

Contents

List of Contributors	vii
Preface	ix
I Fundamentals of Functional Food Processing	
1 Functional Foods, Nutraceuticals and Probiotics as Functional Food Components	3
<i>Athapol Noomhorm, Anil Kumar Anal and Imran Ahmad</i>	
2 Bioactive Components in Foods	21
<i>Anil Kumar Anal, Kishore K. Kumaree and Mridula Thapa</i>	
II Major Sources of Functional Foods	
3 Processing Effects on Functional Components in Cereals and Grains	63
<i>Binod K. Yadav and J. Jerish Joyner</i>	
4 Tropical Fruits	91
<i>Mandeep Kaur and H.K. Sharma</i>	
5 Bioactive Compounds in Meat and their Functions	113
<i>Punchira Vongsawasdi and Athapol Noomhorm</i>	
6 Bioactive Materials Derived from Seafood and Seafood Processing By-products	139
<i>Ratih Pangestuti and Se-Kwon Kim</i>	
7 Food Processing By-products as Sources of Functional Foods and Nutraceuticals	159
<i>Nina Karla M. Alparce and Anil Kumar Anal</i>	
8 Functionality of Non-starch Polysaccharides (NSPs)	187
<i>Kelvin K.T. Goh, Ramesh Kumar and Shen-Siung Wong</i>	

9	Resistant Starch: Properties, Preparations and Applications in Functional Foods	227
	<i>Taslima Ayesha Aktar Nasrin and Anil Kumar Anal</i>	
10	Isoflavones – Extraction and Bioavailability	255
	<i>Khoomtong Atcharaporn, Pananun Thawunporn and Buddhi Lamsal</i>	
III	Processing Effects on the Functional Components during Product Development	
11	Thermal and Non-thermal Processing of Functional Foods	297
	<i>Jiraporn Sripinyowanich Jongyingcharoen and Imran Ahmad</i>	
12	Changes of Properties and Functional Components of Extruded Foods	325
	<i>Vilai Rungsardthong</i>	
13	Recent Advances in Applications of Encapsulation Technology for the Bioprotection of Phytonutrients in Complex Food Systems	363
	<i>Alisha Tuladhar and Anil Kumar Anal</i>	
14	The Effect of Irradiation on Bioactive Compounds in Plant and Plant Products	387
	<i>Nantararat Na Nakornpanom and Porntip Sirisoontarak</i>	
15	Nanoparticles and Nanoemulsions	405
	<i>Anges Teo, Kelvin K.T. Goh and Sung Je Lee</i>	
IV	Health Benefits and Bioavailability of Functional Foods	
16	Pharmacology and Health Benefits of Bioactive Food Sources	439
	<i>Maushmi S. Kumar and Shruti Mishra</i>	
17	Potential Cardio-protective Effects of Functional Foods	463
	<i>Eman M. Alissa and Gordon A. Ferns</i>	
	Index	489