

ISSN: 2157-944X Volume 14, Number 8, August 2023



# Food and Nutrition Sciences



ISSN: 2157-944X



9 772157 944001 08

<https://www.scirp.org/journal/fns>

# Journal Editorial Board

ISSN Print: 2157-944X ISSN Online: 2157-9458

<https://www.scirp.org/journal/fns>

---

## Editor-in-Chief

**Prof. Alessandra Bordoni**

University of Bologna, Italy

## Associate Editors-in-Chief

**Prof. Xufeng Huang**

University of Wollongong, Australia

**Prof. Michael G. Kontominas**

University of Ioannina, Greece

## Editorial Board

**Prof. Hülya Çiçek**

Gaziantep University, Türkiye

**Dr. Ammar Mohammed Hamood AL-Farga**

University of Jeddah, Saudi Arabia

**Dr. Kayanush J. Aryana**

Louisiana State University, USA

**Dr. Lauri O. Byerley**

Louisiana State University, USA

**Dr. Daniel Cozzolino**

The University of Adelaide, Australia

**Dr. Amira Muhammad Galal Darwish**

City of Scientific Research and Technological Applications (SRTA City), Egypt

**Prof. Kelvin J. A. Davies**

University of Southern California, USA

**Dr. Amith R. Devireddy**

University of Missouri, USA

**Prof. Asim K. Duttaroy**

University of Oslo, Norway

**Prof. Yousif Abd El-Aziz Abdou Elhassaneen**

Minoufiya University, Egypt

**Dr. Anthony Fardet**

Institute National de la Recherche Agronomique (INRA), France

**Prof. Tomas Girbes**

University of Valladolid, Spain

**Dr. Beau K. Greer**

Sacred Heart University, USA

**Dr. Jeffrey S. Hampl**

Arizona State University, USA

**Prof. Yong He**

Zhejiang University, China

**Dr. Kimberly B. Heidal**

East Carolina University, USA

**Prof. Yu Huang**

Chinese University of Hong Kong, China

**Dr. Jose C. Jimenez-Lopez**

Spanish National Research Council (CSIC), Spain

**Dr. Jagat R. Kanwar**

Deakin University, Australia

**Dr. Dalia El Khoury**

University of Guelph, Canada

**Prof. Patricia A. Kruk**

University of South Florida, USA

**Dr. Jean-Claude Lavoie**

University of Montreal, Canada

**Dr. Francisco Sánchez Montero**

College of Nutrition Professionals of Costa Rica, Costa Rica

**Dr. Francisco Javier Moreno**

Autonomous University of Madrid, Spain

**Prof. Hasan Mukhtar**

University of Wisconsin, USA

**Dr. Maurice O'Sullivan**

University College Cork, Ireland

**Dr. Mustafa Zafer Ozel**

The University of York, UK

**Dr. Uma Devi Palanisamy**

Monash University, Sunway Campus, Australia

**Prof. Young W. Park**

Fort Valley State University, USA

**Dr. Salina Parveen**

University of Maryland Eastern Shore, USA

**Dr. Reza Poureslami**

Insta-Pro International, USA

**Dr. Jayadev Raju**

Health Canada, Canada

**Prof. Sherif Sabry**

Menoufia University, Egypt

**Prof. Charles R. Santerre**

Purdue University, USA

**Dr. Heidi J. Silver**

Vanderbilt University, USA

**Prof. Jesus Simal-Gandara**

University of Vigo, Spain

**Prof. Linda G. Snetselaar**

The University of Iowa, USA

**Dr. Lucy Thairu**

Touro University, USA

**Dr. Brijesh Kumar Tiwari**

Manchester Metropolitan University, UK

**Prof. Alan C. Tsai**

Asia University, Chinese Taipei

**Prof. Edwin Edward Kadima Wamukoya**

Masinde Muliro University of Science and Technology, Kenya

**Dr. Thomas T. Y. Wang**

Johns Hopkins University, USA

**Dr. Jack Wing Tak Wong**

Stanford University, USA

**Prof. Baojun Xu**

Beijing Normal University-Hong Kong Baptist University United International College, China

# Table of Contents

**Volume 14    Number 8**

**August 2023**

**Novel Gluten-Free Amaranth and Oat Flour Cookies Fortified with Soybean Hulls**

S. X. Liu, D. J. Chen.....699

**Production of Cashew Apple Wine Enriched with *Hibiscus sabdariffa* Extracts**

E. W. Kouï, D. Soro, J. I. K. Gnoumou, N. E. Assidjo, K. B. Yao .....720

**Traditional Processing and Characterization of “*Alme Ardeb*”,  
an Indigenous Beverage from Far North Region, Cameroon**

D. Bakari, S. K. Abdouramane, F. Y. Bruno, Y. Garga, T. N. Leopold.....730

**Mother’s Nutritional Knowledge and Practice towards Children under Two Years of Age and  
Its Impact on Their Health in Abuzaid Albuluk Pediatric Specialized Hospital in 2023**

M. H. A. Abd-Alrazig, M. A.-A. O. Dakeen, M. A. H. M. Ali, R. M. H. Nasr .....746

**Tryptophan Metabolism and Gut Microbiota**

A. Takada .....777

# Food and Nutrition Sciences (FNS)

## Journal Information

### SUBSCRIPTIONS

The *Food and Nutrition Sciences* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published monthly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$89 per copy.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### Advertisements

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### Copyright and reuse rights for the front matter of the journal:

Copyright © 2023 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### Copyright for individual papers of the journal:

Copyright © 2023 by author(s) and Scientific Research Publishing Inc.

#### Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### Disclaimer of liability

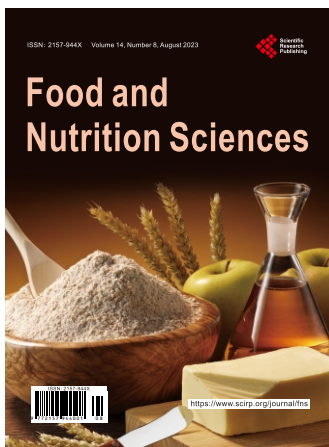
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: [fns@scirp.org](mailto:fns@scirp.org)





**Call for Papers**

# Food and Nutrition Sciences

ISSN Print: 2157-944X ISSN Online: 2157-9458

<https://www.scirp.org/journal/fns>

Food and Nutrition Sciences (FNS) is an international journal dedicated to the latest advancements in related areas. The goal of this journal is to keep a record of the state-of-the-art research and to promote study, research and improvement within its various specialties.

## Subject Coverage

All manuscripts submitted to FNS must be previously unpublished and may not be considered for publication elsewhere at any time during FNS's review period. Additionally, accepted ones will immediately appear online followed by printed in hard copy. Topics to be covered by this journal include, but are not limited to:

- Animal Nutrition
- Antioxidants and Phytochemicals in Food
- Byproducts Processing and Utilization
- Calorie Intake and Consumption
- Carbohydrates and Fibers
- Clinical Nutrition
- Consumer Choice, Preferences, and Concerns
- Diets and Diseases
- Eating Disorders
- Food Chemistry, Engineering and Microbiology
- Food Conservation and Preparation
- Food Machinery
- Food Packaging
- Food Processing Technology
- Food Safety and Hygiene
- Food Science and Technology
- Grain and Oil Engineering
- Healthy Eating Initiatives
- Hormonal Regulations
- Malnutrition
- Maternal and Infant Nutrition
- Metabolism and Nutrition Physiology
- Molecular Gastronomy
- Nutrient Metabolism
- Nutrition and Immunology
- Obesity
- Proteins and Amino Acids
- Public Health Nutrition
- Sensory Analysis
- Sports Nutrition
- Vitamins and Minerals

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of FNS.

## Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

## Website and E-Mail

<https://www.scirp.org/journal/fns>

E-mail: [fns@scirp.org](mailto:fns@scirp.org)

