



Herbal Nutraceuticals and Functional Applications of *Celosia argentea* and Allied Botanicals

Sushant M. Ahire
Prerana S. Pawar
Shivraj P. Jadhav
Sunil K. Mahajan

● **DeepScience**
”

Herbal Nutraceuticals and Functional Applications of *Celosia argentea* and Allied Botanicals

Sushant M. Ahire

Department of Pharmaceutical Chemistry,
Divine College of Pharmacy, Satana, Nashik

Prerana S. Pawar

Department of Pharmaceutics, Divine
College of Pharmacy, Satana, Nashik

Shivraj P. Jadhav

Department of Pharmaceutics, Divine
College of Pharmacy, Satana, Nashik

Sunil K. Mahajan

Department of Pharmaceutical Chemistry,
Divine College of Pharmacy, Satana, Nashik



Published, marketed, and distributed by:

Deep Science Publishing, 2026
USA | UK | India | Turkey
Reg. No. MH-33-0658412
www.deepscienceresearch.com
editor@deepscienceresearch.com
WhatsApp: +91 7977171947

ISBN: 978-93-7185-067-4

E-ISBN: 978-93-7185-768-0

<https://doi.org/10.70593/978-93-7185-768-0>

Copyright © Sushant M. Ahire, Prerana S. Pawar, Shivraj P. Jadhav, Sunil K. Mahajan, 2026.

Citation: Ahire, S. M., Pawar, P. S., Jadhav, S. P., & Mahajan, S. K., (2026). *Herbal Nutraceuticals and Functional Applications of Celosia argentea and Allied Botanicals*. Deep Science Publishing. <https://doi.org/10.70593/978-93-7185-768-0>

This book is published online under a fully open access program and is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). This open access license allows third parties to copy and redistribute the material in any medium or format, provided that proper attribution is given to the author(s) and the published source. The publishers, authors, and editors are not responsible for errors or omissions, or for any consequences arising from the application of the information presented in this book, and make no warranty, express or implied, regarding the content of this publication. Although the publisher, authors, and editors have made every effort to ensure that the content is not misleading or false, they do not represent or warrant that the information-particularly regarding verification by third parties-has been verified. The publisher is neutral with regard to jurisdictional claims in published maps and institutional affiliations. The authors and publishers have made every effort to contact all copyright holders of the material reproduced in this publication and apologize to anyone we may have been unable to reach. If any copyright material has not been acknowledged, please write to us so we can correct it in a future reprint.

Table of Contents

Chapter 1: Introduction to Herbal Nutraceuticals.....1

Ms. Prerana S. Pawar, Mr Sushant M Ahire, Dr. Shivraj P. Jadhav. Dr. Deepak D. Sonawane, Dr. Sunil K. Mahajan

Chapter 2: Botanical and Agronomic Profile of Celosia Argentea.....17

Vrushali Bhalchim

Chapter 3: Ethnopharmacological and Traditional Uses.....28

Amit Kumar, Sushil Kumar, Mukesh Kumar Singh, Vidhan Chand Bala, Sunil Kumar Tiwari

Chapter 4: Phytochemical Constituents and Active Principles.....51

Dr. Shoheb Shaikh, Dr. Vishal Pande, Mr. Ashish Alte, Mr. Sanjay Tawale, Mr.Dnyaneshwar Hardas

Chapter 5: Pharmacological Activities and Mechanisms of Action.....70

Mr. Ritesh B. Aher, Ms. Gauri R. Salave, Ms. Shivrani W. Nimbokar, Ms. Sakshi S. Waikar, Dr. Shivraj P. Jadhav

Chapter 6: Toxicological and Safety Evaluation.....85

Sandesh S. Bole, Prashant B. Patil, Jayprakash S. Suryawanshi, Vishal V. Pande, Sachin N. Kothawade

Chapter 7: Formulation Approaches for Herbal Nutraceuticals.....128

Dharmasoth Rama Devi, Kanikella Sivaji, Kiran Manda, K. Gowtham Kumar, Keloth Basavaiah

Chapter: 8 Product Development and Functional Food Applications.....157
Saloni Desai, Dr. Chirag Desai, Siddhi Patel, Khushi Desai

Chapter: 9 Market Trends and Industrial Perspectives.....177
Pranjal Sachan, Prerana Pawar

Chapter 10: Future Prospects and Research Opportunities.....170
Ms. Bhavika S. Mahajan, Ms. Dipti B. Chavan, Ms. Savita J. Jadhav