GOKULA KRISHNA COLLEGE OF PHARMACY

HEI CODE: C-26844	NAAC SSR	CYCLE I

3 : RESEARCH, INNOVATIONS & EXTENSION

3.2 Innovation Ecosystem	3.2.1 Institution has Created an ecosystem for Innovations, IKS, IRP etc

3.2.1 Documents related to Institution Innovations

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LIST OF SEMINARS / WORKSHOPS / CONFERENCES CONDUCTED

A.Y.:2022-23

S.No	Name of the Event	Date	Details of Resource Person	No. of Participants
1	"Thinking Perspectives in Entrepreneurship"	15-09-2022	Mr J. Joseph, Assistant Professor, Dept. of MBA, Gokula Krishna college of Engineering, Sullurupeta. Email : n4loyola@gmail.com Phone : +91 9444304215	25
2	"Hands on Training in Analytical Instrumentation in Research"	29-10-2022	Dr K. Nagaraju, Professor, Depat. of Pharmaceutical Analysis, Sir C R Reddy college of pharmaceutical sciences, Eluru. Email : nagaraju162@gmail.com Phone : +91 9642166555	35
3	"Essential Statistics in Research for the Pharmaceutical Research "	10-11-2022	Ms P. Sailaja, Associate professor, Department of Pharmacology Ratnam institute of pharmacy Pidathapolur, SPSR Nellore. Email : sailajapharma87@gmail.com Phone : +91 9963366179	33
4	"Intellectual properties Rights- Past, Present and Future"	09-12-2022	Dr S.Shehensha, Associate professor Dept. of Pharmaceutical chemistry Mother Theresa Institute of Pharmaceutical Education and research, Kurnool. Email : shehenshah7@gmail.com Phone : +91 9959856721	27

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M. Pharm, Ph.D. FIC. FBSS. FAGE, FICCP, MISTE
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5	"Research in Experimental and Clinical Pharmacology "	01-02-2023	Dr SK. Aminabee, Professor, Dept. of Pharmacology, V.V Institute of Pharmaceutical Sciences, Gudlavalleru Email : aminaammi@gmail.com Phone : 8309116844.	35
6	"Contemporary Research Methods in Pharmacy and Health Sciences	24-02-2023	Mr B. Sudheer chowdary, Assoc. Professor, Dept. of pharmacology, Bapatla College of Pharmacy, Guntur. Email : sudheer.chowdary18@gmail.com, Phone : +91 9966425564	37
7	"Empowering future clinical pharmacist: Role in clinical research"	10-03-2023	Dr C. Rajaram, Professor & Head, Department of pharmacy practice P Rami Reddy Memorial College of Pharmacy, Kadapa Email : rajarampharmacy21@gmail.com Phone : +91 8019504202	41
8	"Entrepreneurship on Pharmaceutical Management"	20-03-2023	K. Siva Naveen, Excutive HR, Divi's laboratories, Vishakapatnam. Email : sivanaveen@gmail.com Phone : +91 8099884722	25
9	"Pharmacovigilance program of India – Current Scenario and Emerging Trends in Research"	05-04-2023	CH. Kiran kumar M.Pharm, Healthcare IT Expert, RISE Trainings, Nellore Email : risetrainings@outlook.com Phone : +91 7993107993	36

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LIST OF SEMINARS / WORKSHOPS / CONFERENCES CONDUCTED

A.Y.:2021-22

S.No	Name of the Event	Date	Details of Resource Person	No. of Participants
1	"Procedure for Filling and Grant Patents in India"	05-10-2021	Dr.V. Jayashankar reddy, Professor & Head, Dept. of pharmacology, Krishna Teja Pharmacy College, Tirupati Emai : shankarparmacology@gmail.com Phone : 9959348676.	30
2	"Innovations in Novel Drug Delivery Systems and Clinical Research"	06-11-2021	Dr Y.Ramesh, Professor & HOD, Dept. of Pharmaceutics, Ratnam institute of pharmacy, Pidathapolur, SPSR Nellore. Email : yramesh703@gmail.com Phone : +91 7672026003	38
3	"How to Write a Research Proposal"	10-12-2021	Mr. P.V.S.R Chandra Sekhar, Assoc. Professor, Department of pharmaceutics, Sir C.R Reddy college of pharmaceutical sciences, Eluru. Email : pvsrcs@gmail.com Phone : 9490032224	32
4	"Entrepreneurship in Community Pharmacy"	28-01-2022	Mr B. Thirupathaiah, MBA, Sr.HR, Divi's laboratories, Visakhapatnam Email : bthiru02@gmail.com Phone : +91 8332003643	25

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5	"Research on Medication Safety and Error Prevention"	14-03-2022	Mr M. Krishna, Associate Professor, Dept. of Pharmacy practice, Sir C.R Reddy college of pharmaceutical sciences, Eluru. Email : krishnamannem@gmail.com Phone : +91 7702060202	38
6	"Statistical Research Methodology in the Field of Pharmaceutical Sciences "	08-04-2022	Mrs E. Manasa, Associate professor, Dept. of Pharmacognosy, Sun Institute of Pharmaceutical education and Research, Kakupalli, SPSR Nellore. Email : manasa.esr@gmail.com Phone : +91 8985588876	40
7	"Entrepreneurship-Best Ideas for Pharmacist"	25-04-2022	Mr K. Harikrishna, MBA, Sr. Excutive, Divi's laboratories, Vishakapatnam. Email : harikrishna.kora16@gmail.com Phone : +91 9493211359	25
8	"Role of Clinical Research in Drug Development Program"	07-05-2022	Mrs P.Prabhavathi, Associate Professor, Dept. of Pharmaceutical chemistry, Ratnam Institute of Pharmacy, Pidathapolur, SPSR Nellore. Email : prabhapellakuri@gmail.com Phone : +91 8897923914	33
9	"Artificial Intelligence in Pharmaceutical Research and Development"	19-05-2022	Mr K.Vinodkumar, Professor, Dept. of Pharmaceutics, SIMS College of Pharmacy, Guntur Email : kvinodkumar8@gmail.com Phone : +91 6305170092	30

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LIST OF SEMINARS / WORKSHOPS / CONFERENCES CONDUCTED

A.Y.: 2020-21

S.No	Name of the Event	Date	Details of Resource Person	No. of Participants
1	"Current Research on Drug Discovery and Development".	15-10-2020	Dr. K. Rajyalakshmi, Assoc. Professor, Dept. of Pharmaceutics, Bapatla College of Pharmacy, Bapatla. Email : rajimanohar3529@gmail.com Phone : +91 9985081813	29
2	"Concept, Innovation and Entrepreneurial Development"	26-10-2020	Mr. S. Chandrasekhar Babu, Professor & Head - MBA, Gokula Krishna College of Engineering, Sullurupeta. Email : cstpogkce@gmail.com Phone : +91 8074260556	30
3	"Pharmaceutical Sciences and Research"	30-11-2020	Mr K. Suresh, Assoc. Professor, Dept. of Pharmacognosy, MIPER, Kurnool. Email : kasaralasuresh@gmail.com Phone : 9866024211	29
4	"Patent Application Filling and Writing Procedure"	10-12-2020	Dr B. Mohan Gandhi, Assoc. Prof., Dept. of Pharmaceutical analysis, V.V Institute of Pharmaceutical Sciences, Gudlavalleru. Email : bmgandhipharma@gmail.com Phone : +91 9866847074	30

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5	"Applications on Computer Aided Molecular Drug Design and Research"	16-12-2020	Mrs T. Prasanthi, Assoc. Professor, Dept. Pharmaceutical analysis, V.V Institute of Pharmaceutical Sciences, Gudlavalleru. Email : prasanthi8585@gmail.com Phone : +91 9951400935	30
6	"Campus to Corporate: A Strategic Plan for Pharmacy Students"	15-02-2021	Mr. M.Jayakrishna., MBA Assistant Manager TIL Healthcare, Sricity Email : mjayakrishna87@gmail.com Phone : 9949744537.	30
7	"Role of Polymers in Research and its Applications"	25-02-2021	Mrs. D. Kalyani, Assc. Professor, Dept. of Pharmaceutics, Jagans college of pharmacy, Nellore. Email : kevinkarunya@gmail.com, Phone : +91 8106686200	29
8	"Covid-19's Effect on Medical Technology and Research"	12-03-2021	Mr. K. Poorna chandra Rao Assoc. Professor, Dept. of Pharmaceutical chemistry, Bapatla College of Pharmacy, Guntur. Email : poorna7575@gmail.com Phone : +91 9885071976	30

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LIST OF SEMINARS / WORKSHOPS / CONFERENCES CONDUCTED

A.Y.:2019-20

S.No	Name of the Event	Date	Details of Resource Person	No. of Participants
1	"Advances in Pharmaceutical Sciences and Research"	09-08-2019	Mrs K.Sandhya, Assoc. Professor, Dept. of Pharmaceutical Chemistry, Sun Institute of Pharmaceutical Education and Research, Nellore. Email : sandhyakota@gmail.com, Phone : 8919364830.	30
2	"Entrepreneur's Self Confidence and Self Esteem"	12-08-2019	M. Bharathi, Assistant Professor, Dept. of MBA, Gokula Krishna college of Engineering, Sullurupeta. Email : bharathimooga@gmail.com Phone : 9398176072.	30
3	"Current Paradigms in Pharmaceutical Analytical Techniques and Research Methodology"	13-09-2019	Mr. K. Ranjith, Asst. Professor, Dept. of Pharmaceutical Chemistry and Analysis, Bapatla College of Pharmacy, Bapatla, Guntur Dist. Email : ranjith.kapu mail.com Phone : 9491668829	30
4	"Indian Patent laws: Indian Pharmaceutical Industry "	03-01-2020	Dr.P.Kishor, Professor, Dept. of Pharmacognosy and Phytochemistry ANS Pharmacy college, Tenali. Email : kishorpharmcog@gmail.com, Phone : 9951850662	30

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5	"Designing of Protocol for BA/BE Studies in Clinical Research "	06-01-2020	Mrs. Neelum Begum, Assoc. Professor, Dept. of Pharmacology. Bapatla College of Pharmacy, Bapatla. Email : neelammpharm@gmail.com Phone : +91 9666810156	30
6	"Designing the Methodology in Research"	08-01-2020	Dr T.Balakrishna, Assoc. Professor Dept. of Pharmaceutics, V.V Institute of Pharmaceutical Sciences, Eluru. Email : balakrishnathalamanchi@gmail.com Phone : +91 9494466340	32
7	"Research Methodology and Biostatistics "	07-02-2020	Mr. K.Sunil Kumar, Assoc. Professor Dept. of Pharmaceutics, SUN Institute of Pharmaceutical Education and Research, Nellore, AP. Email : sunil.kandukuru@gmail.com Phone : 8185090965	31
8	"Pharmaceutical Marketing and Entrepreneurship"	14-02-2020	Mr. M.Prudhviraj, M.Pharm., Pharmacist, Joy Medicals, Sullurupeta. Email : mkunniraj13@gmail.com Phone : +91 8978152617.	30
9	"Clinical Research, Pharmacovigilance: Challenges and Opportunities ".	09-03-2020	Mrs S.L. Savitri, Assoc. Professor, Dept. of Pharmaceutics, SIMS College of pharmacy, Guntur Email : savitri@gmail.com Phone : +91 8639172916	36

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LIST OF SEMINARS / WORKSHOPS / CONFERENCES CONDUCTED

A.Y.: 2018-19

S.No	Name of the Event	Date	Details of Resource Person	No. of Participants
1	"Pharmacovigilance: Challenges and Opportunities	09-07-2018	CH.Kiran kumar, M.Pharm, Healthcare IT Expert, RISE Trainings, Nellore Email : risetrainings@outlook.com Phone : +91 7993107993	30
2	"Emerging Trends in Pharmacotherapy and Clinical Research"	16-07-2018	Dr. S.Nelson Kumar, Principal & Professor, Dept. of Pharmacology, P.Rami Reddy Memorial College of Pharmacy, Kadapa. Email : nelsonhelpsu&Yahoo.co.in Phone : +91 9505242242	30
3	Innovations in Research and Development	06-08-2018	Dr.V.Sai kishore, Professor, Dept. of Pharmaceutics, Bapatla college of pharmacy, Bapatla Email :voiceofsaikishore@yahoo.com, Phone: 9440938249.	29
4	"Ethical Regulations in Animal Experiments"	10-08-2018	1. Dr. D.Sivaraman, Scientist C, Centre for Laboratory animal technology and research, Sathyabama Institute of science and Technology, Chennai 600 119, Tamil Nadu, India. Email : sivaramand83@gmail.com Phone : +91 9841575334	32

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			2.Dr. B. Pushpa Kumari, Assoc. Professor and Head, Dept of Pharmacology, Sri Padmavathi School of Pharmacy, Tirupati. Email : pushpahema3@gmail.com Phone : +91 9490827068	
5.	"Employability and Entrepreneurship "	17-09-2018	Mr.B.Rupesh, MBA, Operations Head, VVS Global Forwerders, Krishnapatnam Port Company Ltd., Nellore. Email : rupesh260188@gmail.com Phone : 9491450338	30
6	"Role of Pharmacy Education and Research-Present and Future Challenges"	06-10-2018	Dr. R.Manohar, Professor &Head, Dept. of Pharmacology, P.Rami Reddy Memorial College of Pharmacy, Kadapa Email : reddy.manohar1981@gmail.com Mobile : +91 9963085878	30
7	"Innovative Research Trends in Pharmaceutical Industry"	12-11-2018	Mr. K.Sasikanth, Assoc. Professor, Dept. of Pharmaceutics, SIMS College of pharmacy, Guntur. Email : sasipharma.1982@gmail.com Phone : +919573033210	28
8	"Carrier Path to Entrepreneurship in Clinical Sector"	11-03-2019	Mrs S. Mounika, Asst. Professor, Dept. of MBA, Gokula Krishna college of Engineering, Sullurupeta. Email : s.mounika92@gmail.com, Phone : 9701719127	30
9	"Design of Experiments and Research Methodology"	30-03-2019	Dr. T. Venkateswara Rao, Prof. & Head, Dept. of Pharmaceutics, Bapatla College of Pharmacy, Bapatla, Guntur Dist. Email : tvrao250@gmail.com Phone : +91 8106028256	32

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10	"Innovations in cutting Edge Strategies in Drug Discovery and Research"	12-04-2019	Dr. B. Narasimha Rao Professor & Head, Department of Pharmaceutics, P.Rami Reddy Memorial College of Pharmacy, Kadapa. Mobile: +91 9160592004 Email id:simham1985@gmail.com	28

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PROFESSOR & PRINCIPAL
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NUMBER OF BOOKS AND CHAPTERS IN EDITED VOLUMES / BOOKS PUBLISHED PER TEACHER DURING THE LAST FIVE YEARS

S.No	Name of the Full Time Teacher	Title of the Book / Chapters Published	Publisher	ISBN Number	Year of Publication
1	Ms A.R.Sridevi	A Text book for Pharmacology	Pragathi Publications	9-788197-096907	2023
2	Dr Balagani Pavan Kumar	A Text book for Pharmacology	Pragathi Publications	9-788197-096907	2023
3	MrsN.Sukanya	A Text book for Pharmacology	Pragathi Publications	9-788197-096907	2023
4	Ms P.Madhavi	A Text book for Pharmacology	Pragathi Publications	9-788197-096907	2023
5	Dr Balagani Pavan Kumar	Pharmaceutics – I	Nitya Publications	978-93-91669-47-8	2021
6	Mr Sivakumar Peta	A Textbook of Pharmaceutical Analysis	Pragathi Publications	9-788196-887599	2021
7	Dr Balagani Pavan Kumar	A Textbook of Pharmaceutical Analysis	Pragathi Publications	9-788196-887599	2021
8	Dr.P.kishor	A Textbook of Pharmaceutical Analysis	Pragathi Publications	9-788196-887599	2021
9	MrsD.Kalyani	A Textbook of Pharmaceutical Analysis	Pragathi Publications	9-788196-887599	2021
10	MrsB.Swathi	A Textbook of Pharmaceutical Analysis	Pragathi Publications	9-788196-887599	2021

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11	Ms P.Kavitha	A Text book of Pharmaceutics	Pragathi Publications	9-788196-887568	2021
12	Dr Balagani Pavan kumar	A Text book of Pharmaceutics	Pragathi Publications	9-788196-887568	2021
13	MsSk.Zoofishaan	A Text book of Pharmaceutics	Pragathi Publications	9-788196-887568	2021
14	MsT.Swathi	A Text book of Pharmaceutics	Pragathi Publications	9-788196-887568	2021
15	MrsP.K.Devibala	Physical Pharmaceutics	Pragathi Publications	9-788196-887513	2020
16	MsP.Kavitha	Physical Pharmaceutics	Pragathi Publications	9-788196-887513	2020
17	DrBalaganiPavankumar	Physical Pharmaceutics	Pragathi Publications	9-788196-887513	2020
18	DrM.Soujanya	Physical Pharmaceutics	Pragathi Publications	9-788196-887513	2020
19	DrBalaganiPavankumar	A Text book on Novel Drug Delivery Systems	Pragathi Publications	9-788196-887506	2019
20	MrsP.K.Devibala	A Text book on Novel Drug Delivery Systems	Pragathi Publications	9-788196-887506	2019
21	MsC.B.Hanisha	A Text book on Novel Drug Delivery Systems	Pragathi Publications	9-788196-887506	2019
22	MrSivakumar Peta	A Text book on Novel Drug Delivery Systems	Pragathi Publications	9-788196-887506	2019

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Mrs. N Sukanya
Ms. P Madhavi

TEXTBOOK FOR PHARMACOLOGY

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A Textbook For Pharmacology

Mr. AR Sridevi,Dr Balagani Pavan kumar,Mrs.N Sukanya, Ms.P Madavi

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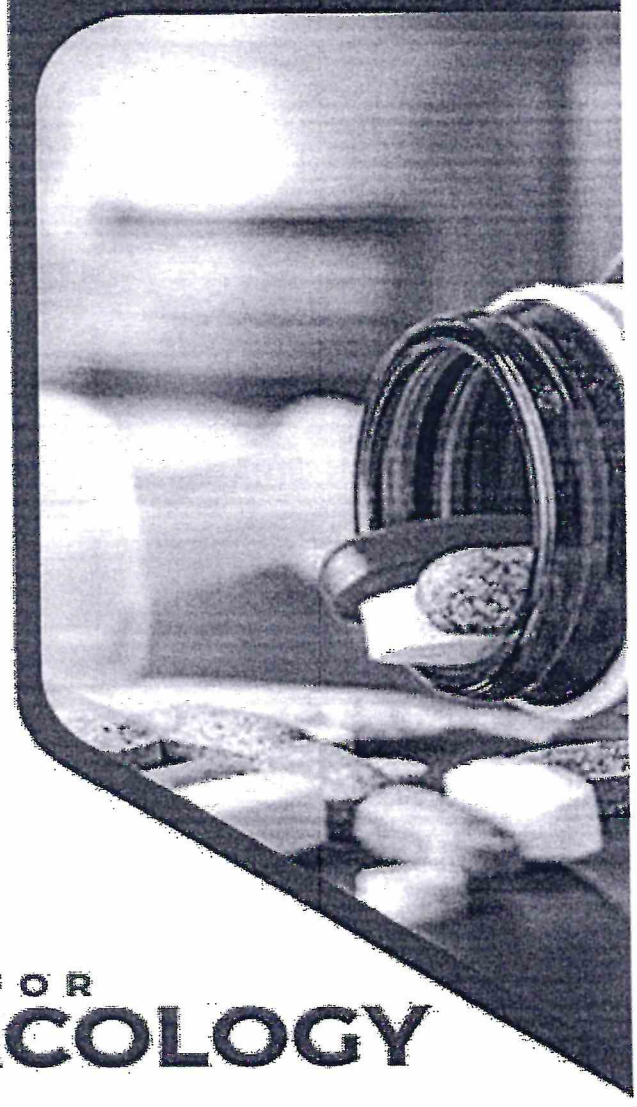

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A TEXTBOOK FOR PHARMACOLOGY

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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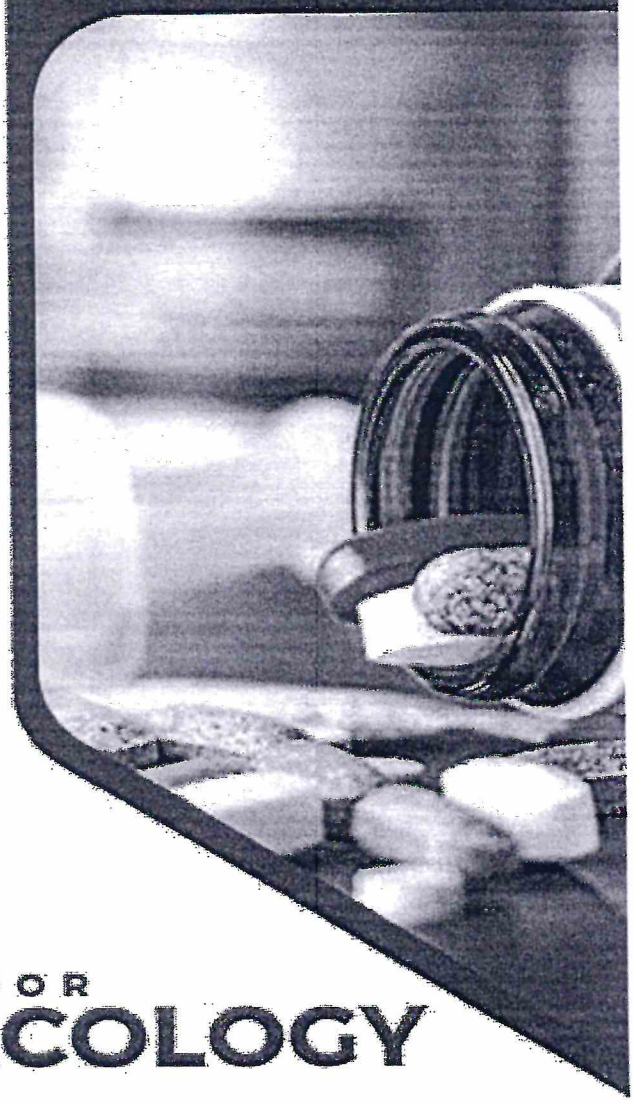
Dr Balagani Pavan Kumar
Mrs. N Sukanya
Ms. P Madhavi



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A Textbook For Pharmacology

Mr. AR Sridevi,Dr Balagani Pavan kumar,Mrs.N Sukanya, Ms.P Madavi

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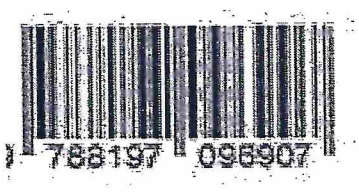

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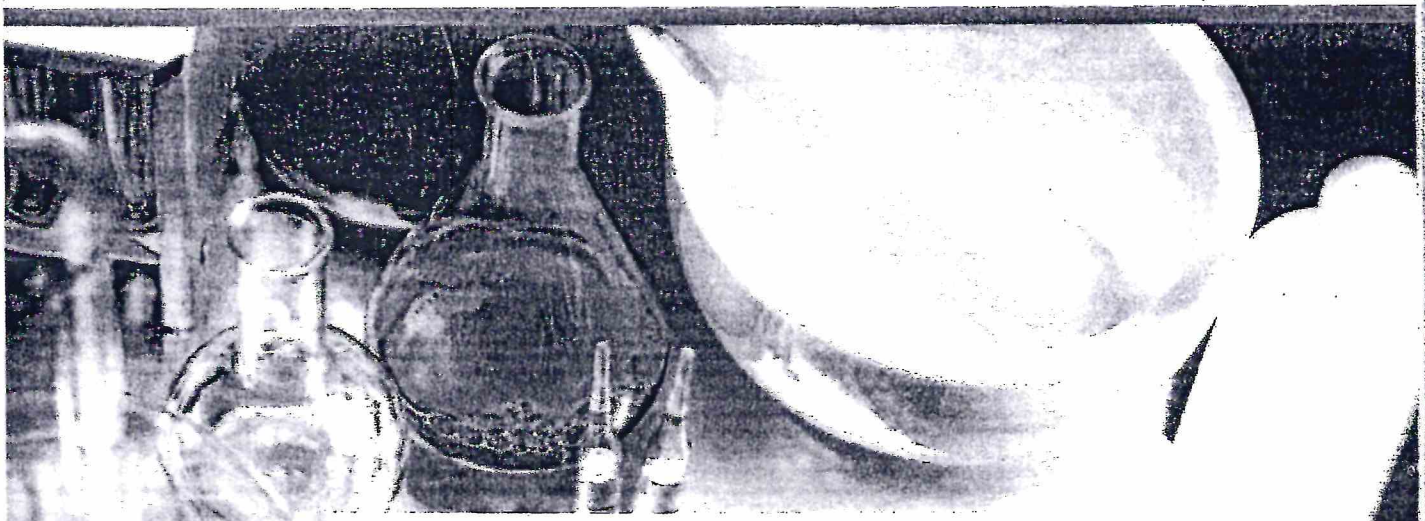

AUTHOR
Dr. K. Kranthi Kumar

CO-AUTHORS
Dr. L. SRINIVAS
Dr. Vema Kiran
Dr.Balagani Pavan Kumar

Dr. BALAGANI PAVAN KUMAR
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A Hand Book of Pharmaceutics-1

AUTHOR

Dr. K. Kranthi Kumar M.PHARM, PH.D, M.B.A., PRAF
Professor cum Head, Dept. of Pharmaceutics
Mahathi college of Pharmacy, CTM Cross Roads
Madanapalle-517319, Chittoor (Dit)
Andhra Pradesh INDIA

Co- AUTHORS

Dr. L. Srinivas M.PHARM, PH.D
Professor, GITAM Institute of Pharmacy
GITAM Deemed to be University
Gandhinagar campus, Rushikonda
Visakhapatnam – 530 045 Andhra Pradesh INDIA

Dr. Vema Kiran M. PHARM, PH.D,
Head cum Asso.Professor, School of Health and Allied Sciences, APEX PROFESSIONAL University
Pasighat, Arunachal Pradesh, INDIA

Dr. Balagani Pavan Kumar M.Pharm, Ph.D., FIC, FAGE, FBSS, FICCP
Professor and Principal, Gokula Krishna College of Pharmacy,
Sullurpet, SPSR Nellore Dist, Andhra Pradesh, India

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PROFESSOR & PRINCIPAL
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Authors Profiles

DR.K.KRANTHIKUMAR M.PHARM, PH.D, M.B.A. is working as Professor cum Head Dept. Of Pharmaceutics in Mahathi College of Pharmacy Madanapalle, Andhra Pradesh 517319 Affiliated to JNTU-A Anantapuramu Andhra Pradesh INDIA. He is done certified PG course in Industrial Regulatory Affairs and Medical content writing. He has 12 years teaching experience in both U.G – B.Pharmacy and P.G-M.PHARMACY courses on Pharmaceutical Technology, NDDS, Physical Pharmacy, Regulatory Affairs etc. He has 29 National, 2 International publications in his credit. He actively involved in research in pharmacy and guided the research work of 29 M.Pharm graduates and 35 B.Pharm under graduates. Till now 21 Conferences attended, 04 UGC sponsored Conferences conducted, 05 Faculty development programmes and 04 Pharmacy text books published. He has a 01 Patent in Herbal gel for therapy of Acne. He is also an Editorial member and reviewer for various pharmacy journals. He is life time member of APTI.

DR. L. SRINIVAS M.PHARM, PH.D. is working as Professor in GITAM Institute of Pharmacy GITAM Deemed to be University Gandhinagar campus, Rushikonda Visakhapatnam – 530 045. He has 17 years teaching experience in both U.G – B.Pharmacy and P.G-M.PHARMACY courses .He actively involved in research in pharmacy and guided the research work of 48 He has a 01 international Patent. He is also an Editorial member and reviewer for various pharmacy journals. He has life member of APTI, IPGA and IHPA.

Dr. Vema Kiran M. PHARM, PH.D, is working as Head cum Asso.Professor in School of Health and Allied Sciences APEX PROFESSIONAL University Pasighat, Arunachal Pradesh INDIA. He has 14 years of teaching experience in both B. PHARMACY&M. PHARMACY courses on pharmaceutical technology, NDDS etc. He has several research publications in his credit. He actively involved in research in pharmacy and guided the research work of 4 M. Pharmacy graduates and 8 B. Pharmacy under graduates.

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SULLURPET, TIRUPATI Dt. A.P - 524121

Dr.Balagani Pavan Kumar, (M.Pharm, Ph.D., FIC, FAGE, FBSS, FICCP) was awarded the degree of Doctor of Philosophy (PhD) in Pharmaceutical Sciences by JNTUA, Anantapuramu. He is presently working as Professor and Principal at Gokula Krishna College of Pharmacy, Sullurpet, SPSR Nellore dist., Andhra Pradesh, India. He is having 15 years of teaching and research experience. He is having 07 patents to his credit. He has published more than 40 research and review articles in various indexed, peer-reviewed national and international journals with good impact factor. Currently he is serving as Editor-in-Chief in Journal of Comprehensive Pharmacy and as technical Editor in Science Alert Publishing Group. He has received several awards and rewards includes Best Teacher award, APP Appreciation Award and Inspiring Role Model & Leader. In the year 2017 he received the most prestigious —Sushrutha Best Scientistǁ award from the Tamil Nadu Scientific Research Organization (Bose Science Society).

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Chapter 1

History of profession of Pharmacy in India in relation to Pharmacy education, industry and associations

History:

The history of pharmacy as an independent science dates back to the first third of the 19th century. Before then, pharmacy evolved from antiquity as part of medicine. The history of pharmacy coincides well with the history of medicine, but it's important that there is a distinction between the two topics. Pharmaceuticals is one of the most- researched fields in the academic industry, but the history surrounding that particular topic is sparse compared to the impact it's made world-wide. Before the advent of pharmacists, there existed apothecaries that worked alongside priests and physicians in regard to patient care.

Asia:

The earliest known Chinese manual on materia medica is the Shennong Bencao Jing (The Divine Farmer's Herb-Root Classic), dating back to the 1st century AD. It was compiled during the Han dynasty and was attributed to the mythical Shennong. Earlier literature included lists of prescriptions for specific ailments, exemplified by a manuscript "Recipes for 52 Ailments", found in the Mawangdui, sealed in 168 BC. Further details on Chinese pharmacy can be found in the Pharmacy in China article. The earliest known compilation of medicinal substances in Indian traditional medicine dates to the 3rd or 4th century AD)(attributed to Sushruta, who is recorded as a physician of the 6th century BC). There is a stone sign for a pharmacy with a tripod, a mortar, and a pestle opposite one for a doctor in the Arcadian Way in Ephesus, Turkey.

In Japan, at the end of the Asuka period (538-710) and the early Nara period (710-794), the men who fulfilled roles similar to those of modern pharmacists were highly respected. The place of pharmacists in society was expressly defined in the Taihō Code (701) and re-stated in the Yōrō Code (718). Ranked positions in the pre- Heian Imperial court were established; and this organizational structure remained largely intact until the Meiji Restoration (1868). In this highly stable hierarchy, the pharmacists and even pharmacist assistants were assigned status superior to all others in health-related fields such as physicians and acupuncturists. In the Imperial household, the pharmacist was even ranked above the two personal physicians of the Emperor Pharmacist in relation to his trade Following are the provisions which pharmacist should keep in mind while dealing with his trade:

(i) Price structure the prices charged should be fair keeping with the quality, quantity and labor or skill required.

(ii) Fair trade practice Fair practice should be adopted by a pharmacist in the trade without any attempt to capture other pharmacist's business If a customer brings a prescription (by

The basis for this text book originally stemmed from my passion for developing better methods prevention of diseases and novel methods in development of clinical methods in various treatments of diseases. As the world moves into the digital age, generating vast amount of data and born digital content, there will be a greater need to access legacy material created with outdated technology. It is my passion to not only find out, but to develop tools to break down barriers of accessibility for future generation.

In truth, I could not have achieved my current level of success without a strong support group. First of all, my parents, who supported me with love and understanding? And secondly, my committee members, each of whom has provided patient advice and guidance throughout the research process. Thank you all for your unwavering support.

Pharmacology is the branch of science focused on health. There are two main approaches to health science the study and research of the body and health-related issues to understand how humans (and animals) function, and the application of that knowledge to improve health and to prevent and cure diseases and other physical and mental impairments. The science builds on many sub-fields, including biology, biochemistry, physics, epidemiology, pharmacology, medical sociology. Applied health sciences endeavor to better understand and improve human health through applications in areas such as health education, biomedical engineering, biotechnology and public health.

Organized interventions to improve health based on the principles and procedures developed through the health sciences are provided by practitioners trained in medicine, nursing, nutrition, pharmacy, social work, psychology, occupational therapy, physical therapy and other health care professions. Clinical practitioners focus mainly on the health of individuals, while public health practitioners consider the overall health of communities and populations.

About The Author

DR.K.KRANTHIKUMAR M.PHARM, PH.D, M.B.A. is working as Professor cum Head Dept. Of Pharmaceutics in Mahathi college of Pharmacy Madanapalle, Andhra Pradesh 517319 Affiliated to JNTU-A Anantapuramu Andhra Pradesh INDIA. He is done certified PG course in Industrial Regulatory Affairs and Medical content writing. He has 12 years teaching experience in both U.G – B.Pharmacy and P.G-M.PHARMACY courses on Pharmaceutical Technology, NDDS, Physical Pharmacy, Regulatory Affairs etc. He has 29 National, 2 International publications in his credit. He actively involved in research in pharmacy and guided the research work of 29 M.Pharm graduates and 35 B.Pharm under graduates. Till now 21 Conferences attended, 04 UGC sponsored Conferences conducted, 05 Faculty development programmes and 03 Pharmacy text books. He has a 01 Patent in Herbal gel for therapy of Acne. He is also an Editorial member and reviewer for various pharmacy journals. He has life member of APTI.

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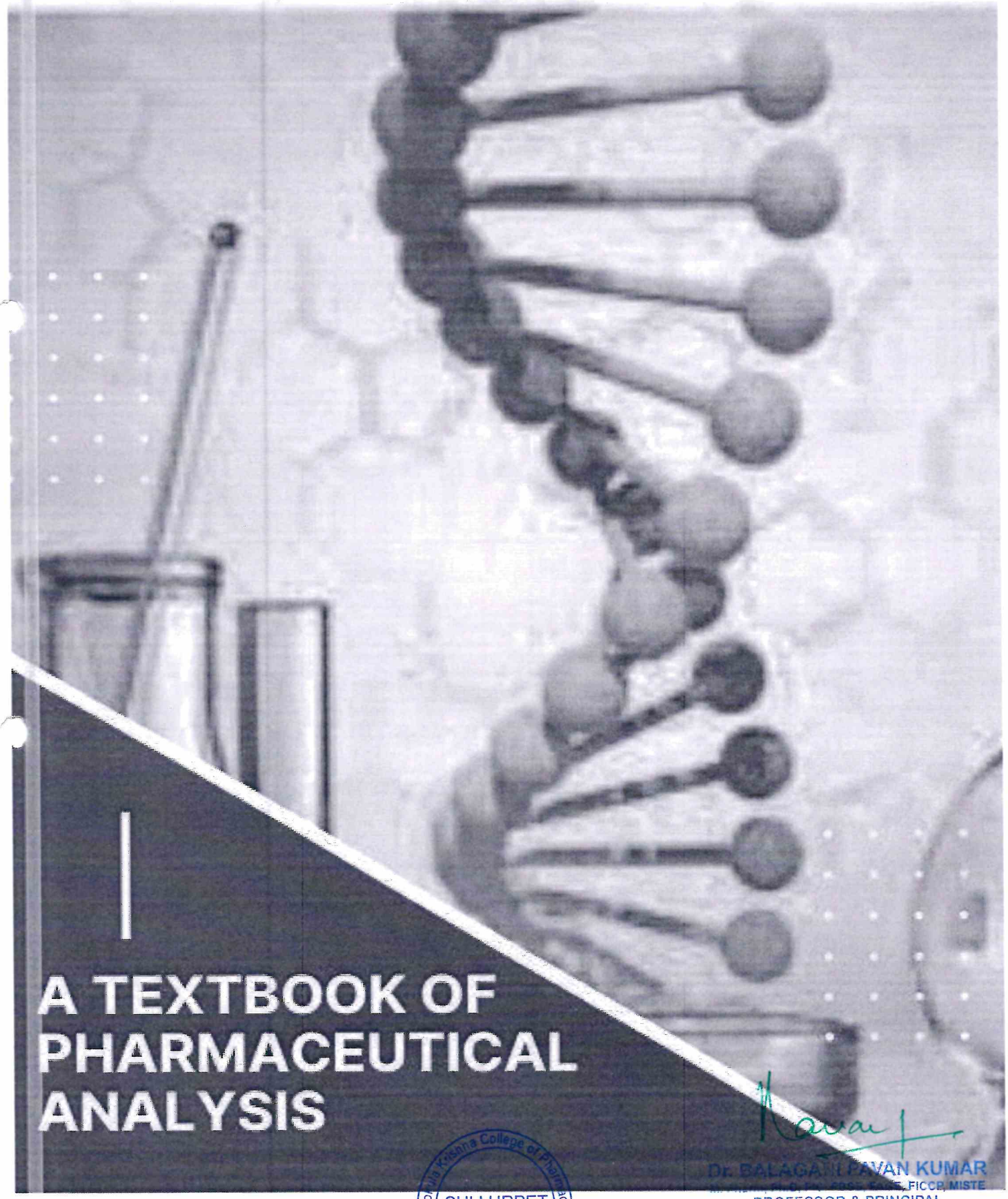

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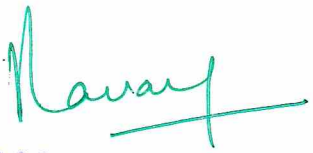

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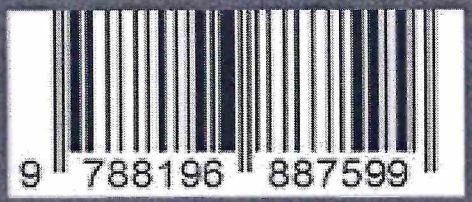

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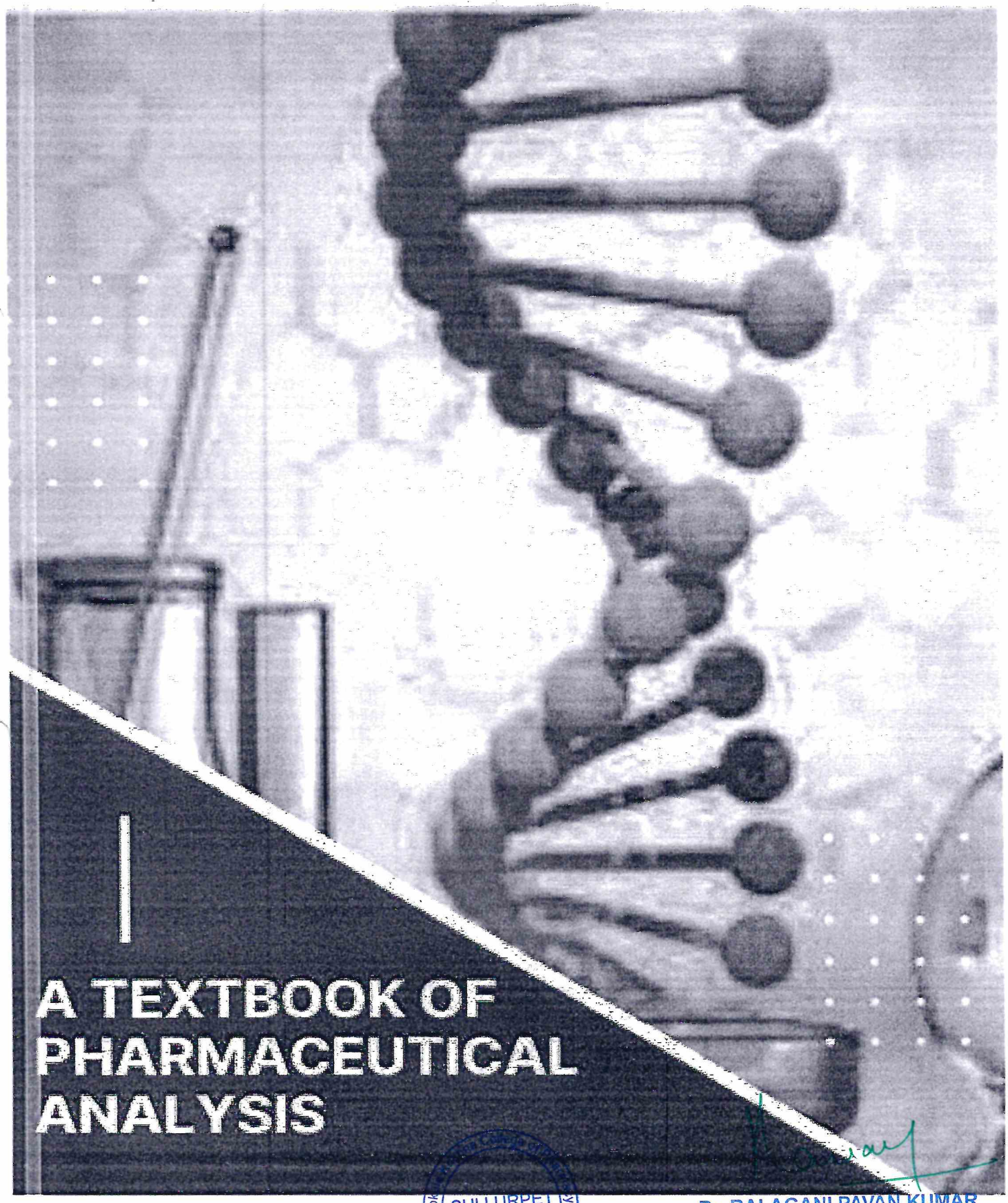

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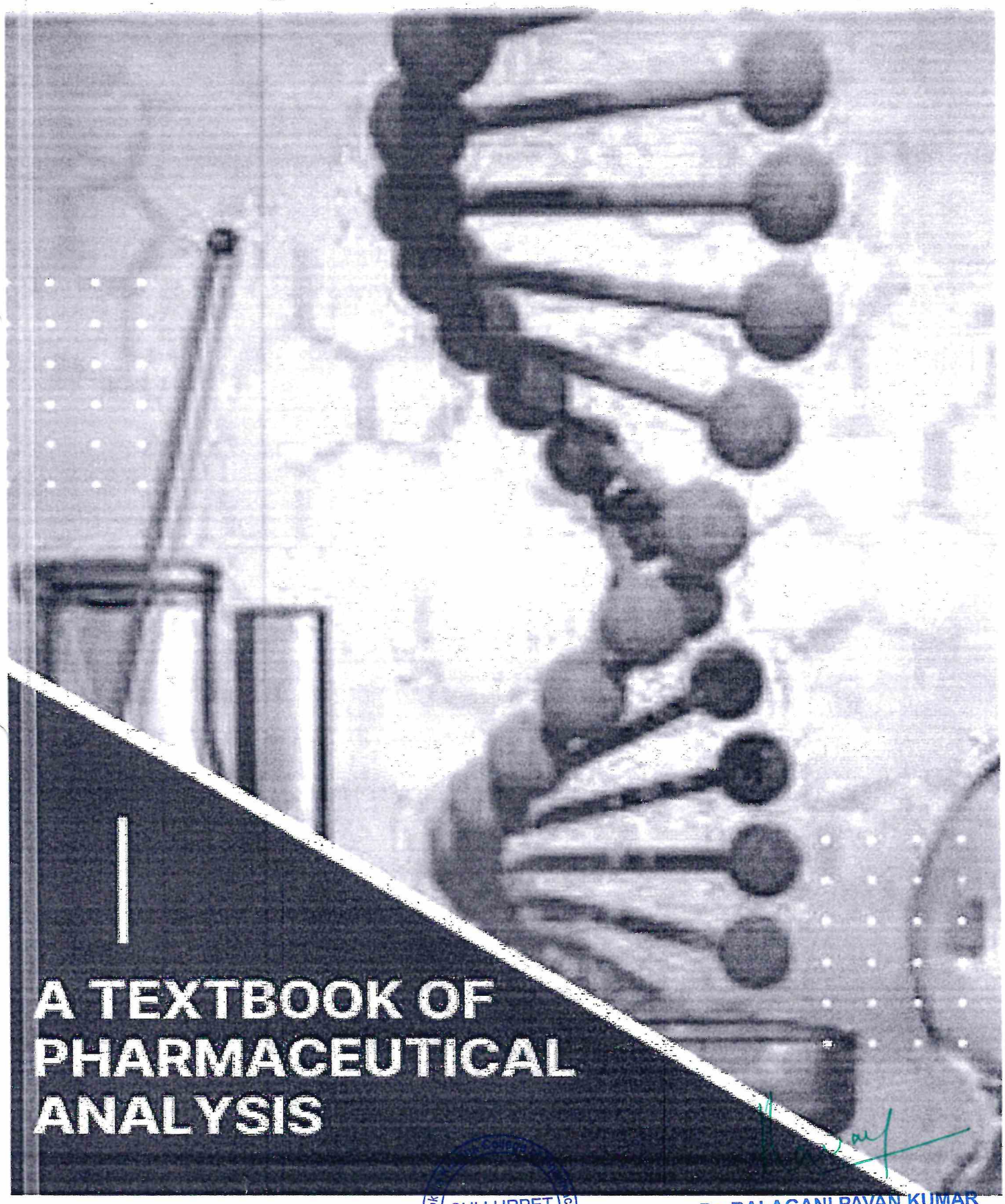

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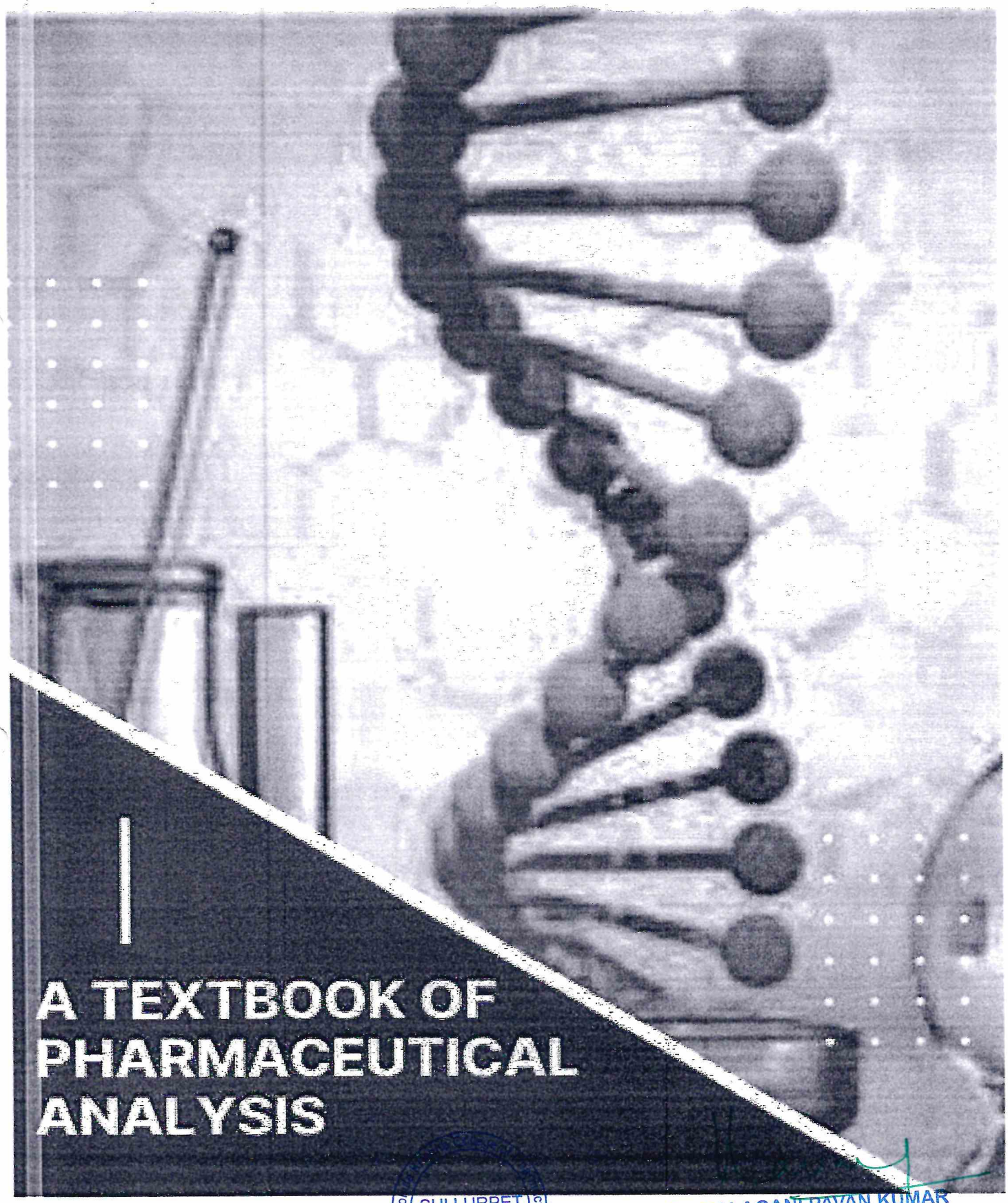

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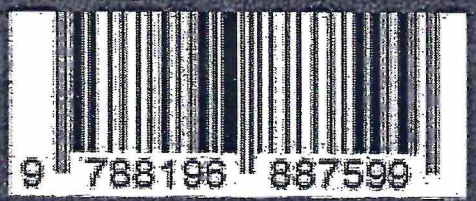

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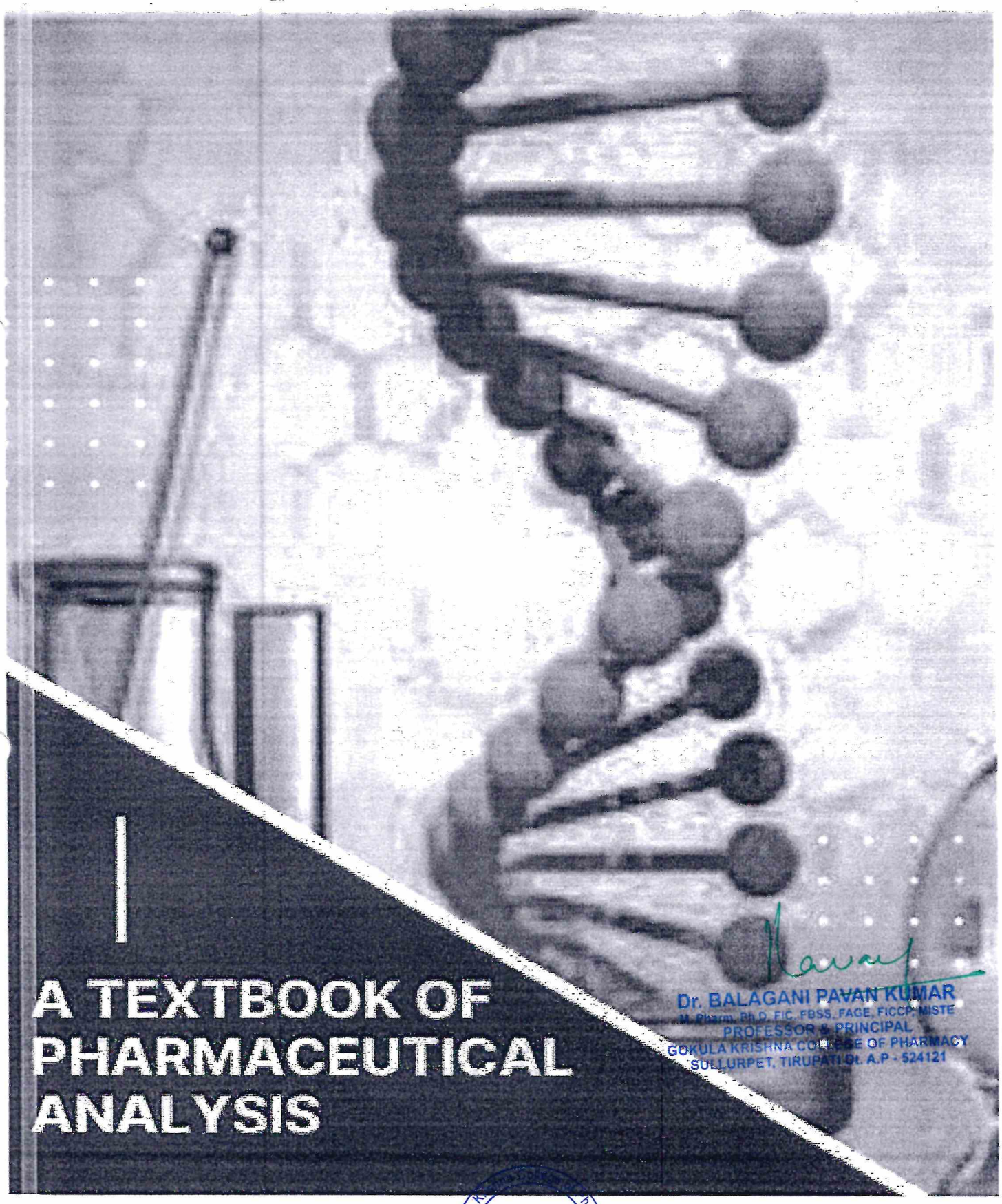

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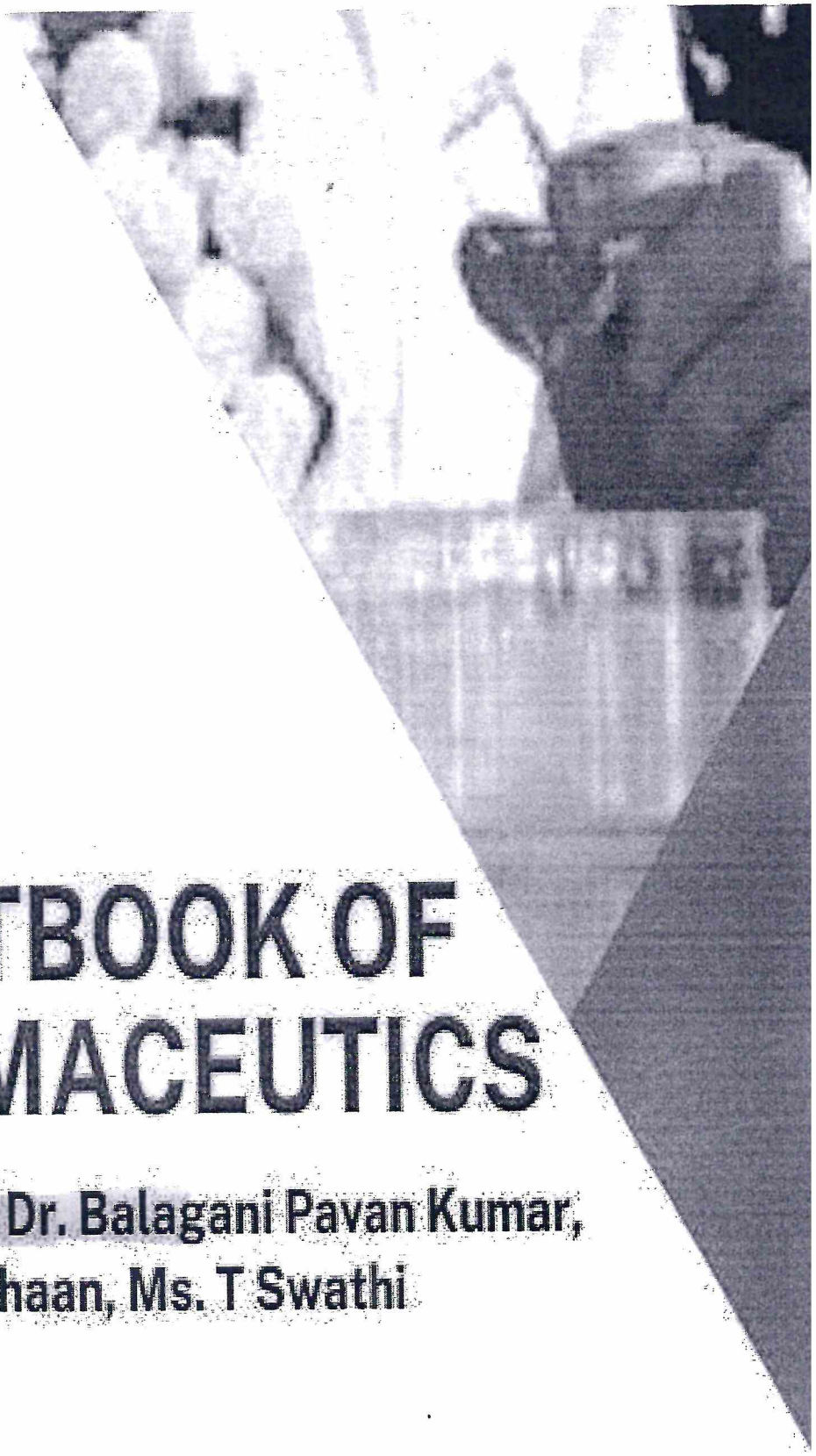

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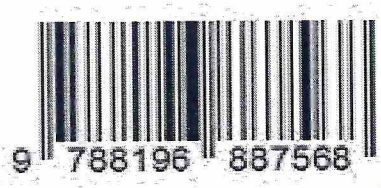

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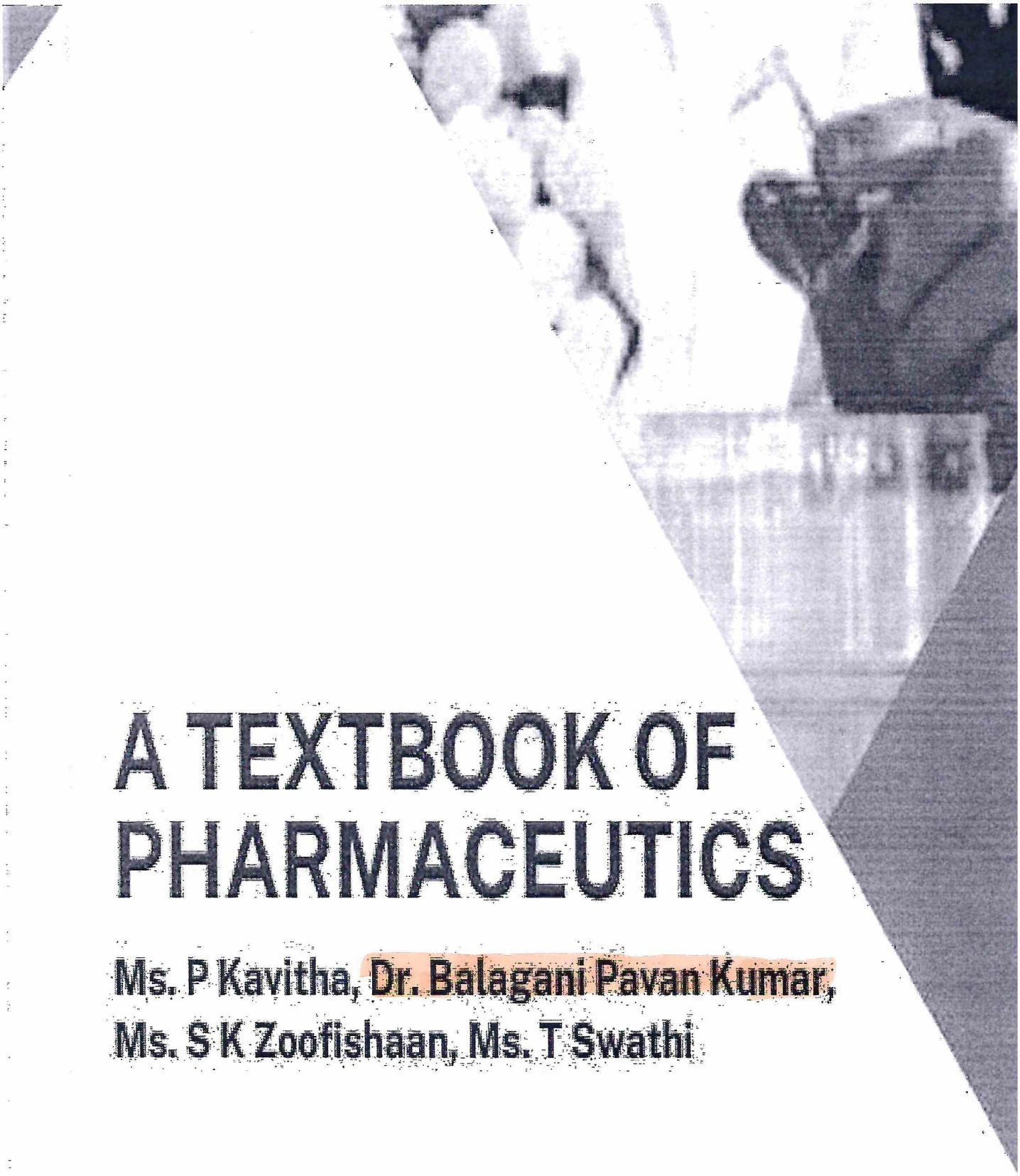

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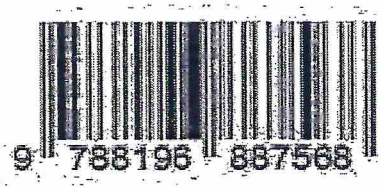

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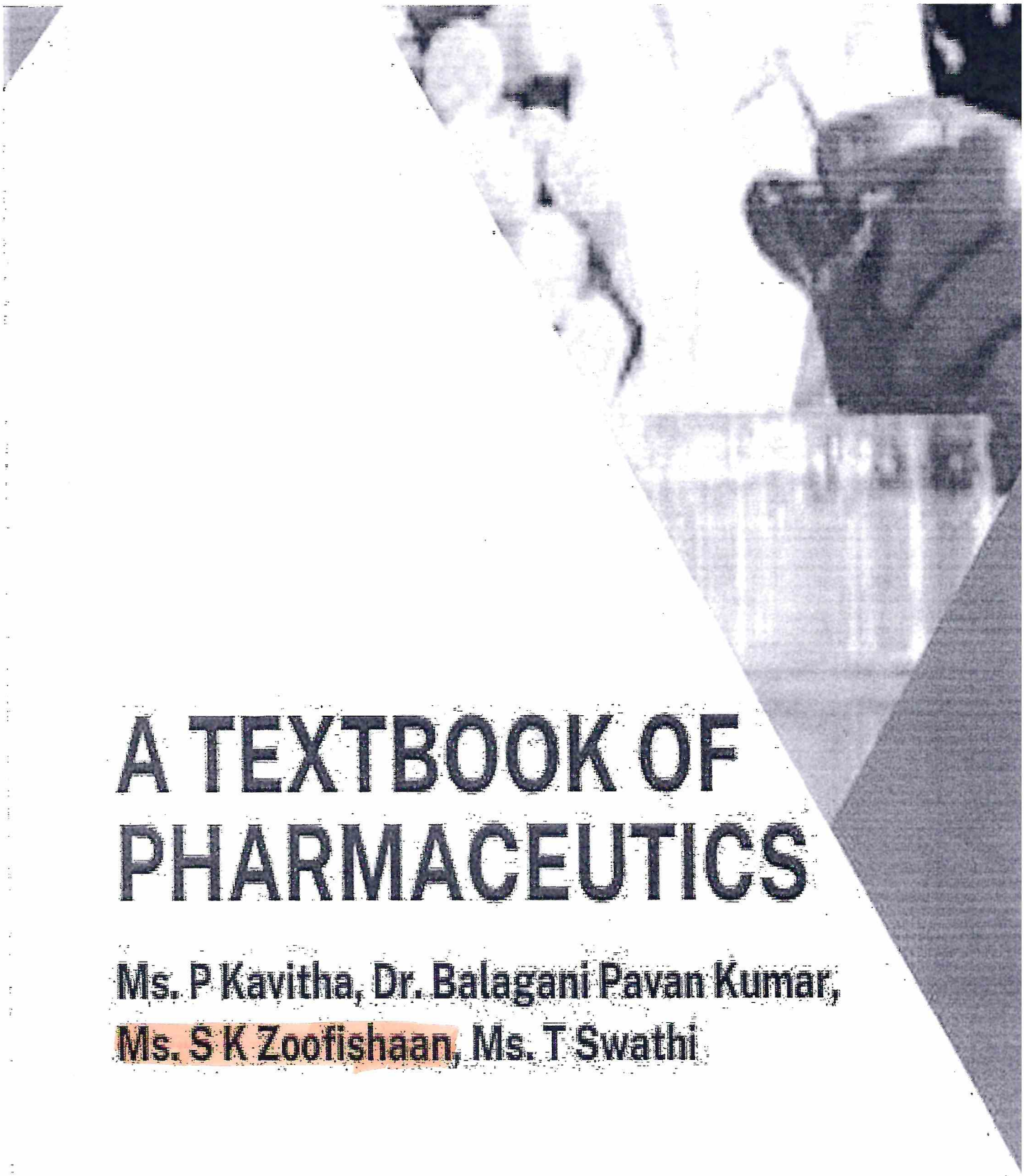

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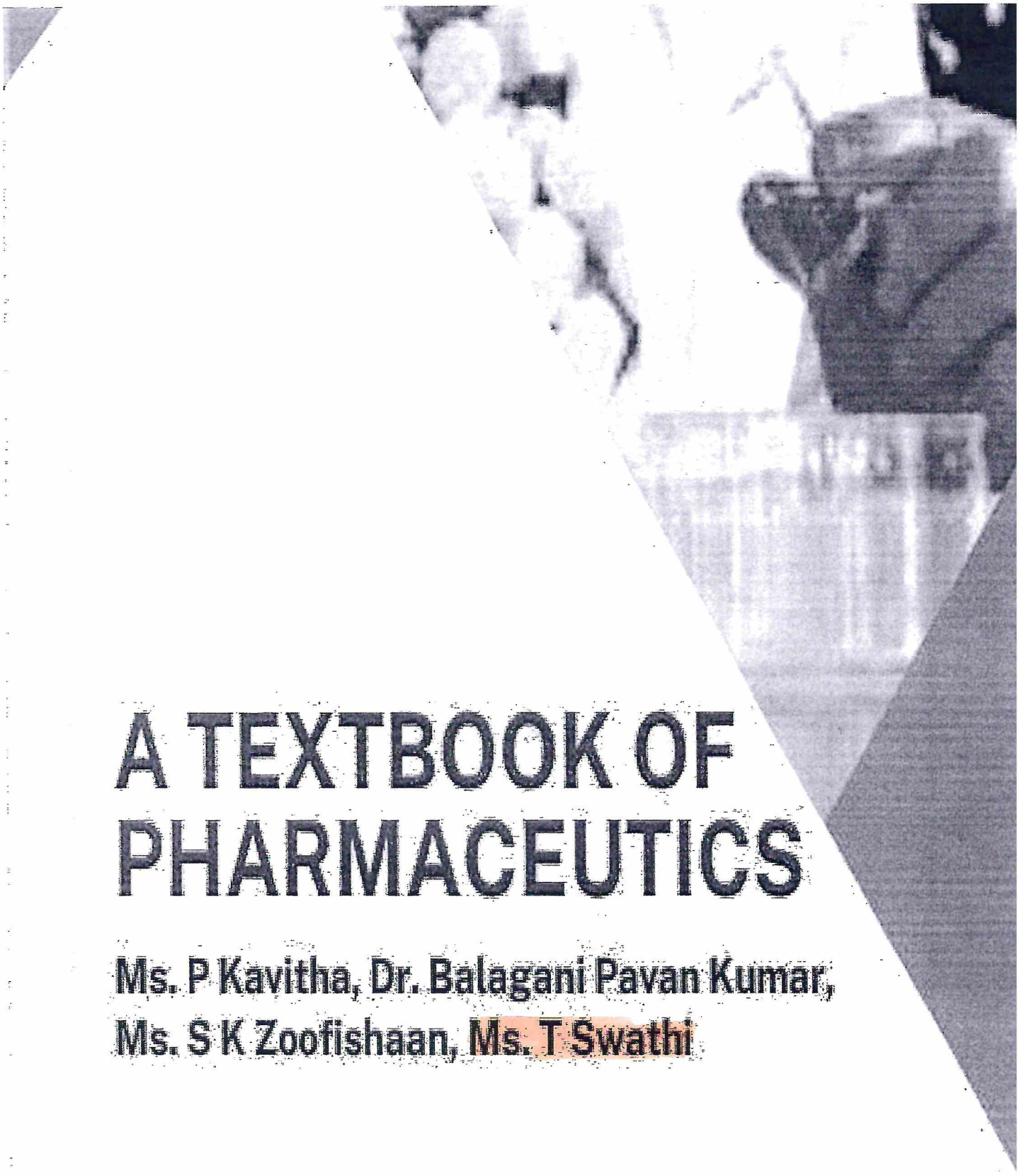

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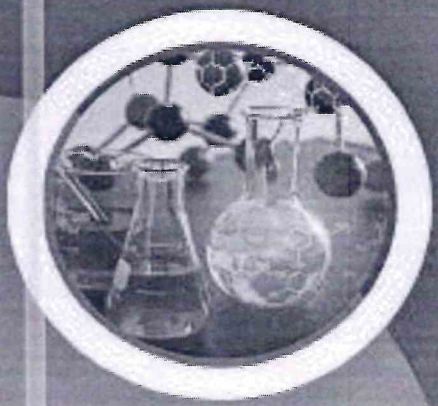

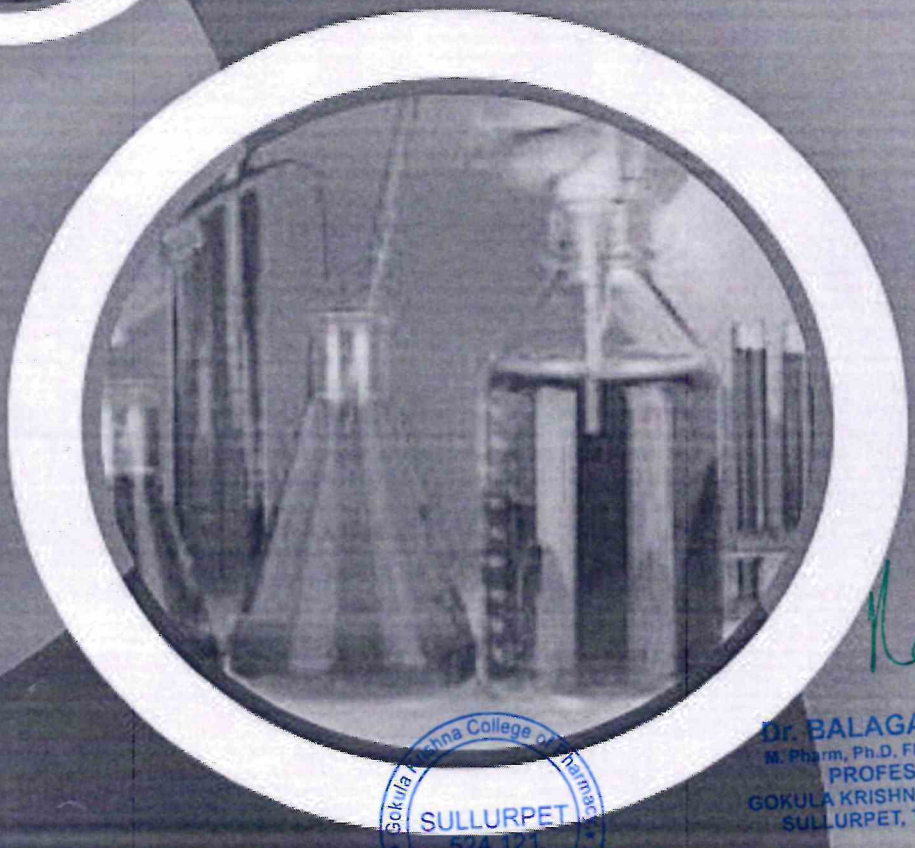

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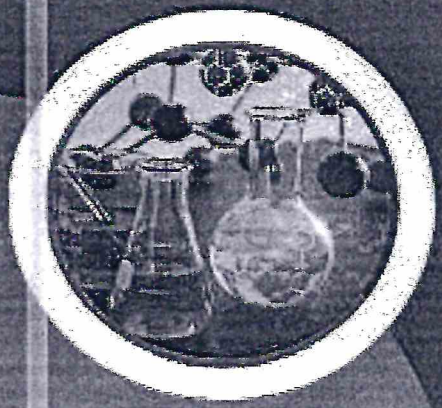

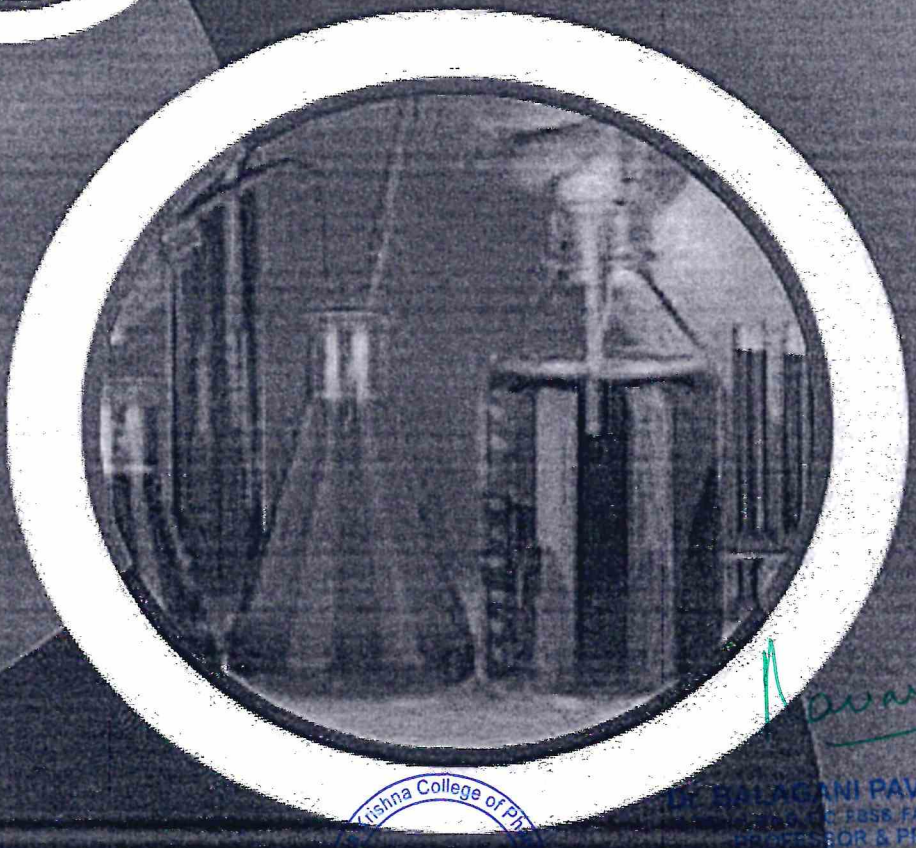

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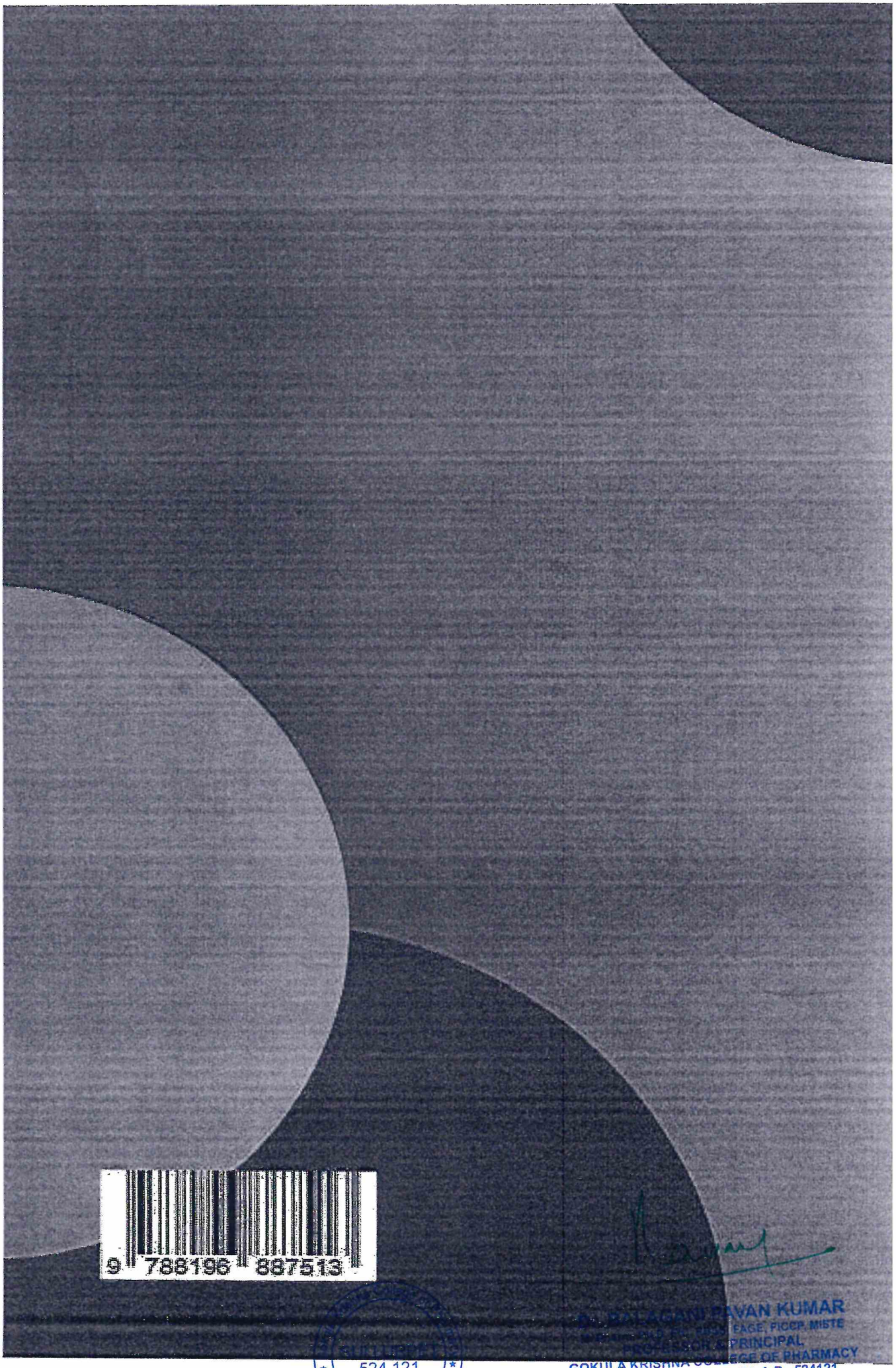

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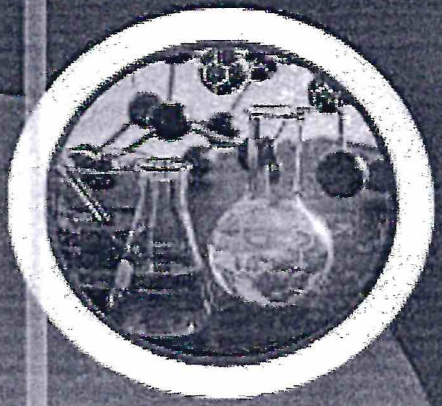

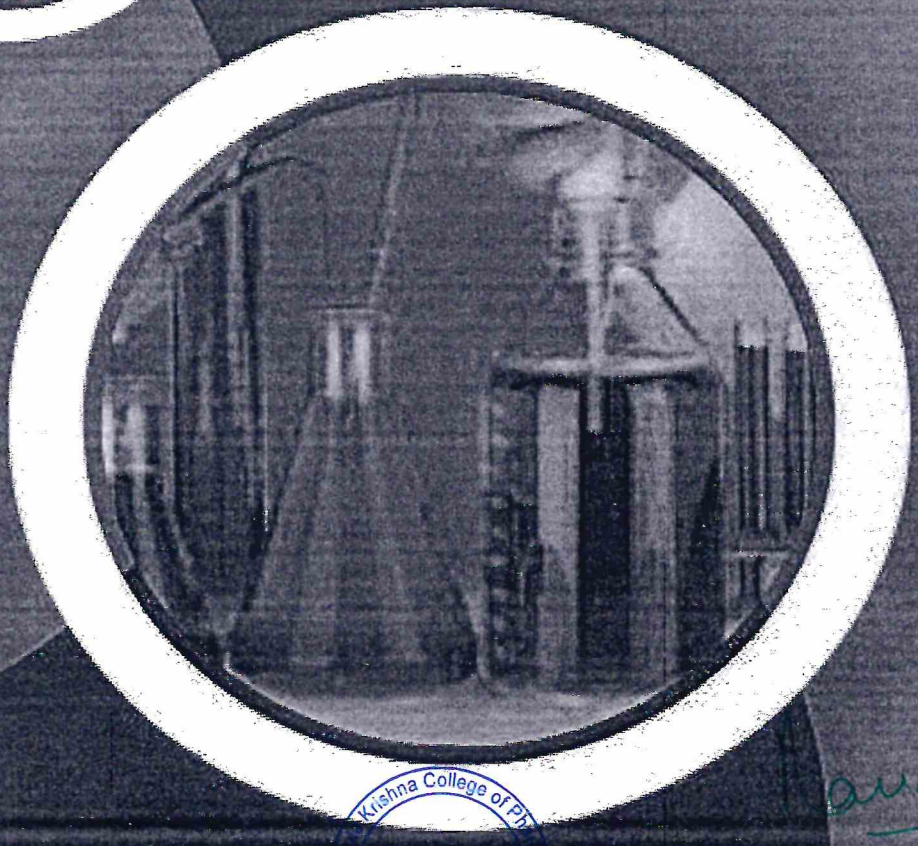

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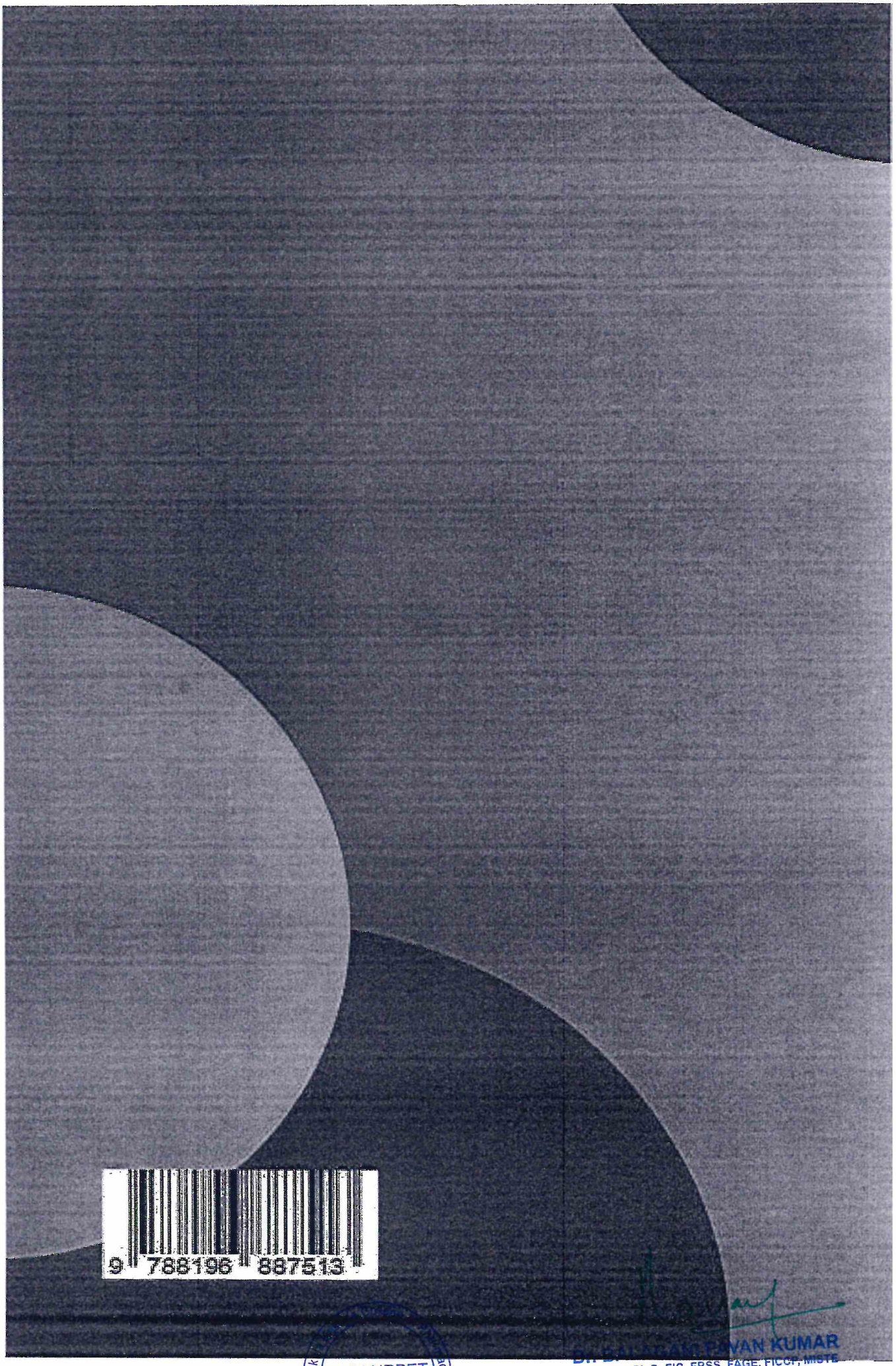

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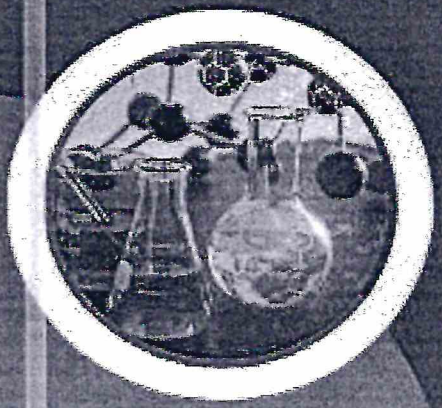

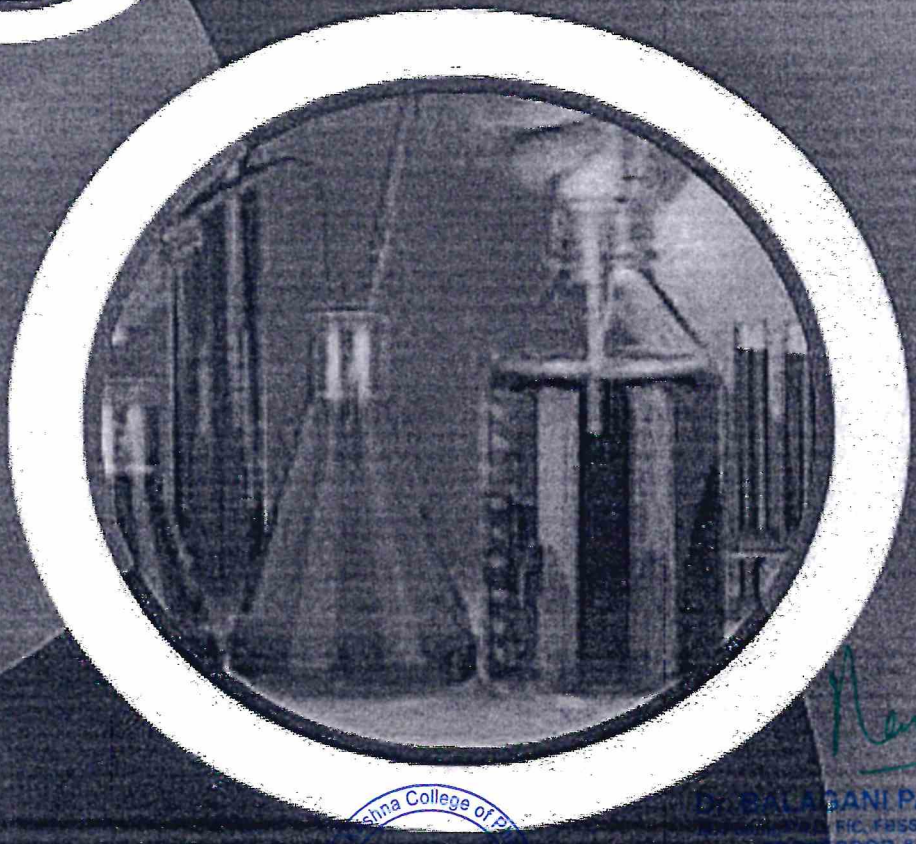

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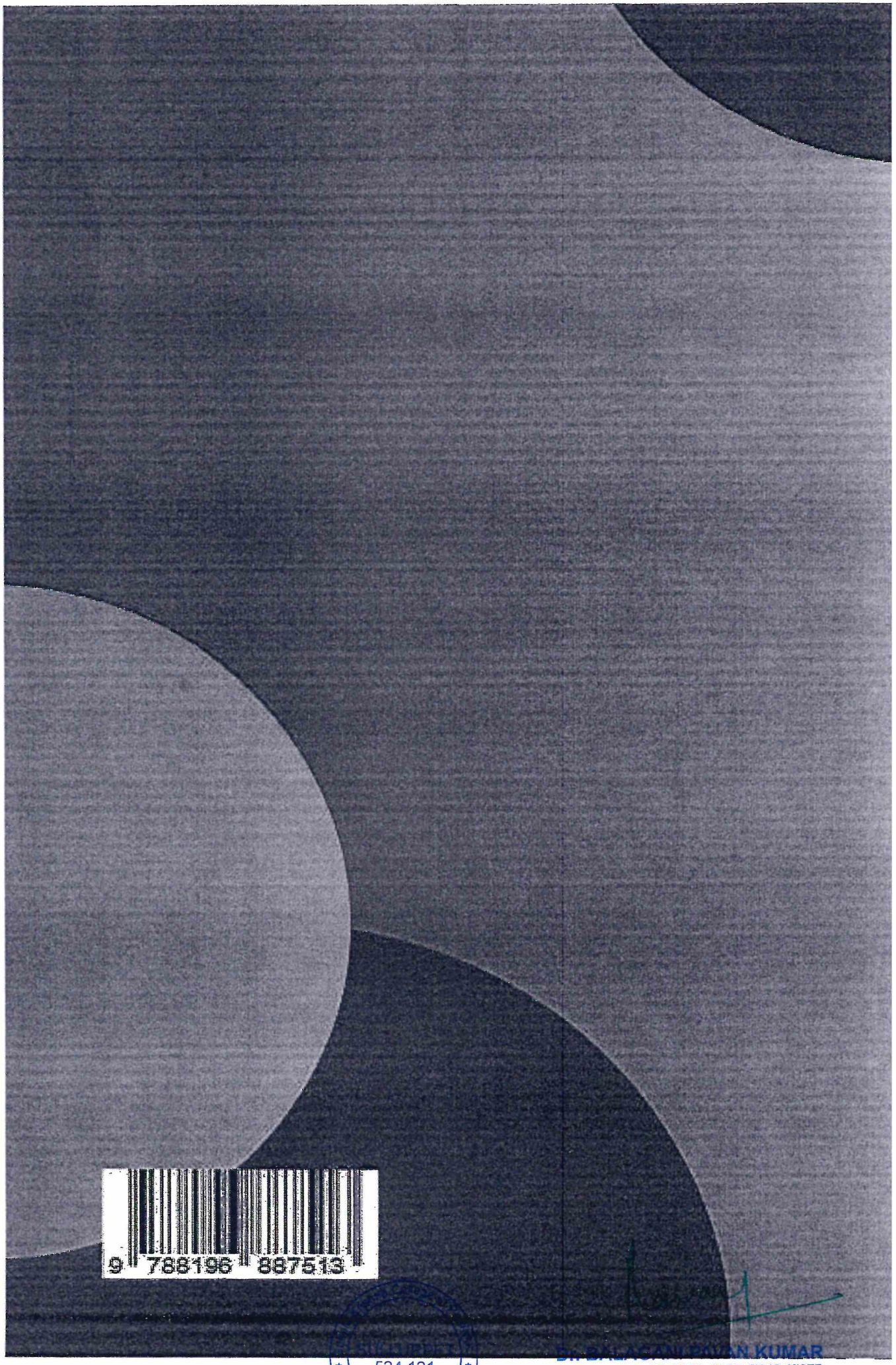

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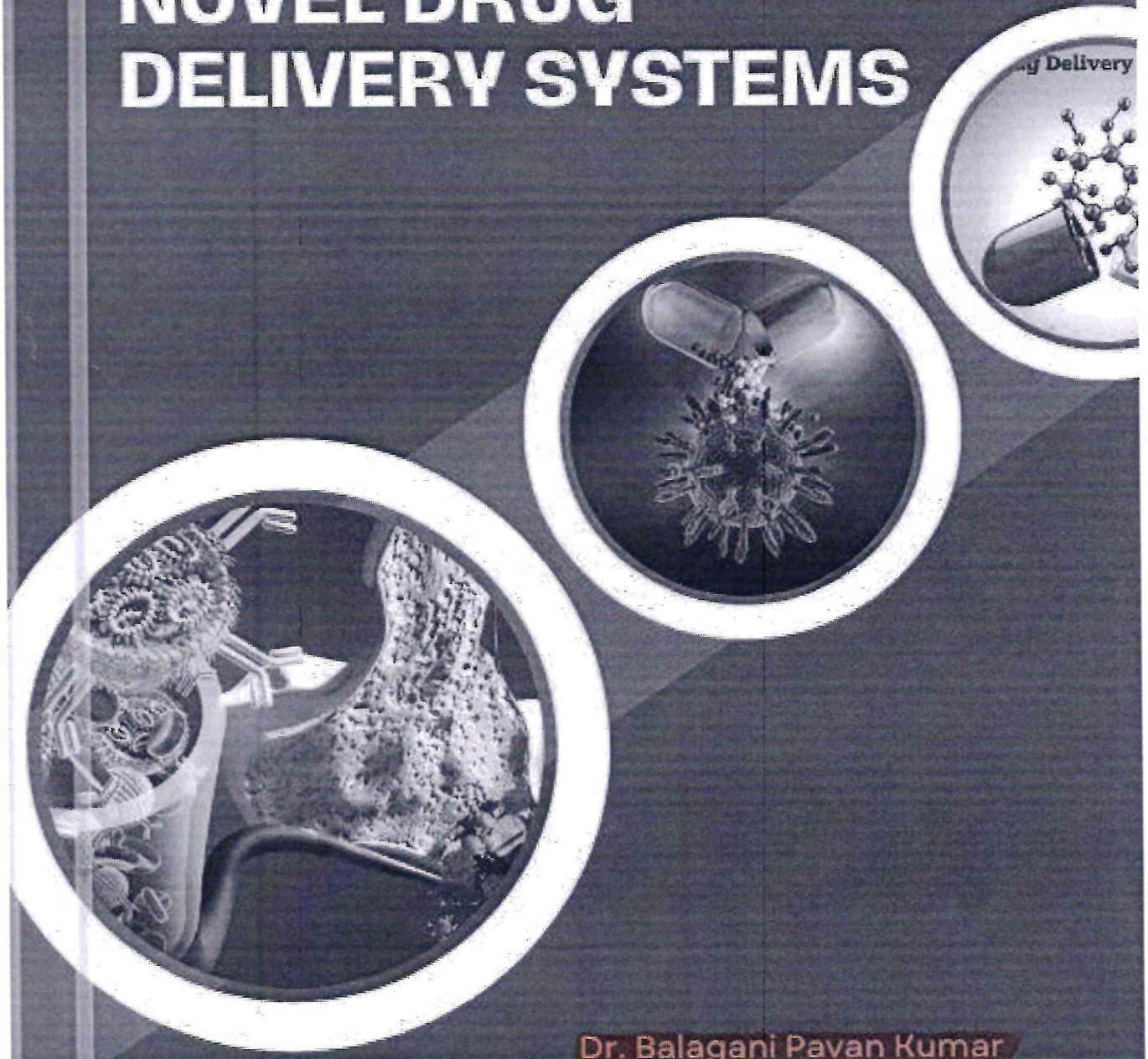

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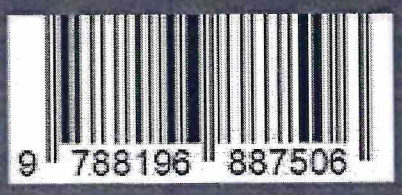

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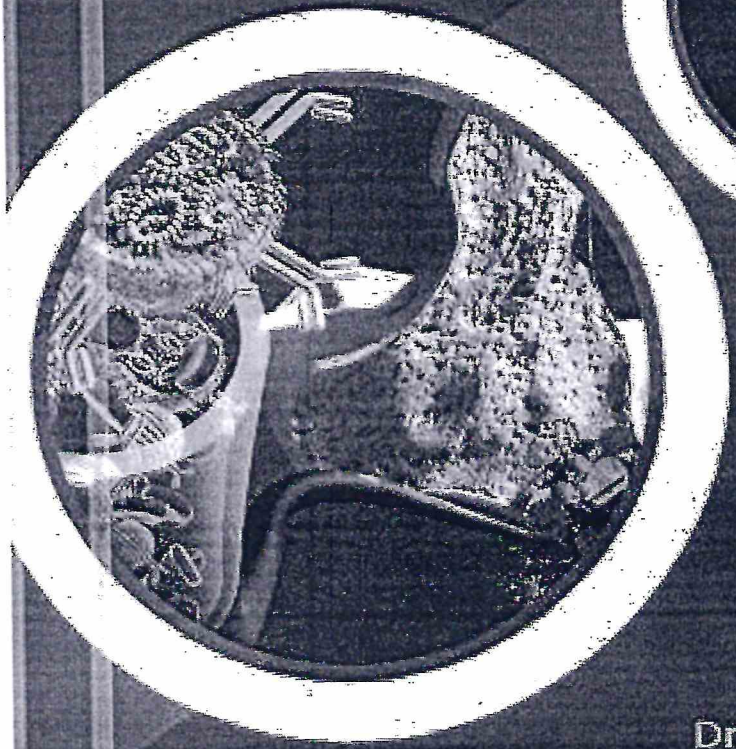

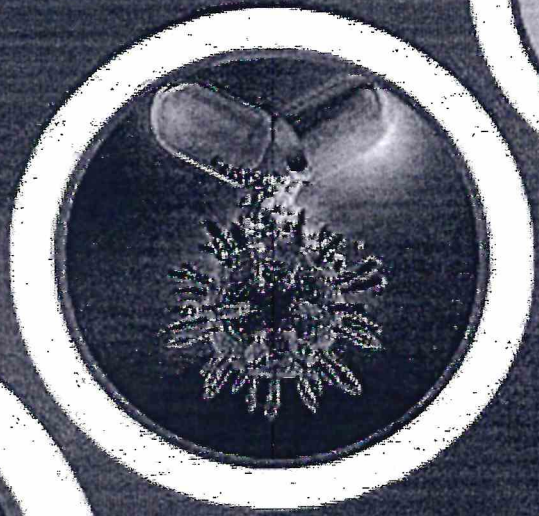

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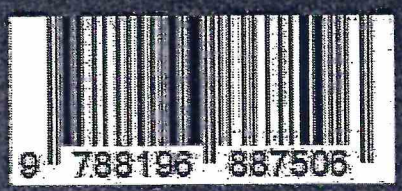

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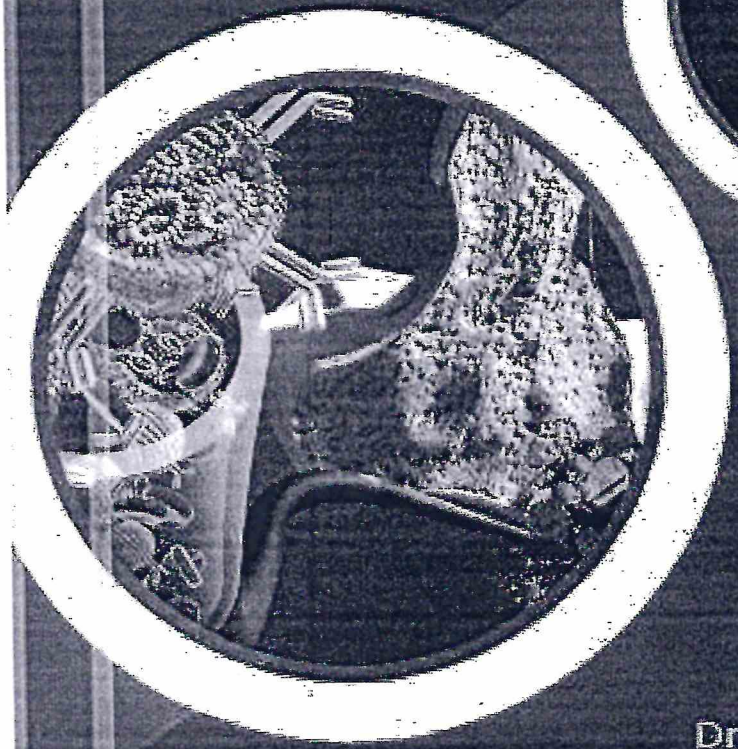

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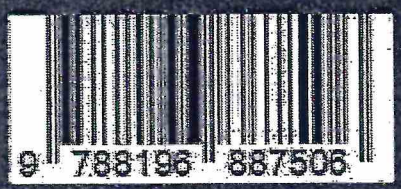

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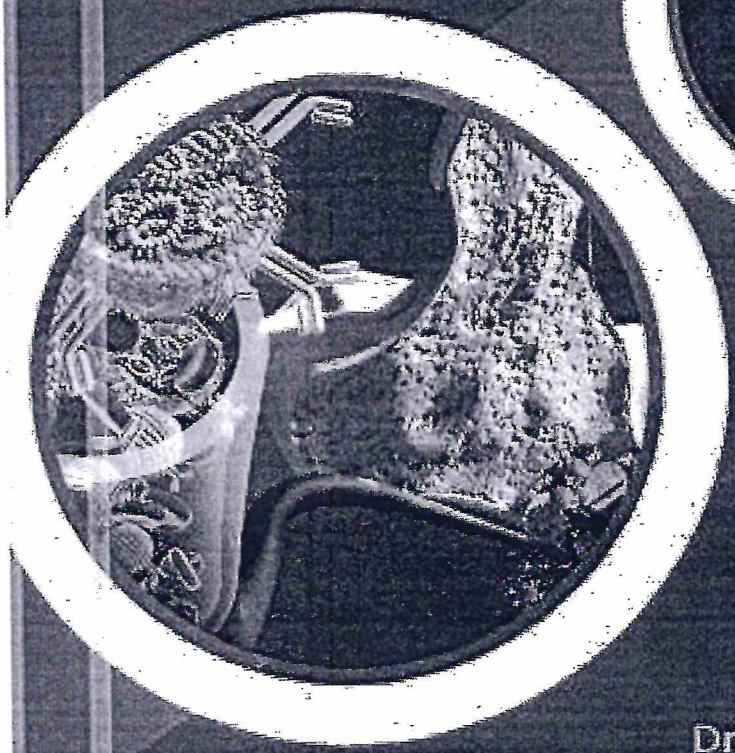

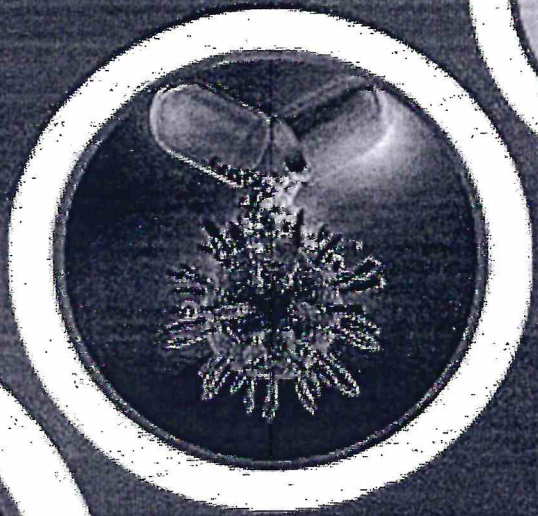

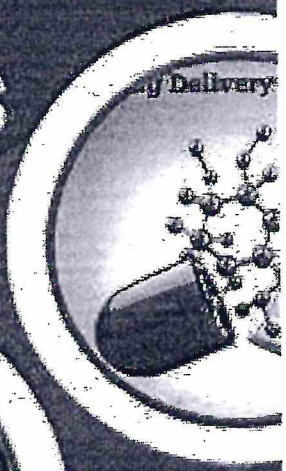

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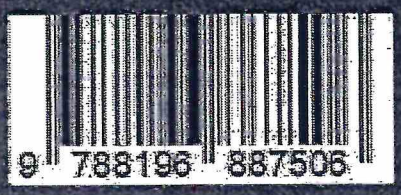

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LIST OF PATENTS GRANTED / PUBLISHED IN THE LAST FIVE YEARS

S.No	Name of the Inventor (s)	Application No	Title of the Patent	Status	Agency to which application is made	Date
1	Dr Balagani Pavan Kumar	383386-001	Portable Electro Spinning Device for Development of Nanofibres	Applied	Intellectual Property India	08-04-2023
2	Dr Balagani Pavan Kumar	2021104266	Enhanced Effectiveness of Meloxicam Through Hydrogel Formulations	Granted	Commissioner of Patents, Australia	25-08-2021
3	Dr Balagani Pavan Kumar	2021104955	Reversible Hydrogel Formulation for Prolonged Antimicrobial Activity	Granted	Commissioner of Patents, Australia	02-11-2021

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Design Application Details

Application Number:

383386-001

Cbr Number:

204430

Cbr Date:

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Applicant Name:

1. Dr. Sachinkumar Dnyaneshwar Gunjal **2. Dr. Balagani Pavan Kumar** **3. Dr. Channabasavaraj. S**
4. Bhawana Kapoor **5. Mr. Vishal ramdas tagalpallewar** **6. Dr. B.Sree Giri Prasad**
7. Dr.Navakanth Raju Ramayanam **8. Dr. Satyanarayan Pattnaik**

Design Application Status

Application Status:

Examination Report has been Generated ,Online Reply Document Recived(FER generated on 19/06/2023)

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CERTIFICATE OF GRANT

INNOVATION PATENT

Patent number: 2021104955

The Commissioner of Patents has granted the above patent on 2 November 2021, and certifies that the belowparticulars have been registered in the Register of Patents.

Name and address of patentee(s):

Dr.Balagani Pavan Kumar, Gokula Krishna College of Pharmacy,Sullurpet,SPSR Nellore,Andhra Pradesh, India - 524121

Dr. G. Sridhar Babu, Sri Shivani College of Pharmacy,Doctor's colony,near mulugu road,Warangal, India - 506007

Dr Bhavani Boddeda, Koringa College of Pharmacy,Korangi,East Godavari,Andhra Pradesh, India

Dr. Manish Kumar Thimmaraju, Balaji Institute of Pharmaceutical Sciences,Narsampet,Warangal,Telangana, India - 506132

Dr.Goje Arjun, Teegala Ram Reddy College of Pharmacy,Hyderabad, Telangana, India

Title of invention:

REVERSIBLE HYDROGEL FORMULATION FOR PROLONGED ANTIMICROBIAL ACTIVITY

Name of inventor(s):

Kumar, Balagani Pavan ; Babu, G. Sridhar ; Boddeda, Bhavani ; Thimmaraju, Manish Kumar ; Arjun, Goje

Term of Patent:

Eight years from 5 August 2021

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.

Dated this 2nd day of November 2021

Commissioner of Patents

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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PATENTS ACT 1990

Australian Government

IP Australia

CERTIFICATE OF GRANT

INNOVATION PATENT

Patent number: 2021104266

The Commissioner of Patents has granted the above patent on 25 August 2021, and certifies that the below particulars have been registered in the Register of Patents.

Name and address of patentee(s):

Manish Kumar Thimmaraju of Balaji Institute of Pharmaceutical Sciences, Narsampet Warangal Telangana 506132 India

G Sridhar Babu of Sri Shivani College of Pharmacy, Doctor's colony. Near Mulugu road Warangal Telangana 506007 India

Balagani Pavan Kumar of Gokula Krishna College of Pharmacy, Sullurpet SPSR Nellore Andhra Pradesh 524121 India

Deepak Kumar of Ranchi College of Pharmacy, Kute ToliTetri, Namkum Ranchi Jharkhand 834010 India

Goje Arjun of Teegala Ram Reddy College of Pharmacy Hyderabad Telangana India

Title of invention:

ENHANCED EFFECTIVENESS OF MELOXICAM THROUGH HYDROGEL FORMULATIONS

Name of inventor(s):

Thimmaraju, Manish Kumar; Babu, G. Sridhar; Kumar, Balagani Pavan; Kumar, Deepak and Arjun, Goje

Term of Patent:

Eight years from 17 July 2021

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.

Dr. BALAGANI PAVAN KUMAR
M.Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI DT. A.P - 524121

Dated this 25th day of August 2021

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Approved by PCI-New Delhi, Government of AP & Affiliated to JNTUA

An ISO 9001:2015 Certified Institution

Behind RTC Depot, Sullurupeta, Tirupati Dist, A.P, INDIA - 524121

Mobile : 9948990116 E-Mail : gkcpsp@rediffmail.com website: www.gkcp.edu.in

NO. OF RESEARCH PAPERS PUBLISHED PER TEACHER IN THE JOURNALS NOTIFIED ON UGC CARE LIST DURING THE LAST FIVE YEARS

CALENDER YEAR - 2022

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1	Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system	Mrs B Swathi	International Journal of Gender, Science and Technology	2040-0748
2	Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system	Mrs P Kavitha	International Journal of Gender, Science and Technology	2040-0748
3	Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system	Mrs CH Harika	International Journal of Gender, Science and Technology	2040-0748
4	Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system	Mr Y Naveen Kumar	International Journal of Gender, Science and Technology	2040-0748
5	Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system	Mr.AVLS Ramakrishna	International Journal of Gender, Science and Technology,	2040-0748
6	Magnetic-silk/polyethyleneimine core-shell nanoparticles for targeted gene delivery into human breast cancer cells	Dr.Balagani Pavan Kumar	Indo-American Journal of Pharma and Bio science	2347-2251

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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7	Magnetic-silk/polyethyleneimine core-shell nanoparticles for targeted gene delivery into human breast cancer	Mr.M.Kalyan babu	Indo-American Journal of Pharma and Bio science	2347-2251
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14	Pharmacokinetic Variability in Pediatrics and Intensive care / towards a personalized dosing approach	Mr C G Bhaskar	Indo-American Journal of pharma and Bio science	2347-2251
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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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GOKULA KRISHNA COLLEGE OF PHARMACY
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28	Cytotoxic Compounds from Kibataliagitingensis (Elm.) Woodson	Mrs S Usha Rani	International Journal of Gender, Science and Technology	2040-0748
29	Cytotoxic Compounds from Kibataliagitingensis (Elm.) Woodson	Mrs Vanitha Devi	International Journal of Gender, Science and Technology	2040-0748
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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FDSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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31	Development and Standardization of a Polyherbal Anti-Urolithiatic Suspension	Pallepati Kavitha	Future Journal of Pharmaceutical and Health Sciences	2583-116X
32	Development and Standardization of a Polyherbal Anti-Urolithiatic Suspension	Sivakumar Peta	Future Journal of Pharmaceutical and Health Sciences	2583-116X

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system

Mrs B Swathi ,Mrs P Kavitha,Mrs CH Harika,Mr Y Naveen Kumar ,Mr.AVLS Ramakrishna
Department of Pharmaceutical analysis
Email ID: swathi.nrnppharma@gmail.com,Mobile no:7095658810
GOKULA KRISHNA COLLEGE OF PHARMACY

ABSTRACT

Unauthorized persons run the risk of abusing unused pharmaceuticals, which may lead to significant injury. In order to keep people safe and keep the environment free of any dangers, the Food and Drug Administration (FDA) recommends that people properly dispose of any unwanted prescription medicine. Unfortunately, safety is an issue that is overlooked by many of the present disposal methods. Granular activated carbon, when added to a drug disposal pouch, provides a novel, easy, and safe way to dispose of unused or expired medicine. We examined the disposal system's deactivation effectiveness and developed a robust and verified technique for methylphenidate hydrochloride and loxapine succinate using high-performance liquid chromatography (HPLC). A C18 analytical column with the following dimensions: 250 mm × 4.60 mm and 100Å, was used to evaluate methylphenidate hydrochloride. The mobile phase consisted of acetonitrile-water with 0.05% (v/v) trifluoroacetic acid, and the flow rate was

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1. Introduction

A major issue now is how to properly dispose of leftover prescription drugs. Accidental exposure, purposeful use or misuse, or both might result from storing undesired or outdated pharmaceuticals. There are social and economic ramifications to the public health problem of th possibility of abuse and addiction to prescriptic pharmaceuticals, even those used to treat pain. Hero addiction affected 591,000 people in 2015, and ov 33,000 people died from opioid overdoses or drug misu disorders associated with prescription opioid painkille [1,2]. Medication is a lifesaver when it comes to alleviatir acute and severe chronic pain, but it may have disastrou consequences when prescribed excessively or witho proper safety measures. The National Survey on Dru usage and Health found that after five years of non-medic prescription painkiller usage, less than 4% of individua began using heroin [1]. Therefore, it is important t dispose of prescription medicine correctly. The disposal two psychoactive drugs, loxapine succinate an methylphenidate hydrochloride (MPH), was the primar focus of the current investigation.By activating th neurological system, the popular prescription medicin MPH influences the brain's dopamine balance, making it a effective treatment for attention-deficit hyperactivit disorder (ADHD) [3]. When administered intranasall MPH has a pharmacological effect comparable to cocain resulting in a fast release of dopamine [4]. Like morphin it has the potential to create serious physiologic dependency and is hence classified as a Schedule I federally-controlled narcotic, due to its significant abus potential. Because of its very satisfying euphoric effect MPH is highly addictive [5]. Lozapine succinate is anothe medicine with abuse potential. For schizophrenia, doctor prescribe this medicine, which is a tricyclic antipsychoti To control the thoughts, feelings, and behaviors ofte associated with schizophrenia, loxapine succinate i administered by inhibiting the activity of dopamine. Th misuse of loxapine succinate is possibl since it is used for the management of schizophrenia an only gives short relief [6]. There is a higher risk of misus for these medicines because of how often they are given.

Given the considerable misuse potential of MPH an loxapine succinate, we aimed to explore their deactivatior profile via the drug disposal system. Also investigated wa the analytical accuracy of the developed technique for both medications. There aren't many analytical procedures fo loxapine succinate [9] and MPH [7,8] published in the

Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system

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PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Mrs B Swathi ,Mrs P Kavitha,Mrs CH Harika,Mr Y Naveen Kumar ,Mr.AVLS Ramakrishna
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A major issue now is how to properly dispose of leftover prescription drugs. Accidental exposure, purposeful use or misuse, or both might result from storing undesired or outdated pharmaceuticals. There are social and economic ramifications to the public health problem of th possibility of abuse and addiction to prescriptic pharmaceuticals, even those used to treat pain. Heroi addiction affected 591,000 people in 2015, and ove 33,000 people died from opioid overdoses or drug misus disorders associated with prescription opioid painkiller [1,2]. Medication is a lifesaver when it comes to alleviatin acute and severe chronic pain, but it may have disastrou consequences when prescribed excessively or withou proper safety measures. The National Survey on Dru usage and Health found that after five years of non-medica prescription painkiller usage, less than 4% of individual began using heroin [1]. Therefore, it is important t dispose of prescription medicine correctly. The disposal c two psychoactive drugs, loxapine succinate an methylphenidate hydrochloride (MPH), was the primar focus of the current investigation.By activating th neurological system, the popular prescription medicin MPH influences the brain's dopamine balance, making it a effective treatment for attention-deficit hyperactivity disorder (ADHD) [3]. When administered intranasally MPH has a pharmacological effect comparable to cocaine resulting in a fast release of dopamine [4]. Like morphine it has the potential to create serious physiologica dependency and is hence classified as a Schedule II federally-controlled narcotic, due to its significant abuse potential. Because of its very satisfying euphoric effects MPH is highly addictive [5]. Lozapine succinate is another medicine with abuse potential. For schizophrenia, doctors prescribe this medicine, which is a tricyclic antipsychotic To control the thoughts, feelings, and behaviors often associated with schizophrenia, loxapine succinate is administered by inhibiting the activity of dopamine. The misuse of loxapine succinate is possible. since it is used for the management of schizophrenia and only gives short relief [6]. There is a higher risk of misuse for these medicines because of how often they are given.

Given the considerable misuse potential of MPH and loxapine succinate, we aimed to explore their deactivation profile via the drug disposal system. Also investigated was the analytical accuracy of the developed technique for both medications. There aren't many analytical procedures for loxapine succinate [9] and MPH [7,8] published in the

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

Development and validation of an HPLC-UV method for analysis of methylphenidate hydrochloride and loxapine succinate in an activated carbon disposal system

Mrs B Swathi ,Mrs P Kavitha,Mrs CH Harika,Mr Y Naveen Kumar ,Mr.AVLS Ramakrishna
Department of Pharmaceutical analysis
Email ID: swathi.nrnppharma@gmail.com,Mobile no:7095658810
GOKULA KRISHNA COLLEGE OF PHARMACY

ABSTRACT

Unauthorized persons run the risk of abusing unused pharmaceuticals, which may lead to significant injury. In order to keep people safe and keep the environment free of any dangers, the Food and Drug Administration (FDA) recommends that people properly dispose of any unwanted prescription medicine. Unfortunately, safety is an issue that is overlooked by many of the present disposal methods. Granular activated carbon, when added to a drug disposal pouch, provides a novel, easy, and safe way to dispose of unused or expired medicine. We examined the disposal system's deactivation effectiveness and developed a robust and verified technique for methylphenidate hydrochloride and loxapine succinate using high-performance liquid chromatography (HPLC). A C18 analytical column with the following dimensions: 250 mm × 4.60 mm and 100Å, was used to evaluate methylphenidate hydrochloride. The mobile phase consisted of acetonitrile-water with 0.05% (v/v) trifluoroacetic acid, and the flow rate was

1.5 mL/min, with a 15-minute run and a 7.8-minute retention period. Using a flow rate of 1.0 mL/min, loxapine succinate was isolated on a C8 100Å column (250 mm × 4.6 mm, 5 mm) that was kept at 25 °C. The medication had a retention duration of around 4.6 minutes, and the run time was 10 minutes. At a pH of 3.0, the mobile phase consisted of 40:60 (v/v) acetonitrile and water with 0.3% triethylamine. Both medications were dissolved in mobile phases to create reference standard solutions with a concentration of 100 mg/mL. Over the concentration range of 5-100 mg/mL for methylphenidate hydrochloride and 0.1-100 mg/mL for loxapine succinate, these techniques exhibit acceptable linearity (R2 ¼ 0.999). Research on the inactivation of these medications made good use of the test methodologies. Xi'an Jiaotong University, 2018. This website is created and hosted by Elsevier B.V. An open access paper published in accordance with the

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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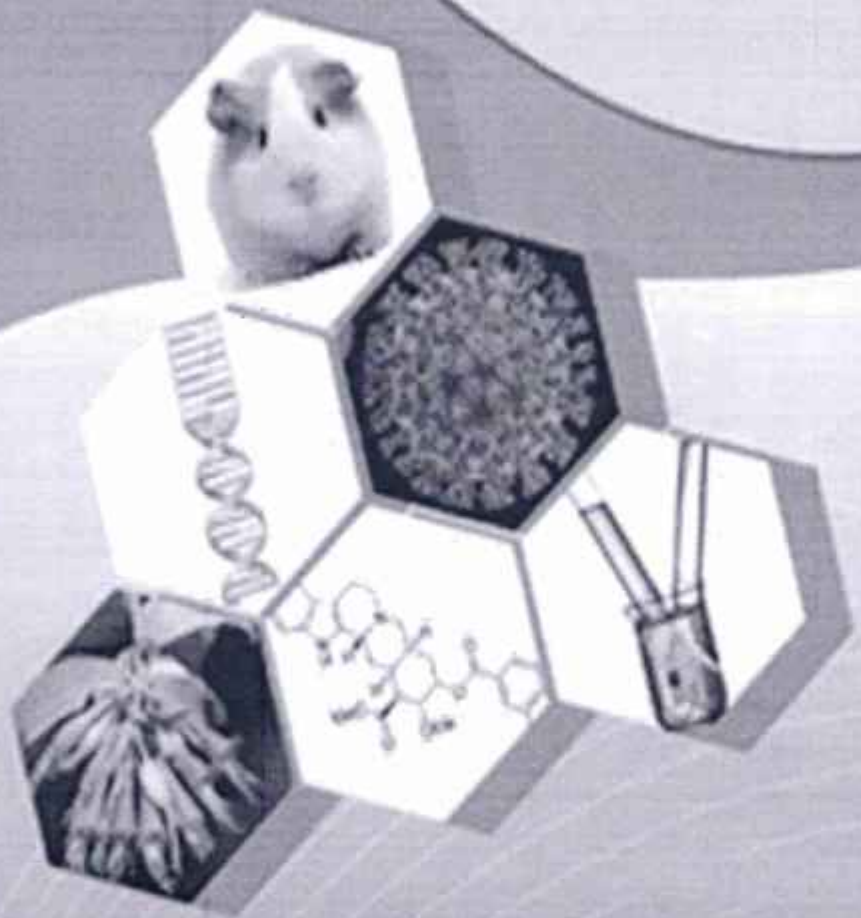

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Magnetic-silk/polyethyleneimine core-shell nanoparticles for targeted gene delivery into human breast cancer cells

Dr.Balagani Pavan Kumar , Mr.M.Kalyan babu , Mr.N.Praveenkumar

A B S T R A C T

The lack of efficient and cost-effective methods for gene delivery has significantly hindered the applications of gene therapy. In this paper, a simple one step and cost effective salting-out method has been explored to fab- ricate silk-PEI nanoparticles (SPPs) and magnetic-silk/PEI core-shell nanoparticles (MSPPs) for targeted delivery of c-myc antisense oligodeoxynucleotides (ODNs) into MDA-MB-231 breast cancer cells. The size and zeta po- tential of the particles were controlled by adjusting the amount of silk fibroin in particle synthesis. Lower surface charges and reduced cytotoxicity were achieved for MSPPs compared with PEI coated magnetic nanoparticles (MPPs). Both SPPs and MSPPs were capable of delivering the ODNs into MDA-MB-231 cells and significantly inhibited the cell growth. Through magnetofection, high ODN uptake efficiencies (over 70%) were achieved within 20 min using MSPPs as carriers, exhibiting a significantly enhanced uptake effect compared to the same carriers via non-magnetofection. Both SPPs and MSPPs exhibited a significantly higher inhibition effect against MDA-MB-231 breast cancer cells compared to human dermal fibroblast (HDF) cells. Targeted ODN delivery was achieved using MSPPs with the help of a magnet, making them promising candidates for targeted gene therapy applications.

Keywords: Silk PEIMagnetic nanoparticles Gene deliveryCancer ODN Magnetofection

1. Introduction

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Due to the potential toxicity and immunogenicity concerns of viral systems (El-Aneed, 2004; Plank et al., 2003; Lungwitz et al., 2005), non-viral gene delivery systems have been explored as an alternative method for gene therapy (Lungwitz et al., 2005; Zhang et al., 2014;

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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm., Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI DT. A.P - 524121

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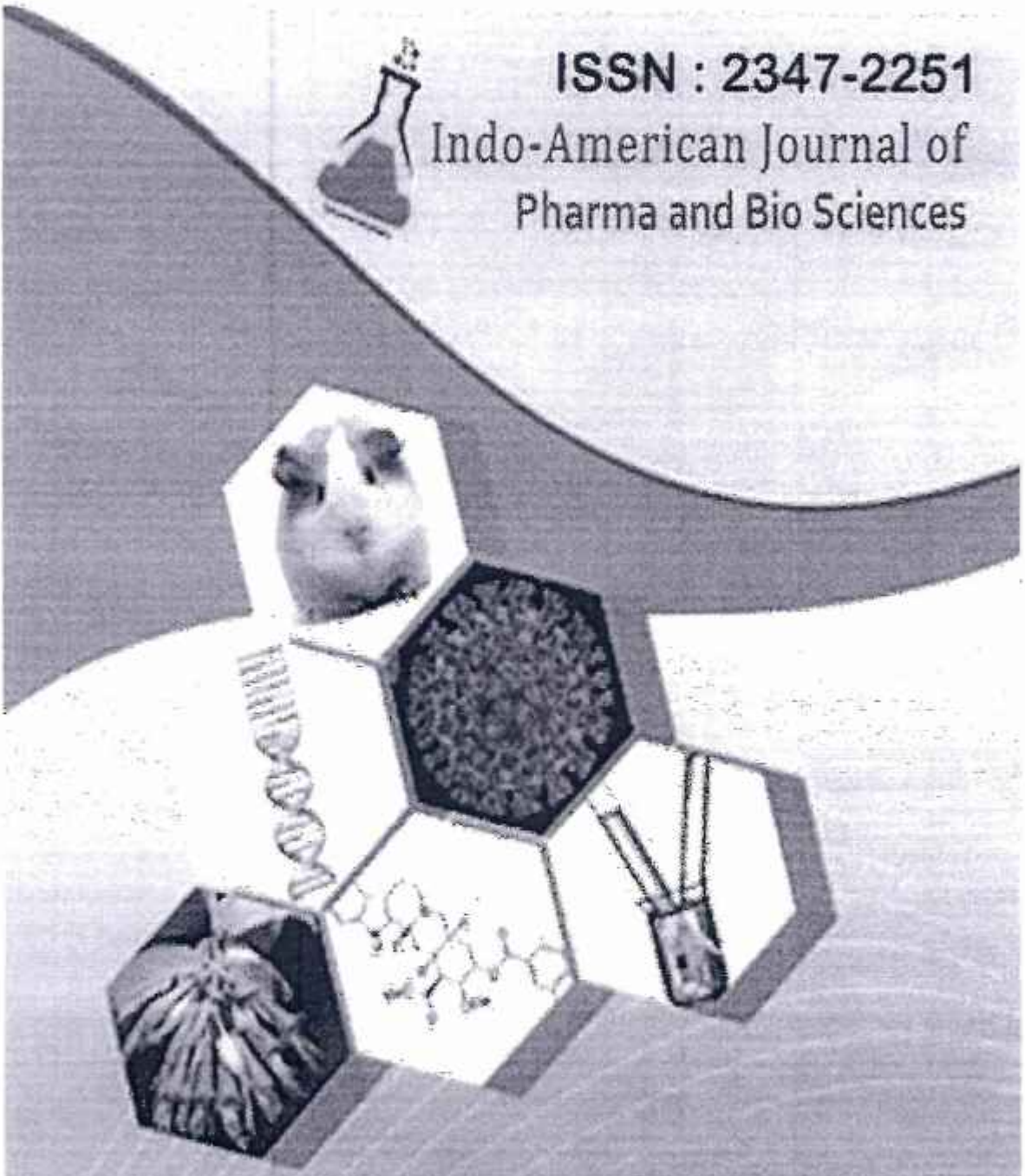

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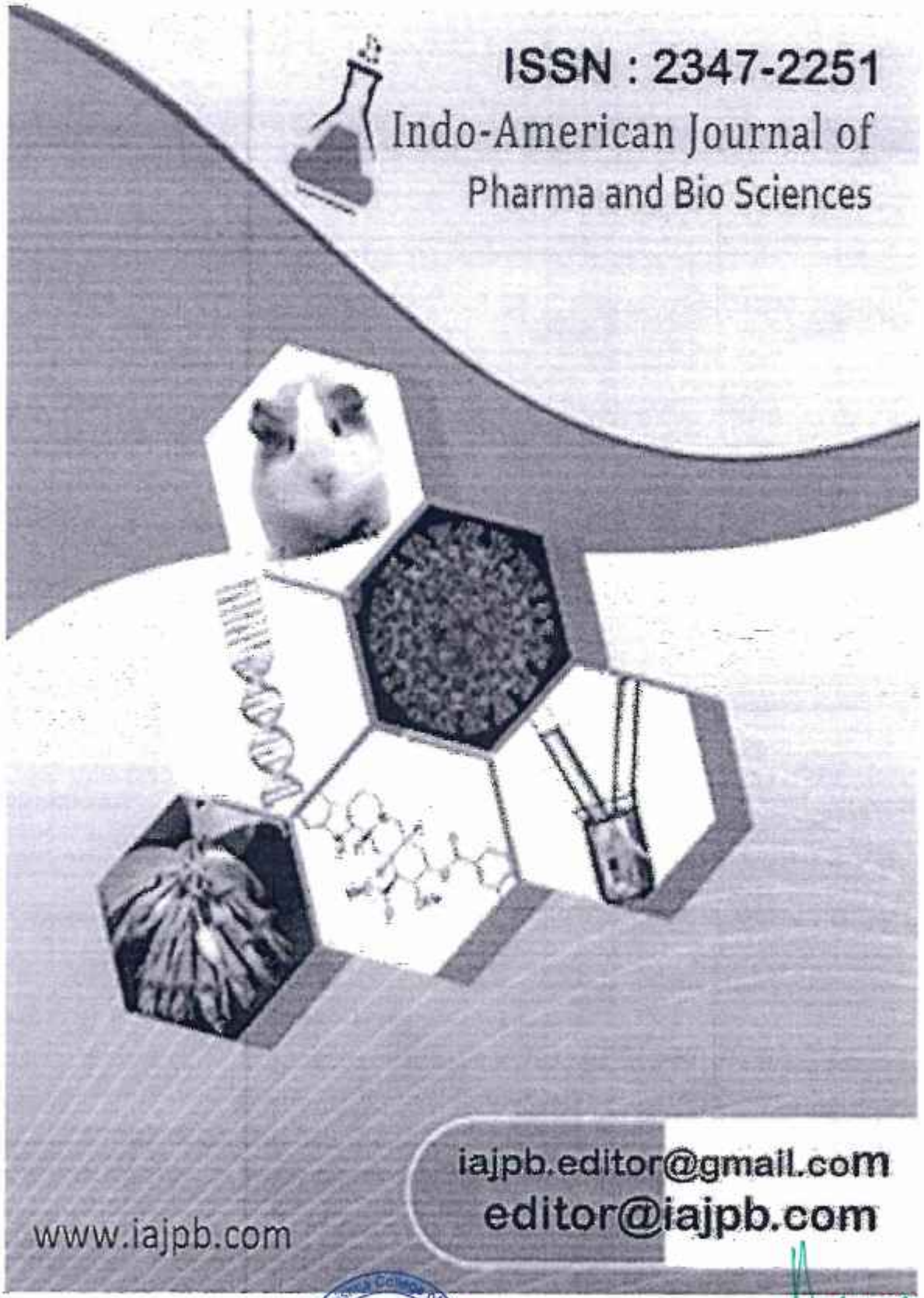
Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt, A.P - 524121



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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 * Excellency Efficiency Quality *

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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A STUDY ON SYNTHESIS AND CHARACTERISATION OF SOME NOVEL QUINAZOLINONES

P. Siva Kumar[1]*, S. Saddam Hussain[2] and AVS Geetha Sameera[3]

[1]Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurpeta, Nellore, Andhra Pradesh, India.
[2]Department of Pharmacy Practice, Jagans College of Pharmacy, Nellore, Andhra Pradesh, India.
[3]Department of Pharmaceutical Analysis, Narayana Pharmacy College, Nellore, Andhra Pradesh, India.

***Corresponding Author: P. Siva Kumar**
Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurpeta, Nellore, Andhra Pradesh, India.

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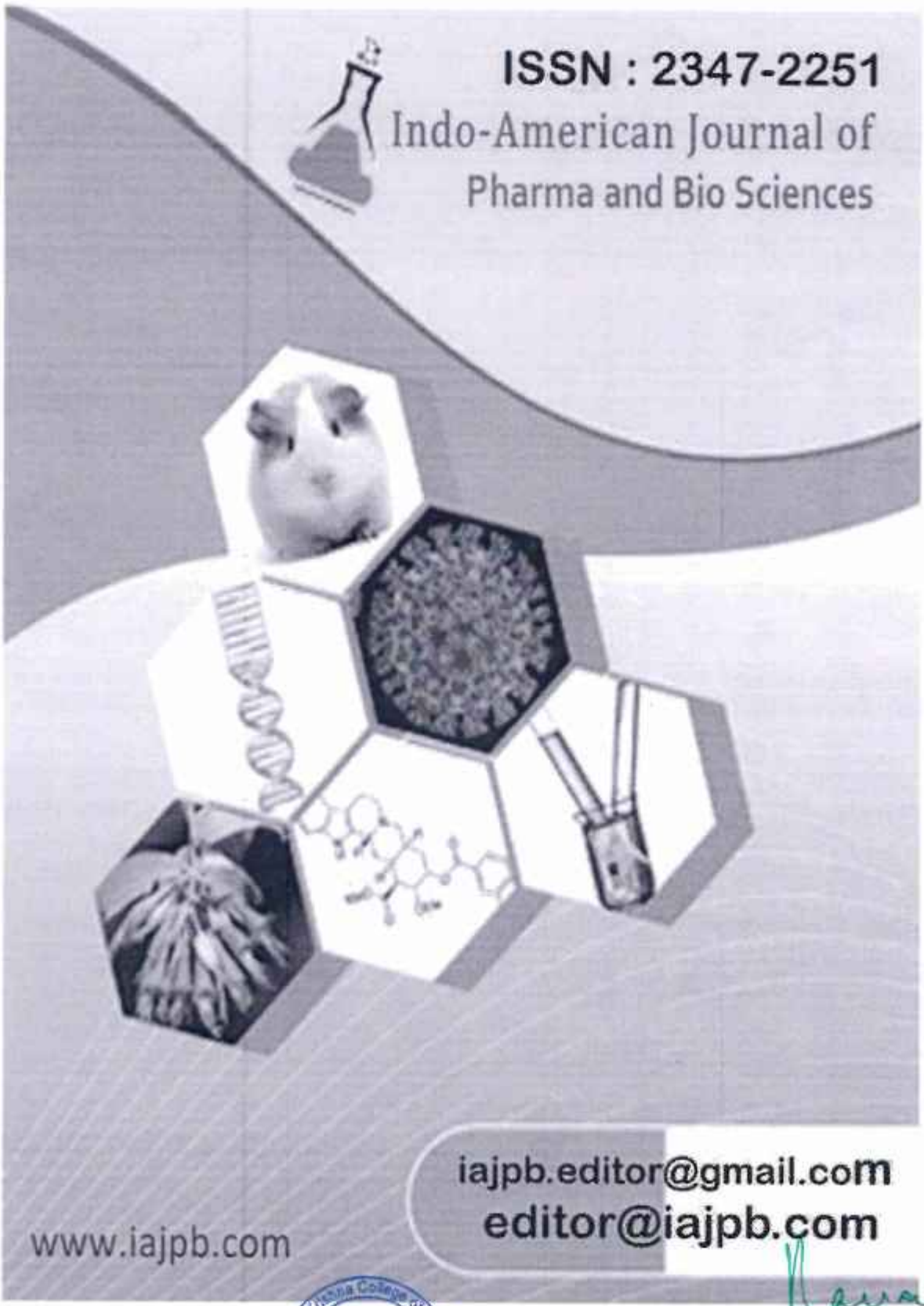
ABSTRACT
Heterocyclic chemistry comprises at least half of all organic chemistry research worldwide. In particular, heterocyclic structures form the basis of many pharmaceutical, agrochemical and veterinary products. The heterocyclic compounds are fundamentals of life, like haeme derivatives in blood & chlorophyll essential for photosynthesis in plants. Also the DNA & RNA are containing heterocycles. The study aims to synthesize simple derivatives of quinazoline by combining with aromatic primary amine, hydrazine hydrate and benzoxazine. The synthesized compounds were characterized by melting point analysis. Melting point was recorded and compared with the standard references. The characterization of compounds provided further scope in the research towards the discovery of new derivatives for several ailments. The biological evaluation could be beneficial for future studies.

KEYWORDS: Heterocyclic compounds, benzoxazine, quinazoline, primary amine, hydrazine hydrate and benzoxazine.

INTRODUCTION
Any of a class of organic compounds whose molecules contain one or more rings of atoms with at least one atom being an element other than carbon, most frequently oxygen, nitrogen, or sulfur are called heterocyclic compounds. Heterocyclic chemistry is the branch of chemistry dealing with the synthesis, properties, and applications of heterocycles. Heterocyclic chemistry comprises at least half of all organic chemistry research worldwide. In particular, heterocyclic structures form the basis of many pharmaceutical, agrochemical and veterinary products. The word hetero means "different from carbon and hydrogen". Many heterocyclic compounds are biosynthesized by plants & animals are biologically active. Some heterocyclic compounds are fundamentals of life, like haeme derivatives in blood & chlorophyll essential for photosynthesis in plants. Also the DNA & RNA are containing heterocycles. Dyestuffs of plant origins include indigo blue used to dye jeans. Several heterocycles are the basic structure nucleus for nicotine, pyridoxine, cocaine, morphine etc. Among a wide variety of nitrogen heterocycles that have been explored for developing pharmaceutically, quinazolinone plays an important role in medicinal chemistry and subsequently has emerged as a pharmacophore. Quinazoline is a compound made up of two fused six member simple aromatic rings- benzene & pyrimidine ring. It is a yellow colored compound, found usually in crystalline form. Medicinally it is used as ant malarial agent. It was first prepared by Gabriel in 1903 and first isolated from the Chinese plant aseru. The development of research on biological activity of quinazolinecompounds started when the compound 2-methyl-1,3-aryl-4-quinazoline was synthesized. This compound has soporific & sedative action.[1-4] In last 10 to 15 years of research for medicinal has been characterized by significant advances. In 1968 only two derivatives were used, soporific & anticonvulsant-methaqualone and diuretic quinathiazone. By 1980, about 50 kinds of derivatives of this class includes medicinal with different biological actions like 'soporific, sedative, tranquilizing, analgesic, anticonvulsant, antitussive, myorelexant, anti rheumatic, hypotensive, antiallergic, bronchodilating, antidiabetic, cholagogue, diuretic, cystatic, antimalarial, spermicidal etc.

Quinazolinone scaffold has been considered as a magic moiety possessing myriad spectrum of medicinal activities. Diversity of biological response profile has attracted considerable interest of several researchers across the globe to explore this skeleton for its assorted



Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC. FBSS FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI DI. A.P - 524121

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Pharmacokinetic Variability in Pediatrics and Intensive Care: Toward a Personalized Dosing Approach

Mrs D Kalyani , Ms A R Sridevi , Mrs P Sukanya , Mrs A Aksa anvija , Mr C G Bhaskar

ABSTRACT - Providing a safe and efficacious drug therapy for large and often heterogeneous populations is a challenging objective in clinical drug development and routine clinical practice. It has been known for years that the optimum dose required for many therapeutic agents among individuals is quite variable. A wide interindividual pharmacokinetic variability was described in clinically relevant populations such as pediatrics and critically ill patients. The aim of this article was to present the main individual factors influencing variability in these two populations and their applications. Growth and development are two specific features of children that are not observed in adults. And critically ill patients have a much higher level of sickness severity that is associated with profound pathophysiological changes. These particular features could lead to difficulties to attain therapeutic targets. Nonlinear mixed effects modeling is a common approach to identify unexplained population variability. This approach is often applied to evaluate and optimize drug therapy in particular populations. Numerous studies have been conducted in these two specific populations to characterize pharmacokinetic parameters and to identify individual factors influencing variability. Size, age and organ function appeared to be the main factors influencing pharmacokinetics in pediatrics. Factors influencing pharmacokinetics in critically ill patients were mainly cardiovascular system, organ dysfunction and organ support. Dosage individualization seems to be a key issue to optimize drug treatment in these specific populations. Clinically utility and safety of a model-based personalized drug therapy has been demonstrated for vancomycin in pediatrics. Many programs were available to optimize drug regimens, especially for antibiotic drugs in critically ill patients. This innovative personalized dosing approach is a promising way to optimize drug therapy in clinically relevant populations, such as pediatrics and critically ill patients.

INTRODUCTION

Providing a safe and efficacious drug therapy for large and often heterogeneous populations is a challenging objective in clinical drug development and routine clinical practice. On the one hand, a therapeutic effect of the drug is desired to be achieved for all patients; on the other hand too high concentrations have to be avoided to reduce adverse events [1,2]. It has been known for years that the optimum dose required for many therapeutic agents among individuals is quite variable. Anatomical and physiological properties have a great influence on the pharmacokinetics of drugs and lead to inter- and intra-individual variability in the pharmacokinetics outcome [3]. Both inter- and intrasubject pharmacokinetic variability may be important. Intersubject variability is fundamental to the argument for using A wide interindividual pharmacokinetic variability was described in clinically relevant populations such as pediatrics and critically ill patients. Growth and development are two specific features of children that are not observed in adults. And critically ill patients have a much higher level of sickness severity that is associated with profound pathophysiological changes. These particular features could lead to difficulties to attain therapeutic targets.One well-known approach to characterize variability in pharmacokinetic parameters is nonlinear mixed effects modeling. It is a common approach to identify unexplained population variability in parameters of pharmacokinetic models and to identify covariates, which explain the variability of the data. Population models can then be developed using bayesian logistics to therapeutic drug monitoring.

Department of Pharmaceutics,
Email ID: kevinkarunya@gmail.com , Mobile no:8106686200
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, [illegible], FICGP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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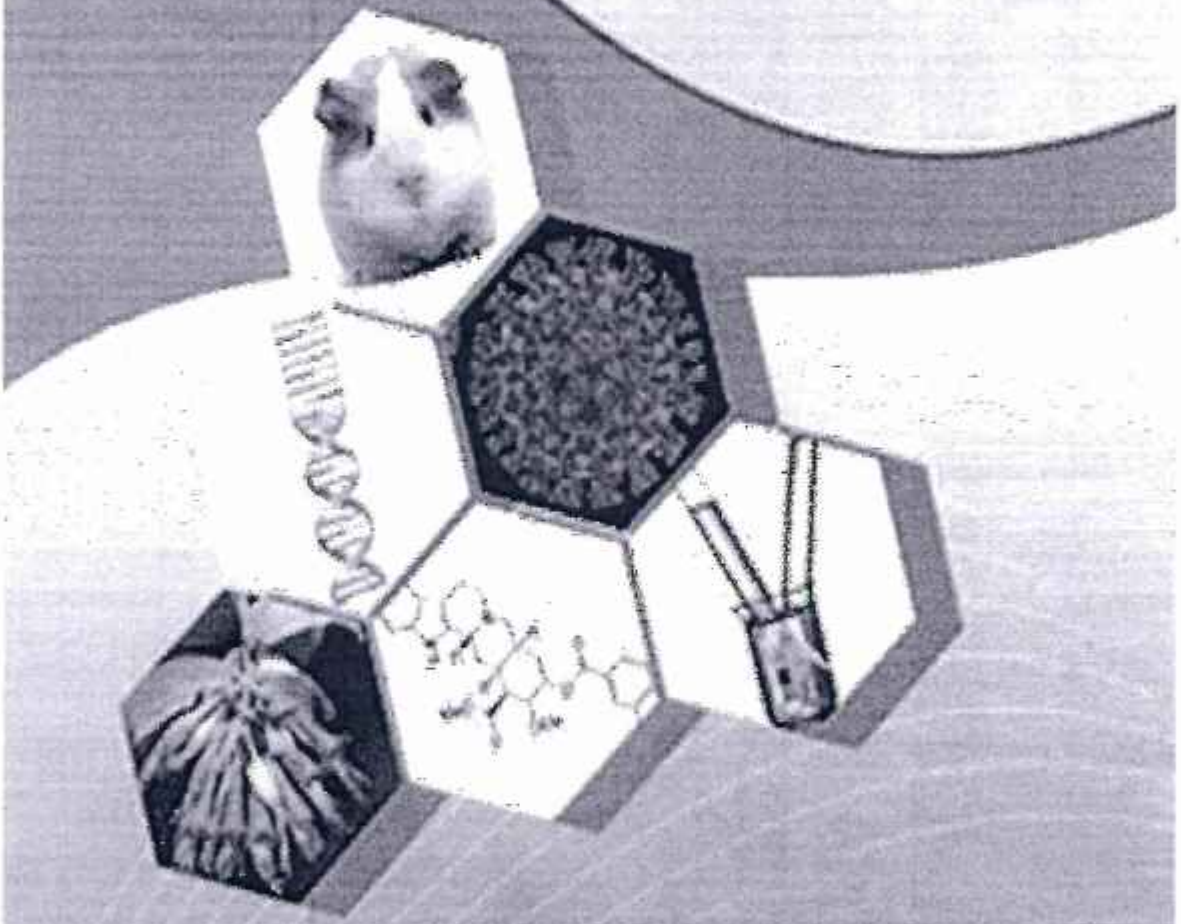

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INTRODUCTION

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Department of Pharmaceutics,
Email ID: kevinkarunya@gmail.com , Mobile no:8106686200
GOKULA KRISHNA COLLEGE OF PHARMACY

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, F.I.C., F.D.S.T., F.A.G.E., FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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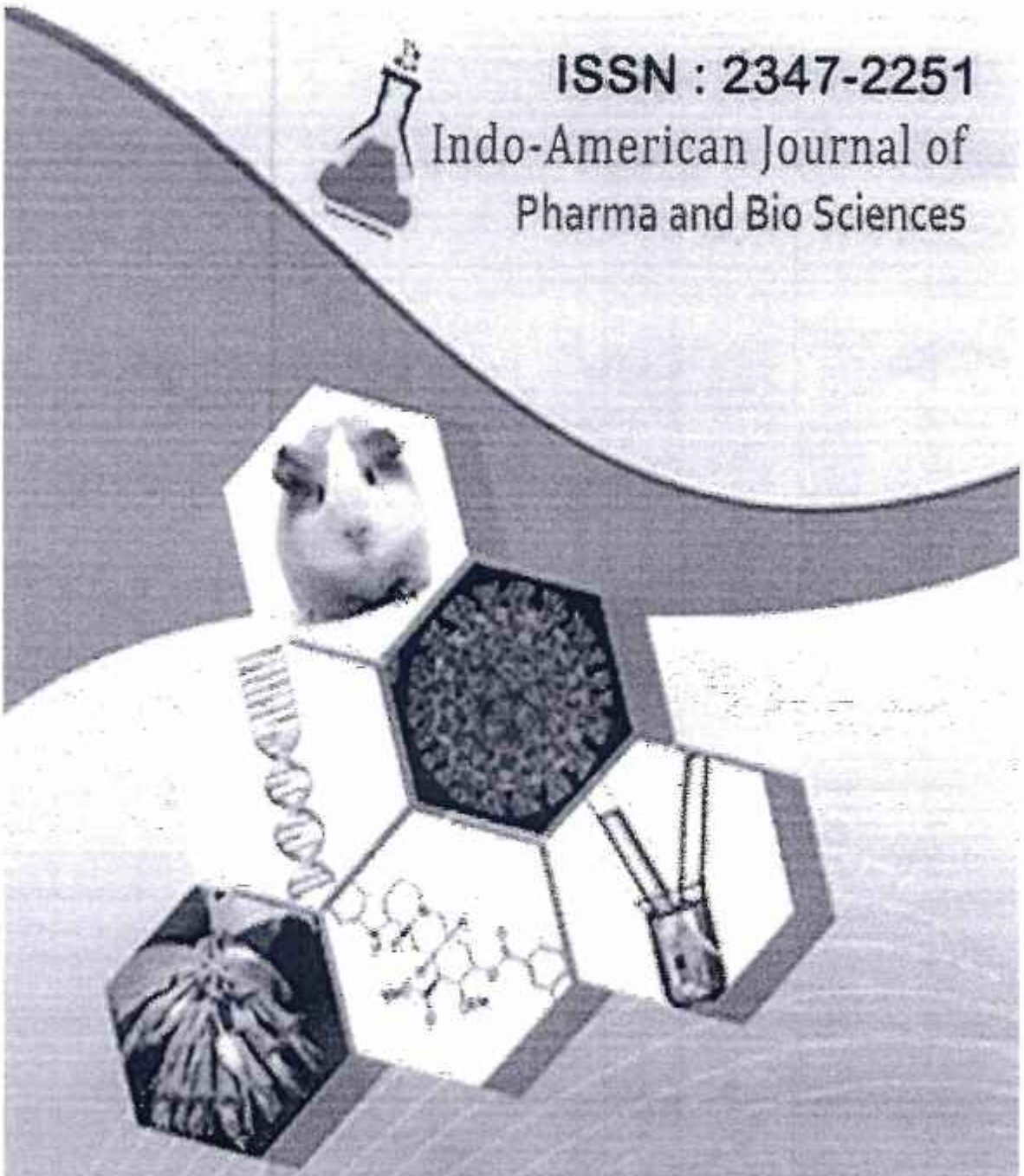

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Department of Pharmaceutics,
Email ID: kevinkarunya@gmail.com , Mobile no:8106686200
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy
SULLURPET
524 121
Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FDS, FAE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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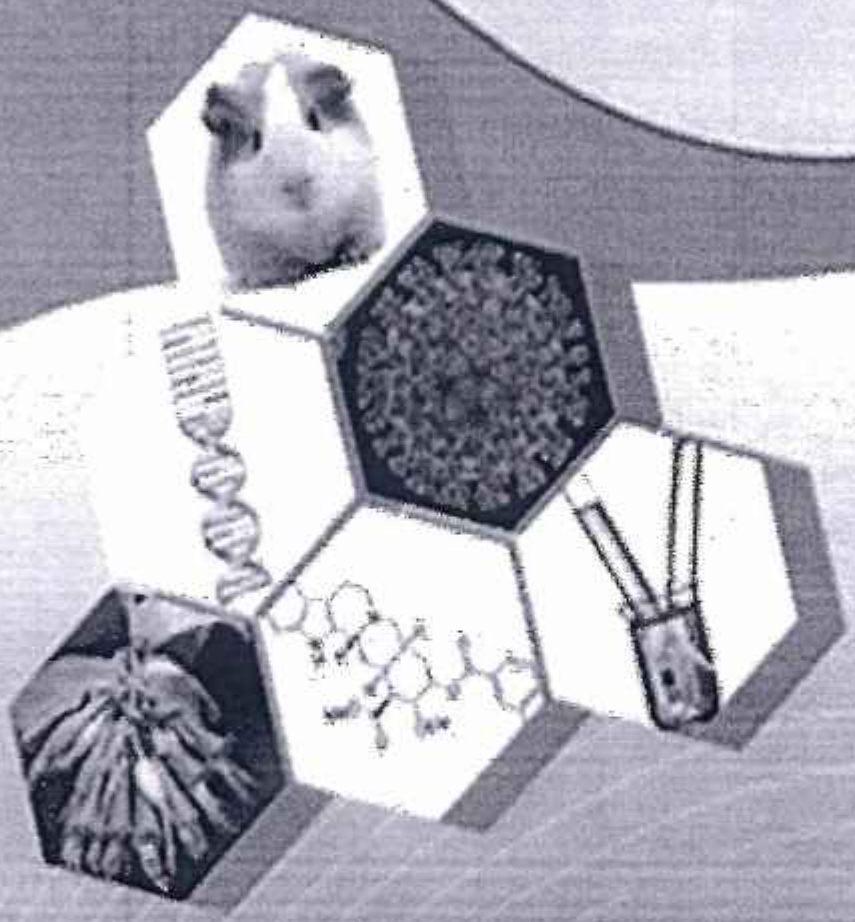

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Email ID: kevinkarunya@gmail.com , Mobile no:8106686200
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy
SULLURPET
524 121
Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm. Ph.D. FIC. FBSS. FA..E. FICCP. MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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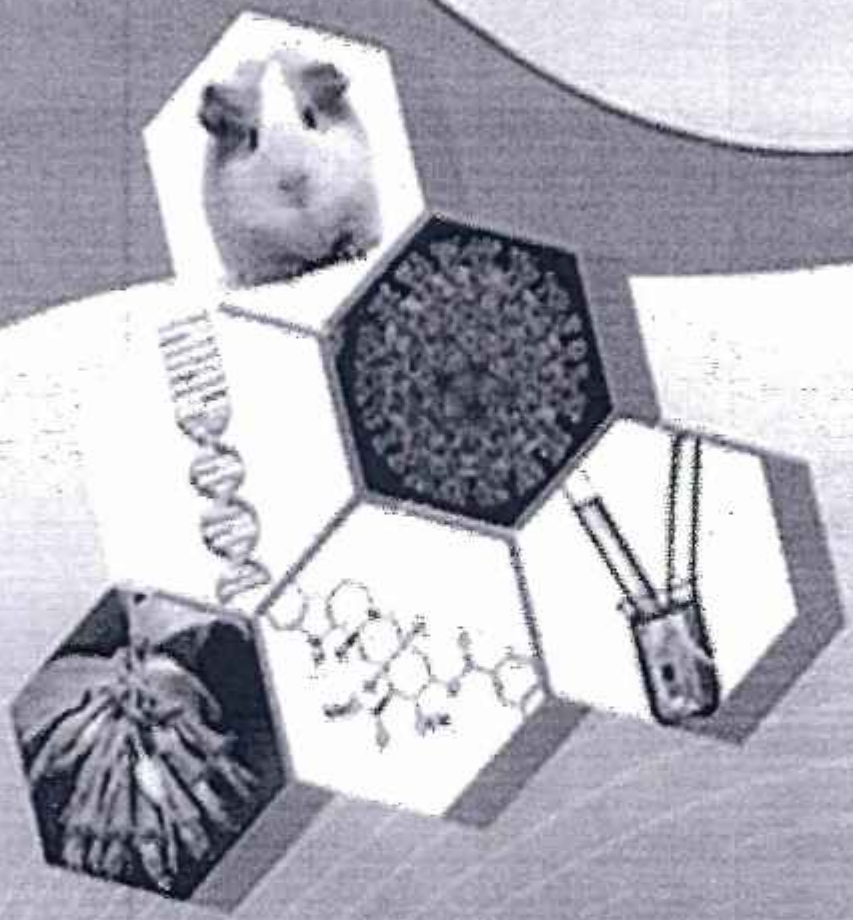

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Email ID: kevinkarunya@gmail.com , Mobile no:8106686200
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy * Excellency Efficiency Quality * SULLURPET 524 121

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FESS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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The Sensitive Method of Subvisible Particle Counting for the Detection and Quantification of Monoclonal Antibody Aggregation Caused by Freeze-Thawing: New Understanding of Particle Function in the Protein Aggregation Process

Mrs N Sukanya , Mrs P K Devibala , Ms.SK Zoofishaan , Mr.M R Pavan Kumar , Mr S Sivakoteswa Rao

Abstract

The purpose of this research was to measure the amount of subvisible particles formed throughout the freeze-thaw cycle of an IgG2 monoclonal antibody (mAb) using microflow imaging (MFI), a sensitive technique. Protein solutions in 20 mM histidine buffer (pH 5.5) were frozen and thawed three times before being examined using multiple-fraction isolation (MFI) and size-exclusion chromatography (SEC). While SEC could not identify aggregates, MFI demonstrated an increase in particle counts with each freeze-thaw cycle. Monitoring particle production enables the identification of protein aggregates containing just a tenth of a percent of the total protein mass, according to estimates of the total mass of particles generated. Even while SEC did not identify protein aggregation, variations in levels caused by various formulations or freeze-thaw protocols were addressed. The purpose of the freeze-thaw process in phosphate-buffered saline was to determine whether the total aggregate mass estimates derived from SEC and MFI were quantitatively compatible. This procedure reduced the monomer peak area in the chromatogram, which allowed SEC to identify insoluble aggregates at a detectable level. The amount of monomer lost as measured by SEC and the total mass of subvisible particles as measured by MFI were in excellent agreement. The following is a copyright notice from Wiley-Liss, Inc. and the American Pharmacists Association: J Pharm Sci 100:492-503, 2011Protein formulation, infrared spectroscopy, particle size, liquid chromatography, and protein aggregation are all relevant terms.

Introduction :

A decrease in product purity and quality and the possibility that aggregates may induce an immunogenic response in patients make therapeutic protein aggregation a big concern.1 Proteins in solution may aggregate due to a variety of stressors, including heat, agitation, light, surface contact, and freeze-thaw cycles.2–8 Most frequently, the resultant aggregation and loss of native protein may be recognized and quantified. evaluated using size-exclusion chromatography (SEC). One drawback of utilizing SEC to detect aggregates is that it can only detect aggregates within a very small size range, around 5 to 1000 kDa, which is considered soluble.2 One other drawback of SEC is that it takes around 0.1% to 0.5% of the total protein to be soluble aggregates and/or native protein lost before a change can be accurately detected in practice.

Department of Pharmaceutics
Email ID: nallamekalasukanya38@gmail.com , Mobile no:9491169765
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY

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The Sensitive Method of Subvisible Particle Counting for the Detection and Quantification of Monoclonal Antibody Aggregation Caused by Freeze-Thawing: New Understanding of Particle Function in the Protein Aggregation Process

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Department of Pharmaceutics
Email ID: nallamekalasukanya38@gmail.com , Mobile no:9491169765
GOKULA KRISHNA COLLEGE OF PHARMACY

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M. Pharm, Ph D. FIC, FBSS, FAGE, FICCP, MISTE
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Cytotoxic Compounds from *Kibatalia gitingensis* (Elm.) Woodson

Dr.P Kishor , Mr.Sivakumar Peta , Dr.M Soujanya , Mrs S Usha Rani ,Mrs Vanitha Devi

Department of Pharmacognosy
Email ID:kishorpharmcog@gmail.com , Mobile no:9951850662

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ABSTRACT

The cytotoxic activities of ursolic acid (1), squalene (2), a mixture of α-amyrin acetate (3a) and lupeol acetate (3b), and isoscopoletin (4), which were extracted from the dichloromethane extracts of Kibatalia gitingensis's leaves and twigs, were tested against three human cancer cell lines: MCF-7 for breast cancer, HT-29 and HCT-116 for colon cancer, and HDFn, a normal cell line, using the in vitro PrestoBlue® cell viability assay. The IC50 values for compounds 1-4 ranged from 0.6931 to 1.083 µg/mL, indicating high cytotoxic effects against HT-29 cells. In addition, the IC50 values for 1-4 ranged from 4.065 to 11.09 µg/mL, indicating significant cytotoxicity against HCT-116 cells.

The MCF-7 cells were least affected by these substances, with IC50 values varying between 8.642 and 25.87 µg/mL. On the one hand, 2, 4 and 1, respectively, are the most cytotoxic to HT-29 cells, HCT-116 cells, and MCF-7 cells.

Key words: Subfamily Apocynaceae, Kibatalia gitingensis Cytotoxicity, MCF-7, HCT-116, HT-29, HDFn, ursolic acid, squalene, α-amyrin acetate, Lupeol acetate, isoscopoletin, and PrestoBlue® cell viability test.

INTRODUCTION

Local names for the Apocynaceae family member Kibatalia gitingensis (Elm.) Woodson include "laniti" and "laneteng-gubat" in the Philippines. According to the International Union for the Conservation of Nature's Red List of Threatened Species, it is considered susceptible to extinction.The alkaloid concentration gives it therapeutic benefits, and it is also widely utilized as a construction material and for ornamental carvings.gitingensine, a steroidal alkaloid isolated from K. gitingensis leaves, has ataraxic effects (the ability to relax smooth muscles) and antispasmodic activity (the ability to widen the arteries of skeletal muscles and the splanchnic area).5 Kibataline6,7 and 20-(epi-N-methyl) paravallarine were found in K. gitingensis leaves in other research.8 The azasteroidal alkaloid found in the plant eliminated serotonin-induced spasms and stimulated spontaneous movement in canines and mice.Paravallarine, N-methylparavallarine, and 20-epiparavallarine are among the several alkaloids extracted from K. gitingensis bark.Not only that, but lanitine (2α-hydroxy- N-methylparavallarine) and its 2β-isomer were found in the plant's stem bark, according to reports.11

Our ongoing investigation into the bioactivities and chemical compositions of native and indigenous Philippine plants includes this study. In a previous paper, we detailed the procedure for extracting and identifying ursolic acid (1), squalene (2), a combination of α-amyrin acetate (3a) and lupeol acetate (3b) from the leaves, and 1-3 and isoscopoletin.

MATERIALS AND METHODS

Sample Collection

Samples of leaves and twigs of *Kibatalia gitingensis*(Elm.) Woodson were collected from the De La Salle University–Science and Technology Complex (DLSU-STC) reforested area in February 2014. The samples were authenticated and deposited at the De La Salle University Herbarium with voucher specimen#908.

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The isolation and structure elucidation of **1-4** from the leaves and twigs of *K. gitingensis* were reported previously.[12]

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The compounds (**1-4**) from *K. gitingensis* were dissolved in dimethyl sulfoxide (DMSO) to makea 4 mg/mL stock solution. Working solutions were prepared in complete growth medium to a final non-toxic DMSO concentration of 0.1%.

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Local names for the Apocynaceae family member Kibatalia gitingensis (Elm.) Woodson include "laniti" and "laneteng-gubat" in the Philippines. According to the International Union for the Conservation of Nature's Red List of Threatened Species, it is considered susceptible to extinction.The alkaloid concentration gives it therapeutic benefits, and it is also widely utilized as a construction material and for ornamental carvings.gitingensine, a steroidal alkaloid isolated from K. gitingensis leaves, has ataraxic effects (the ability to relax smooth muscles) and antispasmodic activity (the ability to widen the arteries of skeletal muscles and the splanchnic area).5 Kibataline6,7 and 20-(epi-N-methyl) paravallarine were found in K. gitingensis leaves in other research.8 The azasteroidal alkaloid found in the plant eliminated serotonin-induced spasm and stimulated spontaneous movement in canines and mice.Paravallarine, N-methylparavallarine, and 20 epiparavallarine are among the several alkaloids extracted from K. gitingensis bark.Not only that, but lanitine (2α-hydroxy- N methylparavallarine) and its 2β-isomer were found in the plant' stem bark, according to reports.11

Our ongoing investigation into the bioactivities and chemica compositions of native and indigenous Philippine plant includes this study. In a previous paper, we detailed the procedure for extracting and identifying ursolic acid (1) squalene (2), a combination of α-amyrin acetate (3a) and lupeo acetate (3b) from the leaves, and 1-3 and isoscopoletin.

MATERIALS AND METHODS

Sample Collection

Samples of leaves and twigs of *Kibatalia gitingensis*(Elm.) Woodson were collected from the De La Salle University–Science and Technology Complex (DLSU-STC) reforested area in February 2014. The samples were authenticated and deposited at the De La Salle University Herbarium with voucher specimen#908.

Isolation and Structure Elucidation

The isolation and structure elucidation of **1-4** from the leaves and twigs of *K. gitingensis* were reported previously.[12]

Preparation of Compounds forCytotoxicity Tests

The compounds (**1-4**) from *K. gitingensis* were dissolved in dimethyl sulfoxide (DMSO) to makea 4 mg/mL stock solution. Working solutions were prepared in complete growth medium to a final non-toxic DMSO concentration of 0.1%.

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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GOKULA KRISHNA COLLEGE OF PHARMACY
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Development and Standardization of a Polyherbal Anti Urolithiatic Suspension

Pallepati Kishor*[1], Pallepati Kavitha[2], Siva Kumar Peta[3]

[1]Department of Pharmacognosy and Phytochemistry, Gokula Krishna College of Pharmacy, Sullurupeta, Nellore District, Andhra Pradesh, India

[2]Department of Pharmaceutical Chemistry, Gokula Krishna College of Pharmacy, Sullurupeta, Nellore District, Andhra Pradesh, India

[3]Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurupeta, Nellore District, Andhra Pradesh, India

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Urolithiasis,
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Antilithiatic Effect,
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Cystone

ABSTRACT

Renal terrific concentration with respect to stone forming components is mostly recognized to become one of the casual factors such as Calculogenisis. At this work, the preparation and standardization of polyherbal suspension was carried out. Proximate analysis values include percentage of the overall residue, proportion like acetone non-soluble residue, fraction of water soluble ash, percentage of moisture content and percentage of extractive values were analysed for various plants. Preliminary phytochemical analysis of various extracts of the plant revealed the presence of various constituents like glycosides, flavonoids, saponins, steroids etc. Poly-herbal anti-urolithiatic suspension was prepared by combining the prepared extracts of *Tribulus terrestris* L., *Aerva lanata* L., *Crataeva religiosa* Hook & Frost and *Emblica officinalis* L. with suspension base. The prepared formulation showed good stability and redispersibility.Inside the research project, male mice have been chosen to urolithiasis so because excretory system of male mice starts to resemble that from people and then also existing research show that having the quantity like stone discharge through female mice had been substantially lower. Such research results, thereby stimulate the need for any further research to hold over the antilithiatic effect of the polyherbal suspension to prove that more effective treatment for lithiasis with polyherbal suspension can be achieved.

*Corresponding Author

Name: Pallepati Kishor
Phone: +91 9951850662
Email: kishorpharmcog@gmail.com

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INTRODUCTION

Urolithiasis is a condition where stones form in the kidneys or the bladder. These stones are made of minerals and salts. Patients with this condition can have a variety of symptoms, depending on how severe it is. Urinary stones are calcifications that form in the kidney, ureter, or bladder [1]. They are most common in children and older adults. Urinary stones can be just like a little like a dust particle or even as big as either a tennis ball. Symptoms of urinary stones include blood in your urine, an inability to urinate, pain when urinating, increased thirst and dark urine. If untreated there is a high risk for acute renal failure resulting in kidney problems [2]. Urolithiasis is a medical term for bladder, kidney or

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
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PROFESSOR & PRINCIPAL
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PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI DT. A.P - 524121

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AN INVESTIGATION OF EFFECTIVENESS OF ALUMINIUM CHLORIDE INDUCED ALZHEIMER'S DISEASE IN VARIOUS EXPERIMENTAL RATS

P. Kishore*[1] and P. Kavitha[2]

[1*]Department of Pharmacognosy and Phytochemistry, Gokula Krishna College of Pharmacy, Sullurupet, Nellore, Andhra Pradesh, India.

[2]Department of Pharmaceutics, Gokula Krishna College of Pharmacy, Sullurupet, Nellore, Andhra Pradesh, India.

ABSTRACT

The Neuroprotective against $AlCl_3$ induced toxicity. Enhanced learning and memory was allied to ingestion of extract in rats. Al overload, AChE hyperactivity are responsible for alzheimers disease which are neutralized or reduced with treatment of extract, which might be due to the synergistic action of its active constituents. However extensive research is needed to validate the anti-alzheimeric effect of extract active components against a variety of models of AD, prior to entering into the clinical trials.

KEYWORDS

Anti-alzheimeric effect, $AlCl_3$ and AChE hyperactivity.

Author for Correspondence:

Kishore P,

Department of Pharmacognosy and Phytochemistry,

Gokula Krishna College of Pharmacy, Sullurupet,

Nellore, Andhra Pradesh, India.

Email: kirn1987@gmail.com

INTRODUCTION

As of 2020 globally, there were approximately 51 million people worldwide with Alzheimer's disease. It most often begins in people over 65 years of age, although up to 11% of cases are early-onset affecting those in their 30s to mid 60s. Women get sick more often than men. It affects about 6% of people 65 years and older[1]. In 2015, all forms of dementia resulted in about 1.9 million deaths.

Causes

Less than 1% of the time, Alzheimer's is caused by specific genetic changes that virtually guarantee a person will develop the disease.

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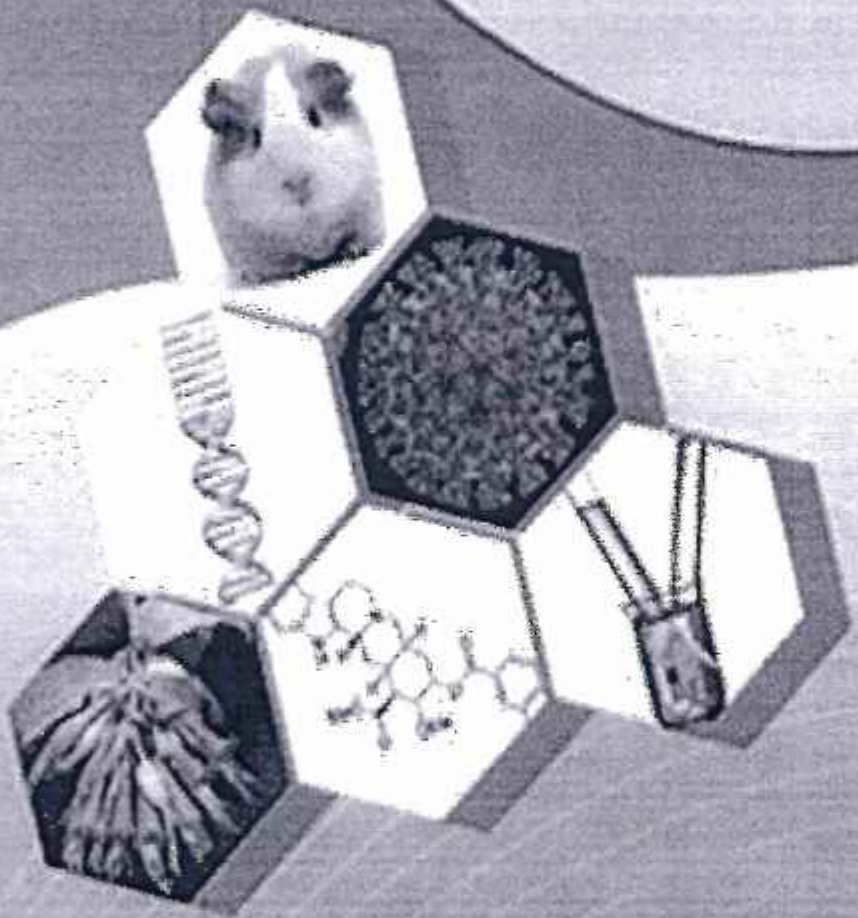

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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UV/VIS imaging-based PAT tool for drug particle size inspection in intact tablets supported by pattern recognition neural networks

Dr.Balagani Pavan Kumar,Ms.P Kavitha,Mr.C G Bhaskar ,Mrs.Y Swarupa,Mr.N Praveen Kumar

ABSTRACT

The potential of machine vision systems has not currently been exploited for pharmaceutical applications, although expected to provide revolutionary solutions for in-process and final product testing. The presented paper aimed to analyze the particle size of meloXicam, a yellow model active pharmaceutical ingredient, in intact tablets by a digital UV/VIS imaging-based machine vision system. Two image processing algorithms were developed and coupled with pattern recognition neural networks for UV and VIS images for particle size-based classification of the prepared tablets. The developed method can identify tablets containing finer or larger particles than the target with more than 97% accuracy. Two algorithms were developed for UV and VIS images for particle size analysis of the prepared tablets. According to the applied statistical tests, the obtained particle size distributions were similar to the results of the laser diffraction-based reference method. Digital UV/VIS imaging combined with multivariate data analysis can provide a new non-destructive, rapid, in-line tool for particle size analysis in tablets.

Keywords: Image analysis Machine vision Tablet inspection Particle size distribution Particle size analysis Pattern recognition neural network

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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC FDSS FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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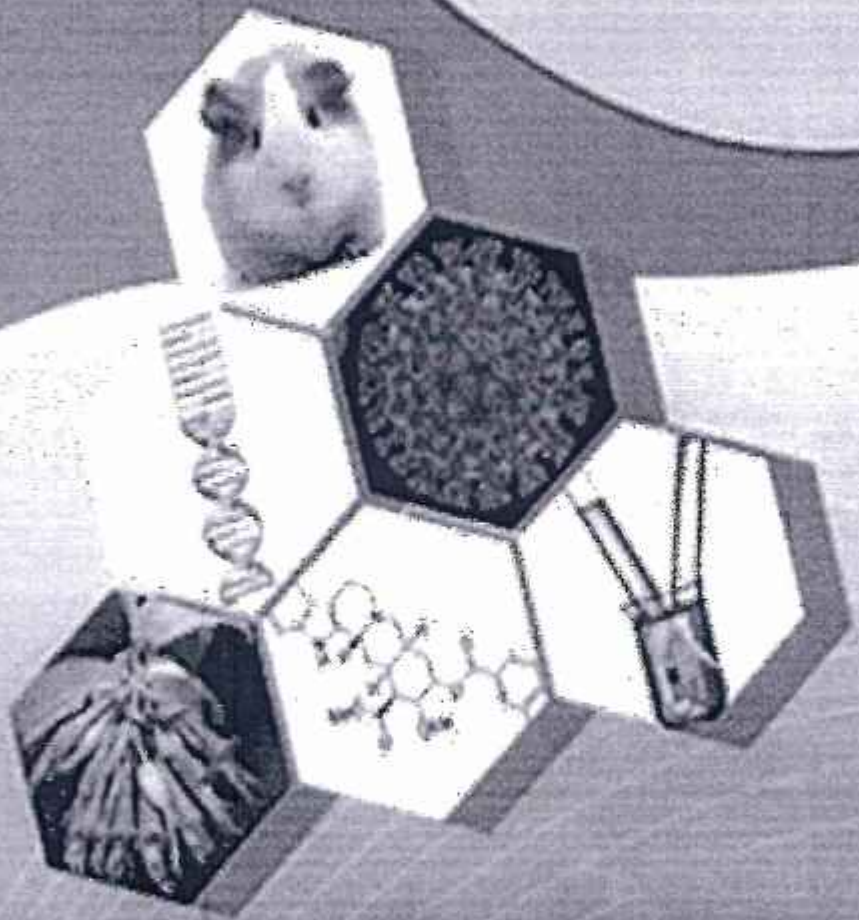

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ABSTRACT

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GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm., Ph.D, FIC, FDSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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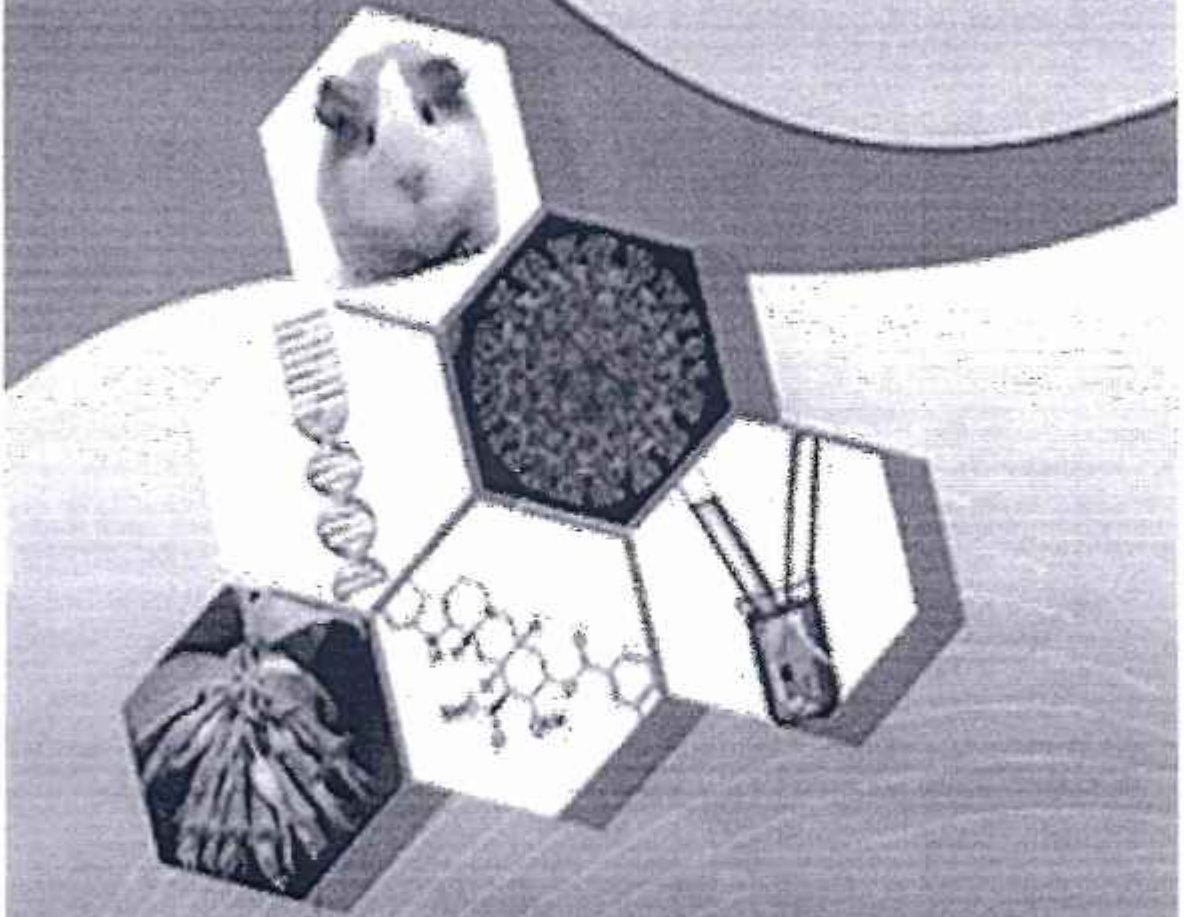

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PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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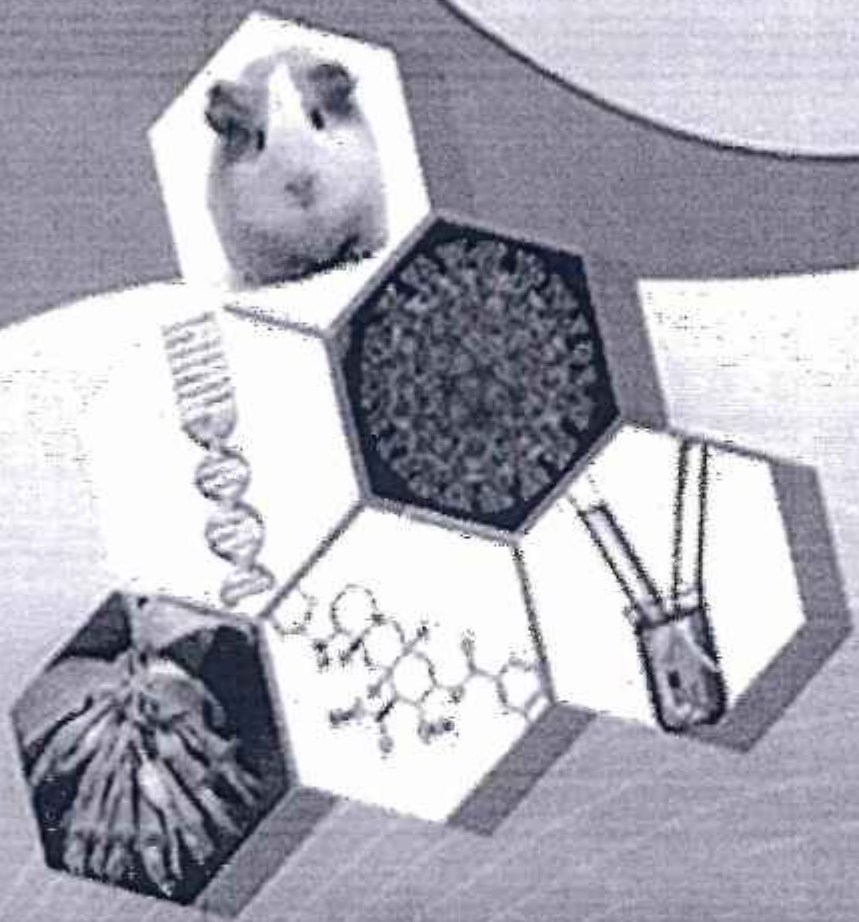

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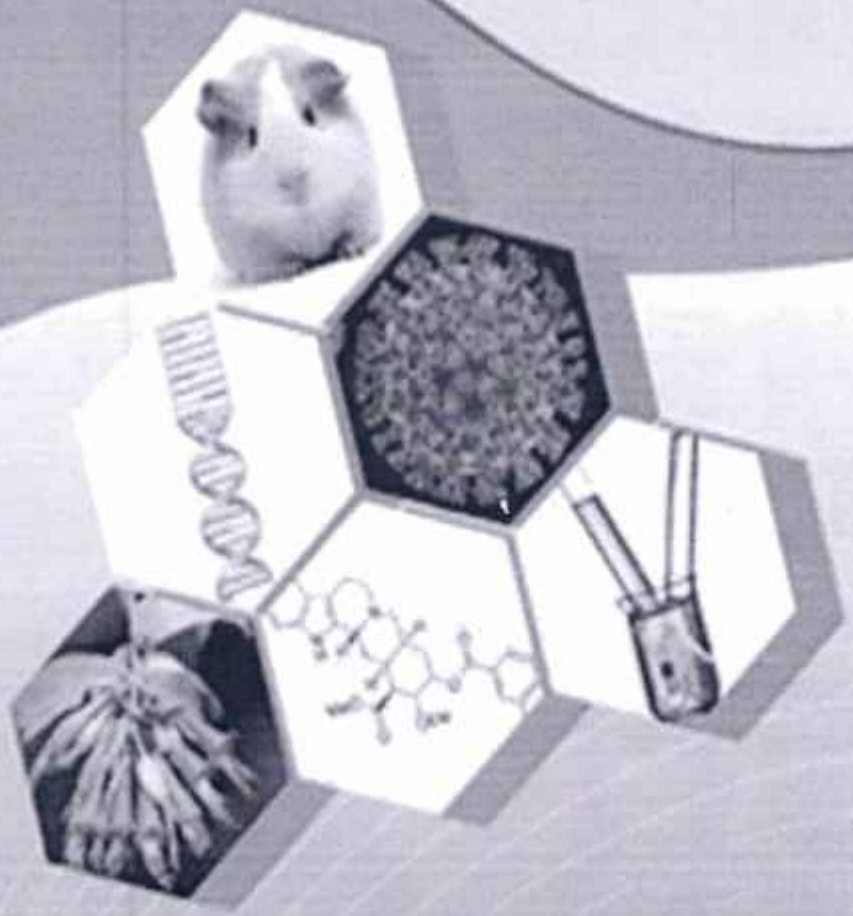

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Gokula Krishna College of Pharmacy * Excellency Efficiency Quality * SULLURPET 524 121

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

Screening of Antidepressant Activity of *Punica granatum* in Mice

Dr.P Kishor , Ms.A R Sridevi , Ms SK Zoofishaan , Mr.M Kalyan babu , Ms A Aksa Anvija
Department of Pharmacognosy
Email ID: kishorpharmcog@gmail.com , Mobile no:9951850662
GOKULA KRISHNA COLLEGE OF PHARMACY

ABSTRACT

Introduction: There are many different mental health issues, including depression, that may be alleviated with the use of the medicinal plants found in India. Acute and chronic administration of Punica granatum (pomegranate) whole fruit had an antidepressant effect on rats, which was the aim of this research. We employed an oral regimen of Punica granatum aqueous extract (250 and 500 mg/kg daily), imipramine (10 mg/kg), and gum acacia (10 ml/kg) as a carrier. Each of the four animal groupings consisted of six creatures. The acute study required the administration of medicines or vehicles 60 minutes before the experiments began. All medications and vehicles used in the long-term trial were given for a total of 14 days, with the last dosage given 60 minutes before the experiment on day 14. To evaluate the efficacy of antidepressants, researchers used the Forced Swim Test and the Tail Suspension Test. An analysis of variance (ANOVA) was performed on the data, with drug therapy being the independent variable. We used Dunnett's test to do post hoc comparisons. The results showed that the period of immobility was greatly decreased in the acute tail suspension test, chronic forced swim test, and acute swim test by the PG 500 mg/kg group, but not in the 250 mg/kg group. The groups treated with PG 250 mg/kg and 500 mg/kg showed a significant reduction in the duration of immobility in the chronic tail suspension test. At 500 mg/kg, the antidepressant effect was similar to that of 10 mg/kg of imipramine. In conclusion, this research provides further evidence that 500 mg/kg of aqueous extract of entire P. granatum fruit has antidepressant effect. Given the nutritional and functional benefits of pomegranate extract, it would be wise to recommend its use to patients suffering from depression.

Key words: Feeling down, tests for tail suspension and forced swimming, pomegranate.

INTRODUCTION

Depression is a long-term mental health condition that may strike anybody at any time. The existing arsenal of treatment is often insufficient, with disappointing outcomes in around one-third of all people treated, despite the availability of numerous powerful antidepressants.1 This gives researchers a reason to keep looking for better antidepressants. There are now more options for treating depression than the currently available synthetic medications due to their limitations. Herbal medicines are an example of an old therapy that has persisted over the years since plants have always been a source of medications. Pomegranate, scientifically known as Punica granatum L. (PG), is a popular fruit and juice variety. The Punicaceae family includes it. The Himalayas in northern India are its natural habitat. From ancient times, it has been farmed all throughout the Mediterranean.2 Valuable chemicals are found in several portions of the pomegranate fruit, including the skin, seeds, and arils. The peel contains a myriad of compounds and minerals, including gallic acid, ellagic acid, catechin, epicatechin, epigallocatechin-3-gallate, quercetin, kaempferol, luteolin, rutin, kaempferol-3-O-glycoside, gallagyldilacton, pedunculagin, tellima-grandin, and many more. The seeds contain punicic acid, linoleic acid, oleic acid, palmitic acid, stigmasterol, β-sitosterol, dau-costerol, camesterol, cholesterol, estriol, estrone, estriol, estriol, tocopherols, ursolic acid, oleanolic acid, isoflavones, and phenyl aliphatic glycosides/lignins, among other major chemical components. The components found in the aril include sugars, pectin, polyphenols, anthocyanins, fatty acids, amino and organic acids, indoleamines, sterols, triterpenoids, and α-tocopherol.3,4

In traditional medicine, pomegranate is used to cure a variety of conditions, including parasite infestations, diarrhea, acidosis, dysentery, bleeding, microbiological infections, respiratory disorders, and aphthus ulcers. It is also used as an antipyretic and vermifuge.5 Various components of the P. granatum fruit have shown anti-inflammatory, anti-cancer, anti-tumor, antihepatotoxic, anti-Diabetic, and antiatherogenic3 characteristics. Reportedly, it also helps with Alzheimer's illness.3, 7 Juice, wine,8 dried arils9, and jam are just a few examples of PG-based products that have been the subject of academic investigation.10 Despite this, research on the health benefits of P. granatum in its entire fruit form is limited. It is possible that the combined effect of the fruit's components is more effective than the sum of its parts. The central nervous system (CNS) effects of P. granatum have received little attention, and the antidepressant effects of the whole fruit have not been documented. Therefore, the purpose

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In traditional medicine, pomegranate is used to cure a variety of conditions, including parasite infestations, diarrhea, acidosis, dysentery, bleeding, microbiological infections, respiratory disorders, and aphthus ulcers. It is also used as an antipyretic and vermifuge.5 Various components of the P. granatum fruit have shown anti-inflammatory, anti-cancer, anti-tumor, antihepatotoxic, anti-Diabetic, and antiatherogenic3 characteristics. Reportedly, it also helps with Alzheimer's illness.3, 7 Juice, wine,8 dried arils9, and jam are just a few examples of PG-based products that have been the subject of academic investigation.10 Despite this, research on the health benefits of P. granatum in its entire fruit form is limited. It is possible that the combined effect of the fruit's components is more effective than the sum of its parts. The central nervous system (CNS) effects of P. granatum have received little attention, and the antidepressant effects of the whole fruit have not been documented. Therefore, the purpose

Screening of Antidepressant Activity of *Punica granatum* in Mice

Dr.P Kishor , Ms.A R Sridevi , Ms SK Zoofishaan , Mr.M Kalyan babu , Ms A Aksa Anvija
Department of Pharmacognosy
Email ID: kishorpharmcog@gmail.com , Mobile no:9951850662
GOKULA KRISHNA COLLEGE OF PHARMACY

ABSTRACT

Introduction: There are many different mental health issues, including depression, that may be alleviated with the use of the medicinal plants found in India. Acute and chronic administration of Punica granatum (pomegranate) whole fruit had an antidepressant effect on rats, which was the aim of this research. We employed an oral regimen of Punica granatum aqueous extract (250 and 500 mg/kg daily), imipramine (10 mg/kg), and gum acacia (10 ml/kg) as a carrier. Each of the four animal groupings consisted of six creatures. The acute study required the administration of medicines or vehicles 60 minutes before the experiments began. All medications and vehicles used in the long-term trial were given for a total of 14 days, with the last dosage given 60 minutes before the experiment on day 14. To evaluate the efficacy of antidepressants, researchers used the Forced Swim Test and the Tail Suspension Test. An analysis of variance (ANOVA) was performed on the data, with drug therapy being the independent variable. We used Dunnett's test to do post hoc comparisons. The results showed that the period of immobility was greatly decreased in the acute tail suspension test, chronic forced swim test, and acute swim test by the PG 500 mg/kg group, but not in the 250 mg/kg group. The groups treated with PG 250 mg/kg and 500 mg/kg showed a significant reduction in the duration of immobility in the chronic tail suspension test. At 500 mg/kg, the antidepressant effect was similar to that of 10 mg/kg of imipramine. In conclusion, this research provides further evidence that 500 mg/kg of aqueous extract of entire P. granatum fruit has antidepressant effect. Given the nutritional and functional benefits of pomegranate extract, it would be wise to recommend its use to patients suffering from depression.

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INTRODUCTION

In order to stimulate an adequate immune response, adjuvants are necessary for vaccines that include recombinant proteins.1, 2 The only adjuvants used in U.S.-approved vaccinations that are now available for purchase are aluminum hydroxide, aluminum phosphate, and aluminum salt adjuvants. In contrast to aluminum phosphate, which has a plate-like molecular structure, aluminum hydroxide, also known as boehmite (AlOOH),3 is composed of needle-like particles with sizes of 2 nm. main particles in the 50 nm range and their phology.5 When combined in a solution, the two adjuvants produce stable porous aggregates with a diameter of 1–10 mm.4,5 Several factors are likely responsible for the incompletely known mechanisms of action of aluminum salt adjuvants.

Department of Pharmaceutics,
Email ID: kavithapharma147@gmail.com , Mobile no: 9393835500
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy * SULLURPET 524 121 * Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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SULLURPET, TIRUPATI Dt. A.P - 524121

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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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The Developability Classification System: Application of Biopharmaceutics Concepts to Formulation Development

Dr.Balagani Pavan Kumar, Mrs.P K Devi Bala, Mrs P Madhavi ,Mrs M Sindhuri , Mrs.S K Lathifa

ABSTRACT: A revised classification system for oral drugs was developed using the biophar- maceutics classification system (BCS) as a starting point. The revised system is designed to have a greater focus on drug developability. Intestinal solubility, the compensatory nature of solubility and permeability in the small intestine and an estimate of the particle size needed to overcome dissolution rate limited absorption were all considered in the revised system. The system was then validated by comparison with literature on the *in vivo* performance of a number of test compounds. Observations on the test compounds were consistent with the revised classification, termed the developability classification system (DCS), showing it to be of greater value in predicting what factors are critical to *in vivo* performance than the widely used BCS.

INTRODUCTION

Following its introduction in the 1990s, the biopharmaceutics categorization system (BCS) had a significant impact on the creation of oral dosage forms with instant release (IR). This method replaced in vivo human trials with in vitro data to prove bioequivalence of low risk (BCS class I) chemicals.One, two Furthermore, the BCS provides a framework for considering critical factors (dosage, solubility, permeability, and dissolution rate) that may impact a drug's efficacy in the body. Beyond identifying biowaiver-friendly medications, these factors likely also characterize the CQAs that affect in vivo effectiveness. When thinking about quality by design (QbD), it is very important to have a good understanding of these when developing oral pharmaceutical items.3 Because of the heavy regulatory burden on the BCS, the classification scheme rightfully treads carefully when deciding which product properties, such solubility and/or dissolution rate, are most important for limiting oral absorption. Considering that To prioritize patient safety, it is vital to accurately categorize product modifications that cause changes to in vivo performance rather than misclassify those that do not. Permeability is a feature of the drug molecule that is not expected to vary with product and process changes, hence changes to the

Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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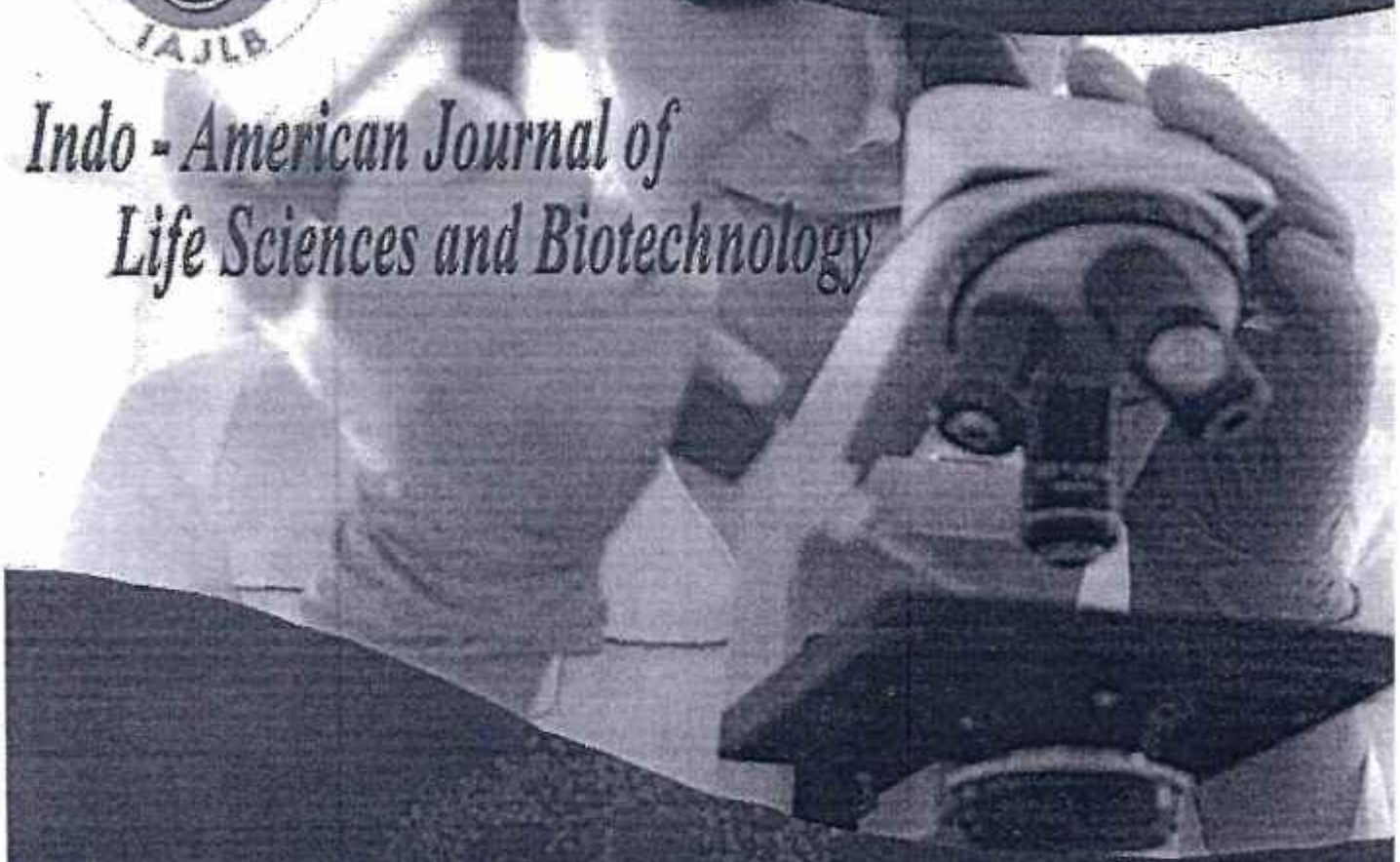

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Department of pharmaceutics,
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GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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SULLURPET 524 121

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D FIC FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC. FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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The Developability Classification System: Application of Biopharmaceutics Concepts to Formulation Development

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GOKULA KRISHNA COLLEGE OF PHARMACY
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Mr.Sivakumar Peta , Dr,C Rajaram,Mr.AVLS Ramakrishna,Mr M R Pavan Kumar,Mr Y Naveen Kumar
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Email ID: sivapeta369@gmail.com , Mobile no: 9494144800
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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Mrs T Swathi *et. al* International Journal of Pharmacetical Sciences Letters

A randomised, parallel, open-label clinical study comparing the effectiveness and safety of apremilast with methotrexate in individuals with moderate to severe palmoplantar psoriasis.

Mrs T Swathi , Mr.T Nagendra Kumar,Mr.M R Pavan Kumar,Mrs. Y R Anitha,Mrs.P Sukanya

Department of Pharmacology

Email ID: swathibhaskarthumma25@gmail.com,Mobile no:9494640005

GOKULA KRISHNA COLLEGE OF PHARMACY

Abstract:

Various studies have revealed varying outcomes regarding the safety and effectiveness of apremilast in comparison to methotrexate. Therefore, more research into the function of Apremilast in palmoplantar psoriasis is required.Patients with moderate to severe palmoplantar psoriasis were the subjects of a randomized, prospective, parallel-group, open-label trial. For 16 weeks, they were randomly assigned to either the methotrexate group (n = 19) or the apremilast group (n = 22). Reduced scores on the modified palmoplantar psoriasis severity index (mPPPASI) from week 0 to week 16 served as the primary effectiveness metric. Additional metrics included the percentage of patients who achieved a Static Physician Global Assessment score of 0 (clear) or 1 (almost clear), the percentage of patients who achieved mPPPASI75 (75% reduction in mPPPASI score) by the end of 16 weeks, and the proportion of patients who demonstrated a dermatology life quality index decline of at least 5àpoints from the beginning.At 16 weeks, there was no statistically significant difference between the two groups in terms of m-PPPASI score drop, however there was a significant decline from week 0 to week 16 within the group. The secondary efficacy measures had identical outcomes. Out of the twenty-four adverse events documented in the methotrexate group, three individuals had abnormal liver function tests. Out of the 19 adverse events documented in the apremilast group, 2 patients had an infection of the upper respiratory tract.In the treatment of moderate to severe palmoplantar psoriasis, apremilast is just as effective as methotrexate, but it is more tolerable.Static Physician Global Assessment, Dermatology Life Quality Index, Palmoplantar Psoriasis, Palmoplantar Psoriasis Area and Severity Index, Apremilast

It is more likely for psoriasis to appear before the age of 30. The high expense of therapy and the significant psychological and social effects of psoriasis have a negative effect on sufferers' quality of life (QOL).[2]

Scalp, face, intertrigonous, genital, palmoplantar, and nail psoriasis are the many types of psoriasis that may be found. Patients with palmoplantar psoriasis have more limited mobility and fewer self-care options, and they also have varying responses to medicines.the thirdTopical

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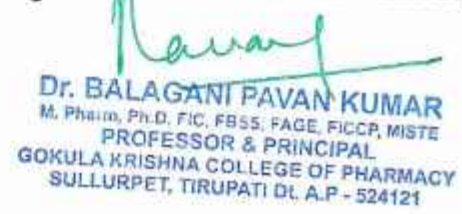

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Mrs T Swathi *et. al* International Journal of Pharmacetical Sciences Letters

A randomised, parallel, open-label clinical study comparing the effectiveness and safety of apremilast with methotrexate in individuals with moderate to severe palmoplantar psoriasis.

Mrs T Swathi , Mr.T Nagendra Kumar,Mr.M R Pavan Kumar,Mrs. Y R Anitha,Mrs.P Sukanya

Department of Pharmacology

Email ID: swathibhaskarthumma25@gmail.com,Mobile no:9494640005

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M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Behind RTC Depot, Sullurupeta, Tirupati Dist, A.P, INDIA - 524121

Mobile : 9948990116 E-Mail : gkcpsp@rediffmail.com website: www.gkcp.edu.in

NO. OF RESEARCH PAPERS PUBLISHED PER TEACHER IN THE JOURNALS NOTIFIED ON UGC CARE LIST DURING THE LAST FIVE YEARS

CALENDER YEAR - 2020

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2	The Proteome of Filter-Grown Caco-2 Cells With a Focus on Proteins Involved in Drug Disposition	Mr.Sivakumar Peta	History of Medicine studies	1300-669
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GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

History of Medicine Studies

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The Proteome of Filter-Grown Caco-2 Cells With a Focus on Proteins Involved in Drug Disposition

Ms. C B Hanisha , Mr.Sivakumar Peta ,Mr.S Bugga Reddy , Mr AVLS Ramakrishna , Ms M Sowmya

Abstract

Research on the physiology of intestinal cells and drug transport often makes use of Caco-2 cells. In this study, the total protein technique was used to quantify the global proteome of filter-grown Caco-2 cells. The results were compared with proteomes from the human colon and jejunum. There were a total of 8096 proteins found. Thorough examination of proteins that characterize enterocyte development, such as adherens and tight junctions, integrins, and brush-border hydrolases, provided almost exhaustive coverage of the anticipated proteins. Out of the 327 proteins that were found, 112 were solute carriers and 20 were ATP-binding cassette transporters; these proteins were involved in absorption, distribution, metabolism, and excretion. The levels of OATP2B1 were sixteen times more in Caco-2 cells compared to jejunum. At clinically relevant intestine concentrations, OATP2B1 accounted for 60%-70% of the uptake kinetics of pitavastatin, an OATP2B1 substrate, in Caco-2 monolayers. We aimed to understand how this discrepancy affected in vitro-in vivo extrapolations. Together, pitavastatin kinetics and transporter concentrations were used to simulate the role of active transport and membrane penetration in the jejunum. Pitavastatin absorption in vivo is mostly mediated via transmembrane diffusion, as shown by the much decreased transporter contribution (<5%) caused by the lower OATP2B1 expression in the jejunum. The first comprehensive measurement of the Caco-2 proteome produced in a filter has been presented here. To correctly interpret drug transport pathways in the human gut, we also show that transporter expression levels are very important.

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Borchardt and Wilson were the first to use Caco-2 cells to study active transport processes, including transport of bile proteins, vitamins, amino acids, and peptides.6,8-10 Since methods for identifying or knocking off the target transporter were just recently developed, functional studies dominated their groundbreaking work and the subsequent many investigations. Modern mass spectrometry has made it feasible to map the whole Caco-2 cell proteome.

Department of Pharmaceutics
Email ID: hanisha777@gmail.com , Mobile no:8019538344
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Research on the physiology of intestinal cells and drug transport often makes use of Caco-2 cells. In this study, the total protein technique was used to quantify the global proteome of filter-grown Caco-2 cells. The results were compared with proteomes from the human colon and jejunum. There were a total of 8096 proteins found. Thorough examination of proteins that characterize enterocyte development, such as adherens and tight junctions, integrins, and brush-border hydrolases, provided almost exhaustive coverage of the anticipated proteins. Out of the 327 proteins that were found, 112 were solute carriers and 20 were ATP-binding cassette transporters; these proteins were involved in absorption, distribution, metabolism, and excretion. The levels of OATP2B1 were sixteen times more in Caco-2 cells compared to jejunum. At clinically relevant intestine concentrations, OATP2B1 accounted for 60%-70% of the uptake kinetics of pitavastatin, an OATP2B1 substrate, in Caco-2 monolayers. We aimed to understand how this discrepancy affected in vitro-in vivo extrapolations. Together, pitavastatin kinetics and transporter concentrations were used to simulate the role of active transport and membrane penetration in the jejunum. Pitavastatin absorption in vivo is mostly mediated via transmembrane diffusion, as shown by the much decreased transporter contribution (<5%) caused by the lower OATP2B1 expression in the jejunum. The first comprehensive measurement of the Caco-2 proteome produced in a filter has been presented here. To correctly interpret drug transport pathways in the human gut, we also show that transporter expression levels are very important.

Introduction

The human colon carcinoma Caco-2 cell line was originally iso- lated by Fogh et al.[1] Zweibaum et al. introduced the use of filter- grown Caco-2 monolayers for studies of epithelial cell physiology and reported on its spontaneous differentiation to an enterocyte- like phenotype.[2,3] This paved the way for scientists in the pharma- ceutical field to apply this cell line for the study of solute transport and absorption. [4-7]

Borchardt and Wilson were the first to use Caco-2 cells to study active transport processes, including transport of bile proteins, vitamins, amino acids, and peptides.6,8-10 Since methods for identifying or knocking off the target transporter were just recently developed, functional studies dominated their groundbreaking work and the subsequent many investigations. Modern mass spectrometry has made it feasible to map the whole Caco-2 cell proteome.

Department of Pharmaceutics
Email ID: hanisha777@gmail.com , Mobile no:8019538344
GOKULA KRISHNA COLLEGE OF PHARMACY

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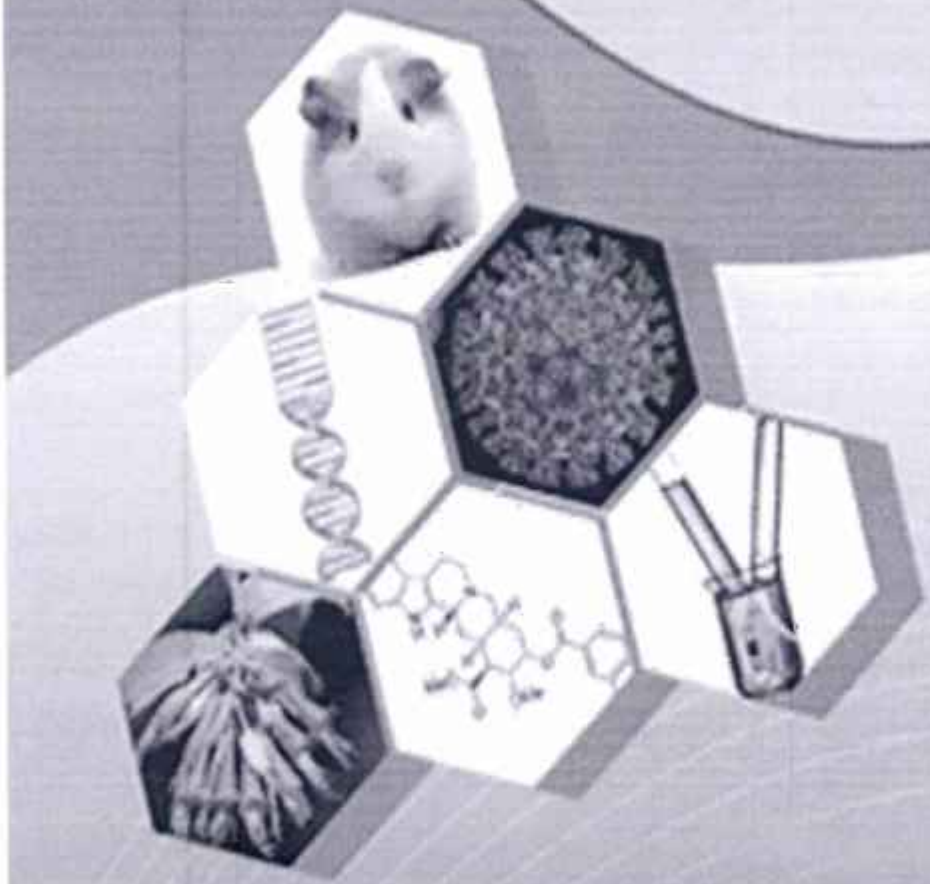

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Keywords: *Factorial Design; Validation; RP-HPLC; ICH guideline; Valethamate bromide (VLB)*

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Department of Pharmaceutical Chemistry
Email ID: ushapharma107@gmail.com,Mobile no:9491835288
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
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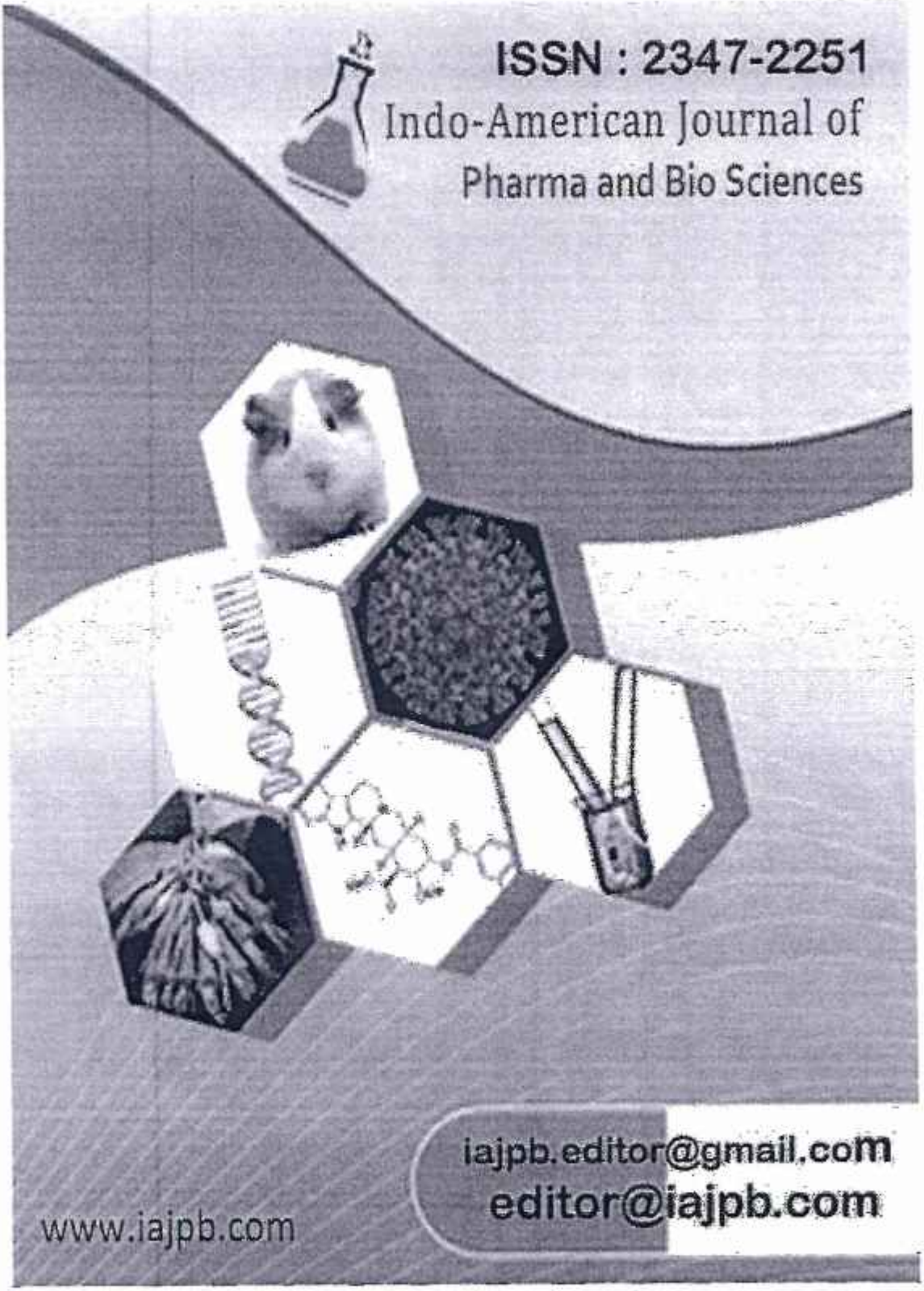
SULLURPET, TIRUPATI Dt. A.P - 524121



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PROFESSOR & PRINCIPAL
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SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of Pharmaceutical Chemistry
Email ID: ushapharma107@gmail.com,Mobile no:9491835288
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
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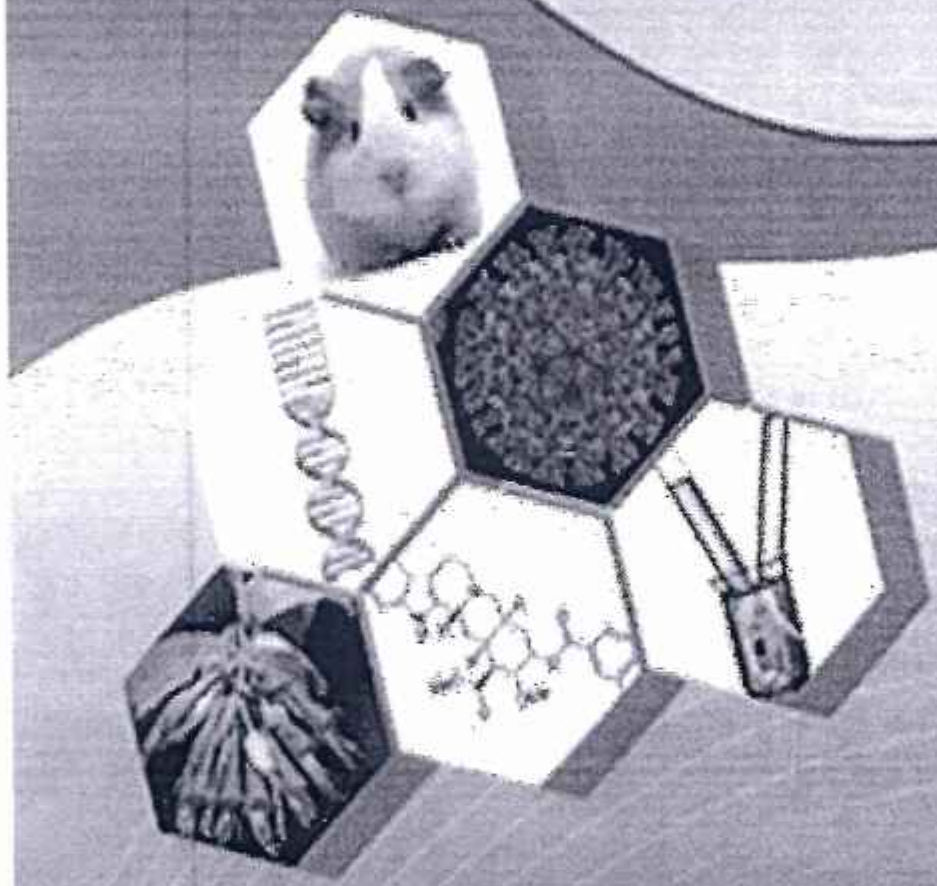

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Department of Pharmaceutical Chemistry
Email ID: ushapharma107@gmail.com,Mobile no:9491835288
GOKULA KRISHNA COLLEGE OF PHARMACY

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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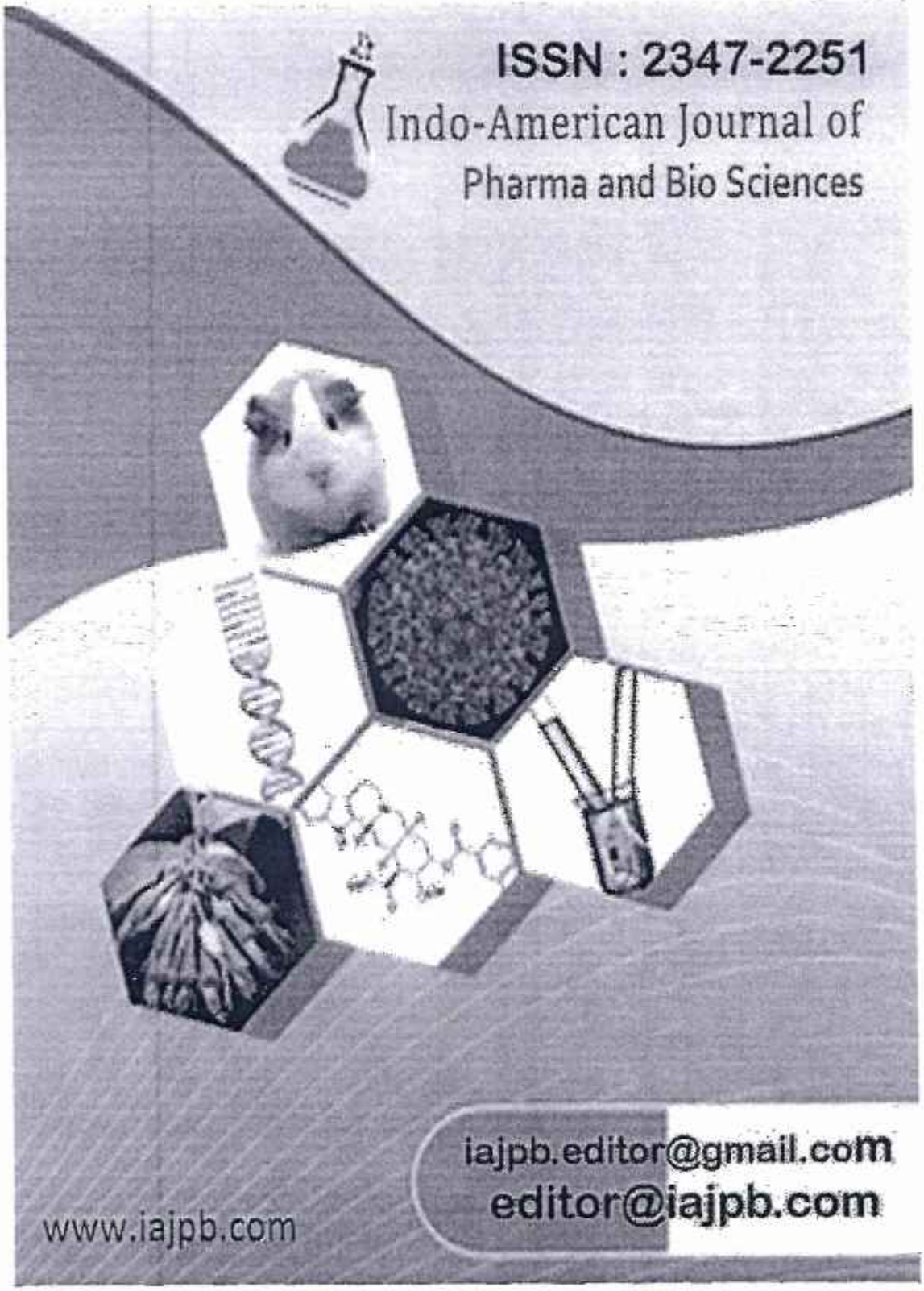

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SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of Pharmaceutical Chemistry
Email ID: ushapharma107@gmail.com,Mobile no:9491835288
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy
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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
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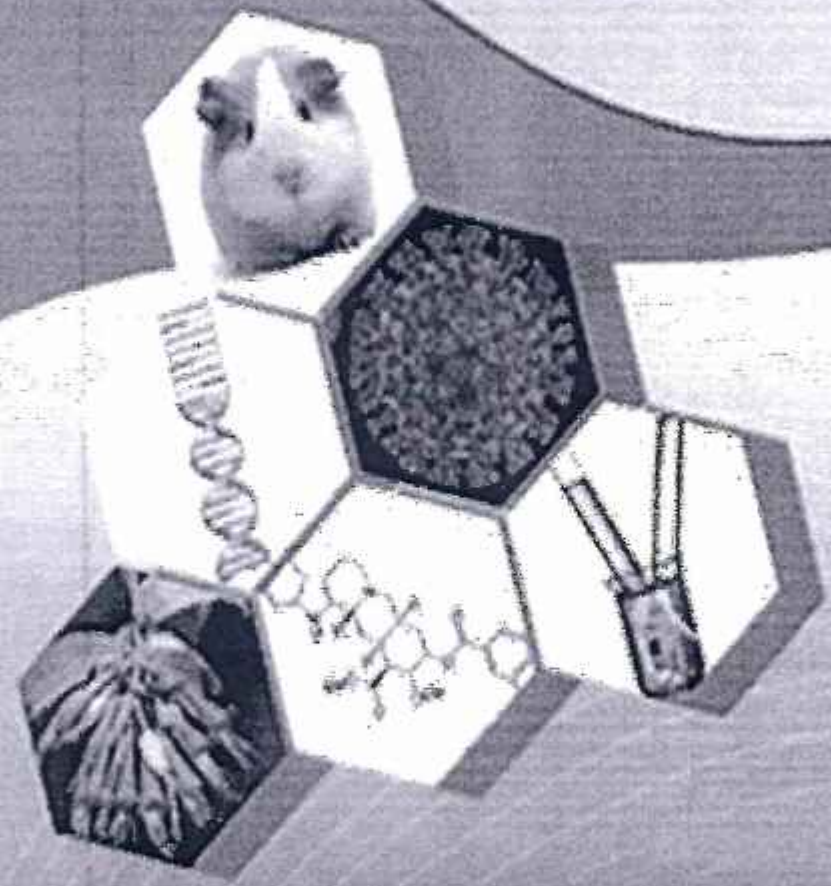

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Department of Pharmaceutical Chemistry
Email ID: ushapharma107@gmail.com,Mobile no:9491835288
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Equality Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Ms A R Sridevi *et. al* International Journal of Pharmacetical Sciences Letters

A tertiary care hospital's drug resistance profile in instances of gastrointestinal and postbiliary surgical-site infections

Ms.A R Sridevi ,Mrs.S Usharani ,Mr.SSivakotewara Rao ,Mr.B Nagendra Prasad, Mr.M Kalyan Babu
Department of pharmacology
Email ID: sridevipharma93@gmail.com,Mobile no: 9182727657
GOKULA KRISHNA COLLEGE OF PHARMACY

Abstract:

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Search Terms:

Minimum inhibitory concentration, health care-associated infection, surgical-site infection, extended-spectrum beta-lactamase, and methicillin-resistant Staphylococcus aureus Despite being avoidable in over half of instances, surgical-site infections (SSIs) are linked to higher rates of patient morbidity, death, and healthcare-associated costs.Up to 30% of patients in poor and medium income countries who have surgery are affected by surgical site infections (SSIs), making them the most prevalent kind of healthcare-associated illness (HAI).[2] SSI is the second most common kind of healthcare-associated infection (HAI), accounting for up to 20% of all HAIs in developed nations.[5]

Introduction

The average SSI rate here was 4.2%, according to a comprehensive multicentric research that included data from six Indian cities.Bacterial isolates associated with SSIs are typically found in healthcare settings, where medication resistance is prevalent. Drug resistance may be associated with surgery-related variables such emergency operations and extended surgical prophylaxis.For

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Surgical-site infection (SSI)-associated bacteria in underdeveloped regions are showing signs of increasing medication resistance, which is leading to more severe complications and increased healthcare expenses. The pattern of medication resistance in our SSI-related isolates was our aim in this analysis. Wound swabs were treated using standard aerobic and anaerobic culture for 191 clinically confirmed SSIs (postbiliary tract and postgastrointestinal surgery) during a 2-year period. The Epsilometer was used to determine the minimum inhibitory concentration (MIC) of the antibiotic. According to the criteria, phenotypes of multidrug resistance were identified. There were 5.3% SSIs, mostly caused by Klebsiella, Staphylococcus, and Pseudomonas, with no anaerobes found. Nineteen percent of the Staphylococcus aureus bacteria were resistant to methicillin, and a third of those bacteria showed an elevated macrolide minimum inhibitory concentration (MIC). Out of all the Enterobacteriaceae isolates, about 58.2% were found to generate extended-spectrum beta-lactamases. We found isolates that had a higher meropenem MIC. The dangerously increasing proportion of antibiotic resistance in SSI patients is accompanied with MICs that are rapidly nearing resistance in susceptible isolates. Immediate remedial measures are required by law.

Search Terms:

Minimum inhibitory concentration, health care-associated infection, surgical-site infection, extended-spectrum beta-lactamase, and methicillin-resistant Staphylococcus aureus Despite being avoidable in over half of instances, surgical-site infections (SSIs) are linked to higher rates of patient morbidity, death, and healthcare-associated costs.Up to 30% of patients in poor and medium income countries who have surgery are affected by surgical site infections (SSIs), making them the most prevalent kind of healthcare-associated illness (HAI).[2] SSI is the second most common kind of healthcare-associated infection (HAI), accounting for up to 20% of all HAIs in developed nations.[5]

Introduction

The average SSI rate here was 4.2%, according to a comprehensive multicentric research that included data from six Indian cities.Bacterial isolates associated with SSIs are typically found in healthcare settings, where medication resistance is prevalent. Drug resistance may be associated with surgery-related variables such emergency operations and extended surgical prophylaxis.For

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Ms A R Sridevi *et. al* International Journal of Pharmacetical Sciences Letters

A tertiary care hospital's drug resistance profile in instances of gastrointestinal and postbiliary surgical-site infections

Ms.A R Sridevi ,Mrs.S Usharani ,Mr.SSivakotewara Rao ,Mr.B Nagendra Prasad, Mr.M Kalyan Babu

Department of pharmacology

Email ID: sridevipharma93@gmail.com,Mobile no: 9182727657

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PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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The Impact of Shear Stress on Compression-nduced Polymorphic Transformation in Tablets and the Creation of Strategies to Minimize It

Mrs.P K Devi Bala , Dr.MSujanya ,Ms.A Manogna ,Mr B Kondal rao , Mrs.Y R Anitha

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Department of pharmaceutics,
Email ID: devinov15@gmail.com,Mobile no:9177579805
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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Email ID: devinov15@gmail.com,Mobile no:9177579805
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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2	3-Thiocyanato- 1*H*- indoles as potential anticancer agents: Two dimensional quantitative structure activity relationship study	Dr.M.Soujanya	International Journal of Pharmaceutical Sciences Letters	2277-2685
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6	Analysis on fat-soluble components of sinapissemina from different habitats by GC–MS	Ms A R Sridevi	International Journal of Gender, Science and Technology	2040-0748

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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M. Pharm, Ph.D, FIC [illegible] FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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GOKULA KRISHNA COLLEGE OF PHARMACY
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Mr.Sivakumar Peta *et. al* International Journal of Pharmacetical Sciences Letters

3-Thiocyanato- 1*H*- indoles as potential anticancer agents: Two dimensional quantitative structure activity relationship study

Mr.Sivakumar Peta ,Dr.M.Soujanya , Mrs.S.Usharani , Mr.B.Kondalrao
Department of Pharmaceutical Chemistry,
Email ID: sivapeta369@gmail.com , Mobile no: 9494144800
GOKULA KRISHNA COLLEGE OF PHARMACY

Abstract

We conducted two-dimensional quantitative structure activity relationship (2D QSAR) research on a new series of 3-thiocyanato-1H-indoles in an effort to identify powerful anti-cancer drugs. variety of 3-thiocyanato-1H-indoles were subjected to 2D-QSAR using Vlife MDS 4.3.The k-nearest neighbors (kNN) approach, used to Vlife molecular design suites (MDS), yielded a statistically verified two-dimensional quantitative structure activity relationship model. Cytotoxicity activity against the HL60 human cancer cell line was associated with Model 3 statistical data (q2 = 0.8001, pred r2 = 0.4082). The LOO approach was used for validation.Final Thoughts: The model now includes three attributes that positively correlate with the cytotoxicity activity. There is hope that novel, more effective anticancer drugs could be developed using this proven 2D QSAR model.

Keywords: 2-dimensional quantum search for anticancer drugs using regression analysis, 3-thiocyanato-1H-indoles; HL60 cell line.

Introduction

The unique capacity of the compounds produced by heterocyclic chemistry to bind reversibly to proteins and imitate the structure of peptides makes it a very useful source of new molecules with various biological functions.(1) to four (3) Indole, also known as benzopyrrole, is a heterocyclic compound with one nitrogen atom (N) substituted for one carbon atom in the ring. As a privileged structure that binds to several receptors with high affinity, the indole moiety is widespread and ranks among the most prevalent hetrocycles among physiologically active natural compounds, medicines, and agrochemicals (5). The therapeutic implications of Indole have been highlighted in published publications as follows: anti-viral, anti-depressant, anti-hyperlipidemic, anti-inflammatory, anti-psychotic, anti-microbial, anti-oxidants, anti-HIV, immunomodulator, anti-leukemia, (19).(21-22) Natural substances with strong pharmacodynamic Indole nucleus activity include reserpine, bufotenine, tryptophan, serotonin, vinblastine, vincristine, tryptamine derivatives, and others.

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Gokula Krishna College of Pharmacy * SULLURPET 524 121 * Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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3-Thiocyanato- 1*H*- indoles as potential anticancer agents: Two dimensional quantitative structure activity relationship study

Mr.Sivakumar Peta ,Dr.M.Soujanya , Mrs.S.Usharani , Mr.B.Kondalrao
Department of Pharmaceutical Chemistry,
Email ID: sivapeta369@gmail.com , Mobile no: 9494144800
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To ensure the efficacy of herbal medicines, quality control is essential, and one aspect of this procedure is regularly monitoring the amounts of chemical ingredients [4,5]. Herbal remedies have a complicated chemical makeup, and the quantification of substances depends on factors such as harvest time, storage conditions, processing technique, and environmental factors. A lot of places have started growing Sinapis semina.

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Comparative pharmacokinetics of chlorogenic acid after oral administration in rats

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Ms Y Radhika
Department of Pharmaceutical Analysis
Email ID: nagamanasa36@gmail.com , Mobile no:7288837695
GOKULA KRISHNA COLLEGE OF PHARMACY

Abstract

The present study was aimed at the comparison of the pharmacokinetics of pure chlorogenic acid and extract of *Solanum lyratum* Thunb. The animals were allocated to two groups, and were administered chlorogenic acid or extract of *S. lyratum* Thunb. at a dose of 50.0 mg/kg orally. Blood samples were collected up to 8 h post-dosing. Plasma chlorogenic acid analyses were performed using an HPLC method with UV detector. The pharmacokinetic parameters were evaluated using non-compartmental assessment. Significant differences existed in the two groups for AUC_{0-t}, $AUC_{0-\infty}$ and CLz/F. The reliable HPLC method was successfully applied to the determination of chlorogenic acid in rat plasma at dosage of 50.0 mg/kg.

1. Introduction

Solanum lyratum Thunb (Solanaceae) is one of the most valued Chinese traditional medicines. It is well known as "*Herba Solani Lyrati*" in mainland of China, which has been used for regulating body immune function and ability [1–4]. It was also reported to have anticancer activity [5]. The plantis known to contain steroidal glucuronides, steroidal alkaloid glucosides, coumarin and phenolic acid, etc. [6–10].

Chlorogenic acid (3-*O*-caffeoylquinic acid) is composed of quinic acid and caffeic acid. It is the major active component of *S. lyratum*, and its amount could reach up to 3.0 mg/g [11]. The compound has a variety of biological activities such as anti-microbes, anti-virus, oxidation prevention, anti-tumor and anti-hypertension [12].

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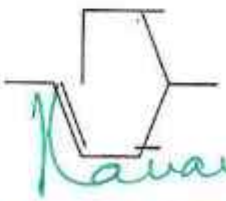

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

Comparative pharmacokinetics of chlorogenic acid after oral administration in rats

Ms S Naga manasa , Mr.Sivakumar Peta , Mr AVLS Ramakrishna , Mr.B.NagendraPrasad
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Department of Pharmaceutical Analysis
Email ID: nagamanasa36@gmail.com , Mobile no:7288837695
GOKULA KRISHNA COLLEGE OF PHARMACY

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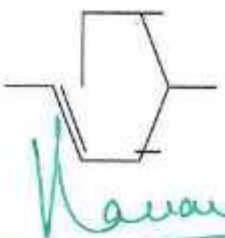

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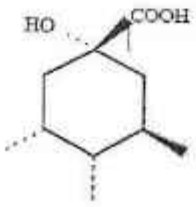

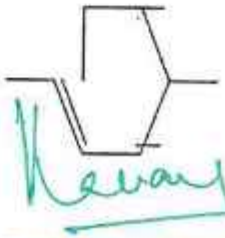

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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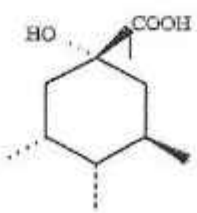

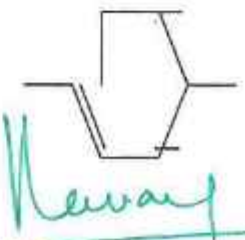

Gokula Krishna College of Pharmacy
SULLURPET
524 121
Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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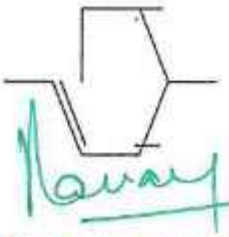

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A Study on the Characterization and Stability Implications of Investigating Local Mobility in Amorphous Pharmaceuticals

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Keywords: Amorphous, solid dispersion, lyophilization, mobility, and crystallization

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Department of Pharmaceutics
Email ID: devinov15@gmail.com , Mobile no: 9177579805
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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GOKULA KRISHNA COLLEGE OF PHARMACY
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SULLURPET
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PROFESSOR & PRINCIPAL
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A Study on the Characterization and Stability Implications of Investigating Local Mobility in Amorphous Pharmaceuticals

Mrs. P K Devibala,Dr.B. Pavan kumar , Ms KVanithadevi ,MR B Kondalrao , Mrs Y Swaroopa

ABSTRACT: There has been a deluge of research on the relationship between molecular mobility and the physical and chemical stability of amorphous drugs in recent years. Glass transition and global mobility-related molecular movements have been the primary targets of these investigations. There were, however, a handful of cases where the volatility could not be explained by international migration. The idea that b-relaxations, which occur at local scales well below the glass transition temperature, may be impacting stability is gaining traction. One common method for determining an amorphous pharmaceutical's mobility below the glass transition temperature (Tg) is to extrapolate data collected above Tg. While not well-suited to pinpointing precise local mobility, this kind of investigation may provide data about mobility in general. Our main goal from a pharmacological standpoint is to prove that local movements are important in amorphous drugs, especially in the Johari-Goldstein relaxations. In order to highlight the possible influence of local mobility on the stability of amorphous phases, an assessment of the coupling model was carried out that linked local movements with global mobility. We took into account the effects of water and other additives when studying the local movements in an amorphous matrix present in molecular dispersions. In conclusion, we have offered a concise review, highlighting the advantages and disadvantages, of the most widely used instrumental methods for characterizing local movements. To this day, Wiley-Liss, Inc., the publisher, has all rights.

Keywords: Amorphous, solid dispersion, lyophilization, mobility, and crystallization

INTRODUCTION

Pharmaceutical companies often produce amorphous forms of certain APIs used in drug formulation.1 An increasingly well-known problem that this method solves is the sluggish pace of dissolution caused by compounds' poor water solubility.1 As a result of their higher free energies, amorphous states may be less physically stable; crystallization tendencies are one indicator of this. Reduced chemical stability may also cause an intolerably short storage life. Thus, there is a lot of focus in the field right now on predicting stability and making amorphous pharmaceuticals. Investigators in the pharmaceutical industry have good cause to wonder if there is a link between molecular dynamics and the stability of amorphous phases.

Department of Pharmaceutics
Email ID: devinov15@gmail.com , Mobile no: 9177579805
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of Pharmaceutics
Email ID: devinov15@gmail.com , Mobile no: 9177579805
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellence Ethics

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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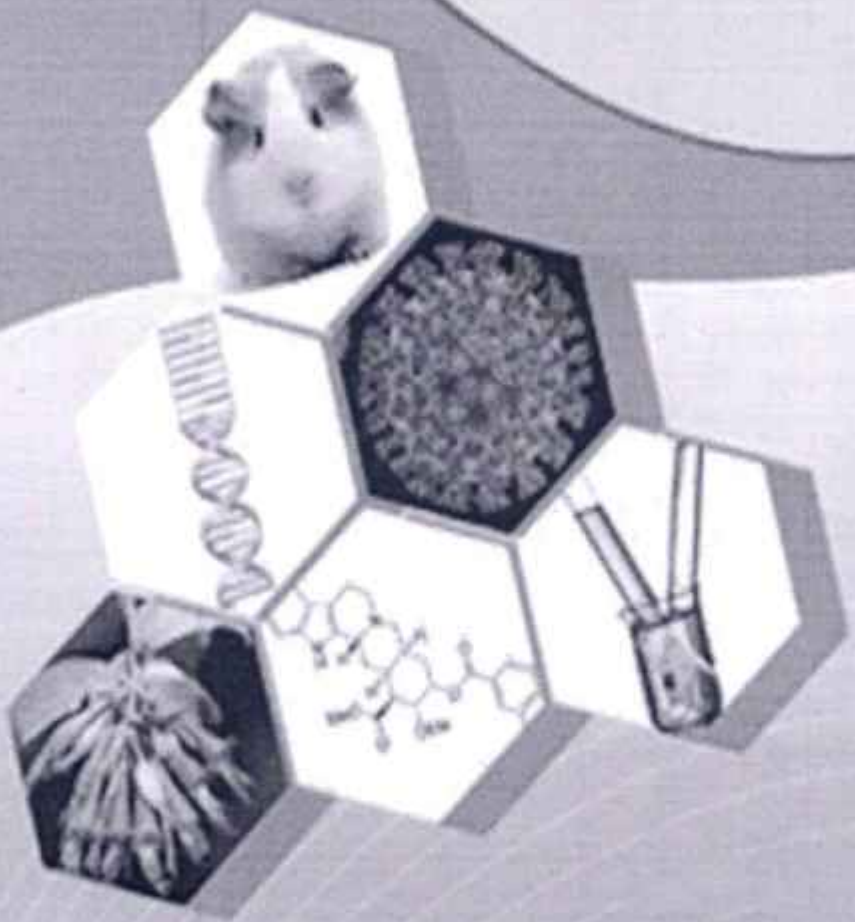

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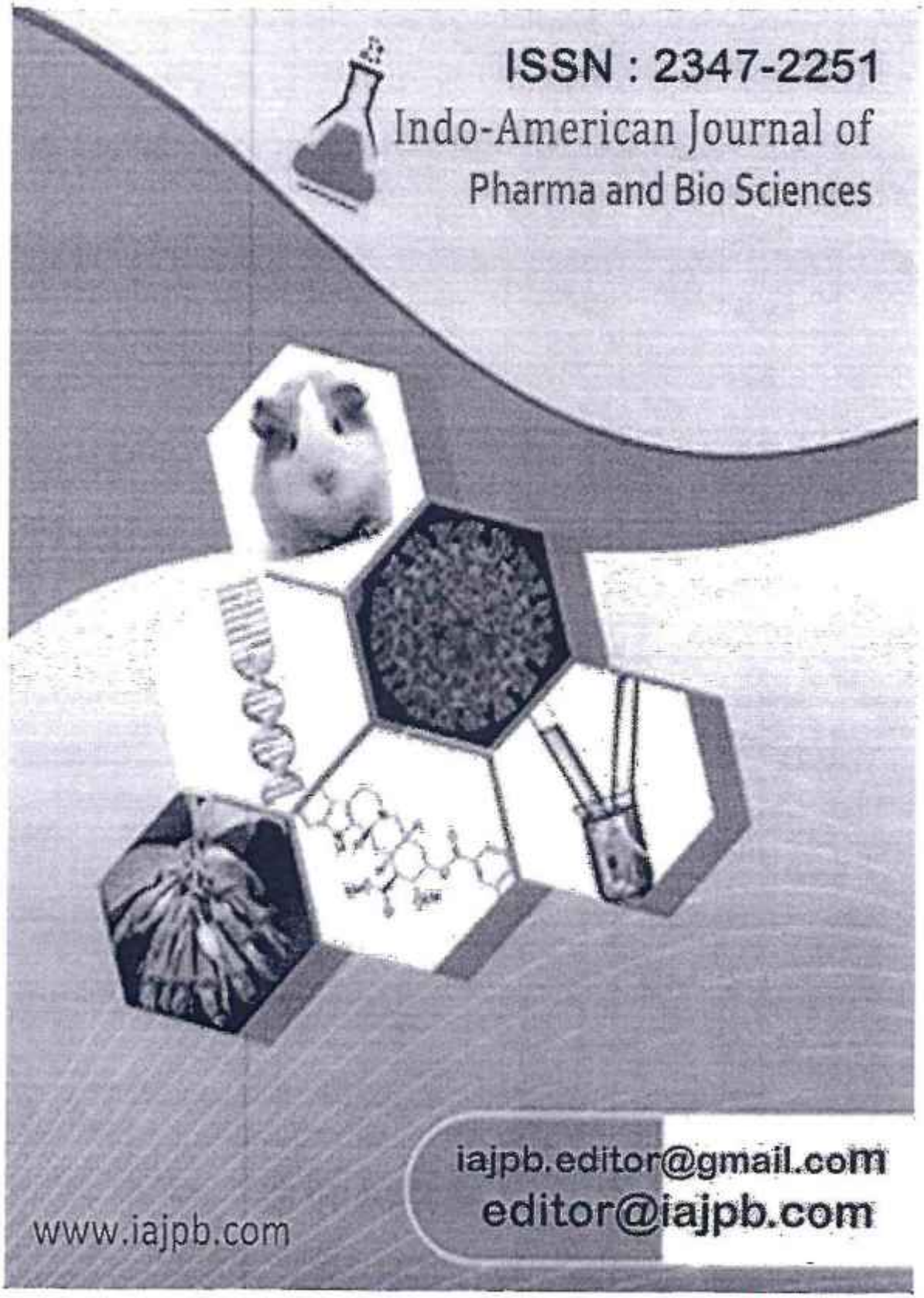
Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no:9849280380.
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121



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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no:9849280380.
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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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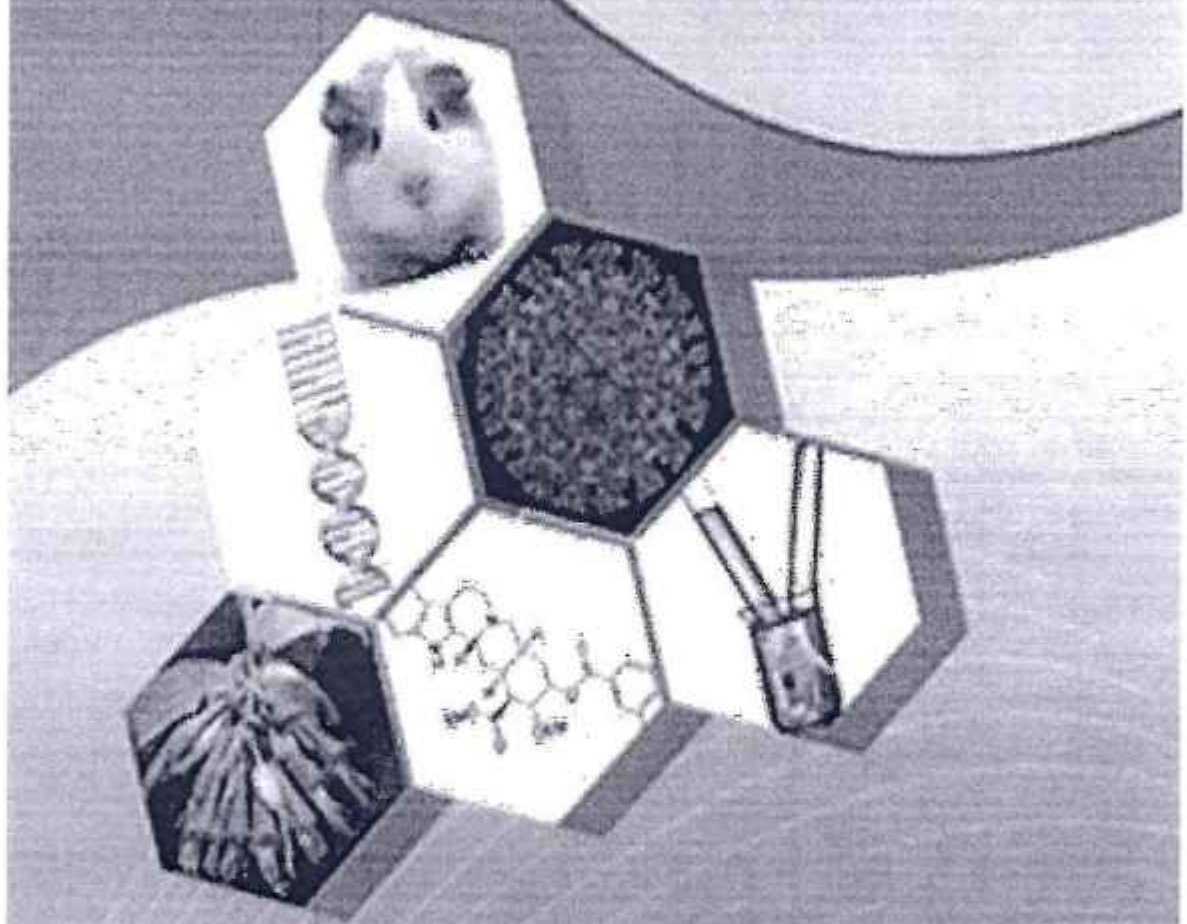

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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no:9849280380.
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
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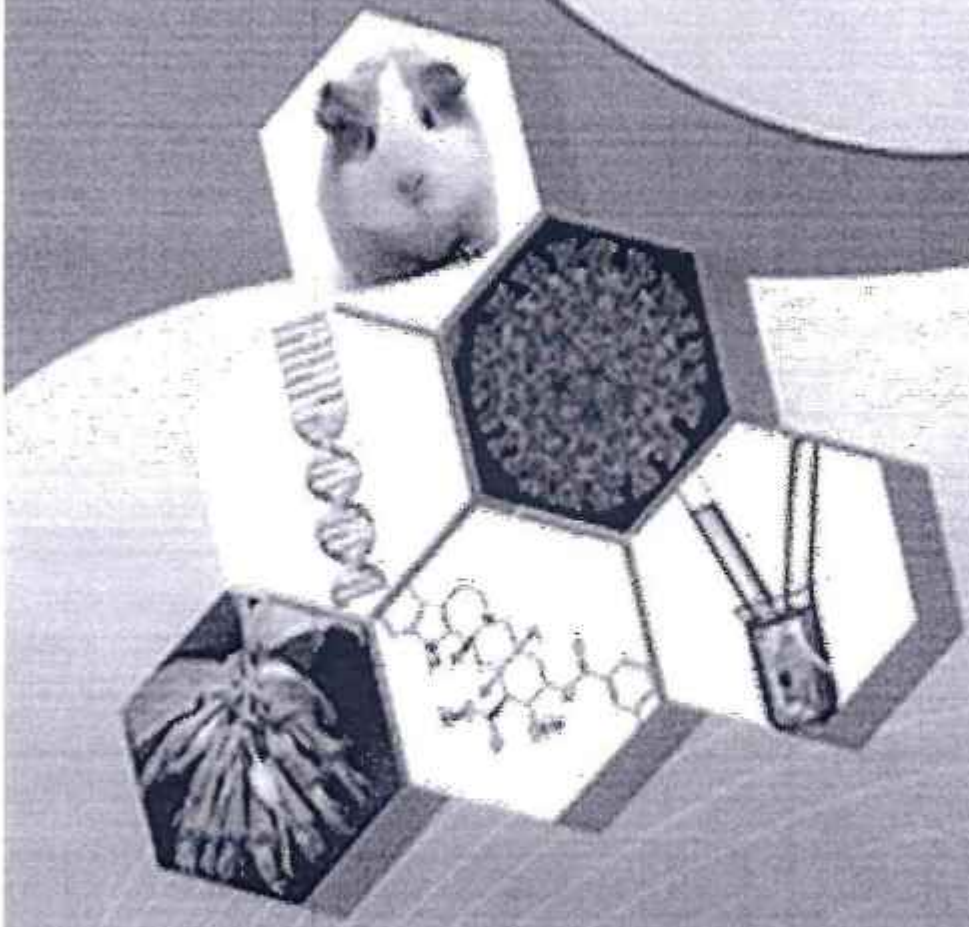

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Department of pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no:9849280380.
GOKULA KRISHNA COLLEGE OF PHARMACY

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FGSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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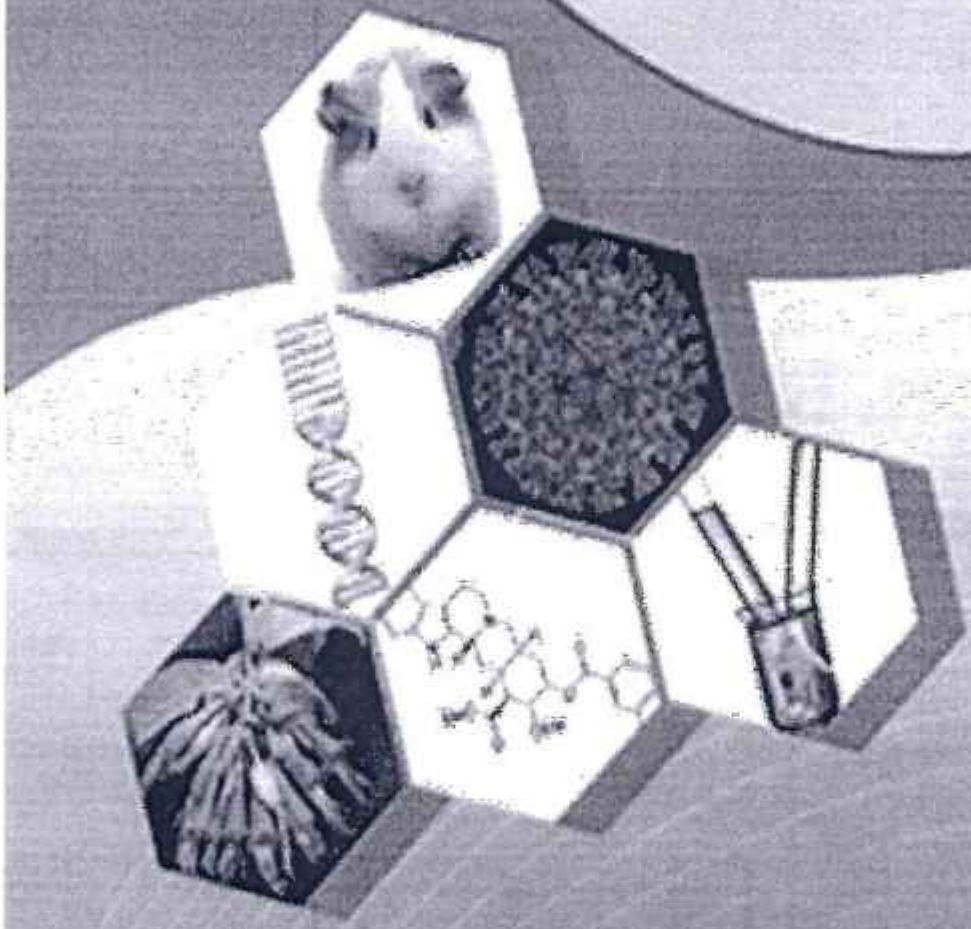

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
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GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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2	A thorough analysis of Thymus serpyllum's traditional uses, phytochemistry, pharmacology, and toxicity	Ms.B.Geethanjali Bai.	International Journal of Pharmaceutical Sciences Letters	2277-2685
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7	A four-strain probiotic exerts positive immunomodulatory effects by enhancing colonic butyrate production in vitro	Mr.K.R.S.C Bharath kumar	Indo-American Journal of Life sciences and Biotechnology	2347-2243

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICC, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Ms.A R Sridevi *et. al* International Journal of Pharmacetical Sciences Letters

A thorough analysis of Thymus serpyllum's traditional uses, phytochemistry, pharmacology, and toxicity

Ms A R Sridevi,Ms.B.Geethanjali Bai.,Mr C G Bhaskar,Ms.A.AksaAnvija,Ms B silpa
Department of pharmacology
Email ID: sridevipharma93@gmail.com , Mobile no: 9182727657
GOKULA KRISHNA COLLEGE OF PHARMACY

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Keywords:

Pharmacological properties, phytochemistry, *Thymus serpyllum*, toxicity, traditional applications

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Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D. FIC FBSS FAGE FICCP MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Ethics Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
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Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Email : editor@iajlb.com or iajlb.editor@gamil.com

Gokula Krishna College of Pharmacy
SULLURPET
524 121

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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A four-strain probiotic exerts positive immunomodulatory effects by enhancing colonic butyrate production in vitro

Ms.P Kavitha ,Mr.K.R.S.C Bharath kumar,Mrs.M.Sindhuri ,Ms P Madhavi , Mr.Y.Naveenkumar

ABSTRACT - The purpose of this contribution is to evaluate the cytotoxicity and apoptosis inducing ability of structurally diverse anthraquinones to establish a relationship between structure and toxicity. Besides the wide spread use of anthraquinones in pharmacological drugs for constipation and non-prescription dietary supplements for weight loss, extracts are still commercialized as crude extracts and long-term side effects are still relevant. In this work we developed a method to quantify the cascarosides isolated from *Rhamnus purshiana* (Cascara Sagrada) using LC-MS/MS and evaluated the effects of this extract and isolated compounds on cellular viability using NOK-SI, HeLa, and T98G cell lineages. Apoptosis inducing ability was also analyzed via evaluating key-proteins involved in apoptosis pathways. Using cascarosides isolated from bark extracts, we found that the presence of glucose moieties in the chemical structure reduced the toxicity. This communication reviewed the mechanisms of action, toxicity of anthraquinones and correlated the toxicity with chemical structures of cascarosides. Results indicate that cascarosides-enriched cascara extract, as well as glycosylated anthraquinones, may have some beneficial effects for laxative action of herbal medicines. Considering our results, a cascarosides-enrichment in cascara extract is recommended.

INTRODUCTION

Anthraquinones are extensively present in nature, found in plants, bacteria, fungi, and insects. They are widely used as pharmacological drugs for constipation and as non-prescription dietary supplements for weight loss. Currently, these compounds are used to treat a variety of conditions because of their wide ranging biological activities, including anti-inflammatory, antifungal, antibacterial, antiviral, and antiarthritic actions (1).

Due to the cytotoxic action of some anthraquinone components, as doxorubicin (natural), daunorubicin (natural) and valrubicin (semisynthetic), several medicines have been developed to treat cancer (1-3). One important mechanism of action for cytotoxic agents used in cancer treatment is apoptosis induction. However, apoptosis is also responsible for the long-term sideeffects – as mucosa darkening – of anthraquinone- rich plants.

The mucosa darkening, also known as pseudo- melanosis coli, is a lipofuscin-like pigment found in macrophages from colonic lamina propria. The melanosis coli has been linked to the chronic use of laxative/purgative anthranoid-rich plants (4, 5). Despite effective laxative action of anthraquinone- rich plants, clinical studies demonstrated that 73.4% of patients who chronically used anthranoids laxatives had melanosis coli, showing a clear association between anthraquinones and colon darkening (6). Histological studies have shown that a large number of apoptotic bodies are not caused by natural renewal, but by laxative action, suggesting that melanic substances are formed by the action of anthraquinones (7). Chen *et al.* (8) proposed a melanosis-forming mechanism that correlated the accumulation of pigments to the long-term use of these natural compounds. When such compounds enter the colon, they produce a laxative effect and damage the epithelial cells. These cells release TNF- α for the cell renewal induction mechanism via triggering apoptosis. Furthermore, damaged epithelial cells are phagocytized by macrophages, which migrate to *lamina propria* of the epithelium. In the *lamina propria*, the apoptotic bodies become lipofuscin, giving rise to black patches that darken the colon.

Department of pharmaceutics,
Email ID: kavithapharma147@gmail.com , Mobile no: 9393835500
GOKULA KRISHNA COLLEGE OF PHARMACY

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Gokula Krishna College of Pharmacy
SULLURPET
524 121
Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of pharmaceutics,
Email ID: kavithapharma147@gmail.com , Mobile no: 9393835500
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of pharmaceutics,
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GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
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SULLURPET, TIRUPATI Dt. A.P - 524121

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Department of pharmaceutics,
Email ID: kavithapharma147@gmail.com , Mobile no: 9393835500
GOKULA KRISHNA COLLEGE OF PHARMACY

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A four-strain probiotic exerts positive immunomodulatory effects by enhancing colonic butyrate production in vitro

Ms.P Kavitha ,Mr.K.R.S.C Bharath kumar,Mrs.M.Sindhuri ,Ms P Madhavi , Mr.Y.Naveenkumar

ABSTRACT - The purpose of this contribution is to evaluate the cytotoxicity and apoptosis inducing ability of structurally diverse anthraquinones to establish a relationship between structure and toxicity. Besides the wide spread use of anthraquinones in pharmacological drugs for constipation and non-prescription dietary supplements for weight loss, extracts are still commercialized as crude extracts and long-term side effects are still relevant. In this work we developed a method to quantify the cascarosides isolated from *Rhamnus purshiana* (Cascara Sagrada) using LC-MS/MS and evaluated the effects of this extract and isolated compounds on cellular viability using NOK-SI, HeLa, and T98G cell lineages. Apoptosis inducing ability was also analyzed via evaluating key-proteins involved in apoptosis pathways. Using cascarosides isolated from bark extracts, we found that the presence of glucose moieties in the chemical structure reduced the toxicity. This communication reviewed the mechanisms of action, toxicity of anthraquinones and correlated the toxicity with chemical structures of cascarosides. Results indicate that cascarosides-enriched cascara extract, as well as glycosylated anthraquinones, may have some beneficial effects for laxative action of herbal medicines. Considering our results, a cascarosides-enrichment in cascara extract is recommended.

INTRODUCTION

Anthraquinones are extensively present in nature, found in plants, bacteria, fungi, and insects. They are widely used as pharmacological drugs for constipation and as non-prescription dietary supplements for weight loss. Currently, these compounds are used to treat a variety of conditions because of their wide ranging biological activities, including anti-inflammatory, antifungal, antibacterial, antiviral, and antiarthritic actions (1).

Due to the cytotoxic action of some anthraquinone components, as doxorubicin (natural), daunorubicin (natural) and valrubicin (semisynthetic), several medicines have been developed to treat cancer (1-3). One important mechanism of action for cytotoxic agents used in cancer treatment is apoptosis induction. However, apoptosis is also responsible for the long-term sideeffects – as mucosa darkening – of anthraquinone- rich plants.

The mucosa darkening, also known as pseudo- melanosis coli, is a lipofuscin-like pigment found in macrophages from colonic lamina propria. The melanosis coli has been linked to the chronic use of laxative/purgative anthranoid-rich plants (4, 5). Despite effective laxative action of anthraquinone- rich plants, clinical studies demonstrated that 73.4% of patients who chronically used anthranoids laxatives had melanosis coli, showing a clear association between anthraquinones and colon darkening (6). Histological studies have shown that a large number of apoptotic bodies are not caused by natural renewal, but by laxative action, suggesting that melanic substances are formed by the action of anthraquinones (7). Chen *et al.* (8) proposed a melanosis-forming mechanism that correlated the accumulation of pigments to the long-term use of these natural compounds. When such compounds enter the colon, they produce a laxative effect and damage the epithelial cells. These cells release TNF- α for the cell renewal induction mechanism via triggering apoptosis. Furthermore, damaged epithelial cells are phagocytized by macrophages, which migrate to *lamina propria* of the epithelium. In the *lamina propria*, the apoptotic bodies become lipofuscin, giving rise to black patches that darken the colon.

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Email ID: kavithapharma147@gmail.com , Mobile no: 9393835500
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
M. Pharm, Ph.D, FIC, FDSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI Dt. A.P - 524121

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Dr.Balagani Pavan Kumar, Mrs. P K Devibala, MsC.B.Hanisha, Mrs. Swaroopa Ms.A.Manogna

ABSTRACT: A number of PK/PD models have been established, building on various classical pharmacology foundations; these models are based on the principles of pharmacological action and the primary physiological processes that limit or turnover the drug's effectiveness. You can design better PK/PD or small system models by adding complexity to many fundamental models; tolerance is only one of many such additions. We demonstrate all of these concepts in our corticosteroid models, along with features of the horizontal and vertical integration of molecular to whole-body processes. The potential advantages and disadvantages of moving PK/PD towards systems models are outlined here. The paper "J Pharm Sci 102:2930-2940" was published in 2013 and was written by Wiley Periodicals, Inc. and the American Pharmacists Association. Words like "pharmacodynamics," "systems pharmacol-ogy," "mathematical models," "dosage response," and "indirect response models" are utilized.

INTRODUCTION

The areas of pharmacokinetics and pharmacodynamics (PK/PD) emerged from a long history of understanding basic pharmacological principles, mostly in relation to static or in vitro methods. A wide variety of small-to-large systems models have evolved to capture drug actions at various levels of biological structure, and several basic PK/PD models for in vivo drug effects have evolved into more complicated ones. This review will go over the various areas that have embraced pharmacometrics and PK/PD, highlight key aspects of popular PK/PD models, demonstrate how to construct models that enhance PK/PD and small systems models, and highlight the difficulties in creating more accurate quantitative approaches for larger systems models.

Department of Pharmaceutics,
Email ID: pavan.gkcp@gmail.com , Mobile no: 9849280380
GOKULA KRISHNA COLLEGE OF PHARMACY

Gokula Krishna College of Pharmacy SULLURPET 524 121 Excellency Efficiency Quality

Dr. BALAGANI PAVAN KUMAR
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Dr. BALAGANI PAVAN KUMAR
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M. Pharm, Ph.D, FIC, FBSS, FAGE, FICCP, MISTE
PROFESSOR & PRINCIPAL
GOKULA KRISHNA COLLEGE OF PHARMACY
SULLURPET, TIRUPATI DT. A.P - 524121