

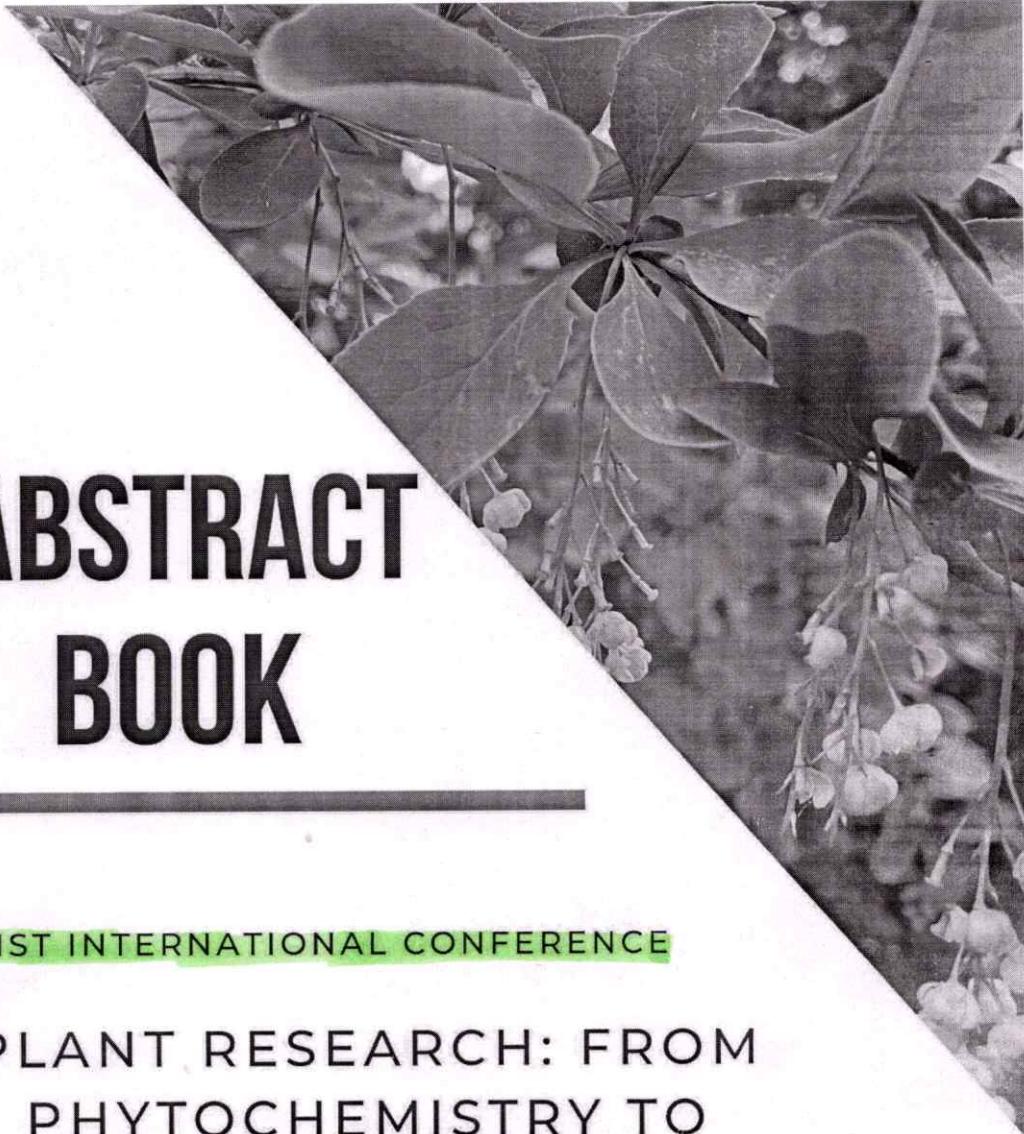


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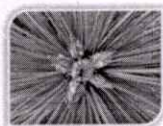


ABSTRACT BOOK

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PLANT RESEARCH: FROM
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Ethnopharmacological study of *Acorus calamus* L. and *Cordia dichotoma* G. Frost. in Scopolamine induced Alzheimer's type Dementia in mice

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Aim(s): The goal of this research study was to see how plant extracts of *Acorus calamus* Linn. and *Cordia dichotoma* G. Forst. overcome scopolamine-induced Alzheimer's type dementia in mice by activating the cholinergic system, anti-oxidant and protection of neuronal death in the hippocampus region of the brain. Dementia is believed to be primarily brought on by neurodegeneration. Alzheimer's disease is the most well-known kind of neurodegenerative dementia.

Methods: Mice's regular behaviors in the Morris Water Maze (MWM), Elevated Plus Maze (EPM), and locomotor activity were all decreased by scopolamine (1 mg/kg i.p.). Moreover, it lowers antioxidant levels in the brain, such as Reduced glutathione (GSH) and Superoxide dismutase (SOD), while also raising Acetylcholinesterase enzyme levels (AChE). Each group's evaluation of several behavioral and biochemical characteristics (including Nitrite level, AChE, SOD, and GSH) was compared. The hippocampal region's histological examination is contrasted with other groupings.

Results: In comparison to *Cordia dichotoma* p.o., *Acorus calamus* (hydro-alcoholic 1:1) p.o., and the combination (*Acorus calamus* + *Cordia dichotoma*) group shown substantial results in behavioral and biochemical parameters. The *Acorus calamus*-treated group and the combination-treated group both demonstrated considerable neuroprotection in histological examinations.

Conclusion: According to the current study, scopolamine-induced oxidative damage to the brain can be lessened by *Acorus calamus*, which also provides neuroprotection. The neurons in the hippocampal area of the brain are restored by *Acorus calamus* its own and in conjunction with *Cordia dichotoma*. As a result, efforts may be concentrated on creating a therapeutic alternative for the treatment and/or prevention of illnesses connected to dementia.



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About the Book

The knowledge of Pharmaceutical Engineering is an essential component in pharmaceutical dosage form manufacturing. It involves the selection of proper equipment for the manufacturing of particular dosage forms either on a small or large scale. The manufacturing of dosage form includes the selection of critical operational parameters, equipment parameters and material parameters in various unit operations of manufacturing of the formulation of excellent quality with greater safety and optimum efficacy.


About the Author


Dr. Sonia Narwal M.Pharm., Ph.D., is working as an Associate Professor in the Department of Pharmacy, Panipat Institute of Engineering and Technology (PIET), Samalkha, Panipat-132102. She is a dynamic teacher cum researcher having more than ten years of research and teaching experience and published more than thirty Research papers and Review articles in International and National reputed journals. She has presented her research work at national/International conferences and attended more than seventy conferences/seminars/workshops organized by PCI, IPGA, IPES and APTI. She had published three books. Her one Indian and one South African Patent is granted and two design Patents are in pipeline.

Ms. Preeti as a research scholar, embarks on a journey of intellectual exploration, delving into the depths of knowledge and contributing to its expansion. With passion and curiosity, she gave her five years in teaching and research. She is pursuing her PhD from Banasthali University, Jaipur, Rajasthan. She has authored a book on pharmaceutics. Her research area includes 'Formulation and Optimization of Lipid-Based Oral Delivery Systems of Anti-Hypertensive Drugs (ACE Inhibitors drug). Indian patent entitled 'Method for Developing Nanoparticulate In-Situ Gel Formulation of Acyclovir for Ocular Disease' has credit into her account. She has attended various FDP, conferences, and workshops/webinars organized by APTI and IPGA to enhance her soft skills and knowledge. Presently, she is working as an Assistant Professor in the Department of Pharmacy, Gurugram global college of Pharmacy, Fahuarnagar, Gurugram-122506.

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B.Pharmacy Pharmaceutics-I is the first step into the world of pharmacy for aspiring pharmacists. In this course, students learn the basics of drug formulation, dosage forms, and the science behind making medicines. From understanding how different drugs work to learning how to create safe and effective medications, this course covers it all. Through hands-on experiments and classroom learning, students gain the skills they need to become knowledgeable and responsible pharmacists who play a crucial role in healthcare. B.Pharmacy Pharmaceutics-I sets the foundation for a rewarding career dedicated to helping others live healthier lives through the power of medicine.

About the Authors :

Ms. Preeti, a dedicated researcher with seven years in teaching and research, holds Pharmaceutics degrees from PDM College of Pharmacy affiliated by PGIMS Rohtak. Currently pursuing a PhD at Banasthali University, Jaipur, and Rajasthan. She authored two books and holds two Indian patents. Ms. Preeti actively contributes to national and international journals and to further hone her skills, she actively participates in e-Faculty Development Programmes, e-conferences, and workshops organized by esteemed pharmaceutical associations. As an Assistant Professor at Gurugram Global College of Pharmacy, she focuses on improving drug bioavailability using natural lipid carriers. Her commitment to pharmaceutical research stems from a desire to enhance patient outcomes, making her a valuable asset to the field of pharmaceutics.



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