# CONTENTS

**Contributors** vii

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

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

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

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

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

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

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

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

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

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

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

12. Effects of Endocrine-Disrupting Substances on Bone and Joint 332  
    Chi-Hsien Chen and Yueliang Leon Guo
CONTENTS

   David O. Carpenter

14. Exposures to Organic Pollutants and Respiratory Illnesses in Adults and Children 384
   Krassi Rumchev, Jeff Spickett, and Janelle Graham

15. Cognitive Function 400
   Lizbeth López-Carrillo and Mariano E. Cebrián

   David O. Carpenter

17. Mechanisms of the Neurotoxic Actions of Organic Chemicals 448
   David O. Carpenter

18. Parkinson’s Disease 471
   Samuel M. Goldman

19. Psychiatric Effects of Organic Chemical Exposure 514
   James S. Brown, Jr.

20. Growth and Development 532
    Lawrence M. Schell, Mia V. Gallo, and Kristopher K. Burnitz

    David O. Carpenter

Index 570