayi Zhang, and Gan Zhang. 2015. “Anaerobic Degradation of Polychlorinated Biphenyls (PCBs) and Polychlorinated Biphenyls Ethers (PBDEs), and Microbial Community Dynamics of Electronic Waste-Contaminated Soil.” *The Science of the Total Environment* 502 (January): 426–33. doi:10.1016/j.scitotenv.2014.09.045.

81. Sonne, Christian, Markus Dyck, Frank F Rigét, Jens-Erik Beck Jensen, Lars Hyldstrup, Robert J Letcher, Kim Gustavson, M Thomas P Gilbert, and Rune Dietz. 2015. “Penile Density and Globally Used Chemicals in Canadian and Greenland Polar Bears.” *Environmental Research* 137C (January): 287–91. doi:10.1016/j.envres.2014.12.026.

82. Squadrone, S., W. Mignone, M.C. Abete, L. Favaro, T. Scanzio, C. Foglini, B. Vivaldi, and M. Prearo. 2015. “Non-Dioxin-like Polychlorinated Biphenyls (NDL-PCBs) in Eel, Trout, and Barbel from the River Roya, Northern Italy.” *Food Chemistry* 175 (May): 10–15. doi:10.1016/j.foodchem.2014.11.107.

83. Stohs, S.J. 2014. *Encyclopedia of Toxicology*. *Encyclopedia of Toxicology*. Elsevier. doi:10.1016/B978-0-12-386454-3.00347-X.

84. Storelli, Maria Maddalena, Angela Dambrosio, Arianna Storelli, Grazia Barone, Federica Ioanna, and Giovanni Normanno. 2014. “Levels of Polychlorinated Biphenyls (PCBs) in Marine Gastropod Hexaplex Trunculus: Compliance with European Union Legislation.” *Journal of Food Composition and Analysis* 36 (1-2): 35–39. doi:10.1016/j.jfca.2014.06.008.

85. Sun, Yu-Xin, Qing Hao, Xiao-Bo Zheng, Xiao-Jun Luo, Zai-Wang Zhang, Qiang Zhang, Xiang-Rong Xu, Fa-Sheng Zou, and Bi-Xian Mai. 2014. “PCBs and DDTs in Light-Vented Bulbuls from Guangdong Province, South China: Levels, Geographical Pattern and Risk Assessment.” *The Science of the Total Environment* 490 (August): 815–21. doi:10.1016/j.scitotenv.2014.05.066.

86. Tartu, S, F Angelier, J O Bustnes, B Moe, S A Hanssen, D Herzke, G W Gabrielsen, et al. 2014. “Polychlorinated Biphenyl Exposure and Corticosterone Levels in Seven Polar Seabird Species.” *Environmental Pollution (Barking, Essex : 1987)* 197C (December): 173–80. doi:10.1016/j.envpol.2014.12.007.

87. Tiano, Marion, Jacek Tronczyński, Mireille Harmelin-Vivien, Céline Tixier, and François Carlotti. 2014. “PCB Concentrations in Plankton Size Classes, a Temporal Study in Marseille Bay, Western Mediterranean Sea.” *Marine Pollution Bulletin* 89 (1-2): 331–39. doi:10.1016/j.marpolbul.2014.09.040.

88. Vecchiato, Marco, Elena Argiriadis, Stefano Zambon, Carlo Barbante, Giuseppa Toscano, Andrea Gambaro, and Rossano Piazza. 2015. "Persistent Organic Pollutants (POPs) in Antarctica: Occurrence in Continental and Coastal Surface Snow." *Microchemical Journal* 119 (March): 75–82. doi:10.1016/j.microc.2014.10.010.

89. Vecchiato, Marco, Stefano Zambon, Elena Argiriadis, Carlo Barbante, Andrea Gambaro, and Rossano Piazza. 2014. "Polychlorinated Biphenyls (PCBs) and Polybrominated Diphenyl Ethers (PBDEs) in Antarctic Ice-Free Areas: Influence of Local Sources on Lakes and Soils." *Microchemical Journal* 120 (December): 26–33. doi:10.1016/j.microc.2014.12.008.

90. Vranković, Jelena, and Marija Slavić. 2015. "Biomarker Responses in Corbicula Fluminea to the Presence of Dioxin-like Polychlorinated Biphenyls and Seasonal Changes." *Ecological Indicators* 48 (January): 99–106. doi:10.1016/j.ecolind.2014.08.005.

91. Wall, Richard J, Alwyn Fernandes, Martin Rose, David R Bell, and Ian R Mellor. 2014. "Characterisation of Chlorinated, Brominated and Mixed Halogenated Dioxins, Furans and Biphenyls as Potent and as Partial Agonists of the Aryl Hydrocarbon Receptor." *Environment International* 76C (December): 49–56. doi:10.1016/j.envint.2014.12.002.

92. Wang, Bing-Ling, Shu-Tao Pang, Jian-Ping Sun, Xiao-Ling Zhang, Xi-Ling Li, Yong-Gang Sun, Xiao-Mei Lu, and Qi Zhang. 2015. "Levels of Polychlorinated Biphenyls in Settled House Dust from Urban Dwellings in China and Their Neurodevelopmental Effects on Preschool-Aged Children." *The Science of the Total Environment* 505 (February): 402–8. doi:10.1016/j.scitotenv.2014.10.026.

93. Wang, Xiangyong, Hongxia Zhang, Lei Zhang, Kai Zhong, Xiaohong Shang, Yunfeng Zhao, Zhendong Tong, Xinwei Yu, Jingguang Li, and Yongning Wu. 2015. "Assessment on Dioxin-like Compounds Intake from Various Marine Fish from Zhoushan Fishery, China." *Chemosphere* 118 (January): 163–69. doi:10.1016/j.chemosphere.2014.07.057.

94. Weijs, Liesbeth, Nathalie Briels, Douglas H. Adams, Gilles Lepoint, Krishna Das, Ronny Blust, and Adrian Covaci. 2015. "Bioaccumulation of Organohalogenated Compounds in Sharks and Rays from the Southeastern USA." *Environmental Research* 137 (February): 199–207. doi:10.1016/j.envres.2014.12.022.

95. Weijs, Liesbeth, Susan D Shaw, Michelle L Berger, Hugo Neels, Ronny Blust, and Adrian Covaci. 2014. "Methoxylated PBDEs (MeO-PBDEs),

Hydroxylated PBDEs (HO-PBDEs) and Hydroxylated PCBs (HO-PCBs) in the Liver of Harbor Seals from the Northwest Atlantic." *The Science of the Total Environment* 493 (September): 606–14. doi:10.1016/j.scitotenv.2014.06.028.

96. Whitehead, Todd P, Sabrina Crispo Smith, June-Soo Park, Myrto X Petreas, Stephen M Rappaport, and Catherine Metayer. 2015. "Concentrations of Persistent Organic Pollutants in California Women's Serum and Residential Dust." *Environmental Research* 136 (January): 57–66. doi:10.1016/j.envres.2014.10.009.

97. Wirth, E F, P L Pennington, C Cooksey, L Schwacke, L Balthis, J Hyland, and M H Fulton. 2014. "Distribution and Sources of PCBs (Aroclor 1268) in the Sapelo Island National Estuarine Research Reserve." *Environmental Monitoring and Assessment* 186 (12): 8717–26. doi:10.1007/s10661-014-4039-4.

98. Wong, Lee-Yang, Mohammed S Uddin, Wayman Turner, Angela D Ragin, and Steve Dearwent. 2015. "Serum PCB Concentrations in Residents of Calcasieu and Lafayette Parishes, Louisiana with Comparison to the U.S. Population." *Chemosphere* 118 (January): 156–62. doi:10.1016/j.chemosphere.2014.07.073.

99. Yang, Chiu-Yueh, Shiau-Ling Chiou, Jung-Der Wang, and Yueliang Leon Guo. 2014. "Health Related Quality of Life and Polychlorinated Biphenyls and Dibenzofurans Exposure: 30 Years Follow-up of Yucheng Cohort." *Environmental Research* 137C (December): 59–64. doi:10.1016/j.envres.2014.11.020.

100. Yoonki, Min, Heo Jongwon, and Lee Meehye. 2014. "Determination of Toxic Congeners of 17 PCDDs/PCDFs and 12 DI-PCBs Using Polyurethane Foam Passive Air Samplers in Ten Cities around Seoul." *The Science of the Total Environment* 491-492 (September): 17–27. doi:10.1016/j.scitotenv.2014.04.039.

101. Yu, Yang, Yingxia Li, Zhenyao Shen, Zhifeng Yang, Li Mo, Yanhong Kong, and Inchio Lou. 2014. "Occurrence and Possible Sources of Organochlorine Pesticides (OCPs) and Polychlorinated Biphenyls (PCBs) along the Chao River, China." *Chemosphere* 114 (November): 136–43. doi:10.1016/j.chemosphere.2014.03.095.

102. Yuan, Guo-Li, Yong Sun, Jun Li, Peng Han, and Gen-Hou Wang. 2014. "Polychlorinated Biphenyls in Surface Soils of the Central Tibetan Plateau:

Altitudinal and Chiral Signatures." *Environmental Pollution (Barking, Essex : 1987)* 196C (October): 134–40. doi:10.1016/j.envpol.2014.10.006.

103. Zehra, Ainy, Syed Ali Musstjab Akber Shah Eqani, Athanasios Katsoyiannis, Jasmin K Schuster, Claudia Moeckel, Kevin C Jones, and Riffat Naseem Malik. 2015. "Environmental Monitoring of Organo-Halogenated Contaminants (OHCs) in Surface Soils from Pakistan." *The Science of the Total Environment* 506-507 (February): 344–52. doi:10.1016/j.scitotenv.2014.10.055.

104. Zhang, Lili, Qian Li, Ling Chen, Ai Zhang, Jieni He, Zhihao Wen, and Lingling Wu. 2015. "Toxicity of Surface Water from Huangpu River to Luminous Bacteria (Vibrio Qinghaiensis SP. Q67) and Zebrafish (Danio Rerio) Embryos." *Ecotoxicology and Environmental Safety* 112 (February): 137–43. doi:10.1016/j.ecoenv.2014.10.037.

105. Zhang, Peng, Linke Ge, Hui Gao, Ting Yao, Xiaodan Fang, Chuanguang Zhou, and Guangshui Na. 2014. "Distribution and Transfer Pattern of Polychlorinated Biphenyls (PCBs) among the Selected Environmental Media of Ny-Ålesund, the Arctic: As a Case Study." *Marine Pollution Bulletin* 89 (1-2): 267–75. doi:10.1016/j.marpolbul.2014.09.050.

106. Zhang, Rui, Fan Zhang, Tiancheng Zhang, Hongqiang Yan, Wei Shao, Li Zhou, and Hebing Tong. 2014. "Historical Sediment Record and Distribution of Polychlorinated Biphenyls (PCBs) in Sediments from Tidal Flats of Haizhou Bay, China." *Marine Pollution Bulletin* 89 (1-2): 487–93. doi:10.1016/j.marpolbul.2014.09.001.

107. Zheng, Xiao-Bo, Xiao-Jun Luo, Jing Zheng, Yan-Hong Zeng, and Bi-Xian Mai. 2015. "Contaminant Sources, Gastrointestinal Absorption, and Tissue Distribution of Organohalogenated Pollutants in Chicken from an E-Waste Site." *The Science of the Total Environment* 505 (February): 1003–10. doi:10.1016/j.scitotenv.2014.10.076.

Appendix B
Literature Search and References –2013-2014 Publications on Toxicology of Polychlorinated Biphenyls

The following is a reference list of materials resulting from a literature search conducted in late August 2014 on the toxicology of Polychlorinated Biphenyls (PCBs), its congeners, and frequently associated compounds. The reference list includes primarily publications from 2013-2014 but a few key reports from agencies such as EPA and WHO have been included for background information. Toxicology is loosely defined as those materials documenting the effects of PCBs on both ecological systems as well as human health. While toxicological reports were the primary focus of this search, some related materials describing environmental prevalence, fate, and transport are also included.

This literature search was conducted via the Virginia Commonwealth University Library system using the VCU multi-database search tool, as well as specific databases such as BIOSIS and Science Direct. The majority of these materials are peer reviewed journal articles; however, government/NPO reports and white papers are included where appropriate and relevant.

ESC, LLC makes no claims about the research in these citations in terms of validity and does not necessarily agree with the conclusions within. We note that readers need to confirm that authors of scientific papers are free of conflicts of interest, financial or otherwise. We advise readers to determine if the authors receive funding from the industries or companies that may be affected by the results of their research.

References are cited in Chicago format and numbered for convenience.

1. Adetona, Olorunfemi, Kevin Horton, Andreas Sjodin, Richard Jones, Daniel B Hall, Manuel Aguillar-Villalobos, Brandon E Cassidy, John E Vena, Larry L Needham, and Luke P Naeher. 2013. “Concentrations of Select Persistent Organic Pollutants across Pregnancy Trimesters in Maternal and in Cord Serum in Trujillo, Peru.” *Chemosphere* 91 (10): 1426–33. doi:10.1016/j.chemosphere.2013.01.043.

2. Adornetto, Annagrazia, Valentina Pagliara, Gianfranco Di Renzo, and Rosaria Arcone. 2013. “Polychlorinated Biphenyls Impair Dibutyryl cAMP-Induced Astrocytic Differentiation in Rat C6 Glial Cell Line.” *FEBS Open Bio* 3 (January): 459–66. doi:10.1016/j.fob.2013.10.008.

3. Airaksinen, R, A Hallikainen, P Rantakokko, P Ruokojärvi, P J Vuorinen, R Parmanne, M Verta, J Mannio, and H Kiviranta. 2014. “Time Trends and Congener Profiles of PCDD/Fs, PCBs, and PBDEs in Baltic Herring off the Coast of Finland during 1978-2009.” *Chemosphere* 114 (November): 165–71. doi:10.1016/j.chemosphere.2014.03.097.

4. An, Jing, Xiu Wang, Panpan Guo, Yufang Zhong, Xinyu Zhang, and Zhiqiang Yu. 2014. “Hexabromocyclododecane and Polychlorinated Biphenyls Increase

Resistance of Hepatocellular Carcinoma Cells to Cisplatin through the Phosphatidylinositol 3-Kinase/protein Kinase B Pathway.” *Toxicology Letters* 229 (1): 265–72. doi:10.1016/j.toxlet.2014.06.025.

5. Association, American Industrial Hygiene. 2013. *White Paper on PCBs in the Built Environment*. Falls Church, Virginia.

6. Aylward, L L, J J Collins, K M Bodner, M Wilken, and C M Bodnar. 2014. “‘Intrinsic’ Elimination Rate and Dietary Intake Estimates for Selected Indicator PCBs: Toxicokinetic Modeling Using Serial Sampling Data in US Subjects, 2005-2010.” *Chemosphere* 110 (September): 48–52. doi:10.1016/j.chemosphere.2014.03.070.

7. Baert, J M, C R Janssen, K Borgå, and F De Laender. 2013. “Migration and Opportunistic Feeding Increase PCB Accumulation in Arctic Seabirds.” *Environmental Science & Technology* 47 (20): 11793–801. doi:10.1021/es402898t.

8. Balasubramani, Aparna, Nathan L Howell, and Hanadi S Rifai. 2014. “Polychlorinated Biphenyls (PCBs) in Industrial and Municipal Effluents: Concentrations, Congener Profiles, and Partitioning onto Particulates and Organic Carbon.” *The Science of the Total Environment* 473-474 (March): 702–13. doi:10.1016/j.scitotenv.2013.12.105.

9. Baptista, Joana, Pedro Pato, Sílvia Tavares, Armando C Duarte, and Miguel A Pardal. 2013. “PCB Bioaccumulation in Three Mullet Species--a Comparison Study.” *Ecotoxicology and Environmental Safety* 94 (August): 147–52. doi:10.1016/j.ecoenv.2013.04.011.

10. Béchaux, Camille, Marco Zeilmaker, Mathilde Merlo, Bas Bokkers, and Amélie Crépet. 2014. “An Integrative Risk Assessment Approach for Persistent Chemicals: A Case Study on Dioxins, Furans and Dioxin-like PCBs in France.” *Regulatory Toxicology and Pharmacology : RTP* 70 (1): 261–69. doi:10.1016/j.yrtph.2014.07.004.

11. Benigni, Romualdo, Cecilia Bossa, Chiara Laura Battistelli, and Olga Tcheremenskaia. 2013. “IARC Classes 1 and 2 Carcinogens Are Successfully Identified by an Alternative Strategy That Detects DNA-Reactivity and Cell Transformation Ability of Chemicals.” *Mutation Research* 758 (1-2): 56–61. doi:10.1016/j.mrgentox.2013.09.006.

12. Berghuis, Sietske A, Shalini D Soechitram, Marrit M Hitzert, Pieter J J Sauer, and Arend F Bos. 2013. “Prenatal Exposure to Polychlorinated Biphenyls and Their Hydroxylated Metabolites Is Associated with Motor Development of

Three-Month-Old Infants." *Neurotoxicology* 38 (September): 124–30. doi:10.1016/j.neuro.2013.07.003.

13. Bjerregaard, Peter, Henning Sloth Pedersen, Nina O Nielsen, and Eric Dewailly. 2013. "Population Surveys in Greenland 1993-2009: Temporal Trend of PCBs and Pesticides in the General Inuit Population by Age and Urbanisation." *The Science of the Total Environment* 454-455 (June): 283–88. doi:10.1016/j.scitotenv.2013.03.031.

14. Blanchet-Letrouvé, I, A Zalouk-Vergnoux, A Vénisseau, M Couderc, B Le Bizec, P Elie, C Herrenknecht, C Mouneyrac, and L Poirier. 2014. "Dioxin-Like, Non-Dioxin like PCB and PCDD/F Contamination in European Eel (Anguilla Anguilla) from the Loire Estuarine Continuum: Spatial and Biological Variabilities." *The Science of the Total Environment* 472 (February): 562–71. doi:10.1016/j.scitotenv.2013.11.037.

15. Bloom, Michael S, Robert L Jansing, Kurunthachalam Kannan, Robert Rej, and Edward F Fitzgerald. 2014. "Thyroid Hormones Are Associated with Exposure to Persistent Organic Pollutants in Aging Residents of Upper Hudson River Communities." *International Journal of Hygiene and Environmental Health* 217 (4-5): 473–82. doi:10.1016/j.ijheh.2013.09.003.

16. Bodin, N, N Tapie, K Le Ménach, E Chassot, P Elie, E Rochard, and H Budzinski. 2014. "PCB Contamination in Fish Community from the Gironde Estuary (France): Blast from the Past." *Chemosphere* 98 (March): 66–72. doi:10.1016/j.chemosphere.2013.10.003.

17. Bogdal, C., M. Scheringer, E. Abad, M. Abalos, B. van Bavel, J. Hagberg, and H. Fiedler. 2013. "Worldwide Distribution of Persistent Organic Pollutants in Air, Including Results of Air Monitoring by Passive Air Sampling in Five Continents." *TrAC Trends in Analytical Chemistry* 46 (May): 150–61. doi:10.1016/j.trac.2012.05.011.

18. Bruckmann, Peter, Ernst Hiester, Marcel Klees, and Cornelius Zetzsch. 2013. "Trends of PCDD/F and PCB Concentrations and Depositions in Ambient Air in Northwestern Germany." *Chemosphere* 93 (8): 1471–78. doi:10.1016/j.chemosphere.2013.07.029.

19. Cannas, M, F Atzori, F Rupsard, P Bustamante, V Loizeau, and C Lefrançois. 2013. "PCBs Contamination Does Not Alter Aerobic Metabolism and Tolerance to Hypoxia of Juvenile Sole (Solea Solea L. 1758)." *Aquatic Toxicology (Amsterdam, Netherlands)* 127 (February): 54–60. doi:10.1016/j.aquatox.2012.04.017.

20. Carpenter, Samantha K, Nohra E Mateus-Pinilla, Kuldeep Singh, Andreas Lehner, Damian Satterthwaite-Phillips, Robert D Bluett, Nelda A Rivera, and Jan E Novakofski. 2014. “River Otters as Biomonitors for Organochlorine Pesticides, PCBs, and PBDEs in Illinois.” *Ecotoxicology and Environmental Safety* 100 (February): 99–104. doi:10.1016/j.ecoenv.2013.07.028.

21. Caspersen, Ida H, Helle K Knutsen, Anne Lise Brantsæter, Margaretha Haugen, Jan Alexander, Helle Margrete Meltzer, and Helen E Kvalem. 2013. “Dietary Exposure to Dioxins and PCBs in a Large Cohort of Pregnant Women: Results from the Norwegian Mother and Child Cohort Study (MoBa).” *Environment International* 59 (September): 398–407. doi:10.1016/j.envint.2013.07.001.

22. Cauli, Omar, Blanca Piedrafita, Marta Llansola, and Vicente Felipo. 2013. “Gender Differential Effects of Developmental Exposure to Methyl-Mercury, Polychlorinated Biphenyls 126 or 153, or Its Combinations on Motor Activity and Coordination.” *Toxicology* 311 (1-2): 61–68. doi:10.1016/j.tox.2012.11.016.

23. Chang, Yu-Cheng, Wen-Jhy Lee, Lin-Chi Wang, Hsi-Hsien Yang, Man-Ting Cheng, Jau-Huai Lu, Ying I. Tsai, and Li-Hao Young. 2014. “Effects of Waste Cooking Oil-Based Biodiesel on the Toxic Organic Pollutant Emissions from a Diesel Engine.” *Applied Energy* 113 (January): 631–38. doi:10.1016/j.apenergy.2013.08.005.

24. Chan-Hon-Tong, Anne, Marie-Aline Charles, Anne Forhan, Barbara Heude, and Véronique Sirot. 2013. “Exposure to Food Contaminants during Pregnancy.” *The Science of the Total Environment* 458-460 (August): 27–35. doi:10.1016/j.scitotenv.2013.03.100.

25. Cimenci, Oya, Stefanie Vandevijvere, Séverine Goscinny, Marie-Anne Van Den Bergh, Vincent Hanot, Christine Vinkx, Fabien Bolle, and Joris Van Loco. 2013. “Dietary Exposure of the Belgian Adult Population to Non-Dioxin-like PCBs.” *Food and Chemical Toxicology : An International Journal Published for the British Industrial Biological Research Association* 59 (September): 670–79. doi:10.1016/j.fct.2013.06.020.

26. Croes, Kim, Elly Den Hond, Liesbeth Bruckers, Ilse Loots, Bert Morrens, Vera Nelen, Ann Colles, et al. 2014. “Monitoring Chlorinated Persistent Organic Pollutants in Adolescents in Flanders (Belgium): Concentrations, Trends and Dose-Effect Relationships (FLEHS II).” *Environment International* 71 (October): 20–28. doi:10.1016/j.envint.2014.05.022.

27. Dallaire, Renée, Eric Dewailly, Pierre Ayotte, Nadine Forget-Dubois, Sandra W Jacobson, Joseph L Jacobson, and Gina Muckle. 2014. "Growth in Inuit Children Exposed to Polychlorinated Biphenyls and Lead during Fetal Development and Childhood." *Environmental Research* 134C (July): 17–23. doi:10.1016/j.envres.2014.06.023.

28. De Boer, Jacob, Nienke Lammertse, Jacco Koekkoek, and Bert van Hattum. 2013. "PCB and Organochlorine Pesticide Concentrations in Eel Increase after Frying." *Chemosphere* 90 (1). Elsevier Ltd: 139–42. doi:10.1016/j.chemosphere.2012.07.042.

29. De Cock, Marijke, and Margot van de Bor. 2014. "Obesogenic Effects of Endocrine Disruptors, What Do We Know from Animal and Human Studies?" *Environment International* 70 (September): 15–24. doi:10.1016/j.envint.2014.04.022.

30. De Felip, Elena, Fabrizio Bianchi, Crescenzo Bove, Liliana Cori, Angelo D'Argenzio, Giancarlo D'Orsi, Mario Fusco, et al. 2014. "Priority Persistent Contaminants in People Dwelling in Critical Areas of Campania Region, Italy (SEBIOREC Biomonitoring Study)." *The Science of the Total Environment* 487 (July): 420–35. doi:10.1016/j.scitotenv.2014.04.016.

31. Delvaux, Immle, Jolijn Van Cauwenberghe, Elly Den Hond, Greet Schoeters, Eva Govarts, Vera Nelen, Willy Baeyens, Nicolas Van Larebeke, and Isabelle Sioen. 2014. "Prenatal Exposure to Environmental Contaminants and Body Composition at Age 7-9 Years." *Environmental Research* 132 (July): 24–32. doi:10.1016/j.envres.2014.03.019.

32. Desforges, Jean-Pierre W, Peter S Ross, Neil Dangerfield, Vince P Palace, Michael Whiticar, and Lisa L Loseto. 2013. "Vitamin A and E Profiles as Biomarkers of PCB Exposure in Beluga Whales (Delphinapterus Leucas) from the Western Canadian Arctic." *Aquatic Toxicology (Amsterdam, Netherlands)* 142-143 (October): 317–28. doi:10.1016/j.aquatox.2013.08.004.

33. Dodoo, D K, D K Essumang, and J W A Jonathan. 2013. "Accumulation Profile and Seasonal Variations of Polychlorinated Biphenyls (PCBs) in Bivalves Crassostrea Tulipa (oysters) and Anadara Senilis (mussels) at Three Different Aquatic Habitats in Two Seasons in Ghana." *Ecotoxicology and Environmental Safety* 88 (February): 26–34. doi:10.1016/j.ecoenv.2012.10.013.

34. Dong, Hui, Chuanyang Su, Xiaomin Xia, Lingrui Li, Erqun Song, and Yang Song. 2014. "Polychlorinated Biphenyl Quinone-Induced Genotoxicity, Oxidative

DNA Damage and Γ-H2AX Formation in HepG2 Cells." *Chemico-Biological Interactions* 212 (April): 47–55. doi:10.1016/j.cbi.2014.01.016.

35. Dorneles, Paulo R, Paloma Sanz, Gauthier Eppe, Alexandre F Azevedo, Carolina P Bertozzi, María a Martínez, Eduardo R Secchi, et al. 2013. "High Accumulation of PCDD, PCDF, and PCB Congeners in Marine Mammals from Brazil: A Serious PCB Problem." *The Science of the Total Environment* 463-464 (October). Elsevier B.V. 309–18. doi:10.1016/j.scitotenv.2013.06.015.

36. Ekuase, Edugie J, Hans-Joachim Lehmler, Larry W Robertson, and Michael W Duffel. 2014. "Binding Interactions of Hydroxylated Polychlorinated Biphenyls (OHPCBs) with Human Hydroxysteroid Sulfotransferase hSULT2A1." *Chemico-Biological Interactions* 212 (April): 56–64. doi:10.1016/j.cbi.2014.01.018.

37. El Majidi, Naïma, Michèle Bouchard, and Gaétan Carrier. 2013. "Systematic Analysis of the Relationship between Standardized Prenatal Exposure to Polychlorinated Biphenyls and Mental and Motor Development during Follow-up of Nine Children Cohorts." *Regulatory Toxicology and Pharmacology : RTP* 66 (1): 130–46. doi:10.1016/j.yrtph.2013.03.002.

38. El Majidi, Naïma, Michèle Bouchard, and Gaétan Carrier. 2014. "Systematic Analysis of the Relationship between Standardized Biological Levels of Polychlorinated Biphenyls and Thyroid Function in Pregnant Women and Newborns." *Chemosphere* 98 (March): 1–17. doi:10.1016/j.chemosphere.2013.10.006.

39. Elabbas, L.E., E. Westerholm, R. Roos, K. Halldin, M. Korkalainen, M. Viluksela, and H. Håkansson. 2013. *Persistent Organic Pollutants and Toxic Metals in Foods*. *Persistent Organic Pollutants and Toxic Metals in Foods*. Elsevier. doi:10.1533/9780857098917.2.215.

40. EPA. 2005. *Polychlorinated Biphenyl (PCB Site Revitalization Guidance Under the Toxic Substances Control Act (TSCA)*. Washington, D.C.

41. EPA. 1996. *PCBs : Cancer Dose-Response Assessment and Application to Environmental Mixtures*. Wasghinton DC.

42. Esteban, Javier, Lubna E Elabbas, Daniel Borg, Maria Herlin, Agneta Akesson, Xavier Barber, Gerd Hamscher, et al. 2014. "Gestational and Lactational Exposure to the Polychlorinated Biphenyl Mixture Aroclor 1254 Modulates

Retinoid Homeostasis in Rat Offspring." *Toxicology Letters* 229 (1): 41–51. doi:10.1016/j.toxlet.2014.04.021.

43. Everaert, Gert, Frederik De Laender, Klaas Deneudt, Patrick Roose, Jan Mees, Peter L M Goethals, and Colin R Janssen. 2014. "Additive Modelling Reveals Spatiotemporal PCBs Trends in Marine Sediments." *Marine Pollution Bulletin* 79 (1-2): 47–53. doi:10.1016/j.marpolbul.2014.01.002.

44. Everett, Charles J, and Olivia M Thompson. 2014. "Dioxins, Furans and Dioxin-like PCBs in Human Blood: Causes or Consequences of Diabetic Nephropathy?" *Environmental Research* 132 (July): 126–31. doi:10.1016/j.envres.2014.03.043.

45. Faroon, Obaid M., L. Samuel Keith, Cassandra Smith-Simon, and Christoper T. De Rosa. 2003. *POLYCHLORINATED BIPHENYLS : HUMAN HEALTH ASPECTS*. Atlanta, Georgia.

46. Faroon, Obaid, and James Olson. 2000. *TOXICOLOGICAL PROFILE FOR POLYCHLORINATED BIPHENYLS (PCBs)*. Atlanta, Georgia.

47. Ferrante, Maria C, Paola Amero, Anna Santoro, Anna Monnolo, Raffaele Simeoli, Francesca Di Guida, Giuseppina Mattace Raso, and Rosaria Meli. 2014. "Polychlorinated Biphenyls (PCB 101, PCB 153 and PCB 180) Alter Leptin Signaling and Lipid Metabolism in Differentiated 3T3-L1 Adipocytes." *Toxicology and Applied Pharmacology*, June. doi:10.1016/j.taap.2014.06.016.

48. Ficko, Sarah A, Carol Luttmer, Barbara A Zeeb, and Kenneth Reimer. 2013. "Terrestrial Ecosystem Recovery Following Removal of a PCB Point Source at a Former Pole Vault Line Radar Station in Northern Labrador." *The Science of the Total Environment* 461-462 (September): 81–87. doi:10.1016/j.scitotenv.2013.04.075.

49. Figueiredo, Kaisa, Kimmo Mäenpää, Matti T Leppänen, Mikko Kiljunen, Merja Lyytikäinen, Jussi V K Kukkonen, Hannu Koponen, Christina Biasi, and Pertti J Martikainen. 2014. "Trophic Transfer of Polychlorinated Biphenyls (PCB) in a Boreal Lake Ecosystem: Testing of Bioaccumulation Models." *The Science of the Total Environment* 466-467 (January): 690–98. doi:10.1016/j.scitotenv.2013.07.033.

50. Foekema, Edwin M, Maria Lopez Parron, Mekuria T Mergia, Elisa R M Carolus, Johannes H J vd Berg, Christiaan Kwadijk, Quy Dao, and AlberTinka J Murk. 2014. "Internal Effect Concentrations of Organic Substances for Early

Life Development of Egg-Exposed Fish." *Ecotoxicology and Environmental Safety* 101 (March): 14–22. doi:10.1016/j.ecoenv.2013.12.006.

51. Fritsch, Erika B, and Isaac N Pessah. 2013. "Structure-Activity Relationship of Non-Coplanar Polychlorinated Biphenyls toward Skeletal Muscle Ryanodine Receptors in Rainbow Trout (Oncorhynchus Mykiss)." *Aquatic Toxicology (Amsterdam, Netherlands)* 140-141 (September): 204–12. doi:10.1016/j.aquatox.2013.06.003.

52. Gährs, Maike, Robert Roos, Patrik L Andersson, and Dieter Schrenk. 2013. "Role of the Nuclear Xenobiotic Receptors CAR and PXR in Induction of Cytochromes P450 by Non-Dioxinlike Polychlorinated Biphenyls in Cultured Rat Hepatocytes." *Toxicology and Applied Pharmacology* 272 (1): 77–85. doi:10.1016/j.taap.2013.05.034.

53. Gascon, Mireia, Eva Morales, Jordi Sunyer, and Martine Vrijheid. 2013. "Effects of Persistent Organic Pollutants on the Developing Respiratory and Immune Systems: A Systematic Review." *Environment International* 52 (February): 51–65. doi:10.1016/j.envint.2012.11.005.

54. Gaum, Petra M, André Esser, Thomas Schettgen, Monika Gube, Thomas Kraus, and Jessica Lang. 2014. "Prevalence and Incidence Rates of Mental Syndromes after Occupational Exposure to Polychlorinated Biphenyls." *International Journal of Hygiene and Environmental Health* 217 (7): 765–74. doi:10.1016/j.ijheh.2014.04.001.

55. Ghimpeţeanu, Oana-Mărgărita, Manuella Militaru, and Marie Louise Scippo. 2014. "Dioxins and Polychlorinated Biphenyls Contamination in Poultry Liver Related to Food Safety – A Review." *Food Control* 38 (April): 47–53. doi:10.1016/j.foodcont.2013.09.054.

56. Grandjean, Philippe, and Philip J Landrigan. 2014. "Neurobehavioural Effects of Developmental Toxicity." *Lancet Neurology* 13 (3): 330–38. doi:10.1016/S1474-4422(13)70278-3.

57. Gregoris, Elena, Elena Argiriadis, Marco Vecchiato, Stefano Zambon, Silvia De Pieri, Antonio Donateo, Daniele Contini, Rossano Piazza, Carlo Barbante, and Andrea Gambaro. 2014. "Gas-Particle Distributions, Sources and Health Effects of Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) and Polychlorinated Naphthalenes (PCNs) in Venice Aerosols." *The Science of the Total Environment* 476-477 (April): 393–405. doi:10.1016/j.scitotenv.2014.01.036.

58. Grilo, T F, P G Cardoso, P Pato, A C Duarte, and M A Pardal. 2013. “Organochlorine Accumulation on a Highly Consumed Bivalve (Scrobicularia Plana) and Its Main Implications for Human Health.” *The Science of the Total Environment* 461-462 (September): 188–97. doi:10.1016/j.scitotenv.2013.04.096.

59. Grilo, T F, P G Cardoso, P Pato, A C Duarte, and M A Pardal. 2014. “Uptake and Depuration of PCB-153 in Edible Shrimp Palaemonetes Varians and Human Health Risk Assessment.” *Ecotoxicology and Environmental Safety* 101 (March): 97–102. doi:10.1016/j.ecoenv.2013.12.020.

60. Handoh, Itsuki C, and Toru Kawai. 2014. “Modelling Exposure of Oceanic Higher Trophic-Level Consumers to Polychlorinated Biphenyls: Pollution ‘Hotspots’ in Relation to Mass Mortality Events of Marine Mammals.” *Marine Pollution Bulletin*, July. doi:10.1016/j.marpolbul.2014.06.031.

61. Hauler, Carolin, Gerhard Rimkus, Célia Risacher, Hans-Joachim Knölker, and Walter Vetter. 2014. “Concentrations of Halogenated Natural Products versus PCB 153 in Bivalves from the North and Baltic Seas.” *The Science of the Total Environment* 490 (August): 994–1001. doi:10.1016/j.scitotenv.2014.05.053.

62. Hellgren, Dennis, Jianyao Wu, Robert Roos, Emma Westerholm, Oliver Adfeldt-Still, Patrik Andersson, Krister Halldin, and Helen Håkansson. 2013. “The PCB Effect Database: A Tool for Translational Research and Health Risk Assessment.” *Toxicology Letters* 221 (August): S229. doi:10.1016/j.toxlet.2013.05.554.

63. Hernik, Agnieszka, Katarzyna Góralczyk, Paweł Struciński, Katarzyna Czaja, Wojciech Korcz, Maria Minorczyk, and Jan Krzysztof Ludwicki. 2013. “Polybrominated Diphenyl Ethers and Polychlorinated Biphenyls in Cord Blood from Women in Poland.” *Chemosphere* 93 (3): 526–31. doi:10.1016/j.chemosphere.2013.06.045.

64. Hisada, Aya, Kazuhisa Shimodaira, Takashi Okai, Kiyohiko Watanabe, Hiroaki Takemori, Takumi Takasuga, Maiko Koyama, et al. 2014. “Associations between Levels of Hydroxylated PCBs and PCBs in Serum of Pregnant Women and Blood Thyroid Hormone Levels and Body Size of Neonates.” *International Journal of Hygiene and Environmental Health* 217 (4-5): 546–53. doi:10.1016/j.ijheh.2013.10.004.

65. Hofe, Carolyn R, Limin Feng, Dominique Zephyr, Arnold J Stromberg, Bernhard Hennig, and Lisa M Gaetke. 2014. “Fruit and Vegetable Intake, as Reflected by Serum Carotenoid Concentrations, Predicts Reduced Probability of

Polychlorinated Biphenyl-Associated Risk for Type 2 Diabetes: National Health and Nutrition Examination Survey 2003-2004.” *Nutrition Research (New York, N.Y.)* 34 (4): 285–93. doi:10.1016/j.nutres.2014.02.001.

66. Hopf, Nancy B, Avima M Ruder, Martha A Waters, and Paul Succop. 2013. “Concentration-Dependent Half-Lives of Polychlorinated Biphenyl in Sera from an Occupational Cohort.” *Chemosphere* 91 (2): 172–78. doi:10.1016/j.chemosphere.2012.12.039.

67. Hsu, Wei-Wen, Janet Rose Osuch, David Todem, Bonita Taffe, Michael O’Keefe, Selamawit Adera, and Wilfried Karmaus. 2014. “DDE and PCB Serum Concentration in Maternal Blood and Their Adult Female Offspring.” *Environmental Research* 132 (July): 384–90. doi:10.1016/j.envres.2014.03.009.

68. Huetos, O, M Bartolomé, N Aragonés, M Cervantes-Amat, M Esteban, M Ruiz-Moraga, B Pérez-Gómez, E Calvo, M Vila, and A Castaño. 2014. “Serum PCB Levels in a Representative Sample of the SPANISH Adult Population: The BIOAMBIENT.ES Project.” *The Science of the Total Environment* 493 (September): 834–44. doi:10.1016/j.scitotenv.2014.06.077.

69. Imaeda, Daisuke, Kei Nomiyama, Tatsuya Kunisue, Hisato Iwata, Oyuna Tsydenova, Masao Amano, Evgeny A. Petrov, Valeriy B. Batoev, and Shinsuke Tanabe. 2014. “Blood Levels of Polychlorinated Biphenyls and Their Hydroxylated Metabolites in Baikal Seals (Pusa Sibirica): Emphasis on Interspecies Comparison, Gender Difference and Association with Blood Thyroid Hormone Levels.” *Chemosphere* 114 (November): 1–8. doi:10.1016/j.chemosphere.2014.03.089.

70. International Organization for Research on Cancer. 2012. *Chemical Agents and Related Occupations. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans / World Health Organization, International Agency for Research on Cancer*. Vol. 100. Lyons, France: International Agency for Research on Cancer. http://www.ncbi.nlm.nih.gov/pubmed/23189753.

71. Kakutani, Hideki, Osamu Aozasa, Ayami Mizuno, Ema Akiyama, Teruyuki Nakao, and Souichi Ohta. 2014. “In Vitro and in Vivo Induction of Cytochrome P450 by Coplanar Polychlorinated/brominated Biphenyls (Co-PXBs) Providing High TEQ in Mother’s Milk in Japan.” *Toxicology* 324C (July): 68–75. doi:10.1016/j.tox.2014.07.008.

72. Kalantari, Fereshteh, Charlotte Bergkvist, Marika Berglund, Elena Fattore, Anders Glynn, Helen Håkansson, and Salomon Sand. 2013. “Establishment of the Cumulative Margin of Exposure for a Group of Polychlorinated

Biphenyl (PCB) Congeners Using an Improved Approach That Accounts for Both Variability and Uncertainty.” *Regulatory Toxicology and Pharmacology : RTP* 65 (3): 325–33. doi:10.1016/j.yrtph.2013.01.005.

73. Kamińska, Joanna, Danuta Ligocka, Marek Zieliński, Marta Czerska, and Marek Jakubowski. 2014. “The Use of PowerPrep and HRGC/HRMS for Biological Monitoring of Exposure to PCDD, PCDF and Dl-PCB in Poland.” *International Journal of Hygiene and Environmental Health* 217 (1): 11–16. doi:10.1016/j.ijheh.2013.02.009.

74. Karthikeyan, Subramanian, Muthusamy Sridhar, Govindan Ramajayam, Ramadoss Lavanya, Jagadeesan Arunakaran, and Narasimhan Srinivasan. 2014. “Polychlorinated Biphenyl (PCBs)-Induced Oxidative Stress Plays a Role on Vertebral Antioxidant System: Ameliorative Role of Vitamin C and E in Male Wistar Rats.” *Biomedicine & Preventive Nutrition* 4 (3): 411–16. doi:10.1016/j.bionut.2014.04.004.

75. Klosterhaus, Susan, Lester J McKee, Donald Yee, Jamie M Kass, and Adam Wong. 2014. “Polychlorinated Biphenyls in the Exterior Caulk of San Francisco Bay Area Buildings, California, USA.” *Environment International* 66 (May): 38–43. doi:10.1016/j.envint.2014.01.008.

76. Kong, Deguo, Matthew MacLeod, Zhe Li, and Ian T Cousins. 2013. “Effects of Input Uncertainty and Variability on the Modelled Environmental Fate of Organic Pollutants under Global Climate Change Scenarios.” *Chemosphere* 93 (9): 2086–93. doi:10.1016/j.chemosphere.2013.07.049.

77. Kruse, Natalie A, Jennifer Bowman, Dina Lopez, Elizabeth Migliore, and Glen P Jackson. 2014. “Characterization and Fate of Polychlorinated Biphenyls, Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans in Soils and Sediments at the Portsmouth Gaseous Diffusion Plant, Ohio.” *Chemosphere* 114 (November): 93–100. doi:10.1016/j.chemosphere.2014.03.092.

78. Kubo, Keiko, Katsuyuki Yamaguchi, Tsuyoshi Ishinazaka, Wakana Yamada, Kaoru Hattori, and Shunitz Tanaka. 2014. “Maternal-to-Fetal Transfer and Concentration Profiles of PCB Congeners for Steller Sea Lions (Eumetopias Jubatus) from Hokkaido, Japan.” *Marine Pollution Bulletin* 78 (1-2): 165–72. doi:10.1016/j.marpolbul.2013.10.047.

79. Kubo, Keiko, Katsuyuki Yamaguchi, Masaki Mitsuhashi, Kaoru Hattori, and Shunitz Tanaka. 2013. “Concentration Profiles of PCB Congeners in the Blubber and Liver of Steller Sea Lions (Eumetopias Jubatus) from the Coast

of Hokkaido, Japan.” *Marine Pollution Bulletin* 69 (1-2): 228–32. doi:10.1016/j.marpolbul.2012.12.012.

80. Kuzu, S Levent, Arslan Saral, Gülsüm Summak, Hatice Coltu, and Selami Demir. 2014. “Ambient Polychlorinated Biphenyl Levels and Their Evaluation in a Metropolitan City.” *The Science of the Total Environment* 472 (February): 13–19. doi:10.1016/j.scitotenv.2013.11.031.

81. Lake, Iain R, Christopher D Foxall, Alwyn Fernandes, Mervyn Lewis, Martin Rose, Oliver White, and Alan Dowding. 2013. “Seasonal Variations in the Levels of PCDD/Fs, PCBs and PBDEs in Cows’ Milk.” *Chemosphere* 90 (1). Elsevier Ltd: 72–79. doi:10.1016/j.chemosphere.2012.07.038.

82. Lamb, James C, Paolo Boffetta, Warren G Foster, Julie E Goodman, Karyn L Hentz, Lorenz R Rhomberg, Jane Staveley, Gerard Swaen, Glen Van Der Kraak, and Amy L Williams. 2014. “Critical Comments on the WHO-UNEP State of the Science of Endocrine Disrupting Chemicals - 2012.” *Regulatory Toxicology and Pharmacology : RTP* 69 (1): 22–40. doi:10.1016/j.yrtph.2014.02.002.

83. Lauby-Secretan, Béatrice, Dana Loomis, Yann Grosse, Fatiha El Ghissassi, Véronique Bouvard, Lamia Benbrahim-Tallaa, Neela Guha, Robert Baan, Heidi Mattock, and Kurt Straif. 2013. “Carcinogenicity of Polychlorinated Biphenyls and Polybrominated Biphenyls.” *The Lancet. Oncology* 14 (4): 287–88. doi:10.1016/S1470-2045(13)70104-9.

84. León-Olea, Martha, Christopher J Martyniuk, Edward F Orlando, Mary Ann Ottinger, Cheryl S Rosenfeld, Jennifer T Wolstenholme, and Vance L Trudeau. 2014. “Current Concepts in Neuroendocrine Disruption.” *General and Comparative Endocrinology*, February. doi:10.1016/j.ygcen.2014.02.005.

85. Li, Ming-Chieh, Pei-Chien Tsai, Pau-Chung Chen, Chia-Jung Hsieh, Yue-Liang Leon Guo, and Walter J Rogan. 2013. “Mortality after Exposure to Polychlorinated Biphenyls and Dibenzofurans: 30 Years after the ‘Yucheng Accident’.” *Environmental Research* 120 (January): 71–75. doi:10.1016/j.envres.2012.09.003.

86. Li, Xiaolin, Li Ye, Xiaoxiang Wang, Wei Shi, Hongling Liu, Xiangping Qian, Yongliang Zhu, and Hongxia Yu. 2013. “In Silico Investigations of Anti-Androgen Activity of Polychlorinated Biphenyls.” *Chemosphere* 92 (7): 795–802. doi:10.1016/j.chemosphere.2013.04.022.

87. Liang, Baocui, Xinhui Liu, Jing Hou, Gang Liang, Wenwen Gong, Diandou Xu, and Li Zhang. 2014. “PCBs Levels and Indicator Congeners in Children’s and Adolescents' Hair.” *Environmental Pollution (Barking, Essex : 1987)* 185 (February): 10–15. doi:10.1016/j.envpol.2013.10.014.

88. Liang, Yi, Andres Martinez, Keri C Hornbuckle, and Timothy E Mattes. 2014. “Potential for Polychlorinated Biphenyl Biodegradation in Sediments from Indiana Harbor and Ship Canal.” *International Biodeterioration & Biodegradation* 89 (April): 50–57. doi:10.1016/j.ibiod.2014.01.005.

89. Lilienthal, Hellmuth, Päivi Heikkinen, Patrik L Andersson, Leo T M van der Ven, and Matti Viluksela. 2013. “Dopamine-Dependent Behavior in Adult Rats after Perinatal Exposure to Purity-Controlled Polychlorinated Biphenyl Congeners (PCB52 and PCB180).” *Toxicology Letters* 224 (1): 32–39. doi:10.1016/j.toxlet.2013.10.016.

90. Lind, Lars, Johanna Penell, Anne-Christine Syvänen, Tomas Axelsson, Erik Ingelsson, Andrew P Morris, Cecilia Lindgren, Samira Salihovic, Bert van Bavel, and P Monica Lind. 2014. “Genetic Variation in the CYP1A1 Gene Is Related to Circulating PCB118 Levels in a Population-Based Sample.” *Environmental Research* 133 (August): 135–40. doi:10.1016/j.envres.2014.05.017.

91. Liu, Hui, Hongxia Liu, Ping Sun, and Zunyao Wang. 2014. “QSAR Studies of Bioconcentration Factors of Polychlorinated Biphenyls (PCBs) Using DFT, PCS and CoMFA.” *Chemosphere* 114 (November): 101–5. doi:10.1016/j.chemosphere.2014.03.113.

92. Lopes, B., J.P. Arrebola, A. Serafim, R. Company, J. Rosa, and N. Olea. 2014. “Polychlorinated Biphenyls (PCBs) and P,p′-Dichlorodiphenyldichloroethylene (DDE) Concentrations in Maternal and Umbilical Cord Serum in a Human Cohort from South Portugal.” *Chemosphere* 114 (November): 291–302. doi:10.1016/j.chemosphere.2014.04.111.

93. Ludewig, Gabriele, and Larry W Robertson. 2012. “Polychlorinated Biphenyls (PCBs) as Initiating Agents in Hepatocellular Carcinoma.” *Cancer Letters* 334 (1): 46–55. doi:10.1016/j.canlet.2012.11.041.

94. Luzardo, Octavio P, Norberto Ruiz-Suárez, Luis Alberto Henríquez-Hernández, Pilar F Valerón, María Camacho, Manuel Zumbado, and Luis D Boada. 2014. “Assessment of the Exposure to Organochlorine Pesticides, PCBs and PAHs in Six Species of Predatory Birds of the Canary Islands, Spain.”

The Science of the Total Environment 472 (February): 146–53. doi:10.1016/j.scitotenv.2013.11.021.

95. Madenjian, Charles P, Daniel L Yule, Sergei M Chernyak, Linda J Begnoche, Eric K Berglund, and Edmund J Isaac. 2014. “Males Exceed Females in PCB Concentrations of Cisco (Coregonus Artedi) from Lake Superior.” *The Science of the Total Environment* 493 (September): 377–83. doi:10.1016/j.scitotenv.2014.06.007.

96. Magliano, D J, V H Y Loh, J L Harding, J Botton, and J E Shaw. 2014. “Persistent Organic Pollutants and Diabetes: A Review of the Epidemiological Evidence.” *Diabetes & Metabolism* 40 (1): 1–14. doi:10.1016/j.diabet.2013.09.006.

97. Malarvannan, Govindan, Claude Belpaire, Caroline Geeraerts, Igor Eulaers, Hugo Neels, and Adrian Covaci. 2014. “Assessment of Persistent Brominated and Chlorinated Organic Contaminants in the European Eel (Anguilla Anguilla) in Flanders, Belgium: Levels, Profiles and Health Risk.” *The Science of the Total Environment* 482-483 (June): 222–33. doi:10.1016/j.scitotenv.2014.02.127.

98. Malisch, Rainer, and Alexander Kotz. 2014. “Dioxins and PCBs in Feed and Food - Review from European Perspective.” *The Science of the Total Environment* 491-492C (September): 2–10. doi:10.1016/j.scitotenv.2014.03.022.

99. Mancia, Annalaura, James C Ryan, Frances M Van Dolah, John R Kucklick, Teresa K Rowles, Randall S Wells, Patricia E Rosel, Aleta A Hohn, and Lori H Schwacke. 2014. “Machine Learning Approaches to Investigate the Impact of PCBs on the Transcriptome of the Common Bottlenose Dolphin (Tursiops Truncatus).” *Marine Environmental Research*, March. doi:10.1016/j.marenvres.2014.03.007.

100. Maranghi, F, R Tassinari, G Moracci, I Altieri, J D Rasinger, T S Carroll, C Hogstrand, A-K Lundebye, and A Mantovani. 2013. “Dietary Exposure of Juvenile Female Mice to Polyhalogenated Seafood Contaminants (HBCD, BDE-47, PCB-153, TCDD): Comparative Assessment of Effects in Potential Target Tissues.” *Food and Chemical Toxicology : An International Journal Published for the British Industrial Biological Research Association* 56 (June): 443–49. doi:10.1016/j.fct.2013.02.056.

101. Medehouenou, Thierry Comlan Marc, Pierre Ayotte, Pierre-Hugues Carmichael, Edeltraut Kröger, René Verreault, Joan Lindsay, Éric Dewailly, Suzanne L Tyas, Alexandre Bureau, and Danielle Laurin. 2014. “Plasma

Polychlorinated Biphenyl and Organochlorine Pesticide Concentrations in Dementia: The Canadian Study of Health and Aging." *Environment International* 69 (August): 141–47. doi:10.1016/j.envint.2014.04.016.

102. Megson, David, Robert Kalin, Paul J. Worsfold, Caroline Gauchotte-Lindsay, Donald G. Patterson, Maeve C. Lohan, Sean Comber, Thomas A. Brown, and Gwen O'Sullivan. 2013. "Fingerprinting Polychlorinated Biphenyls in Environmental Samples Using Comprehensive Two-Dimensional Gas Chromatography with Time-of-Flight Mass Spectrometry." *Journal of Chromatography A* 1318 (November): 276–83. doi:10.1016/j.chroma.2013.10.016.

103. Megson, David, Gwen O'Sullivan, Sean Comber, Paul J Worsfold, Maeve C Lohan, Melanie R Edwards, Walter J Shields, Courtney D Sandau, and Donald G Patterson. 2013. "Elucidating the Structural Properties That Influence the Persistence of PCBs in Humans Using the National Health and Nutrition Examination Survey (NHANES) Dataset." *The Science of the Total Environment* 461-462 (September): 99–107. doi:10.1016/j.scitotenv.2013.04.082.

104. Min, Jin-Young, Rokho Kim, and Kyoung-Bok Min. 2014. "Serum Polychlorinated Biphenyls Concentrations and Hearing Impairment in Adults." *Chemosphere* 102 (May): 6–11. doi:10.1016/j.chemosphere.2013.11.046.

105. Mori, Chisato, Noriko Nakamura, Emiko Todaka, Takeyoshi Fujisaki, Yoshiharu Matsuno, Hiroko Nakaoka, and Masamichi Hanazato. 2014. "Correlation between Human Maternal-Fetal Placental Transfer and Molecular Weight of PCB and Dioxin Congeners/isomers." *Chemosphere* 114 (November): 262–67. doi:10.1016/j.chemosphere.2014.04.095.

106. Nanes, Jessica A, Yulin Xia, R M A Priyanthi S Dassanayake, Rachael M Jones, An Li, Christopher J Stodgell, Cheryl K Walker, et al. 2014. "Selected Persistent Organic Pollutants in Human Placental Tissue from the United States." *Chemosphere* 106 (July): 20–27. doi:10.1016/j.chemosphere.2013.12.080.

107. Nicola, Graciela G, Irene Parra, Mónica Sáez, Ana Almodóvar, and Begoña Jiménez. 2014. "Evaluation of PCBs and DDTs in Endemic Iberian Barbel Barbus Bocagei (Steindachner, 1864) Populations." *The Science of the Total Environment* 479-480 (May): 221–26. doi:10.1016/j.scitotenv.2014.01.013.

108. Nieminen, Pentti, Heli Lehtiniemi, Antti Huusko, Kirsi Vähäkangas, and Arja Rautio. 2013. "Polychlorinated Biphenyls (PCBs) in Relation to Secondary

Sex Ratio--a Systematic Review of Published Studies.” *Chemosphere* 91 (2): 131–38. doi:10.1016/j.chemosphere.2012.11.019.

109. Nymo, Ingebjørg H, Carlos G das Neves, Morten Tryland, Bård-Jørgen Bårdsen, Renato Lima Santos, Andreia Pereira Turchetti, Andrew M Janczak, et al. 2014. “Brucella Pinnipedialis Hooded Seal (Cystophora Cristata) Strain in the Mouse Model with Concurrent Exposure to PCB 153.” *Comparative Immunology, Microbiology and Infectious Diseases* 37 (3): 195–204. doi:10.1016/j.cimid.2014.01.005.

110. Olanca, Burcu, Gul Celik Cakirogullari, Yunus Ucar, Dursun Kirisik, and Devrim Kilic. 2014. “Polychlorinated Dioxins, Furans (PCDD/Fs), Dioxin-like Polychlorinated Biphenyls (dl-PCBs) and Indicator PCBs (ind-PCBs) in Egg and Egg Products in Turkey.” *Chemosphere* 94 (January): 13–19. doi:10.1016/j.chemosphere.2013.08.056.

111. Onozuka, Daisuke, Teruaki Hirata, and Masutaka Furue. 2014. “Net Survival after Exposure to Polychlorinated Biphenyls and Dioxins: The Yusho Study.” *Environment International* 73C (July): 28–32. doi:10.1016/j.envint.2014.07.008.

112. Oziolor, Elias M, Emilie Bigorgne, Lissette Aguilar, Sascha Usenko, and Cole W Matson. 2014. “Evolved Resistance to PCB- and PAH-Induced Cardiac Teratogenesis, and Reduced CYP1A Activity in Gulf Killifish (Fundulus Grandis) Populations from the Houston Ship Channel, Texas.” *Aquatic Toxicology (Amsterdam, Netherlands)* 150 (May): 210–19. doi:10.1016/j.aquatox.2014.03.012.

113. Palou-Serra, Aina, Mario Murcia, Maria-Jose Lopez-Espinosa, Joan O Grimalt, Eduard Rodríguez-Farré, Ferran Ballester, and Cristina Suñol. 2014. “Influence of Prenatal Exposure to Environmental Pollutants on Human Cord Blood Levels of Glutamate.” *Neurotoxicology* 40 (January): 102–10. doi:10.1016/j.neuro.2013.12.003.

114. Papadopoulou, Eleni, Ida H Caspersen, Helen E Kvalem, Helle K Knutsen, Talita Duarte-Salles, Jan Alexander, Helle Margrete Meltzer, Manolis Kogevinas, Anne Lise Brantsæter, and Margaretha Haugen. 2013. “Maternal Dietary Intake of Dioxins and Polychlorinated Biphenyls and Birth Size in the Norwegian Mother and Child Cohort Study (MoBa).” *Environment International* 60 (October): 209–16. doi:10.1016/j.envint.2013.08.017.

115. Pathak, Shweta, and Rahul Kundu. 2013. “Low Doses of a PCB (Aroclor 1254) Affect the Body Weight by Decreasing the Activity of Glucose-6-

Phosphatase in the Liver and Kidney Cells of Mice." *Journal of Environmental Science, Toxicology and Food Technology* 3 (1): 16–21.

116. Pavuk, M, J R Olson, A Sjödin, P Wolff, W E Turner, C Shelton, N D Dutton, and S Bartell. 2014. "Serum Concentrations of Polychlorinated Biphenyls (PCBs) in Participants of the Anniston Community Health Survey." *The Science of the Total Environment* 473-474 (March): 286–97. doi:10.1016/j.scitotenv.2013.12.041.

117. Péan, Samuel, Tarek Daouk, Caroline Vignet, Laura Lyphout, Didier Leguay, Véronique Loizeau, Marie-Laure Bégout, and Xavier Cousin. 2013. "Long-Term Dietary-Exposure to Non-Coplanar PCBs Induces Behavioral Disruptions in Adult Zebrafish and Their Offspring." *Neurotoxicology and Teratology* 39 (January): 45–56. doi:10.1016/j.ntt.2013.07.001.

118. Pedersen, Ellen Bøtker, Peter Jacobsen, Allan Astrup Jensen, Charlotte Brauer, Lars Gunnarsen, Harald W Meyer, Niels E Ebbehøj, and Jens Peter Bonde. 2013. *Risk of Disease Following Occupational Exposure to Polychlorinated Biphenyls*. Copenhagen.

119. Peltonen, Heikki, Päivi Ruokojärvi, Markku Korhonen, Hannu Kiviranta, Juha Flinkman, and Matti Verta. 2014. "PCDD/Fs, PCBs and PBDEs in Zooplankton in the Baltic Sea - Spatial and Temporal Shifts in the Congener-Specific Concentrations." *Chemosphere* 114 (November): 172–80. doi:10.1016/j.chemosphere.2014.04.026.

120. Pereira, M Glória, A J Murk, H Van den Berg, Lee A Walker, and Richard F Shore. 2014. "How Much Do PCB Toxic Equivalents Account for PHAH Toxicity in Predatory Birds?" *Environmental Pollution (Barking, Essex : 1987)* 193C (July): 240–46. doi:10.1016/j.envpol.2014.07.004.

121. Persson, Sara, and Ulf Magnusson. 2014. "Environmental Pollutants and Alterations in the Reproductive System in Wild Male Mink (Neovison Vison) from Sweden." *Chemosphere* 120C (August): 237–45. doi:10.1016/j.chemosphere.2014.07.009.

122. Persson, Sara, Anna Rotander, Bert van Bavel, Björn Brunström, Britt-Marie Bäcklin, and Ulf Magnusson. 2013. "Influence of Age, Season, Body Condition and Geographical Area on Concentrations of Chlorinated and Brominated Contaminants in Wild Mink (Neovison Vison) in Sweden." *Chemosphere* 90 (5): 1664–71. doi:10.1016/j.chemosphere.2012.09.060.

123. Piskorska-Pliszczynska, Jadwiga, Szczepan Mikolajczyk, Malgorzata Warenik-Bany, Sebastian Maszewski, and Pawel Strucinski. 2014. "Soil as a Source

of Dioxin Contamination in Eggs from Free-Range Hens on a Polish Farm." *The Science of the Total Environment* 466-467 (January): 447–54. doi:10.1016/j.scitotenv.2013.07.061.

124. Püssa, Tõnu. 2013. "Toxicological Issues Associated with Production and Processing of Meat." *Meat Science* 95 (4): 844–53. doi:10.1016/j.meatsci.2013.04.032.

125. Qu, Jianhua, Wei Liu, Cong Huang, Cheng Xu, Guizhen Du, Aihua Gu, and Xinru Wang. 2014. "Estrogen Receptors Are Involved in Polychlorinated Biphenyl-Induced Apoptosis on Mouse Spermatocyte GC-2 Cell Line." *Toxicology in Vitro : An International Journal Published in Association with BIBRA* 28 (3): 373–80. doi:10.1016/j.tiv.2013.10.024.

126. Quinn, L P, C Roos, R Pieters, K Løken, A Polder, J U Skaare, and H Bouwman. 2013. "Levels of PCBs in Wild Bird Eggs: Considering Toxicity through Enzyme Induction Potential and Molecular Structure." *Chemosphere* 90 (3): 1109–16. doi:10.1016/j.chemosphere.2012.09.016.

127. Rasmussen, Paul W., Candy Schrank, and Meghan C.W. Williams. 2014. "Trends of PCB Concentrations in Lake Michigan Coho and Chinook Salmon, 1975–2010." *Journal of Great Lakes Research*, June. doi:10.1016/j.jglr.2014.05.011.

128. Romanić, S. Herceg, D. Holcer, B. Lazar, D. Klinčić, P. Mackelworth, and C.M. Fortuna. 2014. "Organochlorine Contaminants in Tissues of Common Bottlenose Dolphins Tursiops Truncatus from the Northeastern Part of the Adriatic Sea." *Environmental Toxicology and Pharmacology*, August. doi:10.1016/j.etap.2014.07.017.

129. Równicka-Zubik, Joanna, Leszek Sułkowski, and Michal Toborek. 2014. "Interactions of PCBs with Human Serum Albumin: In Vitro Spectroscopic Study." *Spectrochimica Acta. Part A, Molecular and Biomolecular Spectroscopy* 124 (April): 632–37. doi:10.1016/j.saa.2014.01.069.

130. Ruder, Avima M, Misty J Hein, Nancy B Hopf, and Martha A Waters. 2014. "Mortality among 24,865 Workers Exposed to Polychlorinated Biphenyls (PCBs) in Three Electrical Capacitor Manufacturing Plants: A Ten-Year Update." *International Journal of Hygiene and Environmental Health* 217 (2-3): 176–87. doi:10.1016/j.ijheh.2013.04.006.

131. Ruiz-Fernández, Ana Carolina, Jorge Feliciano Ontiveros-Cuadras, José L Sericano, Joan-Albert Sanchez-Cabeza, Laval Liong Wee Kwong, Robert B Dunbar, David A Mucciarone, Libia Hascibe Pérez-Bernal, and Federico

Páez-Osuna. 2014. “Long-Range Atmospheric Transport of Persistent Organic Pollutants to Remote Lacustrine Environments.” *The Science of the Total Environment* 493 (September): 505–20. doi:10.1016/j.scitotenv.2014.05.002.

132. Ryan, John Jake, and Dorothea F K Rawn. 2014. “Polychlorinated Dioxins, Furans (PCDD/Fs), and Polychlorinated Biphenyls (PCBs) and Their Trends in Canadian Human Milk from 1992 to 2005.” *Chemosphere* 102 (May): 76–86. doi:10.1016/j.chemosphere.2013.12.065.

133. Salice, Christopher J, Christopher L Rowe, and Karen M Eisenreich. 2014. “Integrative Demographic Modeling Reveals Population Level Impacts of PCB Toxicity to Juvenile Snapping Turtles.” *Environmental Pollution (Barking, Essex : 1987)* 184 (January): 154–60. doi:10.1016/j.envpol.2013.08.031.

134. Selvakumar, K, S Bavithra, L Ganesh, G Krishnamoorthy, P Venkataraman, and J Arunakaran. 2013. “Polychlorinated Biphenyls Induced Oxidative Stress Mediated Neurodegeneration in Hippocampus and Behavioral Changes of Adult Rats: Anxiolytic-like Effects of Quercetin.” *Toxicology Letters* 222 (1): 45–54. doi:10.1016/j.toxlet.2013.06.237.

135. Selvakumar, Kandaswamy, Senthamilselvan Bavithra, Gunasekaran Krishnamoorthy, Ambigapathy Ganesh, Prabhu Venkataraman, and Jagadeesan Arunakaran. 2013. “Impact of Quercetin on PCBs (Aroclor-1254)-Induced Impairment of Dopaminergic Receptors Expression in Hippocampus of Adult Male Wistar Rats.” *Biomedicine & Preventive Nutrition* 3 (1): 42–52. doi:10.1016/j.bionut.2012.07.003.

136. Shan, Qiuli, Jing Wang, Fengchen Huang, Xiaowen Lv, Min Ma, and Yuguo Du. 2014. “Augmented Atherogenesis in ApoE-Null Mice Co-Exposed to Polychlorinated Biphenyls and 2,3,7,8-Tetrachlorodibenzo-P-Dioxin.” *Toxicology and Applied Pharmacology* 276 (2): 136–46. doi:10.1016/j.taap.2014.02.007.

137. Shaw, Susan D, Michelle L Berger, Liesbeth Weijs, Olaf Päpke, and Adrian Covaci. 2014. “Polychlorinated Biphenyls Still Pose Significant Health Risks to Northwest Atlantic Harbor Seals.” *The Science of the Total Environment* 490 (August): 477–87. doi:10.1016/j.scitotenv.2014.05.011.

138. Simmons, D B D, M E McMaster, E J Reiner, L M Hewitt, J L Parrott, B J Park, S B Brown, and J P Sherry. 2014. “Wild Fish from the Bay of Quinte Area of Concern Contain Elevated Tissue Concentrations of PCBs and Exhibit

Evidence of Endocrine-Related Health Effects." *Environment International* 66 (May): 124–37. doi:10.1016/j.envint.2014.01.009.

139. Spector, June T, Anneclaire J De Roos, Cornelia M Ulrich, Lianne Sheppard, Andreas Sjödin, Mark H Wener, Brent Wood, and Anne McTiernan. 2014. "Plasma Polychlorinated Biphenyl Concentrations and Immune Function in Postmenopausal Women." *Environmental Research* 131 (May): 174–80. doi:10.1016/j.envres.2014.03.011.

140. Stapanian, Martin A, Charles P Madenjian, Richard R Rediske, and James P O'Keefe. 2013. "Sexual Difference in PCB Congener Distributions of Burbot (Lota Lota) from Lake Erie." *Chemosphere* 93 (8): 1615–23. doi:10.1016/j.chemosphere.2013.08.016.

141. Stohs, S.J. 2014. *Encyclopedia of Toxicology*. *Encyclopedia of Toxicology*. Elsevier. doi:10.1016/B978-0-12-386454-3.00347-X.

142. Storelli, Maria M, and Nicola Zizzo. 2014. "Occurrence of Organochlorine Contaminants (PCBs, PCDDs and PCDFs) and Pathologic Findings in Loggerhead Sea Turtles, Caretta Caretta, from the Adriatic Sea (Mediterranean Sea)." *The Science of the Total Environment* 472 (March): 855–61. doi:10.1016/j.scitotenv.2013.11.137.

143. Strøm, Marin, Susanne Hansen, Sjúrður Fróði Olsen, Line Småstuen Haug, Panu Rantakokko, Hannu Kiviranta, and Thorhallur Ingi Halldorsson. 2014. "Persistent Organic Pollutants Measured in Maternal Serum and Offspring Neurodevelopmental Outcomes--a Prospective Study with Long-Term Follow-Up." *Environment International* 68 (July): 41–48. doi:10.1016/j.envint.2014.03.002.

144. Tartu, Sabrina, Frédéric Angelier, Dorte Herzke, Børge Moe, Claus Bech, Geir W Gabrielsen, Jan Ove Bustnes, and Olivier Chastel. 2014. "The Stress of Being Contaminated? Adrenocortical Function and Reproduction in Relation to Persistent Organic Pollutants in Female Black Legged Kittiwakes." *The Science of the Total Environment* 476-477 (April): 553–60. doi:10.1016/j.scitotenv.2014.01.060.

145. Tatsuta, Nozomi, Kunihiko Nakai, Katsuyuki Murata, Keita Suzuki, Miyuki Iwai-Shimada, Naoyuki Kurokawa, Toru Hosokawa, and Hiroshi Satoh. 2014. "Impacts of Prenatal Exposures to Polychlorinated Biphenyls, Methylmercury, and Lead on Intellectual Ability of 42-Month-Old Children in Japan." *Environmental Research* 133C (July): 321–26. doi:10.1016/j.envres.2014.05.024.

146. Tremolada, Paolo, Niccolò Guazzoni, Marco Parolini, Bruno Rossaro, Marta Maria Bignazzi, and Andrea Binelli. 2014. “Predicting PCB Concentrations in Cow Milk: Validation of a Fugacity Model in High-Mountain Pasture Conditions.” *The Science of the Total Environment* 487 (July): 471–80. doi:10.1016/j.scitotenv.2014.04.042.

147. Vafeiadi, Marina, Martine Vrijheid, Eleni Fthenou, Georgia Chalkiadaki, Panu Rantakokko, Hannu Kiviranta, Soterios A Kyrtopoulos, Leda Chatzi, and Manolis Kogevinas. 2014. “Persistent Organic Pollutants Exposure during Pregnancy, Maternal Gestational Weight Gain, and Birth Outcomes in the Mother-Child Cohort in Crete, Greece (RHEA Study).” *Environment International* 64 (March): 116–23. doi:10.1016/j.envint.2013.12.015.

148. Van Ael, Evy, Claude Belpaire, Jan Breine, Caroline Geeraerts, Gerlinde Van Thuyne, Igor Eulaers, Ronny Blust, and Lieven Bervoets. 2014. “Are Persistent Organic Pollutants and Metals in Eel Muscle Predictive for the Ecological Water Quality?” *Environmental Pollution (Barking, Essex : 1987)* 186 (March): 165–71. doi:10.1016/j.envpol.2013.12.006.

149. Van Ede, Karin I, Lesa L Aylward, Patrik L Andersson, Martin van den Berg, and Majorie B M van Duursen. 2013. “Tissue Distribution of Dioxin-like Compounds: Potential Impacts on Systemic Relative Potency Estimates.” *Toxicology Letters* 220 (3): 294–302. doi:10.1016/j.toxlet.2013.05.001.

150. Van Ede, Karin I, Konrad P J Gaisch, Martin van den Berg, and Majorie B M van Duursen. 2014. “Differential Relative Effect Potencies of Some Dioxin-like Compounds in Human Peripheral Blood Lymphocytes and Murine Splenic Cells.” *Toxicology Letters* 226 (1): 43–52. doi:10.1016/j.toxlet.2014.01.026.

151. VDEQ. 2003. *Fact Sheet : Sources of Polychlorinated Biphenyls*.

152. Vorrink, Sabine U, Paul L Severson, Mikhail V Kulak, Bernard W Futscher, and Frederick E Domann. 2014. “Hypoxia Perturbs Aryl Hydrocarbon Receptor Signaling and CYP1A1 Expression Induced by PCB 126 in Human Skin and Liver-Derived Cell Lines.” *Toxicology and Applied Pharmacology* 274 (3): 408–16. doi:10.1016/j.taap.2013.12.002.

153. Wahlang, Banrida, K Cameron Falkner, Bonnie Gregory, Douglas Ansert, David Young, Daniel J Conklin, Aruni Bhatnagar, Craig J McClain, and Matt Cave. 2013. “Polychlorinated Biphenyl 153 Is a Diet-Dependent Obesogen That Worsens Nonalcoholic Fatty Liver Disease in Male C57BL6/J Mice.” *The Journal of Nutritional Biochemistry* 24 (9): 1587–95. doi:10.1016/j.jnutbio.2013.01.009.

154. Wahlang, Banrida, Ming Song, Juliane I Beier, K Cameron Falkner, Laila Al-Eryani, Heather B Clair, Russell A Prough, et al. 2014. “Evaluation of Aroclor 1260 Exposure in a Mouse Model of Diet-Induced Obesity and Non-Alcoholic Fatty Liver Disease.” *Toxicology and Applied Pharmacology*, July. doi:10.1016/j.taap.2014.06.019.

155. Wang, Wei, Min-Juan Huang, Jin-Shu Zheng, Kwai Chung Cheung, and Ming Hung Wong. 2013. “Exposure Assessment and Distribution of Polychlorinated Biphenyls (PCBs) Contained in Indoor and Outdoor Dusts and the Impacts of Particle Size and Bioaccessibility.” *The Science of the Total Environment* 463-464 (October): 1201–9. doi:10.1016/j.scitotenv.2013.04.059.

156. Weijs, Liesbeth, Anthony C Roach, Raymond S H Yang, Robin McDougall, Michael Lyons, Conrad Housand, Detlef Tibax, et al. 2014. “Lifetime PCB 153 Bioaccumulation and Pharmacokinetics in Pilot Whales: Bayesian Population PBPK Modeling and Markov Chain Monte Carlo Simulations.” *Chemosphere* 94 (January): 91–96. doi:10.1016/j.chemosphere.2013.09.019.

157. Wigestrand, M B, M Stenberg, S I Walaas, F Fonnum, and P L Andersson. 2013. “Non-Dioxin-like PCBs Inhibit [(3)H]WIN-35,428 Binding to the Dopamine Transporter: A Structure-Activity Relationship Study.” *Neurotoxicology* 39 (December): 18–24. doi:10.1016/j.neuro.2013.07.005.

158. Wolska, Lidia, Agata Mechlińska, Justyna Rogowska, and Jacek Namieśnik. 2014. “Polychlorinated Biphenyls (PCBs) in Bottom Sediments: Identification of Sources.” *Chemosphere* 111C (September): 151–56. doi:10.1016/j.chemosphere.2014.03.025.

159. Wyrwicka, Anna, Steffani Steffani, and Magdalena Urbaniak. 2014. “The Effect of PCB-Contaminated Sewage Sludge and Sediment on Metabolism of Cucumber Plants (Cucumis Sativus L.).” *Ecohydrology & Hydrobiology* 14 (1): 75–82. doi:10.1016/j.ecohyd.2014.01.003.

160. Yorifuji, Takashi, Saori Kashima, Akiko Tokinobu, Tsuguhiko Kato, and Toshihide Tsuda. 2013. “Regional Impact of Exposure to a Polychlorinated Biphenyl and Polychlorinated Dibenzofuran Mixture from Contaminated Rice Oil on Stillbirth Rate and Secondary Sex Ratio.” *Environment International* 59 (September): 12–15. doi:10.1016/j.envint.2013.05.002.

161. Yu, Junchao, Thanh Wang, Shanlong Han, Pu Wang, Qinghua Zhang, and Guibin Jiang. 2013. “Distribution of Polychlorinated Biphenyls in an Urban Riparian Zone Affected by Wastewater Treatment Plant Effluent and the

Transfer to Terrestrial Compartment by Invertebrates." *The Science of the Total Environment* 463-464 (October): 252–57. doi:10.1016/j.scitotenv.2013.06.006.

162. Zani, Claudia, Umberto Gelatti, Francesco Donato, Michela Capelli, Nazario Portolani, Roberto Bergonzi, and Pietro Apostoli. 2013. "Polychlorinated Biphenyls in Serum, Liver and Adipose Tissue of Subjects with Hepatocellular Carcinoma Living in a Highly Polluted Area." *Chemosphere* 91 (2): 194–99. doi:10.1016/j.chemosphere.2012.12.046.

163. Zhang, Lifei, Liang Dong, Wenlong Yang, Li Zhou, Shuangxin Shi, Xiulan Zhang, Shan Niu, Lingling Li, Zhongxiang Wu, and Yeru Huang. 2013. "Passive Air Sampling of Organochlorine Pesticides and Polychlorinated Biphenyls in the Yangtze River Delta, China: Concentrations, Distributions, and Cancer Risk Assessment." *Environmental Pollution (Barking, Essex : 1987)* 181 (October): 159–66. doi:10.1016/j.envpol.2013.06.033.

164. Zhang, Quan, Meiya Lu, Cui Wang, Jie Du, Peixue Zhou, and Meirong Zhao. 2014. "Characterization of Estrogen Receptor A Activities in Polychlorinated Biphenyls by in Vitro Dual-Luciferase Reporter Gene Assay." *Environmental Pollution (Barking, Essex : 1987)* 189 (June): 169–75. doi:10.1016/j.envpol.2014.03.001.

165. Zhou, John L., Ertan Siddiqui, Huu Hao Ngo, and Wenshan Guo. 2014. "Estimation of Uncertainty in the Sampling and Analysis of Polychlorinated Biphenyls and Polycyclic Aromatic Hydrocarbons from Contaminated Soil in Brighton, UK." *Science of The Total Environment* 497-498 (November): 163–71. doi:10.1016/j.scitotenv.2014.07.097.

Appendix C
Literature Review on Toxicology of Polychlorinated Biphenyls (PCBs), 2002-2013

The following is a bibliographic listing of articles resulting from an extensive literature search, conducted during the period August-September 2013, on recent research regarding Polychlorinated Biphenyls (PCBs) during the period 2002 to present (2013). Research was narrowly defined as professional (peer-reviewed) journal articles relating to the toxicological effects on living organisms, which included human health effects, other aquatic and land animals, plants, microorganisms, etc. This literature search was conducted via the Virginia Commonwealth University Library system, specifically utilizing the BIOSIS reference database which includes abstracts of literature in biological and biomedical areas of specialty. The literature search also includes documents available in Environmental Stewardship Concepts, LLC's in-house resource files.

ESC, LLC makes no claims about the research in these citations and does not make any blanket claims as to their veracity, nor necessarily agree with the conclusions. We note that readers need to confirm that authors of scientific papers are free of conflicts of interest, financial or otherwise. We advise readers to determine if the authors receive funding from the industries or companies that may be affected by the results of their research.

1. Abballe, Annalisa, et al. "Persistent environmental contaminants in human milk: Concentrations and time trends in Italy."T T*Chemosphere*T T73.1 (2008): S220-S227.

2. Adams, R. C., & Holton, M. W (2012). Legacy Hazards. *Industrial Hygiene*, May 2012,58-67.

3. Adenugba, A. A., Mcmartin, D. W., & Beck, A. J. (2008). In vitro approaches to assess bioavailability and human gastrointestinal mobilization of food-borne polychlorinated biphenyls (PCBs).T T*Journal of Environmental Science and Health Part B*,T T*43*(5), 410-421.

4. Agletdinov, E. F., Kamilov, F., Alekhin, E. K., Romantsov, M. G., Bulygin, K. V., & Makasheva, L. O. (2008). Gonadotoxic effects of polychlorinated biphenyls in experiments on male rats.T T*Antibiotics and chemotherapy SSSR*,T T*53*(7-8), 15.

5. Ahammed, G. J., Ruan, Y. P., Zhou, J., Xia, X. J., Shi, K., Zhou, Y. H., & Yu, J. Q. (2013). Brassinosteroid alleviates polychlorinated biphenyls-induced oxidative stress by enhancing antioxidant enzymes activity in tomato. *Chemosphere*, 90(11), 2645-2653.

6. Ahmed, Farid E. "Analysis of polychlorinated biphenyls in food products."T T*TrAC Trends in Analytical Chemistry*T T22.3 (2003): 170-185.

7. Al-Rashdan, A., & Helaleh, M. I. (2013). Development of Different Strategies for the Clean-Up of Polychlorinated Biphenyls (PCBs) Congeners Using Pressurized Liquid Extraction. *Journal of Environmental Protection*, 4, 99-107.

8. Álvarez-Pedrerol, M., Ribas-Fitó, N., Torrent, M., Carrizo, D., Garcia-Esteban, R., Grimalt, J. O., & Sunyer, J. (2008). Thyroid disruption at birth due to prenatal exposure to β-hexachlorocyclohexane.T T*Environment International*,*34*(6), 737-740.

9. Andric, N., Kostic, T., Kaisarevic, S., Fa, S., Pogrmic, K., & Kovacevic, R. (2008). In vivo and in vitro effects of PCB126 and PCB153 on rat testicular androgenesis.T T*Environmental Toxicology and Pharmacology*,T T*25*(2), 222-226.

10. Anger, D. L., & Foster, W. G. (2008). The link between environmental toxicant exposure and endometriosis.T T*Frontiers in bioscience: a journal and virtual library*,T T*13*, 1578.

11. Antunes, P., Hendriks, A. J., Huijbregts, M. A. J., Gil, O., & Reis-Henriques, M. A. (2008). Organ-specific accumulation and elimination patterns of PCBs in adult sea bass (Dicentrarchus labrax). *Science of the Total Environment*, *407*(1), 204-210.

12. Arrebola, J. P., Mutch, E., Cuellar, M., Quevedo, M., Claure, E., Mejía, L. M., ... & Mercado, L. A. (2012). Factors influencing combined exposure to three indicator polychlorinated biphenyls in an adult cohort from Bolivia. *Environmental Research*, 116 , 17-25.

13. Arsenescu, V., Arsenescu, R. I., King, V., Swanson, H., & Cassis, L. A. (2008). Polychlorinated biphenyl-77 induces adipocyte differentiation and proinflammatory adipokines and promotes obesity and atherosclerosis. *Environmental health perspectives*,T T116(6), 761.

14. Asiliana, Assan, Reza Gholamnia, Abbass Rezaee, Ahmad Joneidi, Ali Khavanin, and Elmira Darabi. 2009. "Photolysis of Pcbs (Oil Transformer) by Uvc in Presence of Solvent and Oxidizing Agents." *American-Eurasian Journal of Sustainable Agriculture* 3, no. 3: 393-398.

15. Axelrad, Daniel A., Stephanie Goodman, and Tracey J. Woodruff. 2009. "PCB body burdens in US women of childbearing age 2001–2002: An evaluation of alternate summary metrics of NHANES data." *Environmental Research* 109, no. 4: 368-378.

16. Ayotte, Pierre, et al. "Biomarker measurements in a coastal fish-eating population environmentally exposed to organochlorines."T T*Environmental health perspectives*T T113.10 (2005): 1318.

17. Baars, A. J., et al. "Dioxins, dioxin-like PCBs and non-dioxin-like PCBs in foodstuffs: occurrence and dietary intake in The Netherlands."T T*Toxicology Letters* 151.1 (2004): 51-61.

18. Baker, N. A., Karounos, M., English, V., Fang, J., Wei, Y., Stromberg, A., ... & Cassis, L. A. (2013). Coplanar Polychlorinated Biphenyls Impair Glucose Homeostasis in Lean C57BL/6 Mice and Mitigate Beneficial Effects of Weight Loss on Glucose Homeostasis in Obese Mice. *Environmental health perspectives*, 121(1), 105.

19. Balbus, John M., et al. "Implications of global climate change for the assessment and management of human health risks of chemicals in the natural environment." *Environmental Toxicology and Chemistry* 32.1 (2013): 62-78.

20. Bansal, R., & Zoeller, R. T. (2008). Polychlorinated biphenyls (Aroclor 1254) do not uniformly produce agonist actions on thyroid hormone responses in the developing rat brain.T T*Endocrinology*,T T149(8), 4001-4008.

21. Baptista, J., Pato, P., Tavares, S., Duarte, A. C., & Pardal, M. A. (2013). Influence of sex and age on PCBs accumulation in the commercial fish Chelon labrosus. *Journal of Sea Research*, 79, 27-31.

22. Barreca, S., Orecchio, S., & Pace, A. (2012). Photochemical sample treatment for extracts clean up in PCB analysis from sediments. *Talanta*, 103, 349-354.

23. Beckett, K. J., Yamini, B., & Bursian, S. J. (2008). The effects of 3, 3′, 4, 4′, 5-pentachlorobiphenyl (PCB 126) on mink (Mustela vison) reproduction and kit survivability and growth.T T*Archives of environmental contamination and toxicology*,T T*54*(1), 123-129.

24. Beckingham, B., & Ghosh, U. (2013). Polyoxymethylene passive samplers to monitor changes in bioavailability and flux of PCBs after activated carbon amendment to sediment in the field. *Chemosphere*, 91(10), 1401-1407.

25. Birnbaum, L S, and D S Staskal-Wikoff. 2010. "5th International PCB Workshop--summary and implications." *Environment International* 36, no. 8: 814-818.

26. Bjermo, H., Darnerud, P. O., Lignell, S., Pearson, M., Rantakokko, P., Nälsén, C., ... & Glynn, A. (2013). Fish intake and breastfeeding time are associated with serum concentrations of organochlorines in a Swedish population. *Environment International*, *51*, 88-96.

27. Bloom, M. S., Louis, G. M. B., Schisterman, E. F., Liu, A., & Kostyniak, P. J. (2007). Maternal serum polychlorinated biphenyl concentrations across critical windows of human development.T T*Environmental health perspectives*,T T*115*(9), 1320.

28. Bonfanti, Patrizia, Anita Colombo, Sara Villa, Francesca Comelli, Barbara Costa, and Angela Santagostino. 2009. "The effects of accumulation of an environmentally relevant polychlorinated biphenyl mixture on cytochrome P450 and P-glycoprotein expressions in fetuses and pregnant rats." *Chemosphere* 75, no. 5: 572-579.

29. Borlak, J., and T. Thum. "PCBs alter gene expression of nuclear transcription factors and other heart-specific genes in cultures of primary cardiomyocytes: possible implications for cardiotoxicity."T T*Xenobiotica*T T32.12 (2002): 1173-1183.

30. Borrell, Luisa N., et al. "Effect of socioeconomic status on exposures to polychlorinated biphenyls (PCBs) and dichlorodiphenyldichloroethylene (DDE) among pregnant African-American women."T T*Archives of Environmental Health: An International Journal*T T59.5 (2004): 250-255.

31. Brown, Tanya M., et al. “Effects-based marine ecological risk assessment at a polychlorinated biphenyl-contaminated site in Saglek, Labrador, Canada.” *Environmental Toxicology and Chemistry* 32.2 (2013): 453-467.

32. Buck, Germaine M., et al. "PCB congeners and pesticides and female fecundity, New York State Angler Prospective Pregnancy Study."*Environmental Toxicology and Pharmacology*T T12.2 (2002): 83-92.

33. Budnik, L. T., Wegner, R., Rogall, U., & Baur, X. (2013). Accidental exposure to polychlorinated biphenyls (PCB) in waste cargo after heavy seas. Global waste transport as a source of PCB exposure. *International Archives of Occupational and Environmental Health*, 1-11.

34. Burns, Jane S., Paige L. Williams, Oleg Sergeyev, Susan Korrick, Mary M. Lee, Boris Revich, Larisa Altshul, et al. 2009. "Predictors of Serum Dioxins and PCBs among Peripubertal Russian Boys." *Environmental Health Perspectives* 117, no. 10: 1593-1599.

35. Burns, J. S., Williams, P. L., Sergeyev, O., Korrick, S., Lee, M. M., Revich, B., ... & Hauser, R. (2011). Serum dioxins and polychlorinated biphenyls are associated with growth among Russian boys. *Pediatrics*, *127*(1), e59-e68.

36. Bursian, Steven J., et al. "Dietary exposure of mink (Mustela vison) to fish from the Housatonic River, Berkshire County, Massachusetts, USA: Effects on organ weights and histology and hepatic concentrations of polychlorinated biphenyls and 2, 3, 7, 8 - tetrachlorodibenzo - p - dioxin toxic equivalence." *Environmental toxicology and chemistry*T T25.6 (2006): 1541-1550.

37. Broding, H. C., Schettgen, T., Hillert, A., Angerer, J., Göen, T., & Drexler, H. (2008). Subjective complaints in persons under chronic low-dose exposure to lower polychlorinated biphenyls (PCBs).T T*International journal of hygiene and environmental health*,T T*211*(5), 648-657.

38. Brucker-Davis, Françoise, et al. "Cryptorchidism at birth in Nice area (France) is associated with higher prenatal exposure to PCBs and DDE, as assessed by colostrum concentrations."T T*Human reproduction*T T23.8 (2008): 1708-1718.

39. Cachada, A., Pato, P., Rocha-Santos, T., da Silva, E. F., & Duarte, A. C. (2012). Levels, sources and potential human health risks of organic pollutants in urban soils. *Science of the Total Environment*, *430*, 184-192.

40. Campagna, C., Ayotte, P., Sirard, M. A., & Bailey, J. L. (2008). An environmentally relevant mixture of organochlorines, their metabolites and effects on preimplantation development of porcine embryos.T T*Reproductive Toxicology*,T T*25*(3), 361-366.

41. Canzoniero, Lorella MT, et al. "Involvement of the nitric oxide/protein kinase G pathway in polychlorinated biphenyl - induced cell death in SH - SY 5Y neuroblastoma cells."T T*Journal of neuroscience research*T T84.3 (2006): 692-697.

42. Cao, Y., Winneke, G., Wilhelm, M., Wittsiepe, J., Lemm, F., Fürst, P., ... & Krämer, U. (2008). Environmental exposure to dioxins and polychlorinated biphenyls reduce levels of gonadal hormones in newborns: results from the Duisburg cohort study.T T*International journal of hygiene and environmental health*,T T*211*(1), 30-39.

43. Caudle, W. Michael, et al. "Polychlorinated biphenyl–induced reduction of dopamine transporter expression as a precursor to Parkinson's disease–associated dopamine toxicity."T T*Toxicological Sciences*T T92.2 (2006): 490-499.

44. Carlson, Erik A., Nirmal K. Roy, and Isaac I. Wirgin. 2009. "Microarray Analysis of Polychlorinated Biphenyls Mixture-Induced Changes in Gene Expression among Atlantic Tomcod Populations Displaying Differential Sensitivity to Halogenated Aromatic Hydrocarbons." *Environmental Toxicology & Chemistry* 28, no. 4: 759-771.

45. Carpenter, David O. "Polychlorinated biphenyls (PCBs): routes of exposure and effects on human health."T T*Reviews on Environmental Health*T T21.1 (2006): 1-24.

46. Carpenter, D. O. (2008). Environmental contaminants as risk factors for developing diabetes.T T*Reviews on environmental health*,T T*23*(1), 59-74.

47. Carro, T., Dean, K., & Ottinger, M. A. (2013). Effects of an environmentally relevant polychlorinated biphenyl (PCB) mixture on embryonic survival and cardiac development in the domestic chicken. *Environmental Toxicology and Chemistry*, 32(6), 1325-1331.

48. Carro, T., Taneyhill, L. A., & Ottinger, M. A. (2013). The effects of an environmentally relevant 58 congener polychlorinated biphenyl (PCB) mixture on cardiac development in the chick embryo. *Environmental Toxicology and Chemistry*, 32(6), 1317-1324.

49. Černá, M., Kratěnová, J., Žejglicová, K., Brabec, M., Malý, M., Šmíd, J., ... & Volf, J. (2007). Levels of PCDDs, PCDFs, and PCBs in the blood of the non-occupationally exposed residents living in the vicinity of a chemical plant in the Czech Republic.T T*Chemosphere*,T T*67*(9), S238-S246.

50. Chan, Katie, Hans-Joachim Lehmler, Milani Sivagnanam, Cynthia Yan Feng, Larry Robertson, and Peter J O'Brien. 2010. "Cytotoxic effects of polychlorinated biphenyl hydroquinone metabolites in rat hepatocytes." *Journal Of Applied Toxicology: JAT* 30, no. 2: 163-171.

51. Chao, H-R., et al. "Level of polychlorinated dibenzo- p-dioxins, dibenzofurans and biphenyls (PCDD/Fs, PCBs) in human milk and the input to infant body burden."T T*Food and chemical toxicology*T T42.8 (2004): 1299-1308.

52. Chen, Y. Q., et al. "Congener-Specific Polychlorinated Biphenyl–Induced Cell Death in Human Kidney Cells In Vitro: Potential Role of Caspase."T T*International journal of toxicology*T T25.5 (2006): 341-347.

53. Chen, J. W., Wang, S. L., Liao, P. C., Chen, H. Y., Ko, Y. C., & Lee, C. C. (2008). Relationship between insulin sensitivity and exposure to dioxins and polychlorinated biphenyls in pregnant women.T T*Environmental research*,T T*107*(2), 245-253.

54. Chevrier, J., Eskenazi, B., Bradman, A., Fenster, L., & Barr, D. B. (2007). Associations between prenatal exposure to polychlorinated biphenyls and neonatal thyroid-stimulating hormone levels in a Mexican-American population, Salinas Valley, California.T T*Environmental Health Perspectives*,T T*115*(10), 1490.

55. Chevrier, J., Eskenazi, B., Holland, N., Bradman, A., & Barr, D. B. (2008). Effects of exposure to polychlorinated biphenyls and organochlorine pesticides on thyroid function during pregnancy.T T*American journal of epidemiology*,T T*168*(3), 298-310.

56. Chevrier, Jonathan, et al. "Maternal urinary bisphenol A during pregnancy and maternal and neonatal thyroid function in the CHAMACOS study." *Environmental health perspectives* 121.1 (2013): 138-144.

57. Choi, Anna L., et al. "Does living near a Superfund site contribute to higher polychlorinated biphenyl (PCB) exposure?."T T*Environmental Health Perspectives* 114.7 (2006): 1092.

58. Choi, Yean Jung, Melissa J. Seelbach, Hong Pu, Sung Yong Eum, Lei Chen, Bei Zhang, Bernhard Hennig, and Michal Toborek. 2010. "Polychlorinated Biphenyls Disrupt Intestinal Integrity via NADPH Oxidase-Induced Alterations of Tight Junction Protein Expression." *Environmental Health Perspectives* 118, no. 7: 976-981.

59. Chu, Ih, et al. "Toxicological effects of in utero and lactational exposure of rats to a mixture of environmental contaminants detected in Canadian Arctic human populations."T T*Journal of Toxicology and Environmental Health, Part A*T T71.2 (2008): 93-108.

60. Chu, I., Valli, V. E., & Rousseaux, C. G. (2007). Combined effects of 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin and polychlorinated biphenyl congeners in rats. *Toxicological & Environmental Chemistry*,T T*89*(1), 71-87.

61. Chun, C. L., Payne, R. B., Sowers, K. R., & May, H. D. (2012). Electrical stimulation of microbial PCB degradation in sediment. *Water research*, 47(10, 141-152.

62. Cillo, F., de Eguileor, M., Gandolfi, F., & Brevini, T. A. (2007). Aroclor-1254 affects mRNA polyadenylation, translational activation, cell morphology, and DNA integrity of rat primary prostate cells.T T*Endocrine-related cancer*,T T*14*(2), 257-266.

63. Coccini, T., Roda, E., Castoldi, A. F., Goldoni, M., Poli, D., Bernocchi, G., & Manzo, L. (2007). Perinatal co-exposure to methylmercury and PCB153 or PCB126 in rats alters the cerebral cholinergic muscarinic receptors at weaning and puberty.T T*Toxicology*,T T*238*(1), 34-48.

64. Codru, N., Schymura, M. J., Negoita, S., Rej, R., & Carpenter, D. O. (2007). Diabetes in relation to serum levels of polychlorinated biphenyls and chlorinated pesticides in adult Native Americans.T T*Environmental health perspectives*,*115*(10), 1442.

65. Cok, Ismet, et al. "Concentrations of polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and dioxin-like PCBs in adipose tissue of infertile men."T T*Archives of environmental contamination and toxicology*T T55.1 (2008): 143-152.

66. Cole, Donald C., et al. "Dietary intakes and plasma organochlorine contaminant levels among Great Lakes fish eaters."T T*Archives of Environmental Health: An International Journal*T T57.5 (2002): 496-509.

67. Colt, Joanne S, Nathaniel Rothman, Richard K Severson, Patricia Hartge, James R Cerhan, Nilanjan Chatterjee, Wendy Cozen, et al. 2009. "Organochlorine exposure, immune gene variation, and risk of non-Hodgkin lymphoma." *Blood* 113, no. 9: 1899-1905.

68. Combi, T., Taniguchi, S., de Lima, F. P., Mansur, A. V., Figueira, R. C., de Mahiques, M. M., ... & Martins, C. C. (2013). Sources and Temporal Patterns of Polychlorinated Biphenyls Around a Large South American Grain-Shipping Port (Paranaguá Estuarine System, Brazil). *Archives of environmental contamination and toxicology*, 64(4), 573-582.

69. Correa, Paola A., LianShin Lin, Craig L. Just, Dingfei Hu, Keri C. Hornbuckle, Jerald L. Schnoor, and Benoit Van Aken. 2010. "The effects of individual PCB congeners on the soil bacterial community structure and the abundance of biphenyl dioxygenase genes." *Environment International* 36, no. 8: 901-906.

70. Costa, L. G., Fattori, V., Giordano, G., & Vitalone, A. (2007). An in vitro approach to assess the toxicity of certain food contaminants: methylmercury and polychlorinated biphenyls.T T*Toxicology*,T T*237*(1), 65-76.

71. Costa, Pedro M., Sandra Caeiro, Mário S. Diniz, Jorge Lobo, Marta Martins, Ana M. Ferreira, Miguel Caetano, Carlos Vale, T. Ángel DelValls, and M. Helena Costa. 2010. "A description of chloride cell and kidney tubule alterations in the flatfish Solea senegalensis exposed to moderately contaminated sediments from the Sado estuary (Portugal)." *Journal of Sea Research* 64, no. 4: 465-472.

72. Costabeber, I., and T. Emanuelli. "Influence of alimentary habits, age and occupation on polychlorinated biphenyl levels in adipose tissue."T T*Food and chemical toxicology*T T41.1 (2003): 73-80.

73. Covaci, Adrian, et al. "Distribution of PCBs and organochlorine pesticides in umbilical cord and maternal serum."T T*Science of the total environment*T T298.1 (2002): 45-53.

74. Cumbee Jr, J. C., Gaines, K. F., Mills, G. L., Garvin, N., Stephens Jr, W. L., Novak, J. M., & Brisbin Jr, I. L. (2008). Clapper rails as indicators of mercury and PCB bioavailability in a Georgia saltmarsh system.T T*Ecotoxicology*,T T*17*(6), 485-494.

75. Cummings, J. A., Clemens, L. G., & Nunez, A. A. (2008). Exposure to PCB 77 affects partner preference but not sexual behavior in the female rat.T T*Physiology & behavior*,T T*95*(3), 471-475.

76. Custer, Christine M, Thomas W Custer, and Paul M Dummer. 2010. "Patterns of organic contaminants in eggs of an insectivorous, an omnivorous, and a piscivorous bird nesting on the Hudson River, New York, USA." *Environmental Toxicology And Chemistry / SETAC* 29, no. 10: 2286-2296.

77. Dabrowska, Henryka, Ewelina Bernard, Iwona Barska, and Krzysztof Radtke. 2009. "Inter-tissue distribution and evaluation of potential toxicity of PCBs in Baltic cod (Gadus morhua L.)." *Ecotoxicology & Environmental Safety* 72, no. 7: 1975-1984.

78. Dallaire, Frédéric, et al. "Effect of prenatal exposure to polychlorinated biphenyls on incidence of acute respiratory infections in preschool Inuit children."T T*Environmental health perspectives*T T114.8 (2006): 1301.

79. Dallaire, R., Dewailly, É., Ayotte, P., Forget-Dubois, N., Jacobson, S. W., Jacobson, J. L., & Muckle, G. (2013). Exposure to organochlorines and mercury through fish and marine mammal consumption: Associations with growth and duration of gestation among Inuit newborns. *Environment International*, *54*, 85-91.

80. Daniels, Julie L., et al. "Prenatal exposure to low-level polychlorinated biphenyls in relation to mental and motor development at 8 months."T T*American Journal of Epidemiology*T T157.6 (2003): 485-492.

81. Dang, V.D., Walters, D.M., & Lee, C.M. (2013). Assessing ongoing sources of dissolved-phase polychlorinated biphenyls in a contaminated stream. *Environmental Toxicology and Chemistry,* 32(3), 535-540.

82. De, Supriyo, Somiranjan Ghosh, Raghunath Chatterjee, Y-Q Chen, Linda Moses, Akanchha Kesari, Eric P. Hoffman, and Sisir K. Dutta. 2010. "PCB congener specific oxidative stress response by microarray analysis using human liver cell line." *Environment International* 36, no. 8: 907-917.

83. TDeLeon S,TT TTHalitschke R,TT TTHames RS,TT TTKessler A,TT TTDeVoogd TJ,TT TTet al.TT TT(2013)TT TTThe Effect of Polychlorinated Biphenyls on the Song of Two Passerine Species. TTPLoS ONETT TT8(9).

84. Delistraty, D. (2013). Ecotoxicity and risk to human fish consumers of polychlorinated biphenyls in fish near the Hanford Site (USA). *Science of The Total Environment*, *445*, 14-21.

85. Demond, Avery, Timothy Towey, Peter Adriaens, Xiaobo Zhong, Kristine Knutson, Qixuan Chen, Biling Hong, et al. 2010. "Relationship between polychlorinated dibenzo- p-dioxin, polychlorinated dibenzofuran, and dioxin-like polychlorinated biphenyl concentrations in vegetation and soil on residential properties." *Environmental Toxicology & Chemistry* 29, no. 12: 2660-2668

86. Denham, Melinda, et al. "Relationship of lead, mercury, mirex, dichlorodiphenyldichloroethylene, hexachlorobenzene, and polychlorinated biphenyls to timing of menarche among Akwesasne Mohawk girls."T T*Pediatrics*115.2 (2005): e127-e134.

87. Denys, S., Gombert, D., & Tack, K. (2012). Combined approaches to determine the impact of wood fire on PCDD/F and PCB contamination of the environment: A case study. *Chemosphere,* 88(7), 806-812.

88. Dercová, Katarína, Jana Šeligová, Hana Dudášová, Mária Mikulášová, Katarína Šilhárová, Lívia Tóthová, and Pavel Hucko. 2009. "Characterization of the bottom sediments contaminated with polychlorinated biphenyls: Evaluation of ecotoxicity and biodegradability." *International Biodeterioration & Biodegradation* 63, no. 4: 440-449.

89. Deshpande, A. D., Dockum, B. W., Cleary, T., Farrington, C., & Wieczorek, D. (2013). Bioaccumulation of polychlorinated biphenyls and organochlorine pesticides in young-of-the-year bluefish (*Pomatomus saltatrix*) in the vicinity of a Superfund Site in New Bedford Harbor, Massachusetts, and in the adjacent waters.T T*Marine Pollution Bulletin*, 72(1), 146-164.

90. Després, Christine, et al. "Neuromotor functions in Inuit preschool children exposed to Pb, PCBs, and Hg."T T*Neurotoxicology and Teratology*T T27.2 (2005): 245-257.

91. Dewailly, E., Ayotte, P., Lucas, M., & Blanchet, C. (2007). Risk and benefits from consuming salmon and trout: a Canadian perspective.T T*Food and chemical toxicology*,T T*45*(8), 1343-1348.

92. Di Guglielmo, Claudia, David Ramos López, Joaquín De Lapuente, Joan Maria Llobet Mallafre, and Miquel Borràs Suàrez. 2010. "Embryotoxicity of cobalt ferrite and gold nanoparticles: a first in vitro approach." *Reproductive Toxicology (Elmsford, N.Y.)* 30, no. 2: 271-276.

93. Diamond, M. P., Wirth, J. J., & Saed, G. M. (2008). PCBs enhance collagen I expression from human peritoneal fibroblasts.T T*Fertility and sterility*,T T*90*(4), 1372-1375.

94. Ding, Ling, et al. "Effects of brominated flame retardants and brominated dioxins on steroidogenesis in H295R human adrenocortical carcinoma cell line." *Environmental Toxicology and Chemistry*T T26.4 (2007): 764-772.

95. Ding, N., Xu, J., & Schwab, P. (2013). Accumulation and Transformation of PCBs in Ryegrass (Lolium multiflorum L.). In *Functions of Natural Organic Matter in Changing Environment* (pp. 637-640). Springer Netherlands.

96. Dodoo, D. K., Essumang, D. K., & Jonathan, J. W. A. (2012). Accumulation profile and seasonal variations of polychlorinated biphenyls (PCBs) in bivalves Crassostrea tulipa (oysters) and Anadara senilis (mussels) at three different aquatic habitats in two seasons in Ghana. *Ecotoxicology and Environmental Safety*, 88, 26-34.

97. Donato, F., Zani, C., Magoni, M., Gelatti, U., Covolo, L., Orizio, G., ... & Apostoli, P. (2008). Polychlorinated biphenyls and thyroid hormone serum

concentrations among people living in a highly polluted area: a cross-sectional population-based study.T T*Environmental research*,T T*108*(3), 380-386.

98. Dongli, Wang, Weilin L. Shelver, Shannon Atkinson, Jo-Ann Mellish, and Qing X. Li. 2010. "Tissue Distribution of Polychlorinated Biphenyls and Organochlorine Pesticides and Potential Toxicity to Alaskan Northern Fur Seals Assessed Using PCBs Congener Specific Mode of Action Schemes." *Archives of Environmental Contamination & Toxicology* 58, no. 2: 478-488.

99. Dórea, José G. "Elevated PCB levels in anglers and unsuspected transport of pollutants from aquatic food webs into human foods."T T*Environmental Research,* 108.2 (2008): 268.

100. Dreiem, Anne, Sidsel Rykken, Hans-Joachim Lehmler, Larry W Robertson, and Frode Fonnum. 2009. "Hydroxylated polychlorinated biphenyls increase reactive oxygen species formation and induce cell death in cultured cerebellar granule cells." *Toxicology and Applied Pharmacology* 240, no. 2: 306-313.

101. Drouillard, Ken G, Gordon Paterson, and G Douglas Haffner. 2009. "A combined food web toxicokinetic and species bioenergetic model for predicting seasonal PCB elimination by yellow perch (Perca flavescens)." *Environmental Science & Technology* 43, no. 8: 2858-2864.

102. Dutta, S. K., Ghosh, S., De, S., & Hoffman, E. P. (2008). CYP1A1 and MT1K are congener specific biomarker genes for liver diseases induced by PCBs. *Environmental Toxicology and Pharmacology*,T T*25*(2), 218-221.

103. Egorov, Andrey I., Dafina Dalbokova, and Michal Krzyzanowski. "Biomonitoring-based Environmental Public Health Indicators." *Computational Toxicology*. Humana Press, 2013. 275-293.

104. Eichbaum, K., Brinkmann, M., Buchinger, S., Hecker, M., Engwall, M., van Bavel, B., ... & Hollert, H. (2013). The dioRAMA project: assessment of dioxin-like activity in sediments and fish (Rutilus rutilus) in support of the ecotoxicological characterization of sediments. *Journal of Soils and Sediments*, 1-5.

105. Elumalai, Perumal, Gunasekaran Krishnamoorthy, Kandaswamy Selvakumar, Ramachandran Arunkumar, Prabhu Venkataraman, and Jagadeesan

Arunakaran. 2009. "Studies on the protective role of lycopene against polychlorinated biphenyls (Aroclor 1254)-induced changes in StAR protein and cytochrome P450 scc enzyme expression on Leydig cells of adult rats." *Reproductive Toxicology* 27, no. 1: 41-45.

106. Engel, Stephanie M., et al. "Prenatal organophosphate metabolite and organochlorine levels and performance on the Brazelton Neonatal Behavioral Assessment Scale in a multiethnic pregnancy cohort."T T*American Journal of Epidemiology*T T165.12 (2007): 1397-1404.

107. Ennaceur, S., & Driss, M. R. (2013). Time course of organochlorine pesticides and polychlorinated biphenyls in breast-feeding mothers throughout the first 10 months of lactation in Tunisia. *Environmental Monitoring and Assessment*, *185*(2), 1977-1984.

108. Eqani, Syed Ali-Musstjab-Akber-Shah, et al. "Uptake of organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) by river water fish: The case of River Chenab." *The Science of the Total Environment* 450-451 (2013): 83-91.

109. Eriksson, P., Fischer, C., & Fredriksson, A. (2006). Polybrominated diphenyl ethers, a group of brominated flame retardants, can interact with polychlorinated biphenyls in enhancing developmental neurobehavioral defects.T T*Toxicological Sciences*,T T*94*(2), 302-309.

110. Eskenazi, Brenda, et al. "In utero and childhood polybrominated diphenyl ether (pbde) exposures and neurodevelopment in the CHAMACOS Study." *Environmental Health Perspectives* 121.2 (2013): 257.

111. Eum, S.Y., et al. (2007). Polychlorinated biphenyls induce proteolysis of zonula occludens proteins in human brain microvessel endothelial cells. *FASEB Journal,* 21(6), A873.

112. Ferguson, Kelly K., Russ Hauser, Larisa Altshul, John D. Meeker. (2012). Serum concentrations of p, p′-DDE, HCB, PCBs and reproductive hormones among men of reproductive age. *Reproductive Toxicology*, Volume 34, Issue 3, November 2012, Pages 429-435.

113. Fernandez, MF, J Parera, JP Arrebola, LS Marina, M Vrijheid, S Llop, M Abalos, A Tardon, A Castano, E Abad, N Olea. (2012). Levels of polychlorinated dibenzo-p-dioxins, dibenzofurans, and dioxin-like polychlorinated biphenyls in placentas from the Spanish INMA birth cohort study. *Science of the Total Environment* 441:49-56.

114. Fernández-González, R., Martínez-Carballo, E., Regueiro, J., & Simal-Gándara, J. (2013). Inputs of polychlorinated biphenyl residues in animal feeds. *Food Chemistry*, 140(1-2), 296-304.

115. Fischer, C., Fredriksson, A., & Eriksson, P. (2008). Neonatal co-exposure to low doses of an ortho-PCB (PCB 153) and methyl mercury exacerbate defective developmental neurobehavior in mice.T T*Toxicology*,T T*244*(2), 157-165.

116. Fisher, M. A., Eversole, R., Mehne, C., Means, J. C., DeLong, C., Mihalko, D., & Ide, C. F. (2008). Liver cyp1A protein expression and pigmented macrophage aggregates as indicators of polychlorinated biphenyl exposure in carp Cyprinus carpio L. from the Kalamazoo River Superfund site, Michigan.T T*Journal of Fish Biology*,T T*72*(8), 1960-1975.

117. Fitzgerald, Edward F., et al. "Polychlorinated biphenyl exposure and neuropsychological status among older residents of upper Hudson River communities."T T*Environmental Health Perspectives*T T116.2 (2008): 209.

118. Focant, Jean-François, et al. "High-throughput biomonitoring of dioxins and polychlorinated biphenyls at the sub-picogram level in human serum."T T*Journal of Chromatography A*T T1130.1 (2006): 97-107.

119. Focant, Jean-François, et al. "Levels of polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans and polychlorinated biphenyls in human milk from different regions of France." *Science of The Total Environment* 452 (2013): 155-162.

120. Fonnum, F., E. Mariussen, and T. Reistad. "Molecular mechanisms involved in the toxic effects of polychlorinated biphenyls (PCBs) and brominated flame retardants (BFRs)."T T*Journal of Toxicology and Environmental Health, Part A*69.1-2 (2006): 21-35.

121. Fonnum, Frode, and Espen Mariussen. 2009. "Mechanisms involved in the neurotoxic effects of environmental toxicants such as polychlorinated biphenyls and brominated flame retardants." *Journal of Neurochemistry* 111, no. 6: 1327-1347.

122. Franceschini, M. D., Custer, C. M., Custer, T. W., Reed, J. M., & Romero, L. M. (2008). Corticosterone stress response in tree swallows nesting near polychlorinated biphenyl and dioxin contaminated rivers.T T*Environmental Toxicology and Chemistry*,T T*27*(11), 2326-2331.

123. Frederiksen, M., Meyer, H. W., Ebbehøj, N. E., & Gunnarsen, L. (2012). Polychlorinated biphenyls (PCBs) in indoor air originating from sealants in contaminated and uncontaminated apartments within the same housing estate. *Chemosphere*, 89(4), 473-479.

124. Fritsche, Ellen, et al. "Polychlorinated biphenyls disturb differentiation of normal human neural progenitor cells: clue for involvement of thyroid hormone receptors."T T*Environmental Health Perspectives*T T113.7 (2005): 871.

125. Fritschi, Lin, et al. "Risk of non-Hodgkin lymphoma associated with occupational exposure to solvents, metals, organic dusts and PCBs (Australia)."T T*Cancer Causes & Control*T T16.5 (2005): 599-607.

126. Fürst, P. (2006). Dioxins, polychlorinated biphenyls and other organohalogen compounds in human milk. Levels, correlations, trends and exposure through breastfeeding.T T*Molecular Nutrition & Food Research*,T T*50*(10), 922-933.

127. Gallagher, C. M., McElroy, A. E., Smith, D. M., Golightly, M. G., & Meliker, J. R. (2013). Polychlorinated biphenyls, mercury, and antinuclear antibody positivity, NHANES 2003–2004. *International Journal of Hygiene and Environmental Health*. Available online.

128. Gao, S., Chen, J., Shen, Z., Liu, H., & Chen, Y. (2013). Seasonal and spatial distributions and possible sources of polychlorinated biphenyls in surface sediments of Yangtze Estuary, China. *Chemosphere*, 91(6), 809-816.

129. Gichner, T., Lovecka, P., & Vrchotova, B. (2008). Genomic damage induced in tobacco plants by chlorobenzoic acids—Metabolic products of polychlorinated biphenyls. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis*, *657*(2), 140-145.

130. Givens, Marjory L., et al. "Maternal exposure to polybrominated and polychlorinated biphenyls: Infant birth weight and gestational age."*Chemosphere*T T69.8 (2007): 1295-1304.

131. Gray, Kimberly A., et al. "In utero exposure to background levels of polychlorinated biphenyls and cognitive functioning among school-age children."*American Journal of Epidemiology*T T162.1 (2005): 17-26.

132. Grandjean, Philippe, et al. "Attenuated growth of breast-fed children exposed to increased concentrations of methylmercury and polychlorinated biphenyls."T T*The FASEB Journal*T T17.6 (2003): 699-701.

133. Grandjean, P., Budtz-Jørgensen, E., Barr, D. B., Needham, L. L., Weihe, P., & Heinzow, B. (2008). Elimination half-lives of polychlorinated biphenyl congeners in children.T T*Environmental science & technology*,T T*42*(18), 6991-6996.

134. Grasman, Keith A., et al. "Immunological and reproductive health assessment in herring gulls and black-crowned night herons in the Hudson-Raritan Estuary." *Environmental Toxicology and Chemistry* 32.3 (2013): 548-561.

135. Gray, Michael N., Lesa L. Aylward, and Russell E. Keenan. "Relative cancer potencies of selected dioxin-like compounds on a body-burden basis: comparison to current toxic equivalency factors (TEFs)."T T*Journal of Toxicology and Environmental Health, Part A*T T69.10 (2006): 907-917.

136. Gregoraszczuk, E. L., Rak, A., Ludewig, G., & Gasińska, A. (2008). Effects of estradiol, PCB3, and their hydroxylated metabolites on proliferation, cell cycle, and apoptosis of human breast cancer cells.T T*Environmental Toxicology and Pharmacology*,T T*25*(2), 227-233.

137. Grossman, Elizabeth. "Nonlegacy PCBs: Pigment Manufacturing By-Products Get a Second Look." *Environmental Health Perspectives* 121.3 (2013): a86.

138. Guan, Peng, et al. "Associations between dietary intake and breast milk dioxin levels in Tokyo, Japan."T T*Pediatrics International*T T47.5 (2005): 560-566.

139. Guida, M., Marra, M., Zullo, F., Guida, M., Trifuoggi, M., Biffali, E., ... & De Felice, B. (2013). Association between exposure to dioxin-like polychlorinated biphenyls and miR-191 expression in human peripheral blood mononuclear cells. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis*, 753(1), 36-41.

140. Guo, L., Gao, L., Li, A., & Xiao, K. (2013). Polychlorinated naphthalenes (PCNs) in surface sediments of the Yangtze and Yellow River Estuaries, China. *Wuhan University Journal of Natural Sciences*, *18*(1), 79-87.

141. Guvenius, Daiva Meironyté, et al. "Human prenatal and postnatal exposure to polybrominated diphenyl ethers, polychlorinated biphenyls, polychlorobiphenylols, and pentachlorophenol."T T*Environmental Health Perspectives*T T111.9 (2003): 1235.

142. Halldorsson, T. I., Thorsdottir, I., Meltzer, H. M., Nielsen, F., & Olsen, S. F. (2008). Linking exposure to polychlorinated biphenyls with fatty fish consumption and reduced fetal growth among Danish pregnant women: a cause for concern?.T T*American journal of epidemiology*,T T*168*(8), 958-965.

143. Hamel, Annie, et al. "Effects of low concentrations of organochlorine compounds in women on calcium transfer in human placental syncytiotrophoblast."T T*Toxicological Sciences*T T76.1 (2003): 182-189.

144. Hardell, Lennart, et al. "Increased concentrations of polychlorinated biphenyls, hexachlorobenzene, and chlordanes in mothers of men with testicular cancer."*Environmental Health Perspectives*T T111.7 (2003): 930.

145. Hardell, Lennart, et al. "Concentrations of polychlorinated biphenyls in blood and the risk for testicular cancer."T T*International Journal of Andrology*T T27.5 (2004): 282-290.

146. Hardell, Lennart, et al. "In utero exposure to persistent organic pollutants in relation to testicular cancer risk."T T*International Journal of Andrology*T T29.1 (2006): 228-234.

147. Hardell, Lennart, et al. "Decreased survival in pancreatic cancer patients with high concentrations of organochlorines in adipose tissue."T T*Biomedicine & Pharmacotherapy*T T61.10 (2007): 659-664.

148. Harden, F. A., et al. "Evaluation of dioxin-like chemicals in pooled human milk samples collected in Australia."T T*Chemosphere*T T67.9 (2007): S325-S333.

149. Harris, S. A., & Jones, J. L. (2008). Fish consumption and PCB-associated health risks in recreational fishermen on the James River, Virginia. *Environmental Research*,T T*107*(2), 254-263.

150. Hassine, Sihem Ben, et al. "Concentrations of organochlorine pesticides and polychlorinated biphenyls in human serum and their relation with age, gender, and BMI for the general population of Bizerte, Tunisia." *Environmental Science and Pollution Research* (2013): 1-11.

151. Haynes, James M., James J. Pagano, and Sara T. Wellman. 2009. "Total PCBs, Dioxin–Furan TEQs, and Total Mercury Concentrations in Mink in and out of the Rochester Embayment Area of Concern Near and Inland from the Shore of Lake Ontario." *Archives of Environmental Contamination & Toxicology,* 57, no. 4: 794-802.

152. He, Ping, Ai-Guo Wang, Tao Xia, Ping Gao, Qiang Niu, Li-Juan Guo, Ba-Yi Xu, and Xue-Min Chen. 2009. "Mechanism of the neurotoxic effect of PBDE-47 and interaction of PBDE-47 and PCB153 in enhancing toxicity in SH-SY5Y cells." *Neurotoxicology* 30, no. 1: 10-15.

153. Heilmann, Carsten, et al. "Reduced antibody responses to vaccinations in children exposed to polychlorinated biphenyls."T T*PLoS Medicine*T T3.8 (2006): e311.

154. Helaleh, M. I., & Al-Rashdan, A. (2013). Automated pressurized liquid extraction (PLE) and automated power-prep™ clean-up for the analysis of polycyclic aromatic hydrocarbons, organo-chlorinated pesticides and polychlorinated biphenyls in marine samples. *Analytical Methods*, 5, 1617-1622.

155. Hellar-Kihampa, Harieth, et al. "Spatial monitoring of organohalogen compounds in surface water and sediments of a rural–urban river basin in Tanzania." *Science of The Total Environment* 447 (2013): 186-197.

156. Helmfrid, I., Berglund, M., Löfman, O., & Wingren, G. (2012). Health effects and exposure to polychlorinated biphenyls (PCBs) and metals in a contaminated community. *Environment International*, 44, 53-58.

157. Hennig, Bernhard, et al. "Using nutrition for intervention and prevention against environmental chemical toxicity and associated diseases."T T*Environmental Health Perspectives*T T115.4 (2007): 493.

158. Hertz Picciotto, I., Park, H. Y., Dostal, M., Kocan, A., Trnovec, T., & Sram, R. (2008). Prenatal Exposures to Persistent and Non Persistent Organic Compounds and Effects on Immune System Development.T T*Basic & Clinical Pharmacology & Toxicology*,T T*102*(2), 146-154.

159. Hickie, B. E., Ross, P. S., Macdonald, R. W., & Ford, J. K. (2007). Killer whales (Orcinus orca) face protracted health risks associated with lifetime exposure to PCBs.T T*Environmental Science & Technology*,T T*41*(18), 6613-6619.

160. Hinck, Jo Ellen, Christopher J. Schmitt, Kimberly A. Chojnacki, and Donald E. Tillitt. 2009. "Environmental contaminants in freshwater fish and their risk to piscivorous wildlife based on a national monitoring program." *Environmental Monitoring & Assessment* 152, no. 1-4: 469-494.

161. Hinck, Jo Ellen, Ross J. Norstrom, Carl E. Orazio, Christopher J. Schmitt, and Donald E. Tillitt. 2009. "Persistence of organochlorine chemical residues in fish from the Tombigbee River (Alabama, USA): Continuing risk to wildlife from a former DDT manufacturing facility." *Environmental Pollution* 157, no. 2: 582-591.

162. Hojo, R., Kakeyama, M., Kurokawa, Y., Aoki, Y., Yonemoto, J., & Tohyama, C. (2008). Learning behavior in rat offspring after in utero and lactational exposure to either TCDD or PCB126.T T*Environmental Health and Preventive Medicine*,T T*13*(3), 169-180.

163. Hombuckle, Keri, and Larry Robertson. "Polychlorinated Biphenyls (PCBs): Sources, Exposures, Toxicities." *Environmental Science & Technology* 44, no. 8 (April 15, 2010): 2749-2751.

164. Hong, G. H., Kim, C. J., Yeemin, T., Siringan, F. P., Zhang, J., Lee, H. M., ... & Ryu, J. H. (2013). Potential Release of PCBs from Plastic Scientific Gear to Fringing Coral Reef Sediments in the Gulf of Thailand. *Deep Sea Research Part II: Topical Studies in Oceanography*. Available Online.

165. Hopf, N. B., Ruder, A. M., Waters, M. A., & Succop, P. (2013). Concentration-dependent half-lives of polychlorinated biphenyl in sera from an occupational cohort. *Chemosphere*, *91*(2), 172-178.

166. Hori, T., et al. "Blood PCB concentrations and their characteristics examined in Fukuoka 2006 annual inspection for Yusho."T T*Fukuoka Acta Medica*T T98.5 (2007): 176-181.

167. Hsu, Ping-Chi, et al. "Serum hormones in boys prenatally exposed to polychlorinated biphenyls and dibenzofurans."T T*Journal of Toxicology and Environmental Health, Part A,*T T68.17-18 (2005): 1447-1456.

168. Hsu, P., Pan, M., Li, L., Chen, C., Tsai, S., Guo, Y. (2007). Exposure in utero to 2,2',3,3',4,6'-hexachlorobipehnyl (PCB 132) impairs sperm function and alters

testicular apoptosis-related gene expression in rat offspring. *Toxicology and Applied Pharmacology,* 221(1), 68-75.

169. Huang, M. C., Chao, H. R., Wang, S. L., Hung, H. C., Wang, Y. S., & Pan, W. H. (2007). Associations of diet with body burden of dibenzo-p-dioxins and dibenzofurans (PCDD/Fs) and dioxin-like polychlorinated biphenyls (PCBs): Observations on pregnant women from central Taiwan.T T*Food additives and contaminants*,T T*24*(7), 784-791.

170. Huang, Y. W., Hoffman, D. J., & Karasov, W. H. (2007). Oxidative stress induced in PCB 126-exposed northern leopard frogs, Rana pipiens.T T*Journal of Toxicology and Environmental Health, Part A*,T T*70*(8), 676-681.

171. Hudson River Natural Resource Trustees. 2013. PCB Contamination of the Hudson River Ecosystem, Compilation of Contamination Data through 2008: Hudson River Natural Resource Damage Assessment. Accessed January 18, 2013. HTUhttp://www.fws.gov/contaminants/Restorationplans/HudsonRiver/docs/HudsonUTH River Status Report Update January 2013.pdf

172. Huwe, Janice, Doritza Pagan-Rodriguez, Naser Abdelmajid, Nelson Clinch, Donald Gordon, James Holterman, Ezzat Zaki, Margaret Lorentzsen, and Kerry Dearfield. 2009. "Survey of polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, and non-ortho-polychlorinated biphenyls in U.S. meat and poultry, 2007-2008: effect of new toxic equivalency factors on toxic equivalency levels, patterns, and temporal trends." *Journal Of Agricultural And Food Chemistry* 57, no. 23: 11194-11200.

173. Huwe, Janice K., and Gerald L. Larsen. "Polychlorinated dioxins, furans, and biphenyls, and polybrominated diphenyl ethers in a US meat market basket and estimates of dietary intake."T T*Environmental Science & Technology*T T39.15 (2005): 5606-5611.

174. Hwang, L. (2007). Environmental stressors and violence: Lead and polychlorinated biphenyls.T T*Reviews on Environmental Health*,T T*22*(4), 313-328.

175. Hye-Youn, Park, Irva Hertz-Picciotto, Eva Sovcikova, Anton Kocan, Beata Drobna, and Tomas Trnovec. 2010. "Neurodevelopmental toxicity of prenatalpolychlorinated biphenyls (PCBs) by chemicalstructure and activity: a birth cohort study." *Environmental Health: A Global Access Science Source* 9, 51-63.

176. Jan, J., Sovcikova, E., Kočan, A., Wsolova, L., & Trnovec, T. (2007). Developmental dental defects in children exposed to PCBs in eastern Slovakia. *Chemosphere*,T T*67*(9), S350-S354.

177. Jan, J., & Reinert, K. (2008). Dental caries in Faroese children exposed to polychlorinated biphenyls.T T*Environmental Toxicology and Pharmacology*,T T*25*(2), 188-191.

178. Jandacek, Ronald J., and Stephen J. Genuis. (2013). "An Assessment of the Intestinal Lumen as a Site for Intervention in Reducing Body Burdens of Organochlorine Compounds." *The Scientific World Journal,* 2013, 10 pages.

179. Janssen, C., De Laender, F., & Baert, J. (2012). PCB accumulation in Arctic seabirds: the importance of migration and diet. Master's Thesis, Vlaams Instituut Voor de Zee.

180. Jensen, R. G., Koch, A., Homøe, P., & Bjerregaard, P. (2013). Tobacco smoke increases the risk of otitis media among Greenlandic Inuit children while exposure to organochlorines remain insignificant. *Environment International*, *54*, 112-118.

181. Jia, K., Feng, X., Liu, K., Han, Y., Xue, Y., & Xue, C. (2013). Development of a subcritical fluid extraction and GC-MS validation method for polychlorinated biphenyls (PCBs) in marine samples. *Journal of Chromatography B*, Vol. 923-924, 37-42.

182. Jiang, Y., Wang, X., Zhu, K., Wu, M., Sheng, G., & Fu, J. (2011). Polychlorinated biphenyls contamination in urban soil of Shanghai: Level, compositional profiles and source identification. *Chemosphere*, *83*(6), 767-773.

183. Johansson, C., Tofighi, R., Tamm, C., Goldoni, M., Mutti, A., & Ceccatelli, S. (2006). Cell death mechanisms in AtT20 pituitary cells exposed to polychlorinated biphenyls (PCB 126 and PCB 153) and methylmercury. *Toxicology Letters*,T T*167*(3), 183-190.

184. Johnson-Restrepo, Boris, et al. "Polybrominated diphenyl ethers and polychlorinated biphenyls in human adipose tissue from New York." *Environmental Science & Technology*T T39.14 (2005): 5177-5182.

185. Juan, Ching-Yi, et al. "An input–output balance study for PCBs in humans." *Environment International*T T28.3 (2002): 203-214.

186. Kadhel, P., Monnier, P., Boucoiran, I., Chaillet, N., & Fraser, W. D. (2012). Organochlorine Pollutants and Female Fertility: A Systematic Review Focusing on In Vitro Fertilization Studies. *Reproductive Sciences*, 19(12), 1246-1259.

187. Kalantari, Fereshteh, et al. (2013). "Establishment of the Cumulative Margin of Exposure for a Group of Polychlorinated Biphenyl (PCB) Congeners Using an Improved Approach that Accounts for both Variability and Uncertainty." *Regulatory Toxicology and Pharmacology*, 65(3), 325-333.

188. Kannan, K., Perrotta, E., Thomas, N. J., & Aldous, K. M. (2007). A comparative analysis of polybrominated diphenyl ethers and polychlorinated biphenyls in southern sea otters that died of infectious diseases and noninfectious causes. *Archives of Environmental Contamination and Toxicology*,T T*53*(2), 293-302.

189. Karagas, M. R., Mariën, K., Rheinberger, C. M., Schoeny, R., Oken, E., Choi, A. L., ... & Sunderland, E. (2012). Which Fish Should I Eat? Perspectives Influencing Fish Consumption Choices. *Environmental Health Perspectives,* 120(6): 790-798.

190. Karmaus, Wilfried, et al. "Childhood growth and exposure to dichlorodiphenyl dichloroethene and polychlorinated biphenyls."T T*The Journal of Pediatrics,*T T140.1 (2002): 33-39.

191. Kawashiro, Yukiko, et al. "Perinatal exposure to brominated flame retardants and polychlorinated biphenyls in Japan." *Endocrine Journal* 55.6 (2008): 1071-1084.

192. Kim, D., Ryu, H. Y., Lee, J. H., Lee, J. H., Lee, Y. J., Kim, H. K., ... & Yoon, H. S. (2013). Organochlorine pesticides and polychlorinated biphenyls in Korean human milk: Contamination levels and infant risk assessment. *Journal of Environmental Science and Health, Part B*, *48*(4), 243-250.

193. Kimbrough, Renate D., Martha L. Doemland, and Jack S. Mandel. "A mortality update of male and female capacitor workers exposed to polychlorinated biphenyls."T T*Journal of Occupational and Environmental Medicine,*T T45.3 (2003): 271-282.

194. Kimura-Kuroda, J., Nagata, I., & Kuroda, Y. (2007). Disrupting effects of hydroxy-polychlorinated biphenyl (PCB) congeners on neuronal development of cerebellar Purkinje cells: a possible causal factor for developmental brain disorders?.T T*Chemosphere*,T T*67*(9), S412-S420.

195. Kelly, S. M., Eisenreich, K. M., Baker, J. E., & Rowe, C. L. (2008). Accumulation and maternal transfer of polychlorinated biphenyls in snapping turtles of the upper Hudson River, New York, USA. *Environmental Toxicology and Chemistry*, *27*(12), 2565-2574.

196. Kimura-Kuroda, Junko, Isao Nagata, and Yoichiro Kuroda. "Disrupting effects of hydroxy-polychlorinated biphenyl (PCB) congeners on neuronal development of cerebellar Purkinje cells: a possible causal factor for developmental brain disorders?."T T*Chemosphere*T T67.9 (2007): S412-S420.

197. Knott, K. K., Boyd, D., Ylitalo, G. M., & O'Hara, T. M. (2012). Lactational transfer of mercury and polychlorinated biphenyls in polar bears. *Chemosphere*, 88(4), 395-402.

198. Knott, K. K., Schenk, P., Beyerlein, S., Boyd, D., Ylitalo, G. M., & O'Hara, T. M. (2011). Blood-based biomarkers of selenium and thyroid status indicate possible adverse biological effects of mercury and polychlorinated biphenyls in Southern Beaufort Sea polar bears. *Environmental Research*, *111*(8), 1124-1136.

199. Kobayashi, K., Miyagawa, M., Wang, R. S., Suda, M., Sekiguchi, S., & Honma, T. (2008). Effects of in utero exposure to 2, 2′, 4, 4′, 5, 5′ hexachlorobiphenyl (PCB 153) on somatic growth and endocrine status in rat offspring. *Congenital Anomalies*, *48*(4), 151-157.

200. Kohler, Martin, et al. "Joint sealants: an overlooked diffuse source of polychlorinated biphenyls in buildings."T T*Environmental Science & Technology,* 39.7 (2005): 1967-1973.

201. Kong, J., Achari, G., & Langford, C. H. (2013). Dechlorination of polychlorinated biphenyls in transformer oil using UV and visible light. *Journal of Environmental Science and Health, Part A*, *48*(1), 92-98.

202. Kono, Kumiko, Hiroyuki Tanaka, and Jiro Koyama. 2010. "Dioxin transfer from sediment to the infaunal surface deposit-feeding polychaete Perinereis nuntia in a laboratory-rearing experiment." *Environmental Toxicology & Chemistry* 29, no. 7: 1512-1519.

203. Kopec, Anna K., et al. "Comparative toxicogenomic examination of the hepatic effects of PCB126 and TCDD in immature, ovariectomized C57BL/6 mice." *Toxicological Sciences*T T102.1 (2008): 61-75.

204. Korrick, S. A., & Sagiv, S. K. (2008). Polychlorinated biphenyls, organochlorine pesticides and neurodevelopment.T T*Current Opinion in Pediatrics*,T T*20*(2), 198-204.

205. Kudyakov, Rustam, et al. "Respiratory disease in relation to patient residence near to hazardous waste sites."T T*Environmental Toxicology and Pharmacology,* 18.3 (2004): 249-257.

206. Lai, Te-Jen, et al. "A cohort study of behavioral problems and intelligence in children with high prenatal polychlorinated biphenyl exposure."T T*Archives of General Psychiatry*T T59.11 (2002): 1061.

207. Lamb, Matthew R., et al. "Prenatal exposure to polychlorinated biphenyls and postnatal growth: a structural analysis."T T*Environmental Health Perspectives,* 114(5), (2006): 779-785.

208. Landrigan, Philip J., et al. "Early environmental origins of neurodegenerative disease in later life."T T*Environmental Health Perspectives*T T113(9), (2005): 1230-1233.

209. Langer, Pavel, et al. "Fish from industrially polluted freshwater as the main source of organochlorinated pollutants and increased frequency of thyroid disorders and dysglycemia."T T*Chemosphere,*T T67(9), (2007): S379-S385.

210. Langer, P., Kočan, A., Tajtáková, M., Koška, J., Rádiková, Ž., Kšinantová, L., ... & Klimeš, I. (2008). Increased thyroid volume, prevalence of thyroid antibodies and impaired fasting glucose in young adults from organochlorine cocktail polluted area: outcome of transgenerational transmission?. *Chemosphere*,T T*73*(7), 1145-1150.

211. Lauby-Secretan, B., et al. (2013). Carcinogenicity of polychlorinated biphenyls and polybrominated biphenyls. *The Lancet Oncology* 14(4): 287-288.

212. Lazar, Bojan, Luna Maslov, Snježana Herceg Romanić, Romana Gračan, Blanka Krauthacker, Draško Holcer, and Nikola Tvrtković. 2011. "Accumulation of organochlorine contaminants in loggerhead sea turtles, Caretta caretta, from the eastern Adriatic Sea." *Chemosphere* 82, no. 1: 121-129.

213. Lee, Sunggyu, Kurunthachalam Kannan, and Hyo-Bang Moon. "Assessment of exposure to polybrominated diphenyl ethers (PBDEs) via seafood consumption and dust ingestion in Korea." *Science of the Total Environment* 443 (2013): 24-30.

214. Lehmann, D. W., Levine, J. F., & Law, J. M. (2007). Polychlorinated biphenyl exposure causes gonadal atrophy and oxidative stress in Corbicula fluminea clams.T T*Toxicologic Pathology*,T T*35*(3), 356-365.

215. Levin, Milton, et al. "Non-coplanar PCB-mediated modulation of human leukocyte phagocytosis: a new mechanism for immunotoxicity."T T*Journal of Toxicology and Environmental Health, Part A*T T68.22 (2005): 1977-1993.

216. Li, Lih-Ann, and Pei-Wen Wang. "PCB126 induces differential changes in androgen, cortisol, and aldosterone biosynthesis in human adrenocortical H295R cells."T T*Toxicological Sciences*T T85.1 (2005): 530-540.

217. Li, B., Wang, C., Ye, K., Yu, A., Chen, Y., & Zuo, Z. (2008). Differential gene expression in the brain of Sebastiscus marmoratus in response to exposure to polychlorinated biphenyls (PCBs). *Marine Environmental Research*, *66*(5), 548-552.

218. Librando, Vito, et al. "Calorimetric evaluation of interaction and absorption of polychlorinated biphenyls by biomembrane models." *Chemosphere* 91.6 (2013):791-796.

219. Lin, K. C., Guo, N. W., Tsai, P. C., Yang, C. Y., & Guo, Y. L. (2008). Neurocognitive changes among elderly exposed to PCBs/PCDFs in Taiwan. *Environmental Health Perspectives*,T T*116*(2), 184-189.

220. Lin, Y. S., Caffrey, J. L., Hsu, P. C., Chang, M. H., Faramawi, M., & Lin, J. W. (2012). Environmental exposure to dioxin-like compounds and the mortality risk in the US population. *International Journal of Hygiene and Environmental Health*, 215(6): 541-546.

221. Llabjani, Valon, Júlio Trevisan, Kevin C Jones, Richard F Shore, and Francis L Martin. 2010. "Binary mixture effects by PBDE congeners (47, 153, 183, or 209) and PCB congeners (126 or 153) in MCF-7 cells: biochemical alterations assessed by IR spectroscopy and multivariate analysis." *Environmental Science & Technology* 44, no. 10: 3992-3998.

222. Lo Giudice, A., Casella, P., Bruni, V., & Michaud, L. (2013). Response of bacterial isolates from Antarctic shallow sediments towards heavy metals, antibiotics and polychlorinated biphenyls. *Ecotoxicology*, 22(2):240-250.

223. Loch-Caruso, Rita. "Uterine muscle as a potential target of polychlorinated biphenyls during pregnancy."T T*International Journal of Hygiene and Environmental Health*T T205.1 (2002): 121-130.

224. Longnecker, Matthew P., et al. "In utero exposure to polychlorinated biphenyls and sensorineural hearing loss in 8-year-old children."T T*Neurotoxicology and Teratology*T T26.5 (2004): 629-637.

225. Louis, G. M. B., Sundaram, R., Schisterman, E. F., Sweeney, A. M., Lynch, C. D., Gore-Langton, R. E., ... & Barr, D. B. (2013). Persistent Environmental Pollutants and Couple Fecundity: The LIFE Study. *Environmental hHealth Perspectives*, *121*(2), 231.

226. Mari, M., Nadal, M., Schuhmacher, M., & Domingo, J. L. (2013). Body burden monitoring of dioxins and other organic substances in workers at a hazardous waste incinerator. *International Journal of Hygiene and Environmental Health*. Available Online.

227. Lu, Xiaoxia, et al. "Concentration Levels and Ecological Risks of Persistent Organic Pollutants in the Surface Sediments of Tianjin Coastal Area, China." *The Scientific World Journal* 2013 (2013), 8 pages.

228. Lung, Shih-Chun Candice, Yue-Liang Leon Guo, and Ho-Yuan Chang. "Serum concentrations and profiles of polychlorinated biphenyls in Taiwan Yu-cheng victims twenty years after the incident."T T*Environmental Pollution*T T136.1 (2005): 71-79.

229. Lyng, G., Snyder-Keller, A., Seegal, R. (2007). Polychlorinated biphenyl-induced neurotoxicity in organotypic cocultures of developing rat ventral mesencephalon and striatum. *Toxicological Sciences,* 97(1), 128-139.

230. Lynn, S. G., Price, D. J., Birge, W. J., & Kilham, S. S. (2007). Effect of nutrient availability on the uptake of PCB congener 2, 2′, 6, 6′-tetrachlorobiphenyl by a

diatom (Stephanodiscus minutulus) and transfer to a zooplankton (Daphnia pulicaria).T T*Aquatic Toxicology*,T T*83*(1), 24-32.

231. Magi, Simona, et al. "Involvement of Na+-Ca2+ exchanger in intracellular Ca2+ increase and neuronal injury induced by polychlorinated biphenyls in human neuroblastoma SH-SY5Y cells."T T*Journal of Pharmacology and Experimental Therapeutics*T T315.1 (2005): 291-296.

232. Majkova, Z., Oesterling, E., Toborek, M., & Hennig, B. (2008). Impact of nutrition on PCB toxicity.T T*Environmental Toxicology and Pharmacology*,T T*25*(2), 192-196.
233. Malarvannan, G., Isobe, T., Covaci, A., Prudente, M., & Tanabe, S. (2013). Accumulation of brominated flame retardants and polychlorinated biphenyls in human breast milk and scalp hair from the Philippines: Levels, distribution and profiles. *Science of the Total Environment*, *442*, 366-379.

234. Malkiewicz, Katarzyna, et al. "Polychlorinated biphenyls alter expression of α-synuclein, synaptophysin and parkin in the rat brain."T T*Toxicology Letters*T T161.2 (2006): 152-158.

235. Masuda, Y. Haraguchi, K. and Kono, S. "Peculiar remaining of some PCB congeners in the patients with Yusho for more than 30 years."T T*Fukuoka Igaku Zasshi* 94.5 (2003): 136-143

236. Masuda, Yoshito. "Behavior and toxic effects of PCBs and PCDFs in Yusho patients for 35 years."T T*Journal of Dermatological Science Supplement*T T1.1 (2005): S11-S20.

237. McGraw, Joseph E., and Donald P. Waller. 2009. "The role of African American ethnicity and metabolism in sentinel polychlorinated biphenyl congener serum levels." *Environmental Toxicology & Pharmacology* 27, no. 1: 54-61.

238. Meggo, R. E., & Schnoor, J. L. (2013). Cleaning Polychlorinated Biphenyl (PCB) Contaminated Garden Soil by Phytoremediation. *Environmental Sciences*, *1*(1), 33-52.

239. Menichini, E., Iacovella, N., Monfredini, F., & Turrio-Baldassarri, L. (2007). Relationships between indoor and outdoor air pollution by carcinogenic PAHs and PCBs.T T*Atmospheric Environment*,T T*41*(40), 9518-9529.

240. Meyer, H. W., Frederiksen, M., Göen, T., Ebbehøj, N. E., Gunnarsen, L., Brauer, C., ... & Jacobsen, P. (2013). Plasma Polychlorinated Biphenyls in residents of 91 PCB-contaminated and 108 non-contaminated dwellings–an exposure study. *International Journal of Hygiene and Environmental Health*. Available Online.

241. Miller, A., Hedman, J., & Bignert, A. (2012). Temporal, seasonal and spatial variation in dioxins and dioxin-like PCBs from Baltic herring (Clupea harengus) in the Baltic Sea. Report by Swedish Museum of Natural History, Department of Contaminant Research.

242. Miranda, A. L., Roche, H., Randi, M. A. F., Menezes, M. L., & Ribeiro, C. A. (2008). Bioaccumulation of chlorinated pesticides and PCBs in the tropical freshwater fish Hoplias malabaricus: Histopathological, physiological, and immunological findings.T T*Environment International*,T T*34*(7), 939-949.

243. Mori, C., Morsey, B., Levin, M., Gorton, T. S., & De Guise, S. (2008). Effects of organochlorines, individually and in mixtures, on B-cell proliferation in marine mammals and mice.T T*Journal of Toxicology and Environmental Health, Part A*,*71*(4), 266-275.

244. Morland, K., Wolff, M., Bopp, R., Godbold, J., & Landrigan, P. (2008). Fish consumption and body burden of organochlorines among lower hudson urban anglers.T T*American Journal of Industrial Medicine*,T T*51*(8), 587-594.

245. Morrison, R. J., Denton, G. R. W., Bale Tamata, U., & Grignon, J. (2013). Anthropogenic biogeochemical impacts on coral reefs in the pacific islands–an overview. *Deep Sea Research Part II: Topical Studies in Oceanography*. Available Online.

246. Mos, Lizzy, Marc Cameron, Steven J. Jeffries, Ben F. Koop, and Peter S. Ross. 2010. "Risk-based analysis of polychlorinated biphenyl toxicity in harbor seals." *Integrated Environmental Assessment & Management* 6, no. 4: 631-640.

247. Moss, Stefan, Jennifer M. Keller, Sean Richards, and Thomas P. Wilson. 2009. "Concentrations of persistent organic pollutants in plasma from two species of turtle from the Tennessee River Gorge." *Chemosphere* 76, no. 2: 194-204.

248. Mouhamadou, Bello, et al. (2013) "Potential of autochthonous fungal strains isolated from contaminated soils for degradation of polychlorinated biphenyls." *Fungal Biology,* 117(4): 268-274.

249. Na, Yi-Rang, Seung-Hyeok Seok, Min-Won Baek, Hui-Young Lee, Dong-Jae Kim, Sung-Hoon Park, Hyun-Kyoung Lee, and Jae-Hak Park. 2009. "Protective effects of vitamin E against 3,3′,4,4′,5-pentachlorobiphenyl (PCB126) induced toxicity in zebrafish embryos." *Ecotoxicology & Environmental Safety* 72, no. 3: 714-719.

250. Nacci, Diane, Marina Huber, Denise Champlin, Saro Jayaraman, Sarah Cohen, Eric Gauger, Allison Fong, and Marta Gomez-Chiarri. 2009. "Evolution of tolerance to PCBs and susceptibility to a bacterial pathogen (Vibrio harveyi) in Atlantic killifish (Fundulus heteroclitus) from New Bedford (MA, USA) harbor." *Environmental Pollution* 157, no. 3: 857-864.

251. Nagayama, Junya, Takashi Todaka, Hironori Hirakawa, Tsuguhide Hori, Jumboku Kajiwara, Takesumi Yoshimura, and Masutaka Furue. 2010. "Polychlorinated dibenzofurans as a causal agent of fetal Yusho." *Chemosphere* 80, no. 5: 513-518.

252. Nakajima, Sonomi, et al. "Effects of prenatal exposure to polychlorinated biphenyls and dioxins on mental and motor development in Japanese children at 6 months of age."T T*Environmental Health Perspectives*T T114.5 (2006): 773.

253. Nakao, T., et al. "Survey of Human Exposure to PCDDs, PCDFs, and Coplanar PCBs Using Hairas an Indicator."T T*Archives of Environmental Contamination and Toxicology*T T49.1 (2005): 124-130.

254. Neamtu, Silvia, et al. "Environmental Assessment of PCB's Occurrence in Soil due to Industrial Pollution." *Annals of the University of Craiova-Agriculture, Montanology, Cadastre Series* 42.1 (2013): 405-414.

255. Nelson, Nancy J. "Studies examine whether persistent organic agents may be responsible for rise in lymphoma rates."T T*Journal of the National Cancer Institute* 97.20 (2005): 1490-1491.

256. Nelson, W. G., & Bergen, B. J. (2012). The New Bedford Harbor Superfund site long-term monitoring program (1993–2009).T T*Environmental Monitoring and Assessment*,T T*184*(12), 7531-7550.

257. Ni, H. G., & Zeng, E. Y. (2013). Mass Emissions of Pollutants from E-Waste Processed in China and Human Exposure Assessment. *The Handbook of Environmental Chemistry,* 23: 279-312.

258. Noakes, Paul S., et al. "The relationship between persistent organic pollutants in maternal and neonatal tissues and immune responses to allergens: A novel exploratory study."T T*Chemosphere*T T63.8 (2006): 1304-1311.

259. Okada, Kazushi, Shoko Hashimoto, Yoshihiko Funae, and Susumu Imaoka. 2009. "Hydroxylated Polychlorinated Biphenyls (PCBs) Interact with Protein Disulfide Isomerase and Inhibit Its Activity." *Chemical Research in Toxicology* 22, no. 5: 899-904.

260. Omori, Naoko, et al. "Polychlorinated biphenyls alter the expression of endothelial nitric oxide synthase mRNA in human umbilical vein endothelial cells."T T*Human & Experimental Toxicology*T T26.10 (2007): 811-816.

261. Orito, K., Gotanda, N., Murakami, M., Ikeda, T., Egashira, N., Mishima, K., & Fujiwara, M. (2007). Prenatal exposure to 3, 3', 4, 4', 5-pentachlorobiphenyl (PCB126) promotes anxiogenic behavior in rats.T T*The Tohoku Journal of Experimental Medicine*,T T*212*(2), 151-157.

262. Otake, Takamitsu, et al. "Thyroid hormone status of newborns in relation to in utero exposure to PCBs and hydroxylated PCB metabolites." *Environmental Research*T T105.2 (2007): 240-246.

263. Ozcan, S., Tor, A., & Aydin, M. E. (2013). Investigation on the Levels of Heavy Metals, Polycyclic Aromatic Hydrocarbons, and Polychlorinated Biphenyls in Sewage Sludge Samples and Ecotoxicological Testing. *CLEAN–Soil, Air, Water*, 41(4): 411-418.

264. Özyürek, Nazan Akduman, et al. "Levels and sources of polychlorinated biphenyls in Ankara creek sediments, Turkey." *Journal of Environmental Science and Health, Part A* 48.7 (2013): 800-808.

265. Parham, F., Wise, A., Axelrad, D. A., Guyton, K. Z., Portier, C., Zeise, L., ... & Woodruff, T. J. (2012). Adverse effects in risk assessment: Modeling polychlorinated biphenyls and thyroid hormone disruption outcomes in animals and humans. *Environmental Research*, 116: 74-84.

266. Park, H. Y., Hertz-Picciotto, I., Petrik, J., Palkovicova, L., Kocan, A., & Trnovec, T. (2008). Prenatal PCB exposure and thymus size at birth in neonates in Eastern Slovakia.T T*Environmental Health Perspectives*,T T*116*(1), 104.

267. Park, June-Soo, et al. "Placental transfer of polychlorinated biphenyls, their hydroxylated metabolites and pentachlorophenol in pregnant women from eastern Slovakia."T T*Chemosphere*T T70.9 (2008): 1676-1684.

268. Pessah, Isaac N, Gennady Cherednichenko, and Pamela J Lein. 2010. "Minding the calcium store: Ryanodine receptor activation as a convergent mechanism of PCB toxicity." *Pharmacology & Therapeutics* 125, no. 2: 260-285.

269. Petersen, Maria Skaalum, et al. "Polychlorinated biphenyl (PCB) induction of CYP3A4 enzyme activity in healthy Faroese adults."T T*Toxicology and Applied Pharmacology*T T224.2 (2007): 202-206.

270. Petriello, M. C., Newsome, B., & Hennig, B. (2013). Influence of nutrition in PCB-induced vascular inflammation. *Environmental Science and Pollution Research*. Available Online.

271. Pinsker, N. I. (2011). *Phytoremediation of PCB Contaminated Soil: Effectiveness and Regulatory Policy* (Master Thesis, Virginia Commonwealth University Richmond, Virginia).

272. Plíšková, Martina, et al. "Impact of polychlorinated biphenyls contamination on estrogenic activity in human male serum."T T*Environmental Health Perspectives* 113.10 (2005): 1277.

273. Polańska, K., Jurewicz, J., & Hanke, W. (2013). Review of current evidence on the impact of pesticides, polychlorinated biphenyls and selected metals on attention deficit/hyperactivity disorder in children. *International Journal of Occupational Medicine and Environmental Health*, 26(1): 16-38.

274. Polder, A., Thomsen, C., Lindström, G., Løken, K. B., & Skaare, J. U. (2008). Levels and temporal trends of chlorinated pesticides, polychlorinated biphenyls and brominated flame retardants in individual human breast milk samples from Northern and Southern Norway.T T*Chemosphere*,T T*73*(1), 14-23.

275. Porpora, Maria Grazia, et al. "Increased levels of polychlorobiphenyls in Italian women with endometriosis."T T*Chemosphere*T T63.8 (2006): 1361-1367.

276. Porpora, Maria Grazia, et al. "Placental Transfer of Persistent Organic Pollutants: A Preliminary Study on Mother-Newborn Pairs." *International Journal of Environmental Research and Public Health* 10.2 (2013): 699-711.

277. Porta, M., de Basea, M. B., Benavides, F. G., López, T., Fernandez, E., Marco, E., ... & Puigdomènech, E. (2008). Differences in serum concentrations of organochlorine compounds by occupational social class in pancreatic cancer.T T*Environmental Research*,T T*108*(3), 370-379.

278. Portigal, Cheryl L., et al. "Polychlorinated biphenyls interfere with androgen-induced transcriptional activation and hormone binding."T T*Toxicology and Applied Pharmacology*T T179.3 (2002): 185-194.

279. Powers, Brian E., et al. "Auditory deficits in rats exposed to an environmental PCB mixture during development."T T*Toxicological Sciences*T T89.2 (2006): 415-422.

280. Prince, Mary M., et al. "Mortality and exposure response among 14,458 electrical capacitor manufacturing workers exposed to polychlorinated biphenyls (PCBs)."T T*Environmental Health Perspectives*T T114.10 (2006): 1508.

281. Provost, T., Kennedy, M., Castracane, V. D., & Meserve, L. A. (2007). The Effects of Polychlorinated Biphenyl on Circulating Leptin and Thyroid Hormone Status in Sprague-Dawley Rats, Rattus norvegicus. *Ohio Journal of Science* 107(2): 19-22.

282. Ramajayam, G., et al. "Effects of Aroclor 1254 on femoral bone metabolism in adult male Wistar rats."T T*Toxicology*T T241.3 (2007): 99-105.

283. Rashid, C. S., Carter, L. G., Hennig, B., & Pearson, K. J. (2013). Perinatal polychlorinated biphenyl 126 exposure alters offspring body composition. *Journal of Pediatric Biochemistry*, *3*(1), 47-53.

284. Rashleigh, Brenda, M. Craig Barber, and David M. Walters. 2009. "Food web modeling for polychlorinated biphenyls (PCBs) in the Twelvemile Creek Arm of Lake Hartwell, South Carolina, USA." *Ecological Modeling* 220, no. 2: 254-264.

285. Ravoori, Srivani, et al. "DNA damage associated with PCBs in the whole blood cells of Inuit."T T*Environmental Toxicology and Pharmacology*T T25.2 (2008): 273-276.

286. Reeve, Nicola F., et al. "Spatial analysis of health effects of large industrial incinerators in England, 1998–2008: a study using matched case–control areas." *BMJ Open* 3.1 (2013).

287. Redding, Laurel E., et al. "Population physiologically based pharmacokinetic modeling for the human lactational transfer of PCB-153 with consideration of worldwide human biomonitoring results." *Environmental Health Perspectives* 116.12 (2008): 1629.

288. Ren, G., Wang, Z., Yu, Z., Wang, Y., Ma, S., Wu, M., ... & Fu, J. (2013). Primary investigation on contamination pattern of legacy and emerging halogenated organic pollutions in freshwater fish from Liaohe River, Northeast China. *Environmental Pollution*, *172*, 94-99.

289. Reymann, Susanne, and Jürgen Borlak. "Transcriptome profiling of human hepatocytes treated with Aroclor 1254 reveals transcription factor regulatory networks and clusters of regulated genes."T T*BMC genomics*T T7.1 (2006): 217.

290. Rignall, Benjamin, et al. (2013). "Biological and Tumor Promoting Effects of Dioxin-like and Non-Dioxin-like Polychlorinated Biphenyls in Mouse Liver after Single or Combined Treatment." *Toxicological Sciences* 133(1): 29-41.

291. Rignell-Hydbom, Anna, et al. "Exposure to PCBs and p, p′-DDE and human sperm chromatin integrity."T T*Environmental Health Perspectives*T T113.2 (2005): 175-179.

292. Rignell-Hydbom, A., Rylander, L., & Hagmar, L. (2007). Exposure to persistent organochlorine pollutants and type 2 diabetes mellitus.T T*Human & Experimental Toxicology*,T T*26*(5), 447-452.

293. Ripley, J. L., & Foran, C. M. (2008). Interspecific differences of parental polychlorinated biphenyl exposure on nutrient availability, egg production and brooding in two Syngnathus species.T T*Journal of Fish Biology*,T T*72*(6), 1369-1385.

294. Ritchie, Justine M., et al. "Organochlorines and risk of prostate cancer." *Journal of Occupational and Environmental Medicine*T T45.7 (2003): 692-702.

295. Riva, E., et al. "Poly chlorinated biphenyls in colostral milk and visual function at 12 months of life."T T*Acta Paediatrica*T T93.8 (2004): 1103-1107.

296. Romano, E., Bergamin, L., Magno, M. C., & Ausili, A. (2013). Sediment characterization of the highly impacted Augusta Harbour (Sicily, Italy): modern benthic foraminifera in relation to grain-size and sediment geochemistry. *Environ. Sci.: Processes Impacts* 15(5): 930-946.

297. Rose, A., Kehinde, O., & Babajide, A. (2013). The level of persistent, bioaccumulative, and toxic (PBT) organic micropollutants contamination of Lagos soils. *Journal of Environmental Chemistry and Ecotoxicology Vol. 5*(2), 26-38.

298. Royland, J. E., Wu, J., Zawia, N. H., & Kodavanti, P. R. S. (2008). Gene expression profiles in the cerebellum and hippocampus following exposure to a neurotoxicant, Aroclor 1254: developmental effects.T T*Toxicology and Applied Pharmacology*,T T*231*(2), 165-178.

299. Rusiecki, Jennifer A., et al. "A correlation study of organochlorine levels in serum, breast adipose tissue, and gluteal adipose tissue among breast cancer cases in India."T T*Cancer Epidemiology Biomarkers & Prevention*T T14.5 (2005): 1113-1124.

300. Sable, H. J., Powers, B. E., Wang, V. C., Widholm, J. J., & Schantz, S. L. (2006). Alterations in DRH and DRL performance in rats developmentally exposed to an environmental PCB mixture.T T*Neurotoxicology and Teratology*,*28*(5), 548-556.

301. Sable, H. J., Monaikul, S., Poon, E., Eubig, P. A., & Schantz, S. L. (2011). Discriminative stimulus effects of cocaine and amphetamine in rats following developmental exposure to polychlorinated biphenyls (PCBs). *Neurotoxicology and Teratology*, *33*(2), 255-262.

302. Saint-Amour, Dave, et al. "Alterations of visual evoked potentials in preschool Inuit children exposed to methylmercury and polychlorinated biphenyls from a marine diet."T T*Neurotoxicology*T T27.4 (2006): 567-578.

303. Sanchez, Brian C., Kimberly J. Ralston-Hooper, Kevin A. Kowalski, H. Dorota Inerowicz, Jiri Adamec, and María S. Sepúlveda. 2009. "Liver proteome response of largemouth bass (Micropterus salmoides) exposed to several environmental contaminants: Potential insights into biomarker development." *Aquatic Toxicology* 95, no. 1: 52-59.

304. Sandy, A. L., Guo, J., Miskewitz, R. J., McGillis, W. R., & Rodenburg, L. A. (2012). Fluxes of polychlorinated biphenyls volatilizing from the Hudson River,

New York measured using micrometeorological approaches. *Environmental Science & Technology*, *46*(2), 885-891.

305. Schantz, Susan L., John J. Widholm, and Deborah C. Rice. "Effects of PCB exposure on neuropsychological function in children."T T*Environmental Health Perspectives*T T111.3 (2003): 357.

306. Schoenroth, Leeanne, Siu Chan, and Marvin Fritzler. "Autoantibodies and levels of polychlorinated biphenyls in persons living near a hazardous waste treatment facility."T T*Journal of investigative medicine: the official publication of the American Federation for Clinical Research*T T52.3 (2004): 170.

307. Schuhmacher, Marta, et al. "PCDD/F and non-ortho PCB concentrations in adipose tissue of individuals living in the vicinity of a hazardous waste incinerator."T T*Chemosphere*T T57.5 (2004): 357-364.

308. Seelbach, Melissa, Chen Lei, Anita Powell, Choi Yean Jung, Zhang Bei, Bernhard Hennig, and Michal Toborek. 2010. "Polychlorinated Biphenyls Disrupt Blood--Brain Barrier Integrity and Promote Brain Metastasis Formation." *Environmental Health Perspectives* 118, no. 4: 479-484.

309. Selvakumar, K., Sheerin Banu, L., Krishnamoorthy, G., Venkataraman, P., Elumalai, P., & Arunakaran, J. (2011). Differential expression of androgen and estrogen receptors in PCB (Aroclor 1254)-exposed rat ventral prostate: impact of alpha-tocopherol.T T*Experimental and Toxicologic Pathology*,T T*63*(1), 105-112.

310. Senthilkumar, P. K., Robertson, L. W., & Ludewig, G. (2012). PCB153 reduces telomerase activity and telomere length in immortalized human skin keratinocytes (HaCaT) but not in human foreskin keratinocytes (NFK).*Toxicology and Applied Pharmacology*,T T*259*(1), 115-123.

311. Shang, H., Wang, P., Wang, T., Wang, Y., Zhang, H., Fu, J., ... & Jiang, G. (2013). Bioaccumulation of PCDD/Fs, PCBs and PBDEs by earthworms in field soils of an E-waste dismantling area in China. *Environment International*, *54*, 50-58.

312. Sharlin, David S., Ruby Bansal, and R. Thomas Zoeller. "Polychlorinated biphenyls exert selective effects on cellular composition of white matter in a

manner inconsistent with thyroid hormone insufficiency."T T*Endocrinology*T T147.2 (2006): 846-858.

313. Shaw, Susan D., et al. "Persistent organic pollutants including polychlorinated and polybrominated dibenzo-p-dioxins and dibenzofurans in firefighters from Northern California." *Chemosphere* (2013).

314. She, Jianwen, et al. "Polybrominated diphenyl ethers (PBDEs) and polychlorinated biphenyls (PCBs) in breast milk from the Pacific Northwest." *Chemosphere*T T67.9 (2007): S307-S317.

315. Shen, Kaili, Chaofeng Shen, Jie Yu, Chunna Yu, Lei Chen, Dezhi Shi, and Yingxu Chen. 2011. "PCB congeners induced mitochondrial dysfunction in Vero cells." *Journal Of Hazardous Materials* 185, no. 1: 24-28.

316. Shen, J., Hong, B., Schugam, L., Zhao, Y., & White, J. (2012). Modeling of polychlorinated biphenyls (PCBs) in the Baltimore Harbor. *Ecological Modeling*, *242*, 54-68.

317. Shen, H., Guan, R., Li, J., Zhang, L., Ren, Y., Xu, X., ... & Wu, Y. (2013). Determination of dioxin-like polychlorinated biphenyls in 1mL whole blood using programmable temperature vaporization large volume injection coupled to gas chromatogram and high-resolution mass spectrometry. *Analytica Chimica Acta* 767(12):112-117.

318. Shi, Jingchun, et al. "OCPs and PCBs in Marine Edible Fish and Human Health Risk Assessment in the Eastern Guangdong, China." *Archives of Environmental Contamination and Toxicology* (2013): 1-11.

319. Shimada, Miyuki, Satomi Kameo, Norio Sugawara, Kozue Yaginuma-Sakurai, Naoyuki Kurokawa, Satomi Mizukami-Murata, Kunihiko Nakai, Hitoshi Iwahashi, and Hiroshi Satoh. 2010. "Gene expression profiles in the brain of the neonate mouse perinatally exposed to methylmercury and/or polychlorinated biphenyls." *Archives of Toxicology* 84, no. 4: 271-286.

320. Shimazu, Sayuri, Masaya Ohta, Hideyuki Inui, Yoshihiko Nanasato, Hitoshi Ashida, and Hideo Ohkawa. 2010. "Effects of biosurfactants on assays of PCB congeners in transgenic arabidopsis plants carrying a recombinant guinea pig AhR-mediated GUS reporter gene expression system." *Journal of*

Environmental Science & Health, Part B -- Pesticides, Food Contaminants, & Agricultural Wastes 45, no. 8: 773-779.

321. Shimizu, K., Ogawa, F., Thiele, J. J., Lee, J. B., Bae, S., & Sato, S. (2008). Increased levels of urinary nitrite and nitrotyrosine in Yusho victims 40 years after accidental poisoning with polychlorinated biphenyls in Nagasaki, Japan. *Journal of Applied Toxicology*,T T*28*(8), 1040-1044.

322. Siewiorek, A., Kudyba, A., Sobczak, N., Homa, M., Huber, Z., Adamek, Z., & Wojewoda-Budka, J. Effects of PCB Substrate Surface Finish and Flux on Solderability of Lead-Free SAC305 Alloy. *Journal of Materials Engineering and Performance* (2013): 1-6.

323. Simon, T., Britt, J. K., & James, R. C. (2007). Development of a neurotoxic equivalence scheme of relative potency for assessing the risk of PCB mixtures. *Regulatory Toxicology and Pharmacology*,T T*48*(2), 148-170.

324. Sipka, S., Eum, S. Y., Son, K. W., Xu, S., Gavalas, V. G., Hennig, B., & Toborek, M. (2008). Oral administration of PCBs induces proinflammatory and prometastatic responses.T T*Environmental Toxicology and Pharmacology*,T T*25*(2), 251-259.

325. Sola, D., Agnetti, F., Pecorelli, I., & Latini, M. (2013). Survey on the Presence of Polychlorobiphenyls (PCBs) on Fishes of Piediluco Lake (Terni, Central Italy). *Italian Journal of Food Safety*, *1*(5), 93-94.

326. Son, M. H., Kim, J. T., Park, H., Kim, M., Paek, O. J., & Chang, Y. S. (2012). Assessment of the daily intake of 62 polychlorinated biphenyls from dietary exposure in South Korea. *Chemosphere* 89(8): 957-963.

327. Song, E. Q., Ma, X. Y., Tian, X. G., Liu, J., Liu, L. C., Dong, H., & Song, Y. (2013). The Effect of the Structure of Polychlorinated Biphenyls on their Hydroxylation, Oxidation, and Glutathionyl Conjugation Reactions. *Biomedical and Environmental Sciences: BES*, *26*(2), 138-147.

328. Spano, M. “Exposure to PCB and p,p’-DDE in European and Inuit populations: impact on human sperm chromatin integrity.” *Human Reproduction* 20.12 (2005): 3488-3499.

329. Spencer, Wendy A., Hans-Joachim Lehmler, Larry W. Robertson, and Ramesh C. Gupta. 2009. "Oxidative DNA adducts after Cu2+-mediated activation of dihydroxy PCBs: Role of reactive oxygen species." *Free Radical Biology & Medicine* 46, no. 10: 1346-1352.

330. Steinberg, R. M., Walker, D. M., Juenger, T. E., Woller, M. J., & Gore, A. C. (2008). Effects of perinatal polychlorinated biphenyls on adult female rat reproduction: development, reproductive physiology, and second generational effects.T T*Biology of Reproduction*,T T*78*(6), 1091-1101.

331. Stewart, Paul, et al. "Response inhibition at 8 and 9 1/2 years of age in children prenatally exposed to PCBs."T T*Neurotoxicology and Teratology*T T27.6 (2005): 771-780.

332. Stewart, P. W., et al. "Is impulsive behavior and impaired response control a final common path for PCB, MeHg and Pb neurotoxicity in children?." *Neurotoxicology,*. Vol. 27. No. 6. 2006.

333. Stewart, P. W., Lonky, E., Reihman, J., Pagano, J., Gump, B. B., & Darvill, T. (2008). The relationship between prenatal PCB exposure and intelligence (IQ) in 9-year-old children.T T*Environmental Health Perspectives*,T T*116*(10), 1416.

334. Storelli, M. M., et al. "Polychlorinated biphenyls in seafood: contamination levels and human dietary exposure."T T*Food chemistry*T T82.3 (2003): 491-496.

335. Storelli, M. M. (2008). Potential human health risks from metals (Hg, Cd, and Pb) and polychlorinated biphenyls (PCBs) via seafood consumption: estimation of target hazard quotients (THQs) and toxic equivalents (TEQs).T T*Food and Chemical Toxicology*,T T*46*(8), 2782-2788.

336. Storelli, Maria M., and Grazia Barone. (2013). "Toxic Metals (Hg, Pb, and Cd) in Commercially Important Demersal Fish from Mediterranean Sea: Contamination Levels and Dietary Exposure Assessment." *Journal of Food Science* 78(2): T362-T366.

337. Straub, C. L., Maul, J. D., Halbrook, R. S., Spears, B., & Lydy, M. J. (2007). Trophic transfer of polychlorinated biphenyls in great blue heron (Ardea herodias) at Crab Orchard National Wildlife Refuge, Illinois, United States. *Archives of Environmental Contamination and Toxicology*,T T*52*(4), 572-579.

338. Strause, Karl D., et al. "Risk assessment of great horned owls (Bubo virginianus) exposed to polychlorinated biphenyls and DDT along the Kalamazoo River, Michigan, USA."T T*Environmental Toxicology and Chemistry*26.7 (2007): 1386-1398.

339. Sudaryanto, Agus, et al. "Specific accumulation of organochlorines in human breast milk from Indonesia: levels, distribution, accumulation kinetics and infant health risk."T T*Environmental Pollution*T T139.1 (2006): 107-117.

340. Sugawara, Norio, et al. "Developmental and neurobehavioral effects of perinatal exposure to polychlorinated biphenyls in mice."T T*Archives of Toxicology*T T80.5 (2006): 286-292.

341. Suzuki, Go, Masuo Nakano, and Shiro Nakano. "Distribution of PCDDs/PCDFs and Co-PCBs in human maternal blood, cord blood, placenta, milk, and adipose tissue: dioxins showing high toxic equivalency factor accumulate in the placenta."T T*Bioscience, Biotechnology, and Biochemistry*T T69.10 (2005): 1836-1847.

342. Sweeney, A. M., & Symanski, E. (2007). The influence of age at exposure to PBBs on birth outcomes.T T*Environmental Research*,T T*105*(3), 370-379.

343. Sweet, L. I., Passino-Reader, D. R., Meier, P. G., & Omann, G. M. (2006). Effects of polychlorinated biphenyls, hexachlorocyclohexanes, and mercury on human neutrophil apoptosis, actin cytoskelton, and oxidative state .*Environmental Toxicology and Pharmacology*,T T*22*(2), 179-188.

344. Szafran-Urbaniak, B. (2008). Application of validated method for determination of selected polychlorinated biphenyls in human adipose tissue samples. *Environmental Toxicology and Pharmacology*,T T*25*(2), 131-135.

345. Tang, Feige, et al. "Polychlorinated biphenyls disrupt the actin cytoskeleton in hippocampal neurons."T T*Environmental Toxicology and Pharmacology*T T23.2 (2007): 140-146.

346. Tiido, Tarmo, et al. "Impact of PCB and p, p′-DDE contaminants on human sperm Y: X chromosome ratio: studies in three European populations and the

Inuit population in Greenland."T T*Environmental Health Perspectives*T T114.5 (2006): 718.

347. Toft, G., Axmon, A., Lindh, C. H., Giwercman, A., & Bonde, J. P. (2008). Menstrual cycle characteristics in European and Inuit women exposed to persistent organochlorine pollutants.T T*Human Reproduction*,T T*23*(1), 193-200.

348. Tölgyessy, P., Vrana, B., & Šilhárová, K. (2013). An Improved Method for Determination of Polychlorinated Biphenyls and Polybrominated Diphenyl Ethers in Sediment by Ultrasonic Solvent Extraction Followed by Stir Bar Sorptive Extraction Coupled to TD–GC–MS. *Chromatographia*, *76*(3-4), 177-185.

349. Trnovec, Tomáš, et al. "Exposure to polychlorinated biphenyls and hearing impairment in children."T T*Environmental toxicology and pharmacology*T T25.2 (2008): 183-187.

350. Tsai, P. C., Ko, Y. C., Huang, W., Liu, H. S., & Guo, Y. L. (2007). Increased liver and lupus mortalities in 24-year follow-up of the Taiwanese people highly exposed to polychlorinated biphenyls and dibenzofurans.T T*Science of the Total Environment*,T T*374*(2), 216-222.

351. Tsai, P. C., Wang, Y. J., Tsai, J. H., Guo, Y. L., Ueng, T. H., Liu, H. S., & Huang, W. (2008). Reduced expression of von Hippel–Lindau gene in subjects exposed to polychlorinated biphenyls and dibenzofurans.T T*Environmental Research*,T T*108*(2), 247-251.

352. Tue, N. M., Takahashi, S., Suzuki, G., Isobe, T., Viet, P. H., Kobara, Y., ... & Tanabe, S. (2013). Contamination of indoor dust and air by polychlorinated biphenyls and brominated flame retardants and relevance of non-dietary exposure in Vietnamese informal e-waste recycling sites. *Environment International*, *51*, 160-167.

353. Uemura, Hirokazu, Kokichi Arisawa, Mineyoshi Hiyoshi, Atsushi Kitayama, Hidenobu Takami, Fusakazu Sawachika, Satoru Dakeshita, et al. 2009. "Prevalence of Metabolic Syndrome Associated with Body Burden Levels of Dioxin and Related Compounds among Japan's General Population." *Environmental Health Perspectives* 117, no. 4: 568-573.

354. Vega-López, A., Martínez-Tabche, L., & Galar Martínez, M. (2007). Toxic effects of waterborne polychlorinated biphenyls and sex differences in an endangered goodeid fish (Girardinichthys viviparus).T T*Environment International*,T T*33*(4), 540-545.

355. Vega-López, Armando, F. Jiménez-Orozco, Luís Jiménez-Zamudio, Ethel García-Latorre, and M. Domínguez-López. 2009. "Phase I Enzyme Induction in Girardinichthys viviparus, an Endangered Goodeid Fish, Exposed to Water from Native Localities Enriched with Polychlorinated Biphenyls." *Archives of Environmental Contamination & Toxicology* 57, no. 3: 561-570.

356. Verner, M. A., Sonneborn, D., Lancz, K., Muckle, G., Ayotte, P., Dewailly, É., ... & Eggesbø, M. (2013). Toxicokinetic Modeling of Persistent Organic Pollutant Levels in Blood from Birth to 45 Months of Age in Longitudinal Birth Cohort Studies. *Environmental Health Perspectives*, *121*(1), 131.

357. Venkataraman, Prabhu, et al. "PCB (Aroclor 1254) enhances oxidative damage in rat brain regions: protective role of ascorbic acid."T T*Neurotoxicology*T T28.3 (2007): 490-498.

358. Venkataraman, Prabhu, Kandaswamy Selvakumar, Gunasekaran Krishnamoorthy, Sridhar Muthusami, Radhakrishnan Rameshkumar, Seepan Prakash, and Jagadeesan Arunakaran. 2010. "Effect of melatonin on PCB (Aroclor 1254) induced neuronal damage and changes in Cu/Zn superoxide dismutase and glutathione peroxidase-4 mRNA expression in cerebral cortex, cerebellum and hippocampus of adult rats." *Neuroscience Research* 66, no. 2: 189-197.

359. Volety, A. K. (2008). Effects of salinity, heavy metals and pesticides on health and physiology of oysters in the Caloosahatchee Estuary, Florida. *Ecotoxicology*,T T*17*(7), 579-590.

360. Voltura, M. B., & French Jr, J. B. (2007). Effects of dietary PCB exposure on reproduction in the white-footed mouse (Peromyscus leucopus).T T*Archives of Environmental Contamination and Toxicology*,T T*52*(2), 264-269.

361. Wakui, S., Takagi, F., Muto, T., Yokoo, K., Hirono, S., Kobayashi, Y., ... & Kanai, Y. (2007). Spermatogenesis in aged rats after prenatal 3, 3′, 4, 4′, 5-pentachlorobiphenyl exposure.T T*Toxicology*,T T*238*(2), 186-191.

362. Wang, Shu-Li, et al. "In utero exposure to dioxins and polychlorinated biphenyls and its relations to thyroid function and growth hormone in newborns." *Environmental Health Perspectives*T T113.11 (2005): 1645-1650.

363. Wang, Dongli, Weilin L Shelver, Shannon Atkinson, Jo-Ann Mellish, and Qing X Li. 2010. "Tissue distribution of polychlorinated biphenyls and organochlorine pesticides and potential toxicity to Alaskan northern fur seals assessed using PCBs congener specific mode of action schemes." *Archives Of Environmental Contamination And Toxicology* 58, no. 2: 478-488.

364. Wang, N., Yi, L., Shi, L., Kong, D., Cai, D., Wang, D., & Shan, Z. (2012). Pollution level and human health risk assessment of some pesticides and polychlorinated biphenyls in Nantong of Southeast China. *Journal of Environmental Sciences*, *24*(10), 1854-1860.

365. Wang, Shu-Li, et al. "Body burdens of polychlorinated dibenzo-p-dioxins, dibenzofurans, and biphenyls and their relations to estrogen metabolism in pregnant women."T T*Environmental Health Perspectives*T T114.5 (2006): 740.

366. Warner, M., Schall, R. A., Harley, K. G., Bradman, A., Barr, D., & Eskenazi, B. (2013). In Utero DDT and DDE Exposure and Obesity Status of 7-Year-Old Mexican-American Children in the CHAMACOS Cohort. *Environmental Health Perspectives* 121(5): 631-636.

367. Weinhold, B. (2013). PCBs and Diabetes: Pinning Down Mechanisms. *Environmental Health Perspectives*, *121*(1), a32.

368. Wellman, Sara T., James M. Haynes, and James J. Pagano. 2009. "Model Estimates Bioaccumulation of Total PCBs, Dioxin–Furan TEQs, and Total Mercury in Mink Liver Based on Concentrations in Lake Ontario Water." *Archives of Environmental Contamination & Toxicology* 57, no. 4: 808-815.

369. Wetzel, M. A., Wahrendorf, D. S., & von der Ohe, P. C. (2013). Sediment pollution in the Elbe estuary and its potential toxicity at different trophic levels. *Science of The Total Environment*, *449*, 199-207.

370. Whitcomb, Brian W., et al. "Relative concentrations of organochlorines in adipose tissue and serum among reproductive age women."T T*Environmental toxicology and pharmacology*T T19.2 (2005): 203-213.

371. Whitehead, T. P., Ward, M. H., Colt, J. S., Nishioka, M. G., Buffler, P. A., Rappaport, S. M., & Metayer, C. (2013). Determinants of polychlorinated biphenyls in dust from homes in California, USA. *Environmental Science: Processes & Impacts*, *15*(2), 339-346.

372. Whitfield Åslund, M., Simpson, M. J., Simpson, A. J., Zeeb, B. A., & Rutter, A. (2012). Earthworm metabolic responses after exposure to aged PCB contaminated soils. *Ecotoxicology*, 21(7): 1947-1956.

373. Wigle, D. T., Arbuckle, T. E., Walker, M., Wade, M. G., Liu, S., & Krewski, D. (2007). Environmental hazards: evidence for effects on child health.T T*Journal of Toxicology and Environmental Health, part B*,T T*10*(1-2), 3-39.

374. Wigle, D. T., Arbuckle, T. E., Turner, M. C., Bérubé, A., Yang, Q., Liu, S., & Krewski, D. (2008). Epidemiologic evidence of relationships between reproductive and child health outcomes and environmental chemical contaminants.T T*Journal of Toxicology and Environmental Health, Part B*,T T*11*(5-6), 373-517.

375. Włostowski, T., Krasowska, A., & Bonda, E. (2008). Joint effects of dietary cadmium and polychlorinated biphenyls on metallothionein induction, lipid peroxidation and histopathology in the kidneys and liver of bank voles. *Ecotoxicology and Environmental Safety*,T T*69*(3), 403-410.

376. Wołowiec, Paulina, et al. (2013). "Hair Analysis in Health Assessment." *Clinica Chimica Acta* 419: 139-171.

377. Wu, Hongyu, et al. "Persistent Organic Pollutants and Type 2 Diabetes: A Prospective Analysis in the Nurses' Health Study and Meta-analysis." *Environmental Health Perspectives* 121.2 (2013): 153.

378. Wu, Yinglin, et al. "Evaluation of organochlorine contamination in Indo-Pacific humpback dolphins from the Pearl River Estuary, China." *Science of The Total Environment* 444 (2013): 423-429.

379. Xia, C., Lam, J. C., Wu, X., Xie, Z., & Lam, P. K. (2012). Polychlorinated biphenyls (PCBs) in marine fishes from China: Levels, distribution and risk assessment. *Chemosphere* 89(8): 944-949.

380. Xing, G. H., Yang, Y., Yan Chan, J. K., Tao, S., & Wong, M. H. (2008). Bioaccessibility of polychlorinated biphenyls in different foods using an in vitro digestion method. *Environmental Pollution*, *156*(3), 1218-1226.

381. Xu Dua, X. L., Luo, T., Matsuur, N., Kadokami, K., & Chen, J. (2013). Occurrence and aquatic ecological risk assessment of typical organic pollutants in water of Yangtze River estuary. *Procedia Environmental Sciences* 18: 882-889.

382. Xu, Fu-Liu, et al.. "Persistent Organic Pollutants in Fresh Water Ecosystems." *The Scientific World Journal* 2013 (2013).

383. Yang, Mihi, Mi Seon Park, and Ho Sun Lee. "Endocrine disrupting chemicals: human exposure and health risks."T T*Journal of Environmental Science and Health Part C*T T24.2 (2006): 183-224.

384. Yang, C. Y., Wang, Y. J., Chen, P. C., Tsai, S. J., & Guo, Y. L. (2008). Exposure to a mixture of polychlorinated biphenyls and polychlorinated dibenzofurans resulted in a prolonged time to pregnancy in women. *Environmental Health Perspectives*,T T*116*(5), 599.

385. Yuan, J., Pu, Y., & Yin, L. (2013) Docking-based 3D-QSAR predict binding affinities to aryl hydrocarbon receptor for polychlorinated dibenzodioxins, dibenzofurans and biphenyls. *Environmental Toxicology and Chemistry* 32(7): 1453-1458.

386. Zacs, D., Bartkevics, V., & Viksna, A. (2013). Content of polychlorinated dibenzo-p-dioxins, dibenzofurans and dioxin-like polychlorinated biphenyls in fish from Latvian lakes. *Chemosphere*, *91*(2), 179-186.

387. Zahran, E. M., Bhattacharyya, D., & Bachas, L. G. (2013). Reactivity of Pd/Fe bimetallic nanotubes in dechlorination of coplanar polychlorinated biphenyls. *Chemosphere*, *91*(2), 165-171.

388. Zani, C., Gelatti, U., Donato, F., Capelli, M., Portolani, N., Bergonzi, R., & Apostoli, P. (2013). Polychlorinated biphenyls in serum, liver and adipose tissue of subjects with hepatocellular carcinoma living in a highly polluted area. *Chemosphere*, *91*(2), 194-199.

389. Zapata-Perez, Omar, et al. "Ecotoxicological effects of POPs on ariidae Ariopsis felis (Linnaeus, 1766) from three coastal ecosystems in the Southern Gulf of Mexico and Yucatan Peninsula."T T*Journal of Environmental Science and Health Part A*T T42.10 (2007): 1513-1520.

390. Zhang, Yawei, et al. "Serum polychlorinated biphenyls, cytochrome P-450 1A1 polymorphisms, and risk of breast cancer in Connecticut women."T T*American Journal of Epidemiology*T T160.12 (2004): 1177-1183.

391. Zhang, Jianying, Hangjun Zhang, and Wanmin Ni. 2009. "Oxidative stress and apoptosis of Carassius auratus lymphocytes induced by nonplanar (PCB153) and coplanar (PCB169) polychlorinated biphenyl congeners in vitro." *Journal of Environmental Sciences (China)* 21, no. 9: 1284-1289.

392. Zheng, J., Yan, X., Chen, S. J., Peng, X. W., Hu, G. C., Chen, K. H., ... & Yang, Z. Y. (2013). Polychlorinated biphenyls in human hair at an e-waste site in China: Composition profiles and chiral signatures in comparison to dust. *Environment International*, *54*, 128-133.

393. Zhu, Yueming, Amanda L Kalen, Ling Li, Hans-J Lehmler, Larry W Robertson, Prabhat C Goswami, Douglas R Spitz, and Nukhet Aykin-Burns. 2009. "Polychlorinated-biphenyl-induced oxidative stress and cytotoxicity can be mitigated by antioxidants after exposure." *Free Radical Biology & Medicine* 47, no. 12: 1762-1771.

394. Zoeller, R. Thomas. "Environmental chemicals as thyroid hormone analogues: new studies indicate that thyroid hormone receptors are targets of industrial chemicals?."T T*Molecular and Cellular Endocrinology*T T242.1 (2005): 10-15.

395. Zoeller, R. T., Brown, T. R., Doan, L. L., Gore, A. C., Skakkebaek, N. E., Soto, A. M., ... & Vom Saal, F. S. (2012). Endocrine-Disrupting Chemicals and Public Health Protection: A Statement of Principles from The Endocrine Society. *Endocrinology*, *153*(9), 4097-4110.