
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
PART I FUNGAL GENERA AND SPECIES OF MAJOR SIGNIFICANCE AND THEIR ASSOCIATED MYCOTOXINS	
1 Mycotoxins: An Underhand Food Problem <i>Antonio Moretti, Antonio F. Logrieco, and Antonia Susca</i>	3
2 <i>Alternaria</i> Species and Their Associated Mycotoxins <i>Virginia Elena Fernández Pinto and Andrea Patriarca</i>	13
3 <i>Aspergillus</i> Species and Their Associated Mycotoxins <i>Giancarlo Perrone and Antonia Gallo</i>	33
4 <i>Fusarium</i> Species and Their Associated Mycotoxins <i>Gary P. Munkvold</i>	51
5 <i>Penicillium</i> Species and Their Associated Mycotoxins <i>Giancarlo Perrone and Antonia Susca</i>	107
PART II POLYMERASE CHAIN REACTION (PCR)-BASED METHODS FOR DETECTION AND IDENTIFICATION OF MYCOTOXIGENIC FUNGI	
6 Targeting Conserved Genes in <i>Alternaria</i> Species <i>Miguel Ángel Pavón, Inés María López-Calleja, Isabel González, Rosario Martín, and Teresa García</i>	123
7 Targeting Conserved Genes in <i>Aspergillus</i> Species <i>Sándor Kocsubé and János Varga</i>	131
8 Targeting Conserved Genes in <i>Fusarium</i> Species <i>Jéssica Gil-Serna, Belén Patiño, Miguel Jurado, Salvador Mirete, Covadonga Vázquez, and M. Teresa González-Jaén</i>	141
9 Targeting Conserved Genes in <i>Penicillium</i> Species <i>Stephen W. Peterson</i>	149
10 Targeting Aflatoxin Biosynthetic Genes <i>Ali Y. Srouf, Ahmad M. Fakhoury, and Robert L. Brown</i>	159
11 Targeting Trichothecene Biosynthetic Genes <i>Songhong Wei, Theo van der Lee, Els Verstappen, Marga van Gent, and Cees Waalwijk</i>	173
12 Targeting Ochratoxin Biosynthetic Genes <i>Antonia Gallo and Giancarlo Perrone</i>	191
13 Targeting Fumonisin Biosynthetic Genes <i>Robert H. Proctor and Martha M. Vaughan</i>	201

14	Targeting Other Mycotoxin Biosynthetic Genes	215
	<i>María J. Andrade, Mar Rodríguez, Juan J. Córdoba,</i> <i>and Alicia Rodríguez</i>	
15	Evaluating Aflatoxin Gene Expression in <i>Aspergillus</i> Section <i>Flavi</i>	237
	<i>Paula Cristina Azevedo Rodrigues, Jéssica Gil-Serna,</i> <i>and M. Teresa González-Jaén</i>	
16	Evaluating Fumonisin Gene Expression in <i>Fusarium verticillioides</i>	249
	<i>Valeria Scala, Ivan Visentin, and Francesca Cardinale</i>	
PART III POLYMERASE CHAIN REACTION (PCR)-BASED METHODS FOR MULTIPLEX DETECTION OF MYCOTOXIGENIC FUNGI		
17	Multiplex Detection of <i>Aspergillus</i> Species.	261
	<i>Pedro Martínez-Culebras, María Victoria Selma, and Rosa Aznar</i>	
18	Multiplex Detection of <i>Fusarium</i> Species	269
	<i>Tapani Yli-Mattila, Siddaiah Chandra Nayaka, Mudili Venkataramana,</i> <i>and Emre Yörüük</i>	
19	Multiplex Detection of Toxigenic <i>Penicillium</i> Species	293
	<i>Alicia Rodríguez, Juan J. Córdoba, Mar Rodríguez,</i> <i>and María J. Andrade</i>	
PART IV COMBINED PCR AND OTHER MOLECULAR APPROACHES FOR DETECTION AND IDENTIFICATION OF MYCOTOXIGENIC FUNGI		
20	PCR-RFLP for <i>Aspergillus</i> Species.	313
	<i>Ali Atoui and André El Khoury</i>	
21	PCR ITS-RFLP for <i>Penicillium</i> Species and Other Genera	321
	<i>Sandrine Rousseaux and Michèle Guilloux-Bénatier</i>	
PART V NEW METHODOLOGIES FOR DETECTION AND IDENTIFICATION OF MYCOTOXIGENIC FUNGI		
22	Identification of Ochratoxin A-Producing Black <i>Aspergilli</i> from Grapes Using Loop-Mediated Isothermal Amplification (LAMP) Assays	337
	<i>Michelangelo Storari and Giovanni A.L. Brogginì</i>	
23	Detection of Transcriptionally Active Mycotoxin Gene Clusters: DNA Microarray.	345
	<i>Tamás Emri, Anna Zalka, and István Pócsi</i>	
24	Mycotoxins: A Fungal Genomics Perspective.	367
	<i>Daren W. Brown and Scott E. Baker</i>	
	<i>Index</i>	381

Mycotoxigenic Fungi

Methods and Protocols

Moretti, A.; Susca, A. (Eds.)

2017, XI, 383 p. 45 illus., 17 illus. in color., Hardcover

ISBN: 978-1-4939-6705-6

A product of Humana Press