



ENHANCED BY Google

Home | About Us | Conference Schedule | AAP Research Notes | Ordering Info | Publish With Us | Contact Us



# **SUBJECTS**

Alternative & Complementary

Animal Studies & Veterinary

Biology

Engineering/Nanotechnology

Biotechnology

Communication & Language

COVID and Pandemic Issues

Criminal Justice & Criminology

Economics & Finance

Education

Electronics and Communications

Energy Science

Environmental Science/Clima Change & Mitigation

Food Chemistry & Scienc Hospitality & Tourism

Library & Information Science

Materials Science

Mathematics

Mechanical Engineering

Nutrition, Dietetics & Health

Pharmaceutical Science &

Physics

Plant Science & Botany

Political Science / International

Psychology, Psychiatry & Mental Health

Security & Disaster Management

ciology, Social Work & Social

Soil & Water Conservation

Urban Planning

Nutrition, Dietetics & Health

AAP Advances in Nutraceuticals

# Plant Metabolites and Vegetables as **Nutraceuticals**

Editors: Rai K. Keservani, MPharm Bui Thanh Tung, PhD Rajesh K. Kesharwani, PhD, MTech Eknath D. Ahire. MSPharm

Ordering Info/Buy Book



In Production
Pub Date: Forthcoming September 2024 Hardback Price: \$190 US | Hard ISBN: 9781774915448 Pages: Est. 444pp w/index Binding Type: Hardback/ ebook Series: AAP Advances in Nutraceuticals Notes: 12 color, 18 b/w

The use of nutraceuticals in nutritional supplements sold over the counter without prescriptions has been growing in recent years. This volume explores vegetables and plant metabolites as nutraceuticals that provide nutritional importance in the prevention and/or treatment of human diseases and for maintaining the body's energy balance.

Divided into three sections, the book looks at the significant potential of nutraceuticals and health promotion of plant metabolites and vegetables, the nutraceutical benefits of bioactives and flavonoids, and the benefits of plant metabolites and vegetables in prevention and treatment of

## Key features:

- Considers various applications and implications of plant metabolites and vegetables as nutraceuticals in healthcare
- · Discusses the mechanisms of plant metabolites and vegetables to support the prevention and treatment of various diseases, such as cancer, gout, heart disease, liver disease, Parkinson's disease and other brain diseases, and gastrointestinal disease
- · Explores the role of phytochemicals bioactive compounds as nutraceuticals in healthcare
- Looks at the relationship between eating fruits and vegetables and the incidence of serious and chronic

With contributions from renowned scientists and researchers around the globe, the volume provides up-to-date information that offers insights on the value of plant metabolites and vegetables as nutraceuticals that will be of interest to academicians, scientists, researchers, and industry professionals worldwide.

# CONTENTS:

Preface

#### PART I: NUTRACEUTICAL POTENTIAL AND HEALTH PROMOTION OF PLANT METABOLITES AND VEGETABLES 1. Potentials of Vegetables and Plant Metabolites in Healthcare

Munish Sharma, Munish Sharma, Navneet Bithel, Kamal Kant Sharma, and Munit Sharma

2. Nutraceutical Potential of Selected Vegetables Eramma N., Sadashiv S. O., Raghu Ningegowda, Renuka Jyothi S., and Sharangouda J. Patil

#### PART II: NUTRACEUTICAL BENEFITS OF BIOACTIVE AND **FLAVONOIDS**

3. Phytochemicals Present in Vegetables for Health

Kamal Kant Charma Munit Charma Doona Dovi Anaraiita





Follow us for the latest from Apple Academic Press:



Congratulations to Hafiz Ansar Rasul Suleria, PhD, for receiving the Dean's Award for Excellence in Research from the University of Melbourne, Australia, in recognitation for his exceptional performance nis exceptional performance and strong commitment to advanced research in food science. Dr. Suleria is editor of AAP's book series Innovations in Plant Science for Better Health: From Soil to Fork. For more information, visit: Click

Congratulations to Dr. Christian Mancas. His book Conceptual Data Modeling and Database Design: A Fully Algorithmic Approach was one of the 6 Best Data Modeling ebooks for Beginners by BookAuthority, a leading site for book recommendations. For more information, visit: Click here

Announcing a new book series: AAP Insights in Women's and Gender Studies: Womens and Gender Studies Reshaping Identities is on a mission to revolutionize the conversation around gender, identity, and societal dynamics. The series aims to hidse the one between bridge the gap between academic rigor and practical application, providing tools that empower educators, researchers, students, and activists to spark change and advance the cause of gender equality around the world. For more information, visit: Click

# AAP Editor & Author Dr. Wasim Siddiqui to Lead the World Food Preservation Center, USA

Center, USA
AAP congratulates Professor
Mohammed Wasim Siddiqui
on this new and prestigious
appointment. In this role, he
directs the planning,
development, and
implementation of plans within
the organization which is the organization, which is dedicated to reduction of dedicated to reduction or postharvest food loss and wastage. Dr. Siddiqui will also originate and promote existing initiatives of the sister universities and institutes of the World Food Preservation Center® LLC. Dr. Siddiqui is editor of two book series with editor of two book series with AAP. For more information, visit: Click here

Announcing a new AAP book series: Perspectives and Anthropology in Tourism and Hospitality (PATH)

The new AAP book series Innovations in Microbiolo





Preface

# 4G 86

directs the pranting, development, and implementation of plans within the organization, which is dedicated to reduction of postharvest food loss and postnarvest too loss and wastage. Dr. Siddiqui will also originate and promote existing initiatives of the sister universities and institutes of the World Food Preservation Center® LLC. Dr. Siddiqui is ditter of the book exict with editor of two book series with AAP. For more information,

Announcing a new AAP book series: Perspectives and Anthropology in Tourism and Hospitality (PATH) For more information, visit:

visit: Click here

The new AAP book series Innovations in Microbiology welcomes book proposals. For more information, see: Click here

COMMENTS FROM AAP
EDITORS AND AUTHORS
AAP book title. Advances in Audiology
and Hearing Science (2-volume set)
Thave collaborated with AAP during
the process of bringing my twovolume editing work. "Advances in
Audiology and Hearing Science" to a
final publishing phase. Despite the
fact that the book brought together at
1 different authors (with very
different writing styles), AAP
support has been truly important
throughout the initial and final
stages of the book. While the COMMENTS FROM AAP support has been truly important throughout the initial and final stages of the book. While the majority of the publishing work is done at the early stages, the final touches that include the last-minute touches that include the last-minute corrections of the authors are extremely crucial to the quality the book tries to convey. The assistance of AAP during the last stages of corrections and communication with the authors was a very positive contributor to my state of mind during those stressful moments. I recommend the publishing experience with AAP to other editors of scientific material."—Stavoos Hatzopoulos, PhD, Hearing Science Laboratory, University Hospital of Ferrara, Ferrara, Italy

AAP book title: Nanotechnologie. The Physics of Nanomaterials (2-

AAP book title. Nanderconloogies: The Physics of Nanomaterials (2-volume set)
The Physics of Nanomaterials (2-volume set)
As the author of a two-volume book on nanotechnologies, I was very pleased with the interaction and support of the team at Apple
Academic Press. They provided me with regular and useful information and updates throughout the publishing procedure. I am also very happy with the final product, which is of good quality. The books are now available and are professionally distributed through the various channels. I would like gain to that team at AAP for all their hard channels. I would like again to that the team at AAP for all their hard work and support." —David Schmc PhD, Director, Groupe d'Etude de la Matière Condensée GEMaC, Natio Centre for Scientific Research, Université de Versailles/Saint-Quentin, Université Paris-Saclay, Versailles, France

AAP book title plus many others: Physiology of Molluscs (2-volume set)

"Since my first recent association, I have enjoyed the full benefit of support, encouragement, and kindness from the members of AAP I have had the pleasure of being associated with. In the same vein. I have had the pleasure of being associated with. In the same vein, I hope AAP was satisfied with the book series I have edited in advancing the knowledge. It has been a great journey and was a great pleasure and satisfaction. Advancing scholarship through publications is one of the best publications is one of the best routes publishers can take, and I would hold AAP as one of the best ones."—Saber Saleuddin, PhD. University Professor Emeritus, Department of Biology, York University in Toronto, Ontario, Canada

AAP book title plus many others: Green Chemistry and Sustainable Technology: Biological, Pharmaceutical, and Macromolecular

Pharmaceutical, and Macromolecular Systems
"It had been my pleasure to work with the production team of Apple Academic Press for almost a decade. The best presentation of our work was due to their hard work and with careful scrutiny. I am sure that every one of them takes extra pains to publish the book nicely, maintaining the quality and timeliness. It was a rewarding experience to work with AAP I would like to publish more with AAP on my upcoming projects in future also." – Prof. Suresh C. Ameta, Professor of Eminence (Distinguished Professor). Eminence (Distinguished Professor), Faculty of Science, PAHER University

AAP book title: New Frontiers in Nanochemistry, 3-volume set, plus many others "Publishing a book, either as author or editor, is a journey from the initial vibration to the piece of knowledge

#### CONTENTS: Nutrition, Dietetics & Health

Pharmaceutical Science & Technology

#### **Physics**

Plant Science & Botany

Political Science / International

Psychology, Psychiatry & Mental

Security & Disaster Management

Sociology, Social Work & Social Welfare

Soil & Water Conservation

Urban Planning

Viticulture & Enology

Waste Management

Water Management

Women & Gender Studies

#### **SERIES**

AAP Advances on Sustainable Marketing Practices

21st Century Business

AAP Advances in Artificial Intelligence and Robotics

AAP Advances in Nutraceuticals

AAP Focus on Medicinal Plants

AAP Insights in Women's and Gender Studies: Reshaping

AAP Research Notes on Chemical

AAP Research Notes on Chemistry

AAP Research Notes on Nanoscience and Nanotechnolog

AAP Research Notes on

AAP Research Notes on Optimization and Decision Making Theories

AAP Research Notes on Polyme Engineering Science and Technology

AAP Series on Digital Signal Processing, Computer Vision and Image Processing

Advances in Hospitality and

Advances in Materials Science

dvances in Nanoscience and Vanotechnology

Applied Chemistry and Chemical

Biodiversity Hotspots of the World

Biology and Ecology of Marine Life

Biomedical Engineering: Techniques and Applications Boo

Current Advances in Biodiversity, Conservation and Environmental

Electronic Commerce Management for Business

Frontiers of Mechanical and ndustrial Engineering

nnovation Management and

nnovations and Challenges in

Innovations in Agricultural and Biological Engineering

nnovations in Biotechnology

nnovations in Chemical Physics and Mesoscopy

Innovations in Computational Chemistry

nnovations in Horticultural Science

novations in Plant Science for tter Health: From Soil to Fork

#### PROMOTION OF PLANT METABOLITES AND VEGETABLES 1. Potentials of Vegetables and Plant Metabolites in Healthcare Munish Sharma, Munish Sharma, Navneet Bithel, Kamal Kant

PART I: NUTRACEUTICAL POTENTIAL AND HEALTH

Sharma, and Munit Sharma

2. Nutraceutical Potential of Selected Vegetables Eramma N., Sadashiv S. O., Raghu Ningegowda, Renuka Jyothi S., and Sharangouda J. Patil

#### PART II: NUTRACEUTICAL BENEFITS OF BIOACTIVE AND **FLAVONOIDS**

3. Phytochemicals Present in Vegetables for Health Promotion

4. Flavonoids in Vegetables as Nutraceuticals

Kamal Kant Sharma, Munit Sharma, Deepa Devi, Aparajita Gupta, and Shivam Singh

Mayur S. Bidkar, Akshay U. Ghorpade, Dinesh B. Chaudhari, Swati G. Talele, and Anil G. Jadhav

## 5. Nutraceutical Bioactive Compounds in Fruits and Vegetables

Ankur Srivastav, Ajay Kumar Shukla, Manish Kumar, Shailendra Kumar, and Rahul Kumar Mishra

PART III: PLANT METABOLITES AND VEGETABLES IN PREVENTION AND TREATMENT OF DISEASES 6. Effect of Plant- and Vegetable-Based Secondary **Metabolites on Cancer Treatment** Ankit Awasthi and Yashi Srivastava

#### 7. Plant Metabolites and Vegetables for Gout Prevention and Treatment

Bui Thanh Tung, Nguyen Nhu Son, Nguyen Bao Kim, and Raj K. Keservani

#### 8. Plant Metabolites and Vegetables for Heart Disease **Prevention and Treatment**

Ashwini V. Shelke, Swati Talele, Tushar Lokhande, and Anil Jadhay

# 9. Plant Metabolites and Vegetables for Liver Disease **Prevention and Treatment**

Darcia D'mello, Sadashiv S. O., Renuka Jyothi S., and Sharangouda J. Patil

#### 10. Plant Metabolites and Vegetables for Brain Disease Treatment and Prevention Madhuri Verma

#### 11. Plant Metabolites and Vegetables for Gastrointestinal Disease Prevention and Treatment Vidisha Mishra

#### 12. Plant Metabolites and Vegetables for Diabetes **Prevention and Treatment**

Amruta Balekundri, Eknath D. Ahire, Jaffar Shaik, and Raj K.

#### 13. Plant Metabolites and Vegetables for Kidney Disease Prevention and Treatment

Amruta Balekundri, Shalni Satya, Eknath D. Ahire, Jaffar Shaik, and Raj K. Keservani

# 14. Delaying the Onset of Parkinson's Disease through Phytotherapy

Devangna Paul and Myrene Roselyn D'souza

#### ABOUT THE AUTHORS / EDITORS: Editors: Rai K. Keservani, MPharm

Associate Professor, Faculty of B. Pharmacy, CSM Group of Institution, Prayagraj, India

Raj K. Keservani, MPharm, is Associate Professor, Faculty of B. Pharmacy, CSM Group of Institutions, Allahabad, India. He has more than 12 years of academic (teaching) experience from various institutes of India in pharmaceutical education. He has published many peer-reviewed papers in the field of pharmaceutical sciences in national and international journals, over 40 book chapters, several co-authored books, and nearly 30 edited books. He is also active as a reviewer for several international scientific journals. Mr. Keservani graduated with a pharmacy degree from the Department of Pharmacy, Kumaun University, Nainital (Uttarakhand), India. He received his Master of Pharmacy (specialization in pharmaceutics) from the School of Pharmaceutical Sciences



