EFFECTS OF PERSISTENT AND BIOACTIVE ORGANIC POLLUTANTS ON HUMAN HEALTH

Edited by

David O. Carpenter
University at Albany
Institute for Health and the Environment
## CONTENTS

### Contributors

<table>
<thead>
<tr>
<th>Contributors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>vii</td>
<td></td>
</tr>
</tbody>
</table>

1. **Introduction: Why Should We Care about Organic Chemicals and Human Health?**  
   *David O. Carpenter*  
   1

2. **Sources of Human Exposure**  
   *Marti Nadal and José L. Domingo*  
   8

3. **The Burden of Cancer from Organic Chemicals**  
   *Molly M. Jacobs, Rachel I. Massey, and Richard W. Clapp*  
   26

4. **Carcinogenicity and Mechanisms of Persistent Organic Pollutants**  
   *Gabriele Ludewig, Larry W. Robertson, and Howard P. Glauert*  
   57

5. **Diabetes and the Metabolic Syndrome**  
   *Duk-Hee Lee and David R. Jacobs, Jr.*  
   101

6. **Mechanistic Basis for Elevation in Risk of Diabetes Caused by Persistent Organic Pollutants**  
   *Jérôme Ruzzin*  
   130

7. **Cardiovascular Disease and Hypertension**  
   *Marian Pavuk and Nina Dutton*  
   143

8. **Obesity**  
   *Eveline Dirinck, Adrian Covaci, Luc Van Gaal, and Stijn Verhulst*  
   174

9. **Effects and Predicted Consequences of Persistent and Bioactive Organic Pollutants on Thyroid Function**  
   *Stefanie Giera and R. Thomas Zoeller*  
   203

10. **An Overview of the Effects of Organic Compounds on Women’s Reproductive Health and Birth Outcomes**  
    *Susan R. Reutman and Juliana W. Meadows*  
    237

11. **Effects of Organic Chemicals on the Male Reproductive System**  
    *Lars Rylander and Anna Rignell-Hydbom*  
    315

12. **Effects of Endocrine-Disrupting Substances on Bone and Joint**  
    *Chi-Hsien Chen and Yueliang Leon Guo*  
    332
13. Organic Chemicals and the Immune System
   David O. Carpenter

14. Exposures to Organic Pollutants and Respiratory Illnesses in
    Adults and Children
   Krassi Rumchev, Jeff Spickett, and Janelle Graham

15. Cognitive Function
    Lizbeth López-Carrillo and Mariano E. Cebrián

16. Intellectual Developmental Disability Syndromes and Organic
    Chemicals
    David O. Carpenter

17. Mechanisms of the Neurotoxic Actions of Organic Chemicals
    David O. Carpenter

18. Parkinson's Disease
    Samuel M. Goldman

19. Psychiatric Effects of Organic Chemical Exposure
    James S. Brown, Jr.

20. Growth and Development
    Lawrence M. Schell, Mia V. Gallo, and Kristopher K. Burnitz

21. How Much Human Disease Is Caused by Exposure to Organic
    Chemicals?
    David O. Carpenter

Index

570