## Contents

### Health, Meat, Milk, Poultry, Seafood, and Vegetables

**PREFACE** ix

**CONTRIBUTORS** xiii

**PART B: FOOD PRODUCTS MANUFACTURING (CONTINUED)** 1

Section XII: Health Ingredients and Health Products Development for Preventing or Treating Human Diseases 3

46. Bioactive Peptides from Food Proteins 5  
   Hannu Korhonen and Anne Pihlanto

47. Lipid-Soluble Vitamins: Nutritional and Functional Aspects 39  
   Antonio Pérez-Gálvez and María Isabel Mínguez-Mosquera

48. Phytochemicals in Mediterranean Diet: The Interaction Between Tomato and Olive Oil Bioactive Compounds 55  
   Rita Pernice, Paola Vitaglione, Raffaele Sacchi, and Vincenzo Fogliano

49. Functional Microbes: Technology for Health Foods 67  
   Maria Saarela and Tiina Mattila-Sandholm

50. Enterococci and Dairy Products 85  
   Giorgio Giraffa

51. Fermented Milk: Health Benefits Beyond Probiotic Effect 99  
   Todor Vasiljevic and Nagendra P. Shah
52. Application of Functional Foods and Nutraceuticals in Allergic Disorders: Principles and Potential
   Venu Gangur

53. Functional Foods, Herbs, and Aging
   Carlos Kusano Bucalen Ferrari

54. Functional Foods and Gastrointestinal Disorders
   Jude Ryan, Shomik Sibartie, Liam O’Mahoney, and Fergus Shanahan

55. Herbs in the Management of Diabetes Mellitus with an Emphasis on Ginseng
   Vladimir Vuksan and John L. Sievenpiper

56. Functional Foods and Minerals: Calcium
   John J.B. Anderson

Section XIII: Meat and Meat Products

57. Thermal Processing
   Isabel Guerrero Legarreta

58. Ham
   Fidel Toldrá

59. Sausages
   Fidel Toldrá and Milagro Reig

60. Fermented Meat Production
   Fidel Toldrá

61. Processed Pork Meat Flavors
   Fidel Toldrá and Mónica Flores

62. Sensory Quality of Meat Products
   Fidel Toldrá and Mónica Flores

Section XIV: Milk and Milk Products

63. Processing Quality Fluid Milk Products
   James V. Chambers and Somjit Surapat

64. Milk Composition, Physical and Processing Characteristics
   Ramesh C. Chandan

65. Genetics and Milk Production
   Stephanie Clark and Michael J. Costello

66. Flavored Milks
   Kayanush J. Aryana

67. Fermented Milks Popular in Europe and North America
   A.Y. Tamime and R.K. Robinson
<table>
<thead>
<tr>
<th>68.</th>
<th>Fermented Milk in Asia</th>
<th>431</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sardar Iftekharudin Ahmed and Jutatip Wangsai</td>
<td></td>
</tr>
<tr>
<td>69.</td>
<td>Goat Milk, Its Products and Nutrition</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>Young W. Park and George F.W. Haenlein</td>
<td></td>
</tr>
<tr>
<td>70.</td>
<td>Bioactive Peptides in Dairy Products</td>
<td>489</td>
</tr>
<tr>
<td></td>
<td>Marco Gobbetti, Fabio Minervini, and Carlo Giuseppe Rizzello</td>
<td></td>
</tr>
<tr>
<td>71.</td>
<td>Science and Technology of Sour Cream</td>
<td>519</td>
</tr>
<tr>
<td></td>
<td>Wilfried Rieder</td>
<td></td>
</tr>
<tr>
<td>72.</td>
<td>Dairy Protein Hydrolysates</td>
<td>537</td>
</tr>
<tr>
<td></td>
<td>Ifendu A. Nnanna and Chao Wu</td>
<td></td>
</tr>
<tr>
<td>73.</td>
<td>The Manufacture and Applications of Casein-Derived Ingredients</td>
<td>557</td>
</tr>
<tr>
<td></td>
<td>John E. O’Connell and Cal Flynn</td>
<td></td>
</tr>
<tr>
<td>74.</td>
<td>Ice Cream and Frozen Desserts</td>
<td>593</td>
</tr>
<tr>
<td></td>
<td>Arun Kilara and Ramesh C. Chandan</td>
<td></td>
</tr>
<tr>
<td>75.</td>
<td>Frozen Novelties</td>
<td>635</td>
</tr>
<tr>
<td></td>
<td>Jonathan Hopkinson</td>
<td></td>
</tr>
<tr>
<td>76.</td>
<td>Yogurt</td>
<td>647</td>
</tr>
<tr>
<td></td>
<td>Lisa Pannell and Tonya C. Schoenfuss</td>
<td></td>
</tr>
<tr>
<td>77.</td>
<td>Infant Formulas</td>
<td>677</td>
</tr>
<tr>
<td></td>
<td>G. Boehm, C. Beermann, G. Georgi, and B. Stahl</td>
<td></td>
</tr>
<tr>
<td>78.</td>
<td>Biochemical Processes in the Production of Flavor in Milk and Milk Products</td>
<td>715</td>
</tr>
<tr>
<td></td>
<td>Tanoj K. Singh, Keith R. Cadwallader, and MaryAnne Drake</td>
<td></td>
</tr>
</tbody>
</table>

**Section XV: Poultry Products**

| 79. | Poultry Marination | 751 |
|     | Edith Ponce-Alquicira |
| 80. | Poultry Sausages | 773 |
|     | Alfonso Totosaus and M. Lourdes Pérez-Chabela |
| 81. | Flavor of Fresh and Frozen Poultry | 781 |
|     | Edith Ponce-Alquicira |
| 82. | Edible Packaging for Poultry and Poultry Products | 795 |
|     | Baciliza Quintero-Salazar and Edith Ponce-Alquicira |

**Section XVI: Seafood**

| 83. | Frozen Seafood Products Description | 817 |
|     | Nanna Cross |
84. Processing Frozen Seafoods 855
   Shann-Tzong Jiang and Tung-Ching Lee

85. Shellfish Freezing 893
   Athapol Noomhorm, Mukku Shrinivas Rao, and Punchira Vongsawasdi

86. Processing Formulated Fish and Fish Products 915
   Jamilah Bakar

87. Flavorants from Seafood Byproducts 931
   Rosa Jonsdottir, Gudrun Olafsdottir, Sigurður Hauksson, and
   Jon Magnus Einarsson

88. Seafood Processing: Basic Sanitation Practices 947
   Nanna Cross

89. Sustainable Intensive Aquaculture 969
   C.G. Carter

Section XVII: Vegetable Products 983

90. Frozen Vegetables and Product Descriptions 985
   Nanna Cross

91. Frozen Avocados 997
   Rosa María Galicia-Cabrera

92. Frozen French Fried Potatoes and Quality Assurance 1013
   Nanna Cross

93. Paprika Production: Current Processing Techniques and
   Emerging Technologies 1031
   María Isabel Mínguez-Mosquera, Manuel Jarén-Galán,
   Dámaso Hornero-Méndez, and Antonio Pérez-Gálvez

94. Pickles Manufacturing in the United States:
   Quality Assurance and Establishment Inspection 1045
   Nanna Cross

95. Soymilk and Tofu Manufacturing 1063
   Sam K.C. Chang

96. Tomato Processing 1091
   Rosa María Galicia-Cabrera

97. Dried Tomato 1109
   Raquel Pinho Ferreira Guiné and Maria João Barroca Dias

VOLUME 2 INDEX 1123

VOLUME 1 CONTENTS 1155

VOLUME 2 CONTENTS 1159

CUMULATIVE INDEX 1163