Contents

Part I  Bioactive Sources: Plants, Mushrooms and Fungi

1  Glucosinolates and Respective Derivatives (Isothiocyanates) from Plants ......................................................... 3
Kyriaki G. Zinoviadou and Charis M. Galanakis

2  Bioactives from Mushroom and Their Application .............. 23
Carmen Sánchez

3  Bioactive Products from Fungi ...................................... 59
Sergio Sanchez and Arnold L. Demain

Part II  Extraction Technologies for Bioactives

4  Process Development for Bioactive Peptide Production .......... 91
Govind Kumar Gnasegaran, Dominic Agyei, Sharadwata Pan,
Indira P. Sarethy, Caleb Acquah and Michael K. Danquah

5  Comparison of Natural Extraction and Recombinant Mussel Adhesive Proteins Approaches .......................... 111
J.J. Castillo, B.K. Shanbhag and L. He

6  Extraction of Lipids and Carotenoids from Algal Sources ...... 137
Adarsha Gupta, Avinesh R. Byreddy and Munish Puri

7  Magnetic Particles for Microalgae Separation and Biotechnology ........................................ 153
Ivo Safarik, Kristyna Pospiskova, Eva Baldikova
and Mirka Safarikova

8  Enzyme-Assisted Extraction of Bioactives .......................... 171
Sandesh J. Marathe, Swati B. Jadhav, Sandip B. Bankar
and Rekha S. Singhal

xii
Part III  Techniques Employed for the Bioactives Delivery

9  Emerging Technologies for Bioactive Applications in Foods ...... 205
   Liliana G. Santiago, Carlos R. Soccol and Guillermo R. Castro

10 Emerging Technologies of Hydrogels in Bioactive Compounds Delivery ........................................ 227
    Maria Henriques L. Ribeiro

Part IV  Therapeutic Role in Treating Diseases

11 Neurocognitive Improvement Through Plant Food Bioactives: A Particular Approach to Alzheimer’s Disease ................. 267
    Natália Martins and Isabel C.F.R. Ferreira

12 Multifunctional Bioactives for Cancer Therapy: Emerging Nanosized Delivery Systems ................................. 299
    Deepika Sharma, Monica Nijhawan and Munish Puri

Index ...................................................... 325
Food Bioactives
Extraction and Biotechnology Applications
Puri, M. (Ed.)
2017, XVI, 326 p. 41 illus., 14 illus. in color., Hardcover
ISBN: 978-3-319-51637-0