

Preface

The consumption of coffee as a beverage has a history dating back thousands of years but it is only in the past few decades that evidence has been provided to support the notion that it has an extremely complex food matrix in which individual components have therapeutic potential. On the other hand, it has been argued that excessive consumption of coffee may be detrimental. Understanding the biology of coffee and its impact on health is complicated by the fact that coffee contains many bioactive compounds. The well-known ones include caffeine, the diterpenes, and chlorogenic acids. However, several hundred (if not thousands) of other compounds and their derivatives are also present in coffee, too numerous to mention here. They occur in varying quantities and are contained either within the coffee beans themselves or produced by the commercial production process. After ingestion of the coffee beverage, many of these analytes undergo modification via the tissues or even intestinal bacteria. Each of these modified compounds in turn has their own chemistry, biochemistry, and health effects. Understanding the whole nature of coffee production, composition, impact on health, and the putative role of individual coffee-related analytes is thus very complex. This is addressed in the scientific treatise *Coffee in Health and Disease Prevention*, which aims to be the most comprehensive book on coffee in all its aspects.

It has the following four main sections:

SECTION 1: INTRODUCTORY AND GENERAL TEXT

- 1.1 The Plant
- 1.2 Coffee Processing
- 1.3 Constituents and Composition
- 1.4 Coffee Types and Coffee Drinking Culture
- 1.5 By-products and Secondary Usage

SECTION 2: EFFECTS OF COFFEE CONSUMPTION

- 2.1 Infection and Immunity
- 2.2 Cancer

- 2.3 Cardiovascular
- 2.4 Nervous System and Behavior
- 2.5 Diabetes and Glucose Control
- 2.6 Metabolism and Other Organ Systems
- 2.7 Cellular and Molecular Biology

SECTION 3: EFFECTS OF SPECIFIC COMPOUNDS FOUND IN COFFEE

- 3.1 Infection and Immunity
- 3.2 Cancer
- 3.3 Cardiovascular
- 3.4 Nervous System and Behavior
- 3.5 Diabetes and Glucose Control
- 3.6 Metabolism and Other Organ Systems
- 3.7 Cellular and Molecular Biology

SECTION 4: ANALYSIS AND METHODS

This book is thus a comprehensive approach to everything one needs to know about coffee. The book encompasses botany, preclinical and clinical studies. The material ranges from the gene to geographical populations. While there has been some attempt to broadly subdivide the material, it should be emphasized that some chapters assigned to a particular section can equally be allocated to another part of the book. The expert indexing system offsets this, so that material of interest can be readily located.

This book, *Coffee in Health and Disease Prevention*, is designed for nutritionists and dietitians, food scientists, food chemists, pharmacologists, public health scientists and workers, epidemiologists, agriculturists, botanists, health care professionals of various disciplines, policy makers, and marketing and economic strategists. It is designed for teachers and lecturers, undergraduates and graduates, and those undertaking postgraduate research or studies.

The Editor