



05<sup>th</sup> International Conference on  
Integration of AI and Traditional Medicine in Drug Discovery  
*January 05<sup>th</sup> and 06<sup>th</sup>, 2024*



5<sup>th</sup> International Conference on Traditional Medicine

# Integration of AI and Traditional Medicine in Drug Discovery

January 05<sup>th</sup>-06<sup>th</sup>, 2024

## SMBT CAMPUS

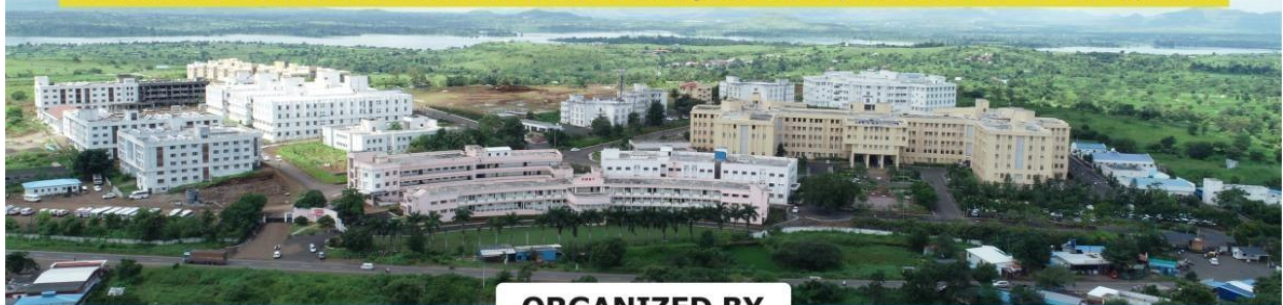
THE BEST CAMPUS LIFE

5<sup>th</sup> International Conference on Traditional Medicine  
Integration of AI and Traditional Medicine  
in Drug Discovery

**MEDICAL | AYURVED | DENTAL | PHARMACY | NURSING**

More Details : [www.ictm2024smbt.in](http://www.ictm2024smbt.in)

**Venue : SMBT Sevabhavi Trust's Educational Campus, Nashik, Maharashtra - 422403, India**



**ORGANIZED BY**

**SMBT Sevabhavi Trust's  
SMBT INSTITUTE OF DIPLOMA PHARMACY**

Nandihills, Dhamangaon, Tal. Igatpuri, Dist. Nashik, Maharashtra-422403, India.



05<sup>th</sup> International Conference on  
Integration of AI and Traditional Medicine in Drug Discovery  
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# **ICTM 2024 SCIENTIFIC PROCEEDING**



International  
Journal Of

PharmaO<sub>2</sub>



International Journal  
Of PharmaO<sub>2</sub>



Chief Editor:  
DRx. Vidyavardhini Y. Ushir

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## Welcome Message

Dear all Delegates and Participants

SMBT is pleased to welcome all the participants from different states and various countries to attend 05<sup>th</sup> International conference on ‘Integration of AI and Traditional Medicine in Drug Discovery’ Health during January 5<sup>th</sup> and 6<sup>th</sup>, 2024 at Nashik, India. The theme of the conference is “Integration of AI and Traditional Medicine in Drug Discovery” This ICTM 2024 deals with the current research developments in the field of Traditional Medicine and also about the new treatment methods which are devised by scientists to treat various diseases in an easier way. These forums get together acts as a best platform for participants to learn about the recent trends in quality assurance and phytochemical research and development in traditional medicines.

The ICTM 2024 is focuses on recent research and development on Traditional Medicine and clinical study of herbal medicines. The session are emphasized on

1. Traditional medicines- sources & clinical application
2. Quality assurance Of Traditional Medicine
3. Phytochemistry – isolation and use of active principles.
4. Trade of natural products and Traditional Medicine
5. Biological screening of natural medicines.
6. Herbal Formulations

Eight lectures will be presented by distinguished scientists. The researchers will be able to report their research finding in paper presentations and poster presentations. Poster Presentation awards and paper presentation awards will be presented each to academician/ research scholar and students. We would like to thank to the SMBT management for their help and encouragement during the preparatory stage of the conference. Our grateful thank for the scientific committee for processing abstracts and proceedings book in time. Our special thank for the organizing committee who have done their most to offer a successful and satisfying conference. We wish you all a fruitful conference which strengthen friendship and traditional medicine. We hope everyone enjoy their stay in Nashik and take home new scientific knowledge and inspiration.

**...SMBT Educational Trust**



**Dr. Yogesh V. Ushir**  
Programme Chair,  
Principal, SMBT Institute of D. Pharmacy

**Organizing Committee Members**



Mr. K.A. Suryavanshi



Mr. K. J. Tiwari



Ms. B.D. Tambe



Mr. V. R. Mahajan



Ms. M. Y. Gaikwad



Ms. P.C. Patil



Ms. D.S. Varma



Ms. P.T. Jundre



Ms. S.S. Rajora



Ms. V.P. Patole



Ms. V.N. Wagh

**ICTM 2024 Pre-conference**  
**Scientific Program Schedule**

**Date-04/01/2024 Venue-Conference Hall, IODP**

<b>Sr.No.</b>	<b>Time(IST Mumbai)</b>	<b>Activity</b>	<b>Topic</b>
1	12.30pm to 1.30pm	<b>Registration of Pre-conference</b>	-----
2	1.30pm to 2.30pm	<b>Session I Asst. Prof. Dwi Marlina Syukri Malahayati University, Indonesia</b>	Antibacterial effect of Eucalyptus against Streptococcus pyogenes
3	2.30pm to 3.30pm	<b>Session II Assist. Prof. Dr. Jaturong Pratungdejkul Mahidol University Thailand.</b>	Integrating In silico Technology into Drug Discovery from Herbal and Traditional Medicines: Bridging Nature's Potential with Computational Precision



## ICTM 2024 Conference

### Scientific Program Schedule 05<sup>th</sup> January 2024 Venue- SMBT Educational Campus

Day1	<b>Breakfast</b>		8:30-9:30am		
	<b>Registration</b>		8.30 – 9.30 am	Registration	
	<b>Opening ceremony</b>	Inauguration	09:30-10:00am		
			09.30am-09.33am	Vision, Mission and SMBT Value	
		Remarks	09.34am-09.36am	Lamp lightning	
			09.37am-09.40am	Welcome Address Dr. Y. V. Ushir, Programme chair ICTM-2024	
			09.40am-09.45am	Felicitation by ICTM coordinator	
			09.46am-09.50 am	Dr. Harshal Tambe MT SMBT Trust	
		National Anthem	09.51am-09.54am	Anthem	
		Group Photo	09.55am- 10.00am	Auditorium stage	
	<b>End of opening ceremony</b>				
	<b>Plenary session-I</b>	Genetic Development of Stx phage using Artificial Intelligence Bioedit	10.00am To 10.45am	Prof. Tessa Sjahriani, Dept. of Microbiology, Malahayati University, Indonesia	Co- chairs: Mr.Akshay Daswad Dr. Sakshi Waghmare
	10.46am to 10.50am. <b>Session open for Interaction</b>				
	10.51am to 10.55am <b>Felicitation of Speaker and Moderators</b>				
	10.56am to 11.00am <b>Dissemination of Book</b>				



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<b>Plenary session-II</b>	AI Driven Exploration Potentials for Indigenous Knowledge Systems	11.00am To 11.45am	Lt. Col. Dr. Asanka Pallewatta Gampaha Wickramarachchi University of Indigenous Medicine, SriLanka	Co-chairs: Mrs. Manjula Patel Dr.Nitin Gaikwad
11.46am to 11.50am. <b>Session open for Interaction</b>				
11.51am to 12.00noon <b>Felicitation of Speaker and Moderators</b>				
<b>Plenary session-III</b>		12.01am To 12.30pm	SHRISHTI SESSION	-----
Lunch Break 12.30pm To 1.30pm				
<b>Plenary session-IV</b>	Metabolomics as an AI tool to define biomarkers for biological activity and Yield optimisation	2.00pm To 2.45 pm	Dr. RuAngelie Edrada Ebel Head, The Natural products Metabolomics group. University of Strathclyde, Glasgow, UK.	Co-chairs: Dr. Shekhar Kokate Ms. Maya Gaikwad
2.46pm to 2.50pm <b>Session open for Interaction</b>				
2.51pm to 3.00pm <b>Felicitation of Speaker and Moderators</b>				
3.00pm to 3.15pm <b>High Tea</b>				
<b>Scientific Sessions</b>	<b>Paper Presentation</b>	3.16p m To 4.30pm	IMSRC Demonstration Room SPA 01 To SPA 07	Coordinator: Ms. Darshana Varma Mrs. Lalita Pagar
	<b>Poster Presentation</b>	3.16p m To 4.30pm	IMSRC Demonstration Room SPO 01 To SPO 20	Coordinator:: Ms. Snehal Rajora Mr. Kiran Aher
<b>End of Day 1</b>				

## ICTM 2024 Conference

### Scientific Program

#### Schedule

06<sup>th</sup> January 2024 Venue-SMBT Educational Campus

<b>Breakfast 9:00-10:00am</b>				
<b>Plenary Session-V</b>	Professionalism in Pharmacy: Issues, challenges and emerging role of Pharmacists in global health in Asia	10.01 am to 10.45am	Assoc. Prof. Dr. Gulam Muhammad Khan  Pokhara University, Nepal	Co-chairs:  Mr. John Surender Mr. Kiran Suryavanshi
10.46am to 10.50am. <b>Session open for Interaction</b>				
10.51am to 10.55am <b>Felicitation of Speaker and Moderators</b>				
10.56am to 11.00am <b>Dissemination of Book</b>				
<b>Plenary Session-VI</b>	Bridging traditions and innovations: Exploring natural products in Drug Discovery through the Lens of tradition medicine and AI	11.01 am to 11.45 am	Prof. Obeta Ifeanyi Sebastian, Data Analyst (NLP)- Cambridge University, UK.	Co-chairs:  Mr. Kundan Tiwari Ms. Poonam Jundre
11.46am to 11.50am. <b>Session open for Interaction</b>				
11.51am to 11.55am <b>Felicitation of Speaker and Moderators</b>				
<b>Plenary</b>	Fortification of meals with the invention from banana peels to boost the nutritional value of food	11.56 am  To	Asst. Prof. Dwi Marlina Syukri Dept. of Microbiology, Malahayati University, Indonesia	Co-chairs:  Dr. Renuka Morghare



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	Session- <b>VII</b>		12.40pm		Dr. Vijay Mahajan
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<b>Day 2</b>	12.41pm to 12.45pm. Session <b>open for Interaction</b>					
	12.46pm to 12.50pm <b>Felicitation of Speaker and Moderators</b>					
	Lunch Break 12.51pm to 1.30pm					
	<b>Scientific Sessions</b>	<b>Paper Presentation</b>	1.30pm To 2.30pm	IMSRC Demonstration Room SP 01 To SP 11 AP-01 To AP08 Innovation:02	Coordinator: Ms. Vrushali Patole Mr. Sampat Wackchaure	
		<b>Poster Presentation</b>	1.30pm to 2.30pm	IMSRC Demonstration Room APO 01 To APO 12 SPO21 To SPO69	Coordinator: Ms. Vaishnavi Wagh Mr. Ganesh Kulkarni	
	2.31pm to 2.45pm <b>High Tea</b>					
	<b>Valedictory session</b>	Prize distribution (Best oral and poster presentation)	<b>2.46 pm to 3.30pm</b>	1 <sup>st</sup> and 2 <sup>nd</sup> Prize for Diploma, UG+PG and Academics/PhD scholar		
	Closing remarks		<b>3.31pm To 3.45pm</b>	<b>Dr. Y. V. Ushir</b>		
	End of Day 2					

## Table for Paper Presentation

### Academic / Research Scholar Category

Sr.no	Code	Name of Delegate	Title of Presentation
1	AP-01	Ms. Dhanashri Garud	Therapeutic effect of Propolis Calcium nanoparticles containing film-forming spray on wound healing.
2	AP-02	Ms. Vaishali Shelke	Formulation and evaluation of Herbal Anti-acne cream- Upcycled cosmetic
3	AP-03	Mr. Amol Tonde	Enzymatic Hydrolysis of Gluten using some Proteolytic Enzymes for the Possible Treatment of <i>Celiac Disease</i>
4	AP-04	Mr. Pramod Kharkar	The paramedical study of hb percentage in the young students with special reference to diet
5	AP-05	Ms. Sunayana Vikhe	GCHRMS investigations and Antiurolithiatic activity of Corn silk and Sour orange in ethylene glycol induced urolithiasis in rats.
6	AP-06	Mr. Vinod Jejurkar	Development and validation of stability indicating analytical methods for estimation of few anti-diabetic drugs in bulk and pharmaceutical formulations
7	AP-07	Dr. Rajesh Wankhade	Role of Triphala formulation as a Mouthwash in Mukha roga
8	AP-08	Mr. Manoj Jagtap	Pharmacognostic study, Phytochemical screening and anticancer activity of selected medicinal plants
9	AP-09	Mr. Amol Deore	Aegle marmelos Ameliorates Non-Alcoholic Fatty Liver Disease in Rats

**AP: Academician/Research Scholar Paper**

## Table for Paper Presentation Student Category

Sr. no	Code	Name of Delegate	Name of Title
1	SPA-01	Ms.Asha Zankar	Formulation and optimization of anti-hemorrhoids herbal tablet
2	SPA-02	Ms. Bhavna waghmare	Formulation and evaluation of herbal hair conditioner by using sweet sop
3	SPA-03	Ms. Komal Wakchaure	Formulation and evaluation of multipurpose herbal cream
4	SPA-04	Ms. Mayuri Chavan	Formulation and evaluation of skin care anti-microbial herbal scrub
5	SPA-05	Ms. Surabhi Gandole	Formulation and Evaluation of Herbal Anti-Acne Face Wash
6	SPA-06	Ms. Priyanka Rathod	Formulation and evaluation herbal powder shampoo
7	SPA-07	Ms.Suhani Lokhande	Anti-fungal and anti- bacterial activities from flower extract of <i>SaussureaObvallata(Brahmakamal)</i>
8	SP-01	Mr. Aditya Chonde	Formulation and Characterization of Nanosuspension Drug Delivery System of Clopidogrel Bisulfate
9	SP-02	Mr. Amey Jahagirdar	Development and evaluation of Lamivudine transferosomal gel
10	SP-03	Ms. Apurva Pulate	Wound healing activity of <i>Tagetes erecta</i> Linn
11	SP-04	Ms. Damini Shinde	Formulation and evaluation of micronutrient transdermal patch as a potential nutrient supplement
12	SP-05	Ms. Gayatri Sapkale	Synthesis of Isoxazole derivative with conjugation of Amino acids for antimicrobial activity
13	SP-06	Ms. Sakshi Sonawane	Design of Cubosomal based Intranasal drug delivery
14	SP-07	Ms. Mayuri Salave	Evaluation of protective effect of gemigliptin

			and Rizatriptan in streptozotocin induced diabetic neuropathy in rats
15	SP-08	Ms. Mansi Khabiya	Guggul Ointment: A herbal Approach for enhanced topical delivery of Aceclofenac.
16	SP-09	Mr. Kalpesh Ojha	Enhanced oral bioavailability of nintedanibesylate with nanostructured lipid carriers: In vitro, cell line and in vivo evaluation
17	SP-10	Ms. Sanskruti Pawshe	Optimizing Drug Release and Bioavailability in Hemorrhoid Suppositories
18	SP-11	Ms. Mohini Bhorge	Formulation and evaluation of foot crack gel from <i>carica papaya</i> leaf extract and hyaluronic acid

**SPA: Students Paper (Diploma) SP: Students Paper (UG/PG)**

## Table for Poster Presentation Academic / Research Scholar Category

Sr no	Code	Name of Delegate	Name of Title
1	APO-01	Mr. Akshaykumar Daswad	Evaluating Antioxidant and Antidiabetic Potential in Plant Extracts Using <i>In-vitro</i> Techniques
2	APO-02	Ms. Archana Gadakh	Green synthesis and characterization of nanoparticles by using nelumbo nucifera rhizomes and its antibacterial activity
3	APO-03	Ms. Aslesha wakchaure	The pharmacognostic study of commelinapaleatea.
4	APO-04	Ms. Dipali Shelke	Evaluating antidiabetic activity: Pharmacological approaches and ai-enabled management strategies
5	APO-05	Ms. Pratiksha Sonwane	Computational design and Synthesis of Some Benzimidazole analogues in search of Anti-TB
6	APO-06	Ms. Renuka Zarekar,	Development and characterization of a novel antiacne niosomal gel of caffeic acid phenethyl ester
7	APO-07	Mr. Shubham Khairnar	Evaluation of Neuroprotective effect of Salicin in experimental animal model of Diabetic Neuropathy
8	APO-08	Ms. Bhagyashali Pawar	Genus fagonia : A traditional medicines
9	APO-09	Ms.Chaitali Diwane	Protective effect of <i>cynara scolymus</i> in paclitaxel induced neuropathic pain in experimental animals
10	APO-10	Mr. Sachin Hodgar	synthesis, characterization, development and validation of rp-hplc method for the estimation of process related impurities: A review
11	APO-11	Mr. Khushal Chaudhari	Integrating In Silico, In Vitro and In vivo Approach to Screen Cardioprotective Potential of Phloridzin as a Phenolic Phytoconstituent





12	APO-12	Ms. Sonali Patil	Enhancing Topical Bioavailability of Caffeine through Phytosomal Encapsulation
13	APO- 13	Ms. Sharmila Naykar	Silver Nanoparticles: Its green synthesis approach for its pharmacological activity

**APO:- Academician/ Research Scholar Paper**

## Table for Poster Presentation Student Category

Sr no	Code	Name of Delegate	Name of Title
1	SPO-01	Ms.Sayali Wagh	Formulation and evaluation of moringa seed oil herbal nano emulsion gel for wound healing
2	SPO-02	Ms.Komal Bhosale	Formulation and Evaluation of herbal cream of wound healing
3	SPO-03	Ms. Komal Ghadge	Formulation and evaluation of herbal face pack
4	SPO-04	Ms.Manisha Bhoir	Formulation and evaluation of herbal soap by using natural ingredients
5	SPO-05	Ms.Mohini Barkale	Formulation and evaluation of ointment containing vidhara and turmeric
6	SPO-06	Ms.Samruddhi Chavanke	Comparative study of qualitative and quantitative tests of different types of pulses
7	SPO-07	Ms.Khushali Waje	Formulation and evaluation of herbal ointment containing neem and turmeric
8	SPO-08	Ms.Bhagyashri Bhor	Formulation and Evaluation of Herbal ointment As Anti-Fungal
9	SPO-09	Ms.Asmita Bhosle	Formulation and evaluation of oral medicated jellies of guava leaves
10	SPO-10	Ms. Divya Jaju	Formulation and Evaluation of Anti-Septic Herbal Cream
11	SPO-11	Ms.Vedika Wagh	Formulation and evaluation Of Averrhoa carambola ointment
12	SPO-12	Ms.Snehal Borade	Formulation and Evaluation of piper leaf antifungal Emulgel
13	SPO-13	Ms.Huda Pathan	Case study on conjunctivitis: on review
14	SPO-14	Ms.Pranjal Binnar	Formulation and Evaluation of Onion Anti-hair fall Shampoo
15	SPO-15	Ms.Mohit Prajapati	Formulation and evolution of herbal sunscreen cream

16	SPO-16	Ms.Rupali Khemnar	Anti-diarrheal activity from fruit of Neolamarckiacadamba
17	SPO-17	Ms.Shruti Mohite	Formulation and evaluation of antibacterial herbal soap
18	SPO-18	Mr.Rahul Kumar Gupta	Anti-inflammatory Activity of Betacyanins Isolated from Root of <i>Beta vulgaris</i> in Wistar Rats
19	SPO-19	Ms.Komal lagad	Formulation and evaluation of herbal honey lipistic
20	SPO-20	Ms.Diksha Bhosale	Formulation And Evaluation Of Herbal Antidiabetic Tablet
21	SPO-21	Ms Vaishnavi Vyavhare	Formulation and evaluation of herbal hair dye
22	SPO-22	Ms. Reshma Jadhav	Formulation and evaluation of herbal face scrub
23	SPO-23	Ms. Pragati Khavne	Formulation and Evaluation herbal spray for skin
24	SPO-24	Mr.Ajay Patange	New Simple Spectrophotometric Method for Simultaneous Estimation of Ivabradine hydrochloride and Trimetazidine dihydrochloride in Bulk Active Pharmaceutical Ingredient Mixture and Tablet Formulation
25	SPO-25	Ms. Akanksha Chikhale	Review-Standardization and Quality Evaluation of Herbal Formulation
26	SPO-26	Ms. Ankita Yadav	Formulation development and evaluation of anti-acne gel loaded with <i>Curcuma amada</i> and nicotinamide
27	SPO-27	Ms.Apeksha Fulsundar	Formulation and evaluation of polyherbal tablet for in-vitro antidiabetic activity
28	SPO-28	Mr. Dhairya Nathwani	Review – Development and characterization of ultra-deformable vesicular systems for herbal drug delivery
29	SPO-29	Ms.Divya Dhamkar	Development and evaluation of selenium and climbazole nanoparticles laden hydrogel for sebopsoriasis.

30	SPO-30	Ms. Gauri Hire	Nanotechnology and therapeutic interventions in covid – 19: A Review
31	SPO-31	Ms. Geetanjali More	Essential oil formulation and assessment in fused microgel and micro-lotion
32	SPO-32	Mr. Godse Sammer	Stability Indicating Method Development and Validation of Teneligliptin by UHPLC Method.
33	SPO-33	Mr. Harshal Patil	Formulation And Evaluation Of Dual Drug Loaded Polymeric Mixed Micelles Of Carbamazepine And Phenethyl Caffeate For Antiepileptic Treatment.
34	SPO-34	Ms. Janvi Zade	Quantum Machine Learning Framework For Virtual Screening in Drug Discovery: A Prospective Quantum Advantage
35	SPO-35	Ms. Sakshi Nirhali	AI Enhanced Pharmacovigilance in Traditional Medicine
36	SPO-36	Ms. Kalyani S. Ghotekar	Creation and assessment of a liposphere loaded formulation of sertraline hcl
37	SPO-37	Ms. Lisha Wadhawa	Bridging the gap between awareness and execution of regulatory requirement in pharmacovigilance
38	SPO-38	Ms. Meghana Patil	Design of Luliconazole Nanoemulgel For Topical Delivery
39	SPO-39	Ms. Namrata Daphale	Development and characterization of ocular niosomal in-situ gel for ophthalmic drug delivery
40	SPO-40	Mr. Pavan Navghare	Phytochemical analysis of <i>Hibiscus sabdariffa</i> by using HPTLC and GC-MS techniques.
41	SPO-41	Ms. Pooja Salgar	The development and assessment of a bilayer tablet containing metronidazole and lactobacillus casei for their anti-diarrheal and gut wall maintenance properties.
42	SPO-42	Ms. Pallavi Pagar	Focus on Magnetic Drug Delivery System Optimization and Safety Aspects of Tablet Dosage form Using Anticancer Drug Imatinib Mesylate
43	SPO-43	Ms. Poonam Rathod	Almotriptan malate in situ gel

44	SPO-44	Mr. Prajwal Bari	Integrating Traditional Diagnosis Methods with AI-Powered Treatment Plans
45	SPO-45	Mr. Pranav Kalamwar	The Contribution of AI in Exploration of Drug Discovery and Development
46	SPO-46	Mr. Prathmesh Nale	Synthesis, purification and characterization of some impurities of propranolol
47	SPO-47	Ms. Ruchita Vaidya	Computer Vision Improved Herbal Drug Safety Assessment
48	SPO-48	Ms. Rutuja Sonawane	Development and Evaluation of Plumbagin Microsponge Gel for Topical Drug Delivery
49	SPO-49	Ms. Sakshi Dhawale	Application of natural polymer in development of pharmaceutical formulation.
50	SPO-50	Ms. Sakshi Surve	Development and evaluation of polyherbal antioxidant formulation using QbD approach.
51	SPO-51	Ms. Samiksha Gholap	Formation of mosquito repellent microencapsulated gel from <i>Citronella</i> oil
52	SPO-52	Ms. Sampada Rakshe	Novel promising phyto-constituents for the management of seborrheic dermatitis
53	SPO-53	Ms. Saniya Mahajan	Development and evaluation of sunscreen formulation.
54	SPO-54	Ms. Shraddha Sonawane	Bioanalytical Method Development, Validation and Quantification of Tivozanib in Human Plasma by RP-HPLC
55	SPO-55	Ms. Shubhangi Shinde	Synthesis and In silico study of six key impurities of Bisoprolol: $\beta$ blocker
56	SPO-56	Ms. Shweta Pawar	Evaluation of Vachadighrita by a Novel Planar Chromatography - HPTLC method
57	SPO-57	Ms. Sneha Jadhav	Development and Assessment of Dual-Drug Loaded Mixed Polymeric Micelles for Anti-Diabetic Intervention
58	SPO-58	Ms. Snehal Zankar	Formulation and evaluation of gel for topical treatment of melanoma cancer by using B16F10 cell line
59	SPO-59	Ms. Swamini Kadam	A review on challenges and impact of green

			chemistry on environment
60	SPO-60	Mr. Swapnil Tarate	Neem and triphala extract ointment is an effective and economical option for the treatment of chronic bed sores
61	SPO-61	Ms. Vaishnavi More	Development and evaluation of nanosponges based gel for topical delivery of antifungal drug
62	SPO-62	Ms. Vaishnavi Shingare	Formulation and Evaluation of Chrysin Loaded Solid Lipid Nanoparticles
63	SPO-63	Ms. Varsha Pawar	Formulation and evaluation of an in-situ gel for the treatment of periodontitis
64	SPO-64	Mr. Gilang Septian	Artificial nerve networks for tuberculosis
65	SPO-65	Ms. Vidya Ekhande	Development and Evaluation of Naringenin Nanoparticles against Letrozole-induced polycystic ovarian syndrome in Female Wistar Rats.
66	SPO-66	Ms. Akanksha Somvanshi	Digital Twins: An innovative approach in drug discovery and safety assessment
67	SPO-67	Ms. Pratiksha Umale	AI-powered personalized healthcare: tailoring treatment for you
68	SPO-68	Ms. Fanya Ambraini	Characterization of silver nanoparticle synthesized with leaf extract of Eucalyptus using Artificial Intelligence supported by RGB

**SPO: Students Poster**

## Table for Innovation Student Category

Sr.no	Code	Name of Delegate	Name of Title
1	SI-01	Ms.Anuradha Pandit	Implementation of Image Processing technique using Machine Learning Algorithms to identify different Medicinal Plants
2	SI-02	Ms. Sakshi Biradar	Implementation of image processing techniques using machine learning algorithms to diving deeper into radiomics: Seeing beyond the human eye

### SI- Student Innovation



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# **ICTM 2024**

## **SPEAKERS ABSTRACT**



## **Professionalism in Pharmacy: Issues & Challenges and EMERGING ROLE OF PHARMACISTS IN GLOBAL HEALTH IN ASIA**

Dr. Gulam Muhammad Khan

Associate Professor School of Health and Allied Sciences, Pokhara University, Kaski, Nepal

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### **Abstract**

Emerging of various global health problems widens the pharmacist's job scope. An accessible resource for health and medication information as the pharmacist strengthens the existing public health system. Achievement of optimal patient outcomes involves community and clinical pharmacist safe and effective medication use. However, the public is still unaware of the pharmacist's role in public and global health. This essay aims to identify pharmacist's role in overcoming global health problems. Pharmacists' role change from public care provider to public care profession. The roles of pharmacists in health care team as primary care practitioners can be seen in their management of tropical and chronic diseases. With their evaluation skills and extensive knowledge of drugs. Pharmacists can provide the best medical advice to the patients besides promoting self-treatment on minor ailments. Furthermore, they also help in reducing the medical costs and optimizing medications for the patients. The faith of the public in pharmacists on vaccination proves that they accept the involvement of pharmacists in healthcare provision. However, the public awareness towards pharmacists' role should be improved.

**Keywords:** Global health, Pharmacist, Disease

### **Reference(s)**

1. AMERICAN PUBLIC HEALTH ASSOCIATION (APHA). (2006) The role of the pharmacist in public health [www.apha.org/advocacy/policy/policysearch/default.htm?id=1338](http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1338) (11 November 2017).
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## **Assessing the surface properties of biogenic silver nanoparticles coating on surgical sutures using artificial intelligence supported RGB analysis**

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### **Abstract**

Surgical site infection arising from microbial contamination of surgical wounds is a major cause of surgical complications and prolong hospital stay. In recent years, monofilament nylon sutures have been used as ideal wound closure material due to its excellent properties, including limited susceptibility to surgical site pathogen and enhanced wound healing potential. However, to enhance the antimicrobial efficacy of sutures, antibiotic coating has been adopted as an alternative strategy to limit bacteria proliferation, surgical site complication, and inflammatory reaction. Current development and spread of antibiotic resistant pathogenic bacteria promote the risk of wound and surgical site complication, and thus demands alternative and effective strategies. Silver nanoparticles synthesized using *Eucalyptus* aqueous leaf extract was deposited on non-absorbable surgical sutures by *in situ* method. The distribution and percentage of AgNPs deposited on the surface were evaluated by energy dispersive x-ray spectroscopy (EDS) at area of 50  $\mu\text{m}^2$ . EDS provides information about the elemental composition of a sample, when combined with SEM imaging, the grayscale intensity of an image can correspond to the concentration of a particular element. Assigning specific elements to the Red, Green, or Blue channels in an RGB image allows for elemental mapping. Nylon surgical sutures The EDX quantitative revealed Ag concentration of 1.9% Wt on the sutures. Mapping of the sutures surface further showed uniform distribution of synthesized silver nanoparticles on the surface of the sutures. Other elemental components of the paper included carbon, nitrogen, oxygen, and chlorine probably from material in the sutures.

Keyword: Silver nanoparticles, Nylon sutures, *In situ* technique, EDS, RGB

## KEYNOTE LECTURE

### **Title: Integrating *In Silico* Technology into Drug Discovery from Herbal and Traditional Medicines: Bridging Nature's Potential with Computational Precision**

**JaturongPratuangdejkuPh.D.**

Head of *In Silico* and Molecular Modeling Platform for Drug Discovery, Head Department of Microbiology, Faculty of Pharmacy, Mahidol University, Thailand

#### **Abstract:**

In recent years, the exploration of natural compounds and traditional remedies has reformed the pharmaceutical industry's search for novel therapeutic agents. This lecture delves into the dynamic realm of *in silico* technology as a powerful tool in the search for potent drugs derived from herbal and traditional medicines. Fusing the ancient wisdom of natural remedies with cutting-edge computational methodologies has unveiled a promising avenue for drug discovery.

The session will begin by describing the intrinsic value of natural substances and traditional medicines, harboring numerous bioactive compounds yet to be extracted. This lecture will demonstrate how *in silico* approaches streamline these compounds' identification, screening, and optimization, expediting the drug discovery process.

Moreover, this talk will spotlight the convergence of diverse disciplines—bioinformatics, molecular modeling, artificial intelligence (AI), machine learning, and big data analytics—culminating in the construction of predictive models and databases with the ongoing project, "Development of artificial intelligence-integrated drug discovery platform." These innovations empower researchers to navigate the vast chemical space of natural products, predicting their pharmacological profiles and potential drug interactions, thus mitigating the challenges associated with experimental validation. By integrating the insights and methodologies from this project, the session aims to spotlight the realworld application and transformative potential of such a sub-platform in expediting the translation of *in silico* predictions into real drug candidates.

Furthermore, the presentation will showcase case studies exemplifying the success of *in silico* methodologies in real-world drug discovery processes to accelerate the development of therapeutics.

This lecture will illuminate the synergistic harmony essential for advancing drug discovery from nature by elucidating the intricate interplay between computational simulations and experimental validation.



In conclusion, this lecture aims to inspire and empower researchers, pharmaceutical scientists, and practitioners by elucidating the transformative potential of in silico technology in unlocking the treasure trove of therapeutic molecules within herbal and traditional medicines. Understanding the practical implications of computational methodologies can accelerate the drug discovery process and foster transformative innovations in healthcare.

## **AI Driven Exploration Potentials for Indigenous Knowledge Systems**

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### **Abstract**

Indigenous Medicine fields have been nourished from various indigenous knowledge systems around the world. However, these traditional knowledge systems face challenges in the modern world, requiring careful updates to match changing lifestyles. This presents a difficulty due to limited documented knowledge and mismatches in available resources. Artificial Intelligence (AI)-driven tools such as natural language processing, machine learning, and data analytics can play a crucial role in interconnecting different knowledge sources, addressing mismatches, and improving healthcare outcomes. This article explores the potentials of AI in Indigenous Medicine, including diagnostic tools, personalized treatment recommendations, and predictive models for disease prevention. Ethical considerations and community engagement are also highlighted to ensure responsible use of AI technologies in preserving and strengthening Indigenous Knowledge Systems.

### **Introduction**

Indigenous Medicine practices have evolved over generations through indigenous knowledge systems, which are often passed down through rich traditions and beliefs. However, these practices face challenges in the modern world due to various complexities such as environmental changes, pollution, food insecurity, and lifestyle shifts. To effectively adapt to modern lifestyles, traditional medicine practices need to be updated. However, this process is hindered by limited documentation and mismatches among available resources. The integration of AI-driven tools offers a potential solution by interconnecting and analyzing different knowledge sources to develop practical solutions.

### **Exploration Materials**

The exploration of AI-driven potentials in Indigenous Knowledge Systems entails the utilization of natural language processing, machine learning algorithms, and data analytics. These technologies enable the analysis of existing literature, including traditional practices and indigenous knowledge, and empower the development of predictive models, diagnostic tools, and treatment recommendations. Collaborative efforts between AI researchers, Indigenous communities, and healthcare professionals are essential to ensure the respectful and responsible use of AI technologies in this context.

### **Discussion**

The integration of AI technologies in Indigenous Medicine holds immense promise for improving healthcare outcomes, preserving cultural heritage, and empowering Indigenous communities. AI algorithms can aid in the identification and analysis of traditional practices,

enabling more personalized and effective treatment recommendations. Machine learning algorithms can help predict disease outbreaks and promote preventative measures based on indigenous knowledge. Furthermore, AI-driven tools can facilitate the digitization and preservation of traditional knowledge, making it more accessible and available for future generations.

However, ethical considerations should guide the development and implementation of AI in Indigenous Medicine. Community engagement throughout the process, including the collection and analysis of data, is crucial to respecting cultural sensitivities, consent, and ensuring that the knowledge systems are accurately represented. Collaboration between communities, researchers, and healthcare professionals is essential to address potential biases, validate AI-driven solutions, and ensure that Indigenous communities have an active role in defining the use of AI technologies.

### **Conclusion**

AI-driven technologies present significant exploration potentials for Indigenous Knowledge Systems in the field of medicine. Through the integration of AI algorithms, Indigenous Medicine practices can be strengthened, preserved, and made more accessible, benefiting both Indigenous communities and the broader healthcare landscape. Responsible and respectful development and implementation of AI are key to maximizing these potentials and fostering positive outcomes for Indigenous communities.

### **Genetic Development of Stx Phage using Artificial Intelligence Bioedit**

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Food poisoning may arise from shiga toxin. Every year, *E. coli* that produces the shigatoxin causes around 2.5 million illnesses globally, which results in 269 deaths. Shigatoxin is also a cause of fatal symptoms of Hemolytic Uremic Syndrome. The horizontal gene transfer of stx genes between *E. coli* serotypes and other Enterobacteriaceae family members is mostly facilitated by bacteriophages. This study looked at the differences in the DNA sequences of mutant Shigatoxin *E. coli* and wild type Shigatoxin *E. coli* of NCBI, using eight lytic bacteriophages. PCR, DNA sequencing, NCBI Blast, and BioEdit application were used for analyze. The bacteriophagedna sequences were found to have 97.73 % to 98.90 % identical similarities with *E. coli* strain STEC, *E. coli* strain 2018-166, and *E. coli* strain S19-141, in contrast to changes in bacteriophages based on cytosine and guanine in the 95th. The conclusion is gene of lytic bacteriophage was involved in the spread of Shigatoxin genetic variation, Therefore, this work provided the potency of pharmaceutical therapy for STEC that undergo genetic variation.



**Academic Paper Presentation**  
**ICTM2024**  
**AP-01 To AP-09**



## AP-01

### **Therapeutic effect of Propolis Calcium nanoparticles containing film-forming spray on wound healing.**

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#### **Abstract**

Cutaneous wound healing has been accepted as a major challenge the field medicine, requiring better treatment with a better healing time. Propolis has attracted with its antioxidant and anti-inflammatory properties, increasing its value as medicinal product. In this study we used propolis and components in gelatin (10%) and chitosan (1%) polymers to prepare propolis containing calcium nanoparticles (PCaNs) film forming spray by bottom up precipitation method through optimized formulation. The optimized PCaNs and PCaNs containing film forming spray were evaluated for various parameters and in- vivo wound healing was performed by excision wound healing model of Wistar rats. The results shows that  $1.30 \pm 0.23$  min to form a thin film with  $6.6 \pm 0.42$  cm pattern and  $77.93 \pm 1.7^\circ$  C spray angle. After 6 hrs extract produced from topical film forming spray was 76.61% ( at pH 5) and 66.12 % ( at pH 7.4) .The rate of contraction was quick in the test group, which revealed 97.73% contraction on day 21, which is 21.67 and 1.6% more than control and standard group, respectively. The obtained finding indicate that propolis nanoparticles are more effective than usual marketed formulation. The optimum batch of film forming spray had a zone of inhibition of  $10 \pm 0.5$  against S. Aureus and  $5 \pm 0.3$  against E. coli, formulation proved wound reduction by 99%. The Propolis calcium nanoparticles loaded film forming spray was successfully developed and the formulation indicated the safety and efficacy through antimicrobial and animal studies.

## AP-02

### Formulation and evaluation of Herbal Anti-acne cream- Upcycled cosmetic

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#### Abstract

The aim of present study was to formulate & evaluate upcycled cosmetic comprising waste of local fruits Dwarf *Cavendish* and *Citrullus lantus*. The Upcycled cosmetics are the cosmetics in which cosmetic components derived from plant waste that is typically valuable. Utilization of upcycled ingredients in cosmetics is growing due technical development which facilitates reinsertion of waste food material in the production of herbal cosmetics. Hence in this study the herbal cream was prepared using banana peel & watermelon rind. The evaluation of formulation was done on different parameters like spreadability, pH, Viscosity, stability, phase separation & it shows no evidence of phase separation, no irritation, good spreadability. Therefore this paper presenting work on upcycled cosmetic i.e. anti acne herbal cream is stable, safe to use & its process of converting waste into value added product.

**Keywords** – Acne Vulgaris , Upcycled cosmetic , Herbal Anti-acne cream.

## **Enzymatic Hydrolysis of Gluten using some Proteolytic Enzymes for the Possible Treatment of *Celiac Disease***

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### **Abstract:**

A typical genetic and chronic inflammatory condition brought on by diet is *Celiac Disease*. The only treatment option, according to doctors, for *Celiac Disease* now available is a rigorous gluten-free diet. There are several approaches being studied by scientists to treat *Celiac Disease*. Modulation of immune responses, regulation of intestinal permeability, antibodies to gliadin and gluten-degrading enzymes are some of the approaches currently being explored by researchers. We have attempted to uncover the mechanisms by which gluten molecule can be hydrolyzed using biological molecules as enzymes. The in vitro studies show promising effect of the selected enzyme on the hydrolysis of gluten.

**AP-04**

**The paramedical study of Hb percentage in the young students with special reference to DIET**

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**Abstract**

The present paraclinical study was to evaluate the Hb% of Jr.College young students with special reference to the students who consume home diet and the students who consume hotel, fast food, restaurant diet which is the problem of recent era .In emergency or life threatening situations of blood loss crisis blood transfusion is very important and essential. At this stage a Hemoglobin percentage is one of the fundamental criteria of quality of blood. This paraclinical study focus on vast difference of hemoglobin % of the students eating home diet Vs fast food/hotel diet.

## AP-05

### **GCHRMS investigations and Antiurolithiatic activity of Corn silk and Sour orange in ethylene glycol induced urolithiasis in rats.**

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#### **Abstract**

**Aim:** Pharmacological Evaluation on effect of sour orange and Corn silk in combination on urolithiasis Ethylene Glycol induced rats.

**Objective:** The present investigation has been done to probe the conventional use of Corn silk and Sour Orange easy junking of order monuments due to its diuretic exertion and action in rats.

## AP-06

### **Development and Validation of Stability Indicating Analytical Methods for Estimation of Few Anti-diabetic Drugs in Bulk and Pharmaceutical Formulations**

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#### **Abstract**

Force degradation of selected drug (from Thiazolidinedione class) was performed with stress conditions; hydrolysis, oxidation, dry heat and photolysis as per Q1 (R2) guideline. Major five degradation product found in alkaline hydrolytic condition and three under acid hydrolytic condition. Selected drug was stable under neutral hydrolysis, oxidation and dry heat condition.

## **Role of Triphala formulation as a Mouthwash in Mukha roga**

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### **Abstract-**

Ayurveda being an Indian traditional Medicine System has a vast treasure of varieties of natural herbs. Herbal medicine system has of India holds the strong background since from the ancient times. Oral hygiene is the prime concern of every individuals as it holds the importance in personal hygiene maintenance in day to day life. Oral cavity has its key importance in the beauty of individual, enjoying every taste of life and to socialize with everyone. Oral diseases Mukha roga are the prime concern of every individual. There are nearly about 75 mukharoga has been described by Acharya Vaghahat, 65 mukharoga by the father of surgery Acharya Sushruta and 64 by Acharya Charak. There are various aetiological factors are responsible for mukharoga. Triphala content trio three golden evergreen herbs i.e. Amlaki, haritaki and bhibhitaki. These tri of drug when comes in combination it plays a very fine crucial role in mainting health as it balances tri doshas. Triphala acts as anti-oxidant, anti-inflammatory, immunomodulating, antibacterial, antimutagenic, antineoplastic, appetite stimulation, reduction in hyperacidity, antifungal etc. As today markets are available with various types of mouthwash and they just plays in clenining and maintenance of hygiene. But as connected to the nature and the things grown in it and human body is built up by panchabhautik compositions. Triphala formulation of mouth wash not only cleans oral cavity and maintains hygiene but also helps in maintining oral health & strengthens the gums, tooth enamel, dentin, cementum, tooth pulp. Its continuous utilization as a part of daily routine does not make any of the structural & functional damage of mukha. As with the fast life of the current generation people are more observed to be prone to mukharoga-dantashula, danta, osha, jivhavaivarnya. Thus this thought provoked to make an awareness of population to get again connected with natural herbal compositions to involve into their routine



morning rituals of much shuddhi. As mother nature in the face of Ayurved science is providing the health gaining treasure to the human in form of triphala.

**Keywords:** Triphala, Mukharoga, Ayurved, panchabhautik



**AP-08****Pharmacognostic study, Phytochemical screening and anticancer activity of selected medicinal plants**

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**Abstract**

*Plectranthus* is a large and widespread genus with a diversity of ethnobotanical uses. In traditional Molis has been used to treat snakebites, as a pulmonary stimulant and vasoconstrictor, as a cardiovascular depressant, as a haemorrhage remedy, and to cure mental disorders and rheumatism. *P. mollis* is reported to exhibit relaxant activity on smooth and skeletal muscles, and has cytotoxic and anti-tumour promoting activity, and can be used in the treatment of cancer. The current study sought to determine the chemical makeup of *P. mollis* essential oil as well as its antibacterial activity. The essential oil of *P. mollis* blooming aerial parts was recovered by hydro-distillation and analysed using gas chromatography with a flame ionisation detector (GC-FID) and gas chromatography combined with mass spectrometry (GC/MS). Twenty-seven compounds were identified, which comprised 98.6% of the total constituents. The main compound was identified as fenchone (32.3%), followed by  $\alpha$ -humulene (17.3%), piperitenone oxide (8.5%), cis-piperitone oxide (6.0%) and E- $\beta$ -farnesene (5.9%). The oil was found rich in oxygenated monoterpenes type constituents (52.0%), followed by sesquiterpene hydrocarbons (40.2%), oxygenated sesquiterpenes (4.9%), and monoterpene hydrocarbons (1.5%). Antimicrobial activity of the essential oil of *P. mollis* was tested against six Gram-positive and eight Gram negative bacteria, and three fungi, by using the tube dilution method. The oil was active against the tested Gram-positive and Gram-negative bacteria, and fungi at a concentration range of  $0.065\pm 0.008$ - $0.937\pm 0.139$  mg/mL,  $0.468\pm 0.069$ - $3.333\pm 0.527$  mg/mL and  $0.117\pm 0.017$ - $0.338\pm 0.062$  mg/mL respectively. The current investigation found that the oil contents were qualitatively comparable but quantitatively different from previous studies from various places of the world. *P. mollis* essential oil contains antibacterial action, which may be effective in the treatment of different infectious disorders caused by bacteria and fungus.

Antifertility, antiinflammatory, and antiplasmodial activities have been described for the plant *Hyptissuaveolens* (L.) Poit; [Lamiaceae]. Plant extracts have traditionally been used to treat swellings, abscesses, haemorrhoids, and as a memory enhancer. Many parts of Asia utilise it as a therapeutic tea, while South America uses it as a food and source of essential oil. With a sour, minty, and sweet-smelling taste, parts of the plant were used as analgesic and decongestant, as well as to avoid fever and to boost blood circulation. It is effective against bacteria and fungi, according to English therapeutic journalists, but there hasn't been much research on its viral

efficiency. *Hyptissuaveolens* contains a variety of essential oils, alkaloids, flavonoids, phenols, saponins, terpenes, and sterols, including diterpenes suaveolic acid, suaveolol, and methyl suaveolate, as well as two steroids -sitosterol and ursolic acid, two phenolic constituents: rosamarinic acid and methyl rosmarinate along with some other important constituents oleanoic acid, 3 $\beta$ -hydroxy lup-12-en-28-oic acid, urs-12-en-3 $\beta$ -ol-27-oic acid, 1,19adihydroxy-urs-2(3),12-dien-28-oic acid and 3 $\beta$ -hydroxyl lup-20(29)-en-27-oic acid. For this reason, and in light of the plant's medicinal importance, this review is an attempt to compile all of the information reported on its phyto-pharmacological activities. This information will aid in generating interest in the plant, and as a result, may be useful in emerging new remedies that are more effective and have better curative properties.

**Key words:** *Plectranthus mollis*, Lamiaceae, essential oil composition, fenchone, antimicrobial activity.

## AP-09

### **Aegle marmelos Ameliorates Non-Alcoholic Fatty Liver Disease in Rats**

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#### **Abstract**

Aegle marmelos, a traditional medicinal herb recognized for its diverse pharmacological properties, has garnered significant attention due to its potential to address metabolic irregularities and provide liver protection. Previous studies have suggested that the various phytochemicals present in Aegle marmelos exhibit promising anti-inflammatory characteristics and can regulate lipid levels, indicating its potential in mitigating Non-Alcoholic Fatty Liver Disease (NAFLD). This study aimed to investigate the effects of an ethanol extract derived from Aegle marmelos on NAFLD. Wistar rats were exposed to an 8-week high-fat diet (HFD) to induce NAFLD, followed by a 4-week treatment involving the administration of Aegle marmelos ethanol extract. The evaluation included serum biochemical parameters, hepatic pro-inflammatory cytokine levels, and liver histopathology. Results demonstrated that the groups treated with the Aegle marmelos ethanol extract showed significant reductions ( $P < 0.05$ ) in body weight, liver weight, hepatic triglyceride (TG) content, serum TG, total cholesterol, low-density lipoprotein cholesterol, alanine aminotransferase, aspartate aminotransferase, glucose, and insulin levels compared to the HFD group. Additionally, there was a notable decrease ( $P < 0.05$ ) in hepatic pro-inflammatory cytokine levels (TNF- $\alpha$ , IL-1 $\beta$ , and IL-6) in the Aegle marmelos-treated groups. Microscopic examination revealed reduced steatosis, ballooning, and lobular inflammation in the liver tissues of rats treated with the Aegle marmelos ethanol extract. The observed hepatoprotective effects of Aegle marmelos against NAFLD may be attributed to its anti-steatotic, anti-inflammatory, and anti-insulin resistance properties.

**Keywords:** Non-alcoholic fatty liver disease, High-fat diet, Insulin resistance, Triglyceride



**ACADEMICIAN POSTER  
PRESENTATION  
CODE  
APO-01 TO APO-13**

## **APO-01**

### **Evaluating Antioxidant and Antidiabetic Potential in Plant Extracts Using *In-vitro* Techniques**

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#### **ABSTRACT**

Traditionally, the world's main sources of medicine have been traditional medicinal plants. Traditional medicinal herbs come in a wide variety and abundance in India. Globally, diabetes is on the increase and is predicted to rise more in coming generations. Diabetes is a metabolic illness caused by low insulin and impaired metabolism. Methods using DPPH, H<sub>2</sub>O<sub>2</sub>, and the enzyme  $\alpha$ -amylase were used to evaluate the extracts' antioxidant and anti diabetic capabilities. In vitro antioxidant and anti-diabetic activity of the extracts appears good.

## **APO-02**

### **GREEN SYNTHESIS AND CHARACTERIZATION OF NANOPARTICLES BY USING NELUMBO NUCIFERA RHIZOMES AND ITS ANTIBACTERIAL ACTIVITY**

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#### **Abstract**

The aquatic perennial plant *Nelumbo Nucifera* (Gaertn.), often known as the lotus, sacred lotus, Indian lotus, water lily, or Chinese water lily, is classified as part of the Nelumbonaceae family. Due to the presence of a triterpenoid, rhizome extract was employed for its anti-inflammatory and antimicrobial activities. In this research, we examine the efficacy of phytoconstituents and screening of antimicrobial activity along with formulation and characterization of Nanoparticles of *Nelumbo Nucifera* Rhizomes. *Nelumbo Nucifera* Rhizome hydro alcoholic extract shows the presence of Carbohydrates, Proteins, Flavonoids Alkaloids Terpenoids, Tannin & Phenolic compounds. The hydro alcoholic extract of *Nelumbo Nucifera* Rhizome were evaluated for antimicrobial activity and it shows Zone of inhibition of 20mm against *E. Coli* and 16 mm against *S. Aureus*. The particle size of nanoparticles was found at 84.54 nm. The EDX pattern shows the presence of silver. The FESEM image shows the formation of nanoparticles. Zeta potential of Nanoparticles was found at -11.6 Mv.

**Keywords:** *Nelumbo Nucifera*, Silver nanoparticles, Zeta potential, antibacterial activity.

## **APO-03**

### **THE PHARMACOGNOSTIC STUDY OF *COMMELINA PALEATEA* L.**

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#### **ABSTRACT:**

The objective of study to explored the detail Pharmacognostic and Phytochemical characterization of *Commelinapaleatea*L. which having medicinal and therapeutic use of the plant belongs to the Commelinaceae. The Leaves of plant were collected and the pharmacognostic nature and powder microscopy were performed. The Leaves are dorsiventral, 7 × 1 cm, base wedge shaped, top tapering. Petals are 3 laterals rounded. Spathe is tapering, 4 × 2 cm. Sepals are laterals obovate, 7 mm. Microscopical identification of leaves transverse section of shows cuticallized epidermal layer, followed by single palisade below upper epidermis also presence of anomocytic type of stomata, bicellular covering trichome. The results show valuable information and standards to identification of this plant material.

**Keywords:** Phytochemical, *Commelina paleatea*

**APO-04**

## **Evaluating Antidiabetic Activity: Pharmacological Approaches and AI-Enabled Management Strategies**

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### **ABSTRACT**

Diabetes mellitus is a metabolic disorder characterized by an elevation in blood glucose levels stemming from alterations in lipid, protein, and carbohydrate metabolism. In India and various other tropical nations, traditional healers employ *D. strictus* as a folk remedy for managing diabetes mellitus. Our research has shown the potential antidiabetic properties of *D. strictus* extracts in diabetic rats induced by streptozotocin. The aim of the current study was to investigate the antidiabetic effects of *DS* extracts on streptozotocin induced diabetic rats.

Progress in machine learning and artificial intelligence has facilitated the timely identification and assessment of diabetes mellitus via an automated system, offering distinct advantages over manual diagnostic methods. Methods for identifying and autonomously managing diabetes, which could be of significant value to the community of researchers working in the field of automated diabetes detection and self-care.



## APO-05

### **Computational design and Synthesis of Some Benzimidazole analogues in search of Anti-TB**

Ms. Pratiksha N. Sonwane<sup>1</sup> and Dr. Manoj R. Kumbhare<sup>2</sup>

<sup>1</sup>Research Scholar, S.M.B.T. College of Pharmacy, Nashik, India.

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#### **Abstract: -**

The bacillus mycobacterium tuberculosis (TB) is a contagious infectious illness that is typified by the development of nodular lesions, or tubercles. It continues to be a major global public health issue that needs immediate attention. It remains one among the top ten causes of mortality worldwide, having claimed the lives of an estimated 1 billion people in the past 200 years. A WHO estimate from 2018 states that 10 million or so people contracted tuberculosis in 2017. Of these, 558,000 acquired extensively drug-resistant (XDR), multi-drug-resistant (MDR), or rifampicin-resistant (RR) tuberculosis. Benzimidazole nucleus known for its wide spectrum activity and its analogues also known for Anti-TB activity. So, in present work Design, synthesis and Anti-TB activity testing is reported. A designed series of benzimidazole derivatives were subjected to molecular docking studies. Based on the docking score best compounds were selected for Synthesis and screened for Anti-TB activity. All the synthesized compounds showed potent activity against H37Rv strain of Mycobacterium tuberculosis. Among these P5 and P6 was found to be the most active compound with MIC of 1.56 $\mu$ g/ml & 3.125  $\mu$ g/ml, resp. against M. tuberculosis. This is a quite good activity compared with Rifampicin (MIC = 6.25  $\mu$ g/ml). The purity of compound were confirmed by TLC, and structure confirmed by spectral analysis. Having activities against M. tuberculosis P5 and P6 may be useful candidate for the development of new drugs to treat TB.

**Keywords: -** Heterocyclic, Benzimidazole, Anti-TB, Docking.

**APO-06**

**Development and characterization of a novel antiacne niosomal gel of caffeic acid phenethyl ester**

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**Abstract:**

The primary goal of this study to improve drug delivery in acne treatment. Propolis is obtained from honeybees having antibacterial and anti-inflammatory potential due to its major constituent like caffeic acid phenethyl ester (CAPE). Staphylococcus aureus and Propionibacterium aureus causes inflammation and acne on the skin's surface. The present work included the formulation of propolis extract-loaded niosomal gel by a reverse phase evaporation method using non-ionic surfactants and cholesterol. Optimum niosomes with particle size, zeta potential and entrapment efficiency equals to 109nm, -31.9mV. An antimicrobial investigation was carried out in vivo on Wistar rats using the developed niosomal gel formulation against S. aureus, in comparison with marketed preparation anti-acne formulation and plain carbopol gel 934. The results showed propolis extract-loaded niosomes gel enhances potential drug release in comparison to niosomes.

## APO-07

### **Evaluation of Neuroprotective effect of Salicin in experimental animal model of Diabetic Neuropathy**

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#### **Abstract:**

Wistar rats were given a single i.p injection of STZ (55 mg/kg, i.p.). After a diabetes diagnosis (blood glucose level >200mg/dl), the animals were given oral gabapentin (300 mg/kg) and salicin (10, 15, and 20 mg/kg) over the following four weeks. Rats given salicin (15 and 20 mg/kg p.o.) exhibited notable ( $p<0.05$ ) alterations in behavior, a significant ( $p<0.05$ ) drop in blood glucose levels, a considerable ( $p<0.05$ ) rise in reduced glutathione (RGS) and catalase levels, and an increase in lipid peroxidation levels. Additionally, histological and electrophysiological alterations have been corrected by salicin therapy (MNCV). The current study concluded that salicin has a preventive, anti-hyperglycemic, antioxidant, and neuroprotective impact in diabetic neuropathy. One of the common side effects of both type 1 and type 2 diabetes is diabetic neuropathy. Neuropathic pain is extremely painful and can result from disorders or injuries to the somatosensory nervous system. In addition to other causative variables, oxidative stress plays a critical role in the development and progression of diabetic neuropathy. Salicin is an aromatic secondary metabolite of plants and a phenolic molecule. It is established that phenolic chemicals have neuroprotective and antioxidant properties. Therefore, this study was conducted to analyse behavioral, biochemical, electrophysiological, and histological changes in order to evaluate the effects of salicin on diabetic neuropathy produced by STZ.

**APO-08**

## **GENUS FAGONIA : A TRADITIONAL MEDICINES**

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### **Abstract**

Fagonias are tropical herbs belonging to the Zygophyllaceae family contains 35 different species such as *F.indica*, *F.laevis*, *F.arabica*, and *F.scabra**F.californica*, *F.cretic*, *F.glutinosae*etc. Known by the popular names Dhamasa and Dhamasia. Since ancient times these plant species have used by traditional practioners for the treatment of various types of ailments such as genital disorders, pharyngitis, acne, dry skin, and ear infections. The genus Fagonia is the subject of numerous investigations, some of which have revealed therapeutic qualities including anti-inflammatory, anti-pyretic, anti-cancer, anti-oxidant, analgesic, wound healing, cytotoxic and antimicrobial properties. It also possesses antipyretic qualities. A variety of biological activities, make this natural plant highly valued due its phytochemical, which mainly includes alkaloids, flavonoids, glycosides, saponins etc. Because of its possible therapeutic usefulness, Fagonia is an essential crop for any clinical research. According to references and the perspective of health, species in the genus Fagonia offer a great way to treat a range of illnesses in people, and they have important biological activities that could lead to the development of numerous new pharmaceutical products.

**Keywords:** Tropical herb, Fagonia, Dhamasa, Anti tumor, Reno-protective, phytochemical.

## **APO-09**

### **Protective effect of *Cynara scolymus* in paclitaxel induced neuropathic pain in experimental animals.**

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2. MGVS Pharmacy College Nashik

3. Matoshri College of Pharmacy Odha Nashik

#### **Abstract:**

Neuropathic pain has a very straight forward definition. It is a disease or disorder, as the name implies, where the nerve itself causes pain. Nonetheless, peripheral nerve dysfunction or disease is referred to as neuropathy syndrome, of which neuropathic pain is a subtype. An impairment of the motor, sensory, or autonomic fibers supplying the central nervous system is referred to as a peripheral neuropathy. Injuries, strokes, illnesses, or congenital conditions affecting the brain and/or spinal cord can result in disorders of the central nervous system introductory. The plant known as artichoke (*Cynara scolymus* L.) is a member of the Asteraceae family

## **APO-10**

# **SYNTHESIS, CHARACTERIZATION, DEVELOPMENT AND VALIDATION OF RP-HPLC METHOD FOR THE ESTIMATION OF PROCESS RELATED IMPURITIES: A REVIEW**

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### **Abstract:**

The plethora subscribe in this research will be directed towards synthesis and characterization of some possible intermediates of the dapagliflozin, sitagliptin and vildagliptin which will be further evaluated as an impurities in bulk as well as dosage form. The attempt will be made in view of identification, characterization, development and validation of an analytical method for the estimation of these intermediates as probable impurities in the bulk and formulation in mention drugs.

**Keywords:** RP-HPLC, Dapagliflozin, Sitagliptin, Vildagliptin, Validation

## APO-11

### **Integrating *In Silico*, *In Vitro* and *In vivo* Approach to Screen Cardioprotective Potential of Phloridzin as a Phenolic Phytoconstituent**

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#### **Abstract**

Naturally occurring phenolic phytoconstituents include phloridzin found in some fruits, particularly apples. Although it has been investigated for a number of possible health advantages and not much of the research has been done especially to address its cardioprotective potential. The study's goal is to investigate phloridzin's potential as a natural phenolic molecule with cardioprotective properties. Phloridzin have anti-inflammatory and antioxidant properties which could indirectly contribute to cardiovascular health. An in-silico investigation was conducted with Phloridzin. Using Lipinski's rule of five, Phloridzin was screened for cardioprotective potential in the current investigation, and the results were compared with those of the typical cardioprotective medication. Phloridzin demonstrated strong antioxidant properties. Hence, result concludes that Phloridzin has proven to possess a potential cardioprotective effect.

**Key words:** Phloridzin, in-silico, antioxidant, anti-inflammatory, cardioprotective

**APO-12**

## **Enhancing Topical Bioavailability of Caffeine through Phytosomal Encapsulation**

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### **Abstract**

The objective for the development of the distinctive phytosomes technology was to enhance the bioavailability of phytoconstituents. Encapsulating phytoconstituents in a lipid membrane or carrier can lead to enhanced absorption, which in turn enhances the bioavailability of phytoconstituent-containing oral and topical formulations. Caffeine shows potential therapeutic as well as cosmetics applicability as an anti-inflammatory, anti-oxidant, UV protectant, etc. Being a hydrophilic medication, caffeine has a restricted topical bioavailability since it cannot cross the lipid-rich biological membrane of the skin.

This study seeks to overcome the restricted topical bioavailability of caffeine. Through the use of Phytosomes technology, a unique lipid bilayer complex. The process comprised complexing caffeine in a stoichiometric ratio with hydrogenated soy phosphatidylcholine using a rotating evaporation technique to create Phytosomes. Caffeine-loaded phytosomes were analyzed by various techniques such as the morphological study by SEM, digital microscopy, FT-IT, UV spectroscopy DCS, XDR, in-vitro drug release study, and entrapment efficiency.

**Keywords:** Phytosomes, drug-lipid complex, hydrogenated soy phospholipid, phytoconstituents, caffeine.



## APO-13

### **Silver Nanoparticles: Its green synthesis approach for its pharmacological activity**

Sharmila Shashikant Naykar, School of Pharmaceutical Sciences Sandip University, Nashik Maharashtra, India

Dr.Ramdas Dolas , School of Pharmaceutical Sciences Sandip University, Nashik Maharashtra, India

#### **Abstract:**

Silver nanoparticles will be nanoparticles of silver of between 1 nm and 100 nm in size. Silver nanoparticles is expanding quickly in many streams like in clinical, drug medical services, food, buyer, beauty care products. Because of its purposes and it had been utilized for its few applications like enemy of microbial, clinical property and wound recuperating movement data capacity and so forth. Nanoparticles union normally includes compound and actual techniques, including enormous utilization of harmful synthetic substances and high temperature conditions. With a climate accommodating point of view, to diminish the utilization of harmful synthetic substances and enormous energy prerequisite, specialists have zeroed in on bio-combination of nanoparticles. Natural blend of nanoparticles using microorganisms, compound and plant or plant extricate, has been recommended as conceivable eco-accommodating options in contrast to compound and actual strategies.

**Keywords:** Nanoparticles, Microorganisms, Recuperating.

**Student Paper**  
**Presentation ICTM**  
**2024**  
**SPA-01**  
**To SPA 07**  
**SP-01 To**  
**SP-11**

## SPA-01

### **Formulation and Optimization of Anti-Hemorrhoids Herbal Tablet**

Ms.Asha V.Zankar<sup>1</sup>, Ms.Bhavana D.Tambe<sup>2</sup>

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#### **Abstract:**

Hemorrhoids also called as piles, are swelling and inflammation on the rectum and Anus area so it cause irritation and discomfort bleeding from the rectum area. Hemorrhoids are caused by bowel movements, obesity and fiber contain intake less amount. In the presence study I have made, Anti-Hemorrhoids Herbal tablet using a drug like curry leaves , Triphala guggul, triphala, musta, kutaki, sunth, Nagkeshar, Yashtimadhu Erand tail . It is use as Anti-hemorrhoids .Hemorrhoids can develop from increased pressure due to specially on the toilet time.then it time increase a unlimited pain on the its place .and it also cause by the sitting at one place for the long time,it cause a irritation on the rectum area.Hemorrhoids are inflammation on the rectum area it cause irregular bleeding and abnormal pain on the its area .and person having a constipations. hemorrhoids happen where is break downward displacement of structures of internal anal cushions when the supporting structures of anal cushions become weak. Some common cause hemorrhoids disease are include like a :-

1) Dry stool during costipatino time.

2) Straining to pass hard .

**Keywords:** Hemorrhoids, Anti-hemorrhoids, Herbal drug , Herbal tablet.

**SPA-02****Formulation and Evaluation of Herbal Hair Conditioner by Using Sweetsop****Ms. Waghmare Bhavna, Ms. Tambe Bhavana**Student<sup>1</sup> SMBT Institute of diploma pharmacy Dhamangoav, Nasik, Maharashtra, IndiaLecturer<sup>2</sup> SMBT Institute of diploma pharmacy Dhamangoav, Nasik, Maharashtra, India**E-mail-** [bhavnawaghmare2005@gmail.com](mailto:bhavnawaghmare2005@gmail.com)**Abstract:**

One cosmetic that is frequently used in daily life is hair conditioner. A vital component of the human being, hair shields the scalp. After shampooing, hair conditioner is a cosmetic which helps to protect the hair that is applied to the head strands tips to condition the hair before being rinsed out. The purpose of hair conditioner is to make hair more manageable and shinier. Its primary goal is to lessen friction between head strands to make combing and brushing simpler. Creating the best hair care product possible is the primary goal in order to satisfy consumer compliance. Plants with a variety of qualities, such Custard Herbal hair conditioners are made using apple, aloe barbadense, cotton rose flower, citrus fruit, mittha neem, edibal nut oil. Various parameters were used to evaluate herbal hair conditioners, including pH, dirt dispersion, cleansing action, stability testing, moisturizing time determination, viscosity, physical appearance, and properties like promoting hair strands growth, preventing breakage, preventing dandruff, reducing hair fall, improving managing and helping with silly.

## SPA-03

### **Formulation and Evaluation of Multipurpose Herbal Cream**

Ms. Komal S. Wakchaure<sup>1</sup>, Ms. Vaishnavi N. Wagh<sup>2</sup>.

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#### **Abstract:**

Herbal cream are formulated different herbal ingredient and these ingredients are to cure different type of skin ailments. The cream is mainly used for acne reduce, irritation of skin, dry skin wrinkles and rashes, etc. The multipurpose cream are used ingredients like Turmeric (*Curcuma long*), Aloe-vera(*Aloe barbadensis*), Tulsi(*Ocimum sanctum*), Neem (*Azadirachta Indica*), Papaya(*Carica papaya*) are used in prepared to cream. The selection of all the ingredients to give the various therapeutic effects. The prepared formulationwere evaluated based on number of criteria including, physical parameters, pH test, wash ability test, irritancy test, spread ability test, phase saperation test.

**Keywords:** Herbal cream, Neem, Aloe-Vera, Tulsi, Neem, Papaya, Evaluation parameters.

## **SPA-04**

### **FORMULATION AND EVALUATION OF SKIN CARE ANTI MICROBIAL HERBAL SCRUB.**

Mayuri B. chavan<sup>1</sup> , Snehal S.Rajora<sup>2</sup>

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#### **Abstract:-**

The reason of this research is to develop and evaluate a herbal scrub for skin care , such as antimicrobial herbal scrub. It is quite advantageous for every type of skin. The main impartial of the study was to combine natural substances into a gel to make a herbal scrub. In today's world , cosmetic play a big part in improving and altering the aspect of skin for both men and women. It is necessary to cleanse the skin's surface.

## SPA-05

### **Formulation and Evaluation of Herbal Anti-Acne Face Wash**

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Guide: Ms. Bhavna Tambe.<sup>2</sup>

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#### **Abstract –**

Formulations designed to accentuate human beauty are known as herbal cosmetics. When it comes to side effects, herbal cosmetics are less harmful than synthetic ones. The application of neem leaves (*Azadirachta indica*), turmeric (*Curcuma longa*), aloe Vera, glycerine, lemon juice, rose water, and xanthan gum for its anti-inflammatory, anti-oxidant, and anti-acne effects is the subject of current research. While there are many topical herbal remedies available for acne, we advise creating a pure herbal mixture devoid of any artificial substances. The plants' antibacterial, antioxidant, and anti-inflammatory qualities are strong. With the aid of this herbal ingredient, it can be used as a herbal face wash for acne. Every herbal component used in this recipe is readily accessible at the local market. The skin on the body is most sensitive on the face, where it is also crucial for one's appearance. Both therapeutic and cosmetic qualities are provided by the use of herbal plants in formulations. Herbal face wash contains components that assist to soften skin, get rid of acne and pimples, make skin clear and healthy, get rid of dead skin cells, and speed up healing. The developed formulation was assessed using the following criteria: grittiness, foam ability, stability test, spread ability, pH test, consistency, and cleaning test.

**SPA-06**

## **FORMULATION AND EVALUATION HERBAL POWDER SHAMPOO**

**Priyanka Rathod<sup>1</sup>, Mr. Kundan Tiwari<sup>2</sup>**

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### **ABSTRACT:**

This shampoo's objective is to create and assess a herbal powder shampoo that substitutes safe, natural ingredients for hazardous ones. These shampoos are available as powder. Acacia is the primary component in this shampoo. because it stops scalp irritation and dandruff. are employed for more than just cleaning; they also impart shine to hair and keep it manageable. The type of ingredient may determine whether the product is an antiseptic shampoo or an antidandruff one. The key component in this composition is mimosa amara. For most people, using dry shampoo on occasion is harmless. Powder shampoo, often called dry shampoo, cleans hair without the need for.

**KEYWORDS:** Herbal powder shampoo, Anti-septic, Anti-dandruff, dry shampoo, Formulation



## SPA-07

### **Anti-fungal and anti- bacterial activities from flower extract of Saussurea Obvallata(*Brahmakamal*)**

1.

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#### **ABSTRACT:**

This study aims to investigate the anti- bacterial and antifungal activity of Saussurea Obvall ataex tractfrom Nashik region. The flower extract was obtained through aqueous extractionmethod, its anti-fungal, anti-bacterial activities was assessed. This article will discuss the methodologies and formulation process of Saussurea Obvallataused for antifungal, antibacterialproperties.

**SP-01**

**Formulation and Characterization of Nanosuspension Drug Delivery System  
of  
Clopidogrel Bisulfate.**

Mr. Aditya D. Chonde<sup>1\*</sup>, Dr. Smita S. Pimpale<sup>1</sup>, Miss. Tejmal V. Bansude.

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**Abstract:**

The foremost goal of the study was to enhance the solubility of clopidogrel bisulfate by developing nano suspensions by the use of Solvent Diffusion Method. These nano suspensions of clopidogrel were created by the Solvent diffusion method. Total nine formulations were developed with variations in concentrations and their ratios. These nine formulations were estimated for solubility, drug content, maximum yield, mean particle size. The chosen formulation was then studied and compared with pure drug for many other parameters like (DSC)Differential scanning calorimetry, FT-IR, in-vitro dissolution studies. Also stability studies and release kinetic studies were carried out. Among nine, F6 fits all the parameters well. Compared with pure drug, F6 showed superior properties like particle size, FT-IR, solubility, Scanning electron microscopy, X-ray diffraction. In vitro dissolution, etc. The optimized formulation exhibited stability as well as first order kinetics for more than three months.

**SP-02**

## **Development and evaluation of Lamivudine transferosomal gel**

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### **Abstract**

The study aims to develop and evaluate Lamivudine Transferosomal Gel. Transferosomes of Lamivudine were prepared using Rotary Film Evaporation Method taking span80, Brij 35 in different proportions. Nine batches were formulated and the optimized formulation was characterized by Ultraviolet Spectroscopy, Fourier Transform Infrared Spectroscopy, Drug Release Studies.

**SP-03**

## **Wound healing activity of *Tagetes erecta* Linn**

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### **Abstract:**

In current world, the major issue of the clinical care is aiding the healing of the wounds of various origin. *Tagetes erecta* also known as marigold is acknowledged by various traditional medicine systems for its therapeutic value in treatment of various problems. The material of interest in the study is mainly hydrogels. Further hydrogel formulation will be prepared using the extract in varied concentrations and will be evaluated. Its wound healing activity will be studied. Further the results will be subjected to statistical data for the most effective concentration of the extract on wound healing. The activity of wound healing will be concluded.

**Keywords:** Wound healing, *Tagetes erecta*, Hydrogels, Anti-inflammatory, Polymeric network.

**SP-04**

## **Formulation and evaluation of micronutrient transdermal patch as a potential nutrient supplement**

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### **Abstract**

The objective of this study was to create medicated transdermal patches employing micronutrients with increased penetration and controlled drug diffusion (drug release is concentration independent. ). Transdermal patches were developed using a solvent evaporation method and a combination of polymers, HPMC E15 and PVP K30 (1:1), and were then optimized by measuring various parameters, such as the percentage cumulative drug release at 1 h, percentage cumulative drug release at 9 h, and the percentage elongation break test. The optimised transdermal formulation (F6), which constituted a polymer mixture (1:1) and a penetration enhancer (DMSO), showed better drug release, with respective rates of 75.96% and 75.49% for ferrous ascorbate and folic acid. Whereas a break test for percent elongation revealed 40% elongation. The controlled release rate of the formulation was demonstrated by the in vitro drug diffusion study, which revealed t<sub>90</sub> values of 9.6 h and 10.1 h, respectively, for ferrous ascorbate and folic acid. Thus, micronutrient transdermal patch with increased penetration was designed.

**SP-05**

**Synthesis of Isoxazole derivative with conjugation of Amino acids for antimicrobial activity**

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**Abstract:**

The study synthesized conjugated isoxazole derivatives using amino acids to enhance antimicrobial activity. The compounds were structurally elucidated using IR, NMR and MS and it's microbial activity also tested against Gram-positive and Gram-negative bacteria and fungal strains. The results showed promising antimicrobial activities, with some derivatives showing superior efficacy for the fungal strain. The conjugation of isoxazoles with amino acids proved a successful strategy for synthesis of antimicrobial agents with enhanced activity against the fungus. Further research is needed to understand their mechanism of action and in vivo efficacy.

**SP-06**

## **Design of Cubosomal based Intranasal drug delivery**

Sakshi R. Sonawane,<sup>1</sup>Dr. U.C.Galgatte,<sup>1</sup> Shruti R. Kolsure<sup>1</sup>

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### **Abstract-**

Cubosomal-Based Intranasal Delivery for Enhanced Treatment of Epilepsy: A Novel Therapeutic Approach. The aim of this study was to develop an effective intranasal medication delivery system for the treatment of epilepsy using cubosomes as the carrier. The focus was on the preparation of cubosomes through the emulsification method and the formulation of cubosomal nasal spray for optimal drug delivery to the central nervous system. The cubosomes were prepared using an emulsification method. The prepared cubosomes were evaluated for various parameters. The developed cubosomal-based nasal medication delivery system shows potential for the treatment of epilepsy. The optimized cubosomes demonstrated desirable properties, and the formulated nasal spray provides an efficient means of drug administration. Further studies, including in vivo experiments, are warranted to validate the therapeutic efficacy and safety of the proposed system for epilepsy treatment. This study highlights the potential of cubosomal-based nasal medication delivery systems for effective epilepsy treatment, providing a promising avenue for further research and development.

**SP-07**

**EVALUATION OF PROTECTIVE EFFECT OF GEMIGLIPTIN AND  
RIZATRIPTAN IN STREPTOZOTOCIN INDUCED  
DIABETIC NEUROPATHY IN RATS**

**Mayuri R. Salave<sup>1</sup>, Dr. Pavan B. Udavant<sup>2</sup>, Prof. Shubham J. Khairnar<sup>3</sup>**

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**Abstract**

Diabetic neuropathy, a common consequence of diabetes, is an increasing problem despite strict glycemic control and drug treatment. Research has investigated the role of serotonin in pain regulation and inflammation, and rizatriptan and gemigliptin have been used to prevent hyperglycemia-related deaths. In this study, a single intraperitoneal injection of STZ (60 mg/kg, i.p.) was used to induce diabetic neuropathy. The neuroprotective ability of gemigliptin (5 mg/kg, i.p.) alone was further enhanced in combination with different doses of rizatriptan (0.5, 1 mg/kg, i.p.) administered at different intervals such as 72 hours and 1 month. Tested. According to this study, lowering serum glucose, triglyceride, and cholesterol levels reduces three factors that contribute to diabetes complications. The combination of gemigliptin and rizatriptan effectively reduces the symptoms of diabetic neuropathy. Additionally, this combination significantly improves recovery of motor activity and reduces hyperalgesia caused by nerve damage. Reducing oxidative stress makes it less of a problem, and this combination increases antioxidant levels such as SOD and his CAT while decreasing LPO levels. Overall, diabetic neuropathic pain is successfully alleviated by the combination of rizatriptan and gemigliptin. This may be due to the neuroprotective, antioxidant, and antiglycemic effects of rizatriptan and gemigliptin.

**KEYWORDS:** Diabetic Neuropathy, Oxidative stress, Hyperalgesia, Antioxidant, Blood glucose, Neuroprotection, ROS.



**SP-08****Guggul Ointment : A Herbal approach for enhanced topical delivery of  
Aceclofenac.**

Ms. Mansi Rajesh Khabiya\*<sup>1</sup>, Dr. Yogesh V. Ushir<sup>2</sup>  
SMBT college of Pharmacy, Dhamangaon, Nashik

**Abstract:**

The present study aims to improve aceclofenac's penetrability by incorporating Guggul, a cost-effective penetration enhancer with remarkable anti-inflammatory attributes. The combination of aceclofenac and Guggul is proposed for the Concerning the management of rheumatoid arthritis, because of the synergistic effects of both components. The pharmaceutical landscape lacks ointment formulations for aceclofenac due to its low solubility. However, recognizing its potent analgesic, antipyretic, and anti-inflammatory properties, a novel study seeks to overcome this limitation by incorporating Guggul, an affordable penetration enhancer known for its remarkable anti-inflammatory effects. This groundbreaking research aims to synergize aceclofenac and Guggul, capitalizing on their collective therapeutic potential. The primary objective is to enhance the penetrability of aceclofenac, paving the way for a promising ointment formulation. The study's focus on Rheumatoid arthritis stems from the synergistic effects anticipated from this unique combination. The proposed formulation addressing solubility challenges in the treatment of Rheumatoid arthritis by combining the strengths of aceclofenac and Guggul. This research endeavors to fill a crucial void in the pharmaceutical market, offering a cost-effective and potent solution for Rheumatoid arthritis management. By exploring the uncharted territory of aceclofenac ointments enriched with Guggul, the study aspires to contribute significantly to pharmaceutical advancements and improved patient care.

**Key words:** Aceclofenac, Anti-inflammatory, Guggul, Penetration enhancer, Rheumatoid arthritis.

**SP-09**

**Enhanced oral bioavailability of nintedanibesylate with nanostructured lipid carriers: In vitro, cell line and in vivo evaluation**

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**1. ABSTRACT**

The goal of the current study was to investigate how lymphatic absorption of nanostructured lipid carriers (NLCs) can enhance the oral bioavailability of nintedanibesylate (NE). The high-speed homogenization approach was used to create the NE loaded NLCs (NE-NLCs), which were then physicochemical evaluated. The NE-NLCs exhibited a zeta potential of  $-17.3 \pm 3.5$  mV, an entrapment efficiency of  $88.5 \pm 2.5\%$ , and a particle size of  $125.7 \pm 5.5$  nm. Studies using DSC and XRD showed that NE was changed into an amorphous form. The TEM pictures revealed particles with a homogeneous spherical shape. The NE-NLCs' in vitro release investigation adhered to the Higuchi model and revealed drug release of  $6.87 \pm 2.72\%$  in pH 1.2 and  $92.72 \pm 3.40\%$  in pH 6.8 phosphate buffer. A lipolysis investigation revealed that NE-NLCs had more medication in the aqueous layer than NE-suspension. In comparison to FITC solution, a tissue distribution investigation revealed that FITC-loaded NLCs had a deeper penetration. More FITC-loaded NLCs were absorbed by Caco-2 cells in terms of cellular absorption. A549 cell line cytotoxicity research showed that NE-NLCs had a greater capacity to suppress tumor cell development than suspension did. Compared to NE-suspension, the oral bioavailability of NE was improved by almost 26.31 times upon incorporation into NLCs. When compared to mice not treated with cycloheximide, the intestinal lymphatic absorption of NE-NLCs was reduced in the treated mice. Therefore, the created NE-NLCs may represent a promising delivery method for boosting NE's oral bioavailability through lymphatic absorption.

**SP-10**

## **Optimizing Drug Release and Bioavailability in Hemorrhoid Suppositories**

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### **Abstract**

Rectal suppositories of Alum were prepared using different bases and polymers like Cocoa butter, PEG-4000, White Bees wax and Shea butter and effect of different additives in In-vitro release of Alum was studied. The Agar based suppositories were non-disintegrating, non-dissolving, whereas PEG-4000 based were disintegrating and dissolving and Cocoa butter based were melting suppositories. The suppositories were prepared using Hot Melt and Trituration Method. Quality Control checks were carried out on the formulations. All the prepared suppositories were evaluated for various physical parameters like weight variation, drug content, dissolution test and disintegration test. The PEG-4000 and Cocoa butter suppositories were of macro melting range, disintegration and liquefaction time.

**Keywords:** Alum, Cocoa butter, PEG-4000, In-vitro release, Liquefaction, Anti-hemorrhoid, Rectal Suppositories

**SP-11**

**Formulation and evaluation of foot crack gel from *carica papaya* leaf extract  
and hyaluronic acid**

Mohini D Bhorge,

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**Abstract:**

Gel formulations offer appropriate dose delivery. Foot crack also called as fissure it is cause because of different reasons, for example, absence of dampness, dry skin, harm to nerve. The papaya leaf extract papain it is a catalyst exfoliating property which eliminates dead skin cell and hyaluronic acid which has capacity hold humidity for longer timeframe. The mix of papain and Hyaluronic corrosive gel will give excellent impact on to different side effects of crack foot.

**Keywords:** Crica papaya, Papain, Hyaluronic acid, Gel, Crack foot.



**STUDENTS POSTER  
PRESENTATION  
CODE  
SPO-01 TO SPO-68**

**SPO-01**

## **FORMULATION AND EVALUATION OF MORINGA SEED OIL HERBAL NANOEMULSION GEL FOR WOUND HEALING**

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### **ABSTRACT:**

The objective of this formulation was to formulate and evaluate the moringa seed oil nanoemulsion gel using high energy emulsification methods.

Moringa oleifera is a tree with antioxidants and also anti-inflammatory properties .Its health benefits may range from speeding up wound healing to managing blood glucose.

Moringa oil can reduce premature aging, help manage diabetes , and prevent heart disease. They also help your body heal and build muscles.

Nanoemulsion is also means the a system formed from a mixture of two or more immiscible liquid in which the disperse phase droplets are of average size range 20-500nm.

Nanoemulsion are the develop system for the delivery of active agents for controlled release and drug delivery. Nanoemulsion gel is not used only as a medication formulation on the any disease but also the use in cosmetic because of their simplicity in formation , controllable particles size , enhance stability and relatively low surfactant levels.

**KEY WORDS** : Moringa seed oil, Anti-inflammatory agent , herbal nanoemulsion gel, high energy emulsification method, surfactant, cosurfactant.

**SPO-02**

## **Formulation and Evaluation of herbal cream of wound healing**

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### **ABSTRACT:**

Now, a days herbal cosmetics are product which are widely used in world in every generation. The main approach for making this cream is the herbal make less side effect and the herbal formulation have significant demand in the global market. The goal of the research was to develop a a herbal cream healing the wound and treating various skin disease. And moisturizing, Nourishing the skin. The basic drugs used to make the cream. Moringa leaves (moringa oleifera), extract of turmeric rhizomes (curcuma longa), aloe - vera (Aloe barbadensin miller), neem leaves (Azadirachta indica) , Tulsi (ocimum sanctum), papaya oil (carica papaya) they have anti - inflammatory and antiseptic property helpful against disease, wound healing, enzymes action and give multipurpose effect. The prepared formulation were evaluated based on number of criteria including, physical parameters , PH test, irritancy test, wash ability test, phase separation test.

### **Key words:**

Herbal formulation, Evaluation, Herbal drug, Herbal drug use, herbal wound healing.

**SPO-03**

## **Formulation and Evaluation of Herbal Face Pack**

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### **ABSTRACT:**

Skin is the major part of body; facial skin is one of the sensitive and representative part of human being. In current preparation of powder based on herbal face pack using herbal ingredients like orange peel, neem, ritha, Bael, etc. This ingredients gives antiseptic and antioxidants property.

### **KEYWORDS:**

face pack, Bael, antioxidants, antiseptics, smoothness, spread ability



## SPO-04

### FORMULATION AND EVALUATION OF HERBAL SOAP BY USING NATURAL INGREDIENTS

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#### Abstract

Based on the principles of Ayurvedic beauty care products, this homemade cleanser with lemon, coconut oil, Tulsi , vitamin E,, and is very gentle and has no negative effects.

It's also common knowledge that Ayurvedic beauty care products are made locally. Since many third-beam contaminants are damaging to human skin today, beauty care products should be considered a watch out for the skin and body area. All home-grown fixings are readily available advertisements of varying ranges. Due to its antibacterial and antimicrobial qualities, lemons have a medicinal impact. In addition, they possess antifungal properties, making them potent and effective in preventing skin inflammation and redness. Lemon helps the skin look younger and revitalized.

**Key words :** - Home made cleanser , Lemon , Tulsi, vitamin E , antimicrobial , antibacterial , Herbal ingredients

**SPO-05**

## **Formulation And Evaluation of Ointment Containing Vidhara And Turmeric**

**AUTHOR :MOHINI RAOSAHEB BARKALE.**

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### **ABSTRACT :**

Various medicinal plants are help to healing the wound. The vidhara is a plant of the species *Argyreiaspeciosais* belong in to family convolvulaceae and the turmeric is the dried rhizome of the plant *Curcuma longa* belong in to family zingiberaceae . The vidhara gives anti diabetic , wound healing, anti viral , hepatoprotective and the turmeric gives anti inflammatory , strong antioxidant properties .The ointment is mainly used in the treatment of wound healing, and inflammation due to their anti inflammatory and wound healing property . The main advantage of the preparation of vidhara and turmeric ointment is wound healing effectively and does not cause irritation to patients.

### **KEYWORDS :**

Vidhara ,spread ability , Anti inflammatory, maceration

## **SPO-06**

### **Comparative Study of Qualitative and Quantitative Tests of Different types of Pulses**

Ms. Samruddhi S. Chavanke<sup>1</sup>, Ms. Darshana S. Varma<sup>2</sup>.

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<sup>2</sup>Lecturer of SMBT Institute of Diploma Pharmacy, Dhamangaon, Nashik, India.

#### **Abstract:**

Pulses are known as legumes; pulses belongs to Fabaceae family. Pulses are mainly grown in India. The present work is to do the comparative study of Qualitative and Quantitative test of different types of pulses of Nashik region (local area) and the varieties of pulses selected are Red Lentils, Pegin Pea, Green Gram, and Cheackpeas. The Qualitative and Quantitative test can identify by Total Carbohydrate, Total Protein, and Total Starch with the main aim is to know “increase the public awareness of the nutritional and environmental benefits of pulses as food production”.

**Key words:** Total Carbohydrate, Total Starch, Total Protein.

**SPO-07****Formulation and Evaluation of Herbal Ointment Containing Neem and Turmeric**

Author : Khushali Kiran Waje

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**ABSTRACT :**

Herbal ointment have gain significant attention as natural alternative for treating various skin condition due to there therapeutic benefits and minimum side effect. The uses of herbal medicine increase in recent year. The present research work is prepared, formulate, and evaluate by using extract of turmeric ( *Curcuma longa*), neem leaves (*Azadirachta indica*), lemon oil, they have some medicinal properties like antiseptic, antifungal, anti-inflammatory, antibacterial, using this herbal ingredient and prepared ,evaluate, and formulate the herbal neem ointment. The prepared formulation was evaluated for its physicochemical parameters like odour ,pH, colour, consistency, solubility, wash ability, diffusion study, spread ability, odour, irritancy, stability.

**KEYWORDS:** Herbal drug, Maceration, Evaluation, spread ability.

## **SPO-08**

### **Formulation and Evaluation of Herbal ointment As Anti-Fungal**

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Lecturer of SMBT Institute of Diploma Pharmacy, Dhamangaon, Igatpuri, Nashik,  
Maharashtra – 422403

#### **ABSTRACT :**

The beal leaves are obtained from the genus *Aegle marmelos* belonging to family Rutaceae . In this research study of formulation and evaluation Herbal ointement of beal leaves due to their anti Fungalproperty .The beal leaves have been use effectively in Anti-bacterial, Anti-Acne, Anti-fungal , Anti-inflammatory activities As per given activity with aim we focus on formulation and evaluation of Anti-fungal herbal ointment.

**KEYWORDS :**Beal leaves, herbal ingredients, antifungal activity, ointment.

## SPO-09

### FORMULATION AND EVALUATION OF ORAL MEDICATED JELLIES OF GUAVA LEAVES

Author: Bhosale Asmita Chandrakant, Guidance Ms Darshana Varma

SMBT Institute of Diploma Pharmacy Dhamangaon Nashik

#### **Abstract :**

The guava leaves are obtained from the plant *Psidium guajava l* belong in the family Mrytaceae . Guava leaves have long been used effectively for oral hygiene due to their antimicrobial , antibacterial and antiulcer properties. Guava leaves are use in stomach and intestinal condition , pain , diabetes , and wound healing. Due to their antiulcer property guava leaves use for the mouth ulcer effectively as a medicated jellies. There are several types of jellies like medicated jellies , lubricant jellies , miscellaneous jellies . The aim for this research is prepared a oral medicated jellies with the help of guava leaves for the treatment of mouth ulcer. The oral route of administration is the most convenient and acceptable route for the patient compliance and acceptance. The jellies are acceptable because their color , taste , smell , texture .

**Key words :** medicated jellies , guava leaves, mouth ulcer , antiulcer

## **SPO-10**

### **Formulation and Evaluation of Anti-Septic Herbal Cream**

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#### **Abstract:**

Herbal cream have various studies have been done to assess the antiseptic potential of BlumeaLacera and Turmeric. BlumeaLacera have Activity of antiseptic and antioxidant. Antiseptic a substance that Prevents or arrests the growth or action of micro-organisms either by inhibiting their activity or by destroying them. For all above problem ayurvedic has a fast acting solution in a form of cream which has herbal medicines with antiseptic potential. Another traditional use minor burns and cuts. This cream is not only useful in antiseptic but also to normalize skin colour by erasing scars naturally. The prepared formulation were evaluated based on number criteria including, physical parameters, PH test, wash ability test, phase separation test.

#### **Keywords:**

Blumea Lacera, Herbal Cream, Evaluation parameter

## **SPO-11**

### **Formulation and evaluation OF Averrhoa carambola ointment**

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#### **ABSTRACT**

The carambola fruit is also known as star fruit, Which obtained Woody plant of Averrhoa carambola belong to family Oxalidaceae. The carambola fruit having many potent activation like Antioxidant ,Anti- inflammatory, Anti microbial, Anti-fungal .Since number of activation and shown by carambola and for this aim to formulate carambola fruit ointment in treatment of bacterial infection the ointment here prepared by using spachula method.(Mostly use in skin disorder)

**KEY WORDS:** Averrhoa carambola, ointment, anti microbial activity.



## **SPO-12**

### **Formulation and Evaluation of piper leaf antifungal Emulgel**

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2. Lecturer, Diploma Pharmacy, SMBT Institute of Diploma Pharmacy, Dhamangaon, Nashik.

#### **Abstract**

The application of a pharmacological dose form is known as topical medication delivery. Dosage forms used directly to the skin to treat a variety of diseases are known as topical medication delivery systems. Emulgel is viewed as having greater advantages in pharmaceutical manufacturing when compared to other semisolid formulations. For the delivery of hydrophobic medications, emulgel has shown to be a promising drug delivery method. The aim of the research was to create betel leaf extract utilizing Carbopol 934 as a gelling agent. As penetration enhancers, lemon oil and lavender oil were applied. Distilled water content of propylene glycol. The formulation was tested for spreadability, viscosity, pH, and drug release from betel leaf. The antibacterial and antifungal properties of the betel leaf medication and the Emulgel formulation will be summarized by the Emulgel.

#### **Keywords**

Topical medication delivery; antifungal; emulgel; enhancer; penetration; leaf of piper betel.

## **SPO-13**

### **CASE STUDY ON CONJUNCTIVITIS :ON REVIEW**

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Maharashtra 422403

#### **Abstract**

Eye flu, commonly known as conjunctivitis, is an infectious condition affecting the outermost layer of the eye and inner surface of the eyelids. It is characterized by redness, itching, and discharge. Viral or bacterial agents, as well as allergens, can trigger this inflammation. While typically not severe, it is highly contagious and can spread through direct or indirect contact. Proper hygiene, such as frequent handwashing and avoiding touching the eyes, helps prevent transmission. Consultation with a healthcare professional is recommended for accurate diagnosis and appropriate treatment.

•**Keywords-** Eye flu, pink eye, viral conjunctivitis, symptoms, management.

## **SPO-14**

### **Formulation and Evaluation of Onion Anti-hair fall Shampoo**

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#### **ABSTRACT:**

Shampoo and rinse are cosmetics used in hair cleansing that removed dirt and debris from the scalp and hair, leaving it looking clean. Most important to skin hygiene is washing off the dirt on the skin's surface and maintaining it in a clean condition. Cleansing products are used with this purpose in mind. In the present study , herbal shampoo was formulated containing suitable ingredient such as *Allium cepa* (onion), *Emblicaofficinalis* (Amla), *Trigonellafoenum* (Fenugreek), *Sapindusmukorossi* (Reetha), *Acacia concinna* (Shikakai), *Camellia sinensis* (Green tea), *Aloe barbidensis* (Aloevera) *Oryza sativa* (Rice) in different proportion to formulate and evaluate its physiochemical property. Herbal shampoo was evaluated by different types of parameters like pH test, Foamability test, Skin irritation test, Dirt dispersion test, Percentage of solid test, Viscosity test, Stability test.

**Key words:** Herbal shampoo, cleansing cosmetic, Evaluate its physiochemical properties.

## **SPO-15**

### **Formulation and evaluation of herbal sunscreen cream**

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#### **Abstract:**

Sunscreen is the one of the cosmetic products, which is widely used in our daily life. Sunscreen cream is a chemical compound that helps to protect you from sunrays. Sunburn is caused by ultraviolet radiation. The main purpose of this study is helps to decrease of skin cancer and other skin related diseases by ultraviolet radiation. That's why the uses of sunscreen cream are the mostly demanding in market. Sunscreen cream shows beneficial effects in reducing the symptoms of skin problems sunscreen agent should be non-irritating, non-toxic. The herbal products are used this sunscreen are Butterfly pea flower, aloe vera, almond oil, rose water, vitamin E capsule and bees wax. Herbal sunscreen cream was evaluated by different types of parameters like pH, stability, viscosity, spread ability, physical appearance.

Key Words: Herbal Drugs, Herbal sunscreen, Effective Skin care.

**SPO-16**

**ANTI-DIARRHEAL ACTIVITY FROM FRUIT OF  
NEOLAMARCKIA CADAMBA**

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**Abstract**

This study aims to evaluate the Anti-diarrheal activity of neolamarckiacadamba aqueous extracts where prepared from unripe fruits of the plant. Furthermore, the extracts demonstrated Anti- microbial activity against common pathogens associated with diarrheal diseases.

## **SPO-17**

### **Formulation and evaluation of antibacterial herbal soap**

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#### **Abstract:**

Antibacterial Herbal Soap is a herbal product made from crude drugs which are useful for protection of Skin, dehydration, moistening, remove itching and treats the dry pigmentation, tanning and Fungal infection. In the world of Synthetic drugs or formulation. Herbal Soaps are beneficial, useful and free from any harm for our skin. It gives positive and good, effective response. Main objective of this formulation is to prepare the Antibacterial Herbal Soap with the preparation of Turmeric, Neem are Antibacterial 1 drugs optimum extraction Condition for the antibacterial extract from neem and turmeric were selected form of extraction methods is soxhlet apparatuses and fixing the soap formulation in their final look. Antibacterial qualities of soap are useful to remove the dust particles, bacterial germs, and give you clear and healthy Skin. Bacterial skin the most prevalent among Individuals care for the recovering of our healthy skin. We have to treat the infectious dead skin as soon as possible. For the costly treatment not everyone's can afford that. So the & Antibacterial Soap may help them on it will affordable to everyone some herbal plants extracts have antibacterial properties which may helpful for skin.

**Key Words:** Herbal Drugs, Antibacterial Herbal Soap, Effective Skin Care.

**SPO-18****Anti-inflammatory Activity of Betacyanins Isolated  
from Root of *Beta vulgaris* in Wistar Rats****Rahul Shambhu Gupta.****Student, (Diploma Pharmacy)****E-mail address: [satishguptaaa111@gmail.com](mailto:satishguptaaa111@gmail.com)****Abstract -**

*Beta vulgaris* (chenopodiacea) is a medicinal plant with a wide range of traditional uses. *Beta vulgaris* demonstrated anti-inflammatory, wound-healing, antioxidant, anticancer properties. Thus, we have scheduled a screening anti-inflammatory plant's root activity with the methanolic extract. Following methyl alcohol extraction, root powders were screened for phytochemicals used to identify different phytoconstituents. The roots of *Beta vulgaris* were subjected to methanolic extracts for anti inflammatory. A preliminary screening of the phytochemical composition identified flavonoids, alkaloids, sterols, and saponins. The extract's potential for lethality was examined up to a dosage of 2000 mg/kg. None of them have caused rats to behave abnormally or die. Additional 200 and 400 mg/kg/p.o. methanolic extracts considerably (p~0.01) decreased the inflammation. The results of this investigation showed that *Beta vulgaris* root extract has anti-inflammatory properties.

**Keywords:** wound healing, anti-inflammatory

## **SPO-19**

### **Formulation and evaluation of harbal honey lipistic**

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#### **Abstract-**

Cosmetics are enhance and protect the beauty of human. Cosmetics are prepared by using different type Of animal parts, vegetable, leaves, flower, fruit, color, pigment etc. As per FD and C Act cosmetics are Define as “articles use for rubbed, poured, sprinkle, or spread on body surface for the purpose of Cleansing, beautying, and altering the apperance”. Cosmetics are available in the form of skin care, Lotions, powers, perfumes, lipstick, nail polish, eye and face products etc. The herbal lipstick formulated For the purpose of beautifying the lips and care and attractiveness of face. The herbal lipstick are Prepared by using ingredients like beeswax, coconut oil, olive oil, beet root powder, rose essence, honey Etc. The prepared formulation were evaluated base on number of criteria involving color, PH, irritation, Melting point, breaking point ,force application, perfume stability, solubility etc.

Keywords: Natural ingredients, Herbal lipstick Formulation and Evaluation.



## **SPO-20**

### **Formulation And Evaluation Of Herbal Antidiabetic Tablet**

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#### **Abstract :**

The aglemarmelos belong into Rutaceaefamily.Diabetic mellitus is the most common disease in world,now days more people suffering from diabetes mellitus. main objective was formulate and evaluate the antidiabetic herbal tablet was to control and maintain the blood sugar level the antidiabetic herbal tablet was formulate by using Aagle marmelos , Musa acuminata colla collected from local Market and dried . The dried ingredients are converted into powdered form. further use Tablet were prepared after studies of preformulation and tablet evaluated by weight variation, thickness , disintegration time, hardness, friability .

**Keywords :**Aagle marmelos , Antidiabetic tablet,herbal drug , evaluation,herbal formulation

## **SPO-21**

### **FORMULATION AND EVALUATION OF HERBAL HAIR DYE**

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#### **Abstract.**

In the preparation of Herbal Hair Dye, formulation are. Shikakai, Acacia - concinna. Hibiscus Hibiscus rosa Sinensis, coffee. coffee genus, onion. (Allium cepa), Reetha Sapindusmukorossi, custard apple. Annona squamosa. According To Formulation Fusion Test. Patch Test are done successfully. Normally The hair dye formulation is Natural method made up of crude drug

**Keywords-** Hair Dye. Natural, evaluation. Crude drug, Test

## **SPO-22**

### **Formulation and evaluation of herbal face scrub**

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#### **Abstract:**

In this herbal formulation use a herbal ingredients which have many different properties. It herbal cosmetic are safest product it have no any side effect or no harmful to the skin, main aim of this herbal scrub are prepare use for the protect the various skin problems like a dark spot ,pimple, acne , wrinkle ,black head ,dark circles and also use for the stop the oil secretion from the surface of skin . In some marketing cosmetic formulation are apply on skin it cause for the skin problems like a dryness , rashes .it this formulation cure a all problems because it consist all natural ingredients which are cleansing the skin increase the softing,moisturing , smoothning of skin . In this formulation use active ingredients like a Turmeric, rice, masoor dal, honey, orange peel, Multani mitti, aloe vera, sandal wood and green tea . Evaluate the formulation using some parameters like aappearance,pH ,Viscosity, Spread ability, wash ability ,irritability ,and found to be best result .and its formulation prepared for the promote healthy and glowing skin .

**Keywords:** Herbal Face Scrub, Effective, Formulation, Evaluation.

## **SPO-23**

### **Formulation and Evaluation herbal spray for skin**

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#### **Abstract:-**

In this herbal formulation such herbal ingredients which have lots of different properties. The herbal skin sprays are very useful or effective to human body without any side effects. This formulation can be useful for the treatment of various skin problems like Inflammation diseases, skin rashes, pimples, acne, Itchy skin

In this formulation include various active ingredients such as Tulasi, sodium benzoate, aloe vera, glycerine, lemon water, purified water, rose water. where Neem is used as the main ingredient.

#### **Keywords:-**

Herbal spray, Neem, Anti-inflammatory,

## SPO-24

### **New Simple Spectrophotometric Method for Simultaneous Estimation of Ivabradine hydrochloride and Trimetazidine dihydrochloride in Bulk Active Pharmaceutical Ingredient Mixture and Tablet Formulation**

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#### **Abstract:**

Simple UV spectrophotometric based simultaneous estimation of Ivabradine hydrochloride (IBH) in presence of Trimetazidine dihydrochloride (TMZ) in bulk as well as tablet form.

The lambda max of both drugs was determined for Ivabradine hydrochloride (286 nm) and Trimetazidine dihydrochloride (231 nm). The minimum concentration required (limit of detection) for UV spectrophotometric detection of Ivabradine hydrochloride was determined to be 2.350 µg/mL with a limit of quantification (LOQ) of 7.122 µg/mL, similarly the limit of detection (LOD) for Trimetazidine dihydrochloride observed to be 3.790 µg/mL with limit of detection of 11.485 µg/mL. Based on the results, it is concluded that the proposed UV spectroscopic technique is new but simple, precise, reliable, and affordable for the simultaneous determination of Ivabradine hydrochloride and Trimetazidine dihydrochloride

## **SPO-25**

### **Review-Standardization and Quality Evaluation of Herbal Formulation**

Akanksha Pramod Chikhale<sup>1</sup> · Poonam Tukaram Rathod<sup>2</sup>

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#### **Abstract:**

Saints and munis have been using herbal therapy for many ailments since ancient times. Herbal medicine contains numerous active ingredients that can treat a wide range of illnesses; nevertheless, in order to prepare a herbal formulation without damaging the active ingredients, the right understanding is required. In light of this, the preparation of the herbal formulation is highlighted in the current paper. With this knowledge, we can treat the majority of complex illnesses with herbal remedies and spare people from the negative effects of synthetic medications. When herbal medications are standardized, their identification, quality, and purity are verified.

## **SPO-26**

### **Formulation development and evaluation of anti-acne gel loaded with *Curcuma amada* and nicotinamide**

Ankita R. Yadav<sup>1</sup>, and Dr. Moreshwar P. Patil<sup>2</sup>

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#### **Abstract:**

Acne is a most common skin disorder affecting 79% to 95% of the adolescent population. Propionibacterium acne and Staphylococcus epidermidis are common pus-forming microbes responsible for the development of various forms of acne and related problem. Antibiotic resistance in P. acne and S. epidermidis has been rising steadily. So, there is a need to develop a preparation that reduces the growth of bacteria which mainly causes acne, reduces excessive sebum secretion, and inflammation, and gives a cooling effect. The aim of the study was to formulate develop and evaluate anti-acne gel loaded with Curcuma amada and nicotinamide.

## SPO-27

### FORMULATION AND EVALUATION OF POLYHERBAL TABLET FOR IN-VITRO ANTIDIABETIC ACTIVITY

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#### Abstract -

Polyherbal antidiabetic tablets were formulated, evaluated and compressed by combining the powder extract of *Nigella sativa*, *Trigonella foenum*, and *Glazyrrihza Glabra*. Several tests were conducted, including visual inspection, ash value, moisture content, water soluble extractive value, alcohol soluble extractive value, angle of repose, bulk density, tapped density, Carr's index, disintegration time, informality weight of tablets, determination of tablet hardness, determination of tablet friability, etc. and preliminary phytochemical screening. The tablet also had in vitro antidiabetic activity for the enzymes alpha amylase and alpha glucosidase. I used thin layer chromatography to extract *Glycyrrhiza glabra*, *Trigonella foenum*, and *Nigella sativa* from methanol. As the stationary phase, silica gel G was used. The column of material was created using acetic acid, toluene, and ethyl acetate. As follows: (5.0:4.2:0.8) for 10 ml. The mobile phase of the sample, which contains a mixture with a concentration of 100 ml of toluene, ethyl acetate, and acetic acid (50:42:8), was collected and given to IIT Bombay. In the gas chromatography and mass spectrometry analyses, the chemical constituent was found to be 2H-Pyran-2-one, tetrahydro-4-hydroxy-4-methyl-, Tetrahydro [2,2'] bifuranyl-5-one, 1H-Benzimidazole, 2-(1-methylethyl)-, Bifenthrin, Propionamide, 2,2-diphenyl-N-(2-pyridinyl)-, Dihydromyristicin, 2-Dodecanone, di-p-Tolyl sulfone.

**Keywords:** Antidiabetic, evaluation, compression, polyherbal tablets, alpha amylase, alpha glycosidase.



## **SPO-28**

### **Review – Development and characterization of ultra-deformable vesicular systems for herbal drug delivery**

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Student<sup>1</sup> ,Dr.L.H. Hiranandani College of pharmacy, Ulhasnagar, Thane, Maharashtra

Student<sup>2</sup>Dr.L.H.Hiranandani College of pharmacy, Ulhasnagar, Thane, Maharashtra

#### **Abstract:**

Certain physicochemical qualities are exhibited by herbal substances. Its biological availability is frequently low when taken orally. As a result, different transdermal pathways via the skin are employed. The hardest layer to get through is the stratum corneum skin layer. To improve transdermal drug distribution, a drug delivery system like ethosome, transfersome, or transethosome must be used. Examining the potential of ethosome, transfersome, and transethosome to improve the formulation and characterization of herbal medications is the goal of this review study.

## **SPO-29**

### **Development and evaluation of selenium and climbazole nanoparticles laden hydrogel for sebopsoriasis.**

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Progressive Education Society's Modern College of Pharmacy, Yamunanagar, Nigdi, Pune,  
Maharashtra, India-411044.

#### **ABSTRACT**

The primary aim of the research was to create a hydrogel containing climbazole and selenium nanoparticles that would have improved permeability, sustained activity, and dual anti-inflammatory and anti-fungal properties in a single dose form. The Climbazole nanoparticles were prepared by anti-precipitation method and optimized by evaluating in vitro drug release study, particle size, zeta potential, SEM, DSC etc. Both nanoparticles were further incorporated into gel, and further optimized by parameters like viscosity, spreadability, pH, drug content and in vitro drug release study

**Keyword**-Nanoparticles, anti-fungal

**SPO-30****NANOTECHNOLOGY AND THERAPEUTIC INTERVENTIONS IN  
COVID – 19: A REVIEW****Authors-Hire Gauri<sup>1\*</sup> and Bhangale Charushila<sup>2</sup>**

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**ABSTRACT**

The topic and title concern the modern technology study and review with the aid and aiming the therapeutic interpretation and overall emphases on a novel corona virus disease called COVID-19, a respiratory disorder; to overcome the disease and its prevention, the article is determined here. As the modern technique to demonstrate the overview of the virus and its cause, prevention, treatment and how the so-called modern technique, namely “nanotechnology” and its various components and factors are valuable and helpful with their pharmacological effects, implications, and other therapeutic interventions in treating the viral infection is discussed and reviewed. Several essential factors with nanoparticles, nanomaterials, and technology-based applications by reduction of spread ability of infections with nano formulation antibiotics and pharmaceuticals are demonstrated in the article

## **SPO-31**

### **Essential oil formulation and assessment in fused microgel and micro-lotion**

Ms. Geetanjali P. More<sup>1\*</sup>, Ms. Pratiksha Kshirsagar<sup>1\*</sup>, Dr. Smita S. Pimple<sup>1</sup>

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Modern College of Pharmacy, Yamunanagar, Nigdi, Pune, Maharashtra, India-411044.

#### **ABSTRACT-**

Microencapsulation can control the volatility of essential oils, which can extend the duration of repellency. It can also protect and prevent the loss of volatile aromatic ingredients and improve the controlled release and stability of the core materials.

**SPO-32**

**Stability Indicating Method Development and Validation of Teneligliptin by UHPLC Method.**

**<sup>1</sup>Godase Sameer Narayan**

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**Abstract:**

**Aim:** Stability Indicating Method Development and Validation of Teneligliptin by UHPLC Method.

Teneligliptin is a new drug recently approved by FDA for treatment of type 2 Diabetes Mellitus (DMT 2). Very few methods have been reported for analysing its degradation products and their impact on human health. A precise, specific, and sensitive gradient UHPLC technique was developed and validated to analyze Teneligliptin using an Agilent C18 column(4.6 x 100 mm ID) with 2.5 $\mu$ m particle size. The method employs a flow rate 0.9ml/min and detects the teneligliptin at a wavelength 241nm. This method comprises a mobile phase consisting a mixture of Methanol with 0.1% TEA (60:40%v/v), along with a 20 $\mu$ l injection volume for a duration of 20 minutes. The method's stability under various stress conditions was confirmed through forced degradation studies conducted on both bulk substances and pharmaceutical dosage forms.

Validation of the method followed the guidelines outlined by the ICH for assessing the validation parameters like specificity, linearity, accuracy, precision, robustness, LOQ and LOD.

The calibration curve for Teneligliptin exhibited a high correlation coefficient of 0.999, indicating excellent linearity. Furthermore, the precision and robustness of the method were validated with a remarkable RSD (Relative Standard Deviation) below 2%.

**Keywords:** Teneligliptin, Method Development, Validation, Stability Indicating

**SPO-33**

**Formulation And Evaluation Of Dual Drug Loaded Polymeric Mixed Micelles Of Carbamazepine And Phenethyl Caffeate For Antiepileptic Treatment.**

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Modern College of Pharmacy, Yamunanagar, Nigdi, Pune, Maharashtra, India-411044.

**ABSTRACT-**

Epilepsy, a neurological condition characterized by recurring seizures, is a global health challenge. A new solution has been developed to enhance the solubility and bioavailability of carbamazepine (CBZ) and phenethyl caffeine (CAPE), an antiepileptic drug. The intranasal spray, made of polymeric mixed micelles, contains both drugs. The formulation has been optimized for stability and effective drug delivery. The study shows that the drug-polymer interactions are compatible, and the micelles remain stable for long-term use.

**Keyword:** Carbamazepine, CAPE, TPGS 1000, Polymeric micelles, soluplus.

**SPO-34**

## **Quantum Machine Learning Framework For Virtual Screening in Drug Discovery: A Prospective Quantum Advantage**

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### **Abstract**

Drug discovery is a complicated process and any effort taken to fasten the process with minimum risks involved is always welcomed. The world has recently witnessed a huge disaster, the Covid-19 pandemic and felt the turmoil raised by the same. With this paper we would like to present the essence of using quantum machine learning with SVC (support vector classifier) algorithms to increase the accuracy and precision of drug discovery process. A comparison is made between classical algorithmical patterns for drug discovery and the ones established by quantum computing for ligand-based virtual screening. Besides proving the advantages of using quantum computing for drug discovery, we also study the performance of algorithms of IBM Quantum processors using ADRB2 and COVID-19 datasets, which ultimately prove that quantum derived algorithms surpass the classical versions.

## **SPO-35**

### **AI Enhanced Pharmacovigilance in Traditional Medicine**

JishaanKhan,Sakshi Nirhali<sup>1</sup>, Dr. Deepak Bharati<sup>2</sup>, Dr. Pravin Morankar<sup>3</sup>, Prajwal Bari<sup>4</sup>,  
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#### **Abstract :**

This review investigates the transformative impact of Artificial Intelligence (AI) on pharmacovigilance within the realm of traditional medicine. Traditional medicine, steeped in ancient wisdom, benefits from AI-driven approaches that improve safety monitoring, efficacy assessment, and the integration of age-old remedies into contemporary healthcare systems. The aim is to bridge the gap between ancient remedies and modern healthcare by leveraging AI technologies. AI algorithms, employing machine learning algorithms and natural language processing, sift through extensive datasets sourced from historical texts, clinical trials, electronic health records, and social media. These technologies enable rapid detection of adverse effects, identification of usage patterns, prediction of potential risks, and real-time monitoring of traditional remedies. This proactive approach empowers timely intervention and raises safety standards.

#### **Keywords:**

AI-powered techniques, Pharmacovigilance, Traditional medicine, Machine learning, Safety monitoring, Adverse event,



**SPO-36**

## **CREATION AND ASSESSMENT OF A LIPOSPHERE LOADED FORMULATION OF SERTRALINE HCL**

Ms. Kalyani S. Ghotekar<sup>1\*</sup>, Mr. Akshay J. Giri<sup>1\*</sup>, Dr. Atul A. Phatak<sup>1</sup>

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### **ABSTRACT:**

Several strategies have been used by researchers to develop an oral drug delivery system that improves the dissolution profile. Lipospheres, a kind of nanotechnology to enhance bioavailability and aqueous solubility of BCS class 2 drugs. Sertraline HCl is one of the most prescribed antidepressants. The main objective of the work was to formulate sertraline hydrochloride-loaded liposphere and to characterize and evaluate the formulated liposphere. The liposphere prepared by melt dispersion technique were able to entrap the sufficient amount of drug by using optimized ratio of lipids and surfactants. The formula can be optimized by 2<sup>3</sup> factorial designs. Physicochemical properties of drug was carried out by IR, DSC, UV. The in-vivo pharmacodynamic study by using albino mice was performed. The stability study of period of 3 months would be performed by keeping the formulation in three different environmental conditions. The drug entrapment and particle size can be checked in interval of 30 days. It was found to be about 97.13% of drug can be released over 24 hrs. Which is good to achieved sustained released of drug. The enrichment of sertraline hydrochloride entrapment was attained with good bioavailability and controlled release with enhanced its aqueous solubility.

**SPO-37**

**Title: Bridging the gap between awareness and execution of regulatory requirement in pharmacovigilance**

Lisha M. Wadhawa

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**Abstract:**

‘Pharmacovigilance’ the term invented in mid-70’s, deals with the drug safety. With the increasing demand for quality medicine, it is needed to focus on ‘adverse effects of medicines’ every drug along with its beneficial effects, comes with unwanted adverse effects, they can be mild or minor or serious. Even today, it is observed that common man and also some healthcare professionals are either unaware or not serious to report ADRs. This research/survey highlights the gap between regulatory requirement and current scenario of reporting ADR in a small area of Nashik district in Maharashtra, India.

**Key words:** Pharmacovigilance, drug, adverse drug reaction(ADR), adverse effects.

## SPO-38

### **Design of Luliconazole Nanoemulgel For Topical Delivery**

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#### **Abstract**

Dermatophyte infections, one of the first recognized fungal infection, are exceedingly frequent around the world. Dermatophytosis affects around 20-25% of the global population, and its prevalence is increasing on a daily basis. Proper. To prevent the disease from spreading to peripheral organs and mortality, targeted and effective therapeutic approaches are required. Luliconazole is a highly effective imidazole antifungal drug with a distinct structure. *T. rubrum* (MIC 0.0078g/ml) and *epidermophytonfloccosum* (MIC values range from 0.00012 to 0.02 g/ml) are the two principal dermatophytic pathogens that luliconazole effectively suppresses. The current project's goal is to create and test a nanoemulgel containing luliconazole. The nanoemulsions were formulated using the Aqueous Titration method, which was then followed by the High energy emulsification method. The preparation of luliconazole nanoemulgel yielded good results. Luliconazole nanoemulgel formulation is appropriate for drug delivery.

## **SPO-39**

### **DEVELOPMENT AND CHARACTERIZATION OF OCULAR NIOSOMAL IN-SITU GEL FOR OPHTHALMIC DRUG DELIVERY**

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#### **Abstract:**

To make a long lasting and effective diclofenac sodium (DCS) niosomal in situ gel, the research focused on enhancing how well it's absorbed and stays where needed. Niosomes were created using the thin film hydration method, with different mixes of cholesterol and span 60. They were then checked for things like how much drug they held, their efficiency, size, and how well the drug diffused in tests to perfect the process. As for the in-situ gel, an ion triggered method made it. Tests and adjustments considering factors such as gel quality and how the drug releases followed to make the gel better. The gel used a niosomal blend. This combination showed enhanced drug content ( $97.99\pm 1.5\%$ ) and captured efficiency ( $98.93\pm 1.8$ ). Its particle size was also favourable ( $106.2\pm 1.8$ ). This was due to the cholesterol and Span 60 included in the optimized niosomal mix. An ideal gelation temperature of  $37^{\circ}\text{C}$  and a  $t_{90}$  value of 10 hours were observed in the perfected in situ gel. This gel had gellan gum and HPMC K4M, suggesting sustained effectiveness. Diclofenac sodium was chosen to provide extended drug delivery. This combats eye irritation by boosting bioavailability.

## SPO-40

### **Phytochemical analysis of *Hibiscus sabdariffa* by using HPTLC and GC-MS techniques.**

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#### **Abstract**

The major objective of this research is to use HPTLC and GC-MS to determine the principal components of the *Hibiscus sabdariffa* Linn plant. Calyx of *Hibiscus sabdariffa* plant were collected then ethanolic, aqueous and ethyl acetate extract was prepared by maceration method. HPTLC analysis study focuses on the quantitative analysis of Protocatechuic acid and Lupeol in extracts obtained from *Hibiscus sabdariffa* Linn. The GC-MS results revealed a complex composition of phytochemicals in various extracts. Phytochemical analysis of this plant species further helps in selection of appropriate extract for biological analysis as well as it will also help in herbal product development.

## SPO-41

### **The development and assessment of a bilayer tablet containing metronidazole and lactobacillus casei for their anti-diarrheal and gut wall maintenance properties.**

Ms. Pooja B. Salgar<sup>1\*</sup>, Mr. Aniket A. Kadam<sup>1\*</sup>, Dr. Atul A. Phatak<sup>1</sup>

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#### **ABSTRACT-**

This study focuses on the formulation and evaluation of a bilayer tablet containing metronidazole and Lactobacillus casei. The aim is to explore its potential in addressing both anti-diarrheal effects through metronidazole and gut wall maintenance properties via Lactobacillus casei. The tablet's design intends to achieve a synergistic therapeutic approach for gastrointestinal health. The assessment involves various pharmaceutical parameters, including dissolution profiles, stability, and efficacy in alleviating diarrheal symptoms while promoting gut flora balance. Results aim to contribute valuable insights into the development of an effective combination therapy for gastrointestinal disorders.

## **Focus on Magnetic Drug Delivery System Optimization and Safety Aspects of Tablet Dosage form Using Anticancer Drug Imatinib Mesylate**

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### **Abstract:**

The study aims to investigate the impact of magnetite particles on systemic circulation in magnetic drug delivery systems. Magnetite-based nanoparticles have promising applications in targeted drug delivery, cancer genotherapy, protein therapy, and hyperthermia. The study analyzed the compatibility criteria of the magnetic system to validate oral tablets that make up the system. Hemogram changes indicated the presence of magnetite in systemic circulation. The study successfully created tablet dosage forms using the anticancer medication candidate imatinib mesylate. Analyzing drug release patterns indicated important contributions from the system's in-vitro components, magnets, and polymers. The study highlighted the significance of continuous safety evaluations. Cancer therapy frequently entails long-term treatment. Although a single dose of magnetite may immediately restore changed haemogram and hemolysis data, extended absorption may cause normal physiological systems to malfunction, even when coated with the proper polymer. This malfunction could happen as soon as the coating is released or continue even if the coating is present for a long time. Over time, the bodily system may experience negative consequences from magnetite buildup. The study's findings emphasize how uncertain the long-term safety of magnetic drug delivery systems is. Although a magnetic drug delivery tablet system for oral use has been successfully validated and developed, careful consideration of safety factors is necessary when optimizing magnetic drug delivery systems. The risks that come with continuous use, especially over an extended period, make continuous safety evaluations essential. The study offers insightful information about the intricate interactions between magnetite, polymers, and systemic reactions in the context of magnetic drug delivery systems.

## SPO-43

### **Almotriptan malate in situ gel**

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#### **Abstract:-**

The objective of this research is to create, evaluate, and characterize a thermosensitive in-situ nasal gel that functions as an alternative to intracranial drug delivery. The gel contains the selective serotonin 5-HT<sub>1</sub> receptor agonist almotriptan malate. Using a cold method, gels were created by adjusting the concentrations of carboxymethyl chitosan and pluronics (PF127 and PF68), which are thermoreversible and mucoadhesive polymers, respectively. The drug content ranged from 95.8–98.66% after gelation and from 96.42–98.92% before. The pH value was found to be between 5.56 and 6.31. It was demonstrated that the chitosan content increased all of the formulations' mucoadhesive strengths, which varied from 3300 to 5193.65 dyne/cm<sup>2</sup>. The in-vitro drug diffusion results of the modified formulation, which contained 17% w/v PF127, 2% w/v PF68, and 0.1% w/v carboxymethyl chitosan, showed an 89.36% release after six hours.



## SPO-44

### **Integrating Traditional Diagnosis Methods with AI-Powered Treatment Plans**

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#### **Abstract:**

Artificial intelligence can help healthcare practitioners provide a wide spectrum of treatment for patients and smarter medical systems. AI approaches encompassing artificial learning as well as deep learning are used in healthcare for disease identification, drug discovery, and patient risk identification. Many diseases, such as diabetes, cardiovascular problems, tuberculosis, hypotension, hypertension, dermatitis, stroke, and liver disease, can be recognized early using artificial intelligence techniques. The recent AI revolution has the potential to revolutionize the discipline of health diagnosis by enhancing the accuracy of forecasts, the speed, and the effectiveness of the procedure for diagnosing patients. Artificial intelligence (AI) algorithms can interpret medical images (such as X-rays, magnetic resonance imaging (MRIs), ultrasound examinations, computed tomography (CT), and DXAs) and aid healthcare workers in discovering and diagnosing diseases more precisely and quickly. AI can analyze massive amounts of patient data, including medical 2-D/3-D imaging, bio-signals (such as electrocardiograms (ECG), electroencephalograms (EEG), electromyography (EMG), vital indicators (for example, body temperature, pulse rate, rate of breathing, and cardiac pressure), demographic data, health status, and results from lab tests. It is critical to remember that, despite AI being a fantastic tool, it cannot replace qualified medical practitioners. Instead, AI might be utilized to assist and improve diagnostic processes, enhancing patient care and health care results. Future studies and applications of AI for medical diagnostics must examine ethical issues, data protection, and long-term viability.

**SPO-45**

## **The Contribution of AI in Exploration of Drug Discovery and Development**

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### **ABSTRACT**

The artificial intelligence (AI) community is become more and more active. Artificial intelligence (AI) technologies are essential for the meticulous analysis of data-driven information due to the growing amount of data. By optimizing trial design (including biomarkers, efficacy parameters, dose selection, and trial duration), precisely choosing the target patient population, patient stratification, and patient sample evaluation, artificial intelligence (AI) significantly raises the success rates of clinical trials. As long as the correct questions are posed in conjunction with the appropriate technology, artificial intelligence approaches hold enormous potential for achieving these aims.

## SPO-46

### **SYNTHESIS, PURIFICATION AND CHARACTERIZATION OF SOME IMPURITIES OF PROPRANOLOL**

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Dr. Amit Suryakant Tapkir<sup>3</sup>

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#### **Abstract**

**Introduction:** During the process of drug development, control of impurities and it should keep in within prescribed limit is very important to get high-qualified drugs. Several studies have dedicated to synthesize the impurities and study the structures to support the method of purification. Propranolol is beta blocker medication preferably block  $\beta_1$  receptor, primarily used to treat high blood pressure and heart associated chest pain. Hence synthesis and study of impurities related to propranolol is very important variable. **Aim:** The aim of this research work has to synthesis of propranolol impurity because these impurities play and vital role in the process of drug. **Experimental work:** We focus on synthesis of main five key propranolol impurities with purification and characterization. We synthesize five impurities namely 2-[(naphthalen-1-yloxy) methyl] oxirane; 3,3'-(isopropyl azanediyl) bis(1-(naphthalen-1-yloxy) propan-2-ol) hydrochloride; 1,3-bis(naphthalen-1-yloxy) propan-2-ol; 1-amino-3-naphthalen-1-yloxypropan-2-ol; N-(2-Hydroxy-3-(naphthalen-1-yloxy) propyl)-N-isopropyl acetamide. These five impurities where designed and synthesize by ring opening, dimerization and reduction by taking 1 naphthol as starting material. **Characterization:** Column chromatography and thin-layer chromatography techniques were used for the separation and purification of chemical compounds. The structures of synthesized compounds were elucidated by using mass spectrometry and <sup>1</sup>H-NMR spectroscopy. For future prospect pharmaceutical industry reduce the level of impurity to their required threshold according to ICH guideline. **Conclusion:** We synthesized impurity which belong to emergency cardiovascular drug, so that they have high market value in pharmaceutical industry for



concerning safety of potent drug. In our research work, we study how to synthesize impurities of API and their characterization.

**KEYWORDS:** Propranolol, Impurity Synthesis, 2-[(naphthalen-1-yloxy) methyl] oxirane, Ring opening, Dimerization.

**SPO-47**

## **Computer Vision Improved Herbal Drug Safety Assessment**

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### **Abstract:**

A proper safety investigation is becoming increasingly important as alternative healthcare gains popularity. Maintaining proper health is very important. Neural network technology is altering how certain assessments are carried out. Herbal medication inspection and proof are frequently accomplished through the evaluation of biological and physicochemical features. This shows the broad range of uses of software algorithms in the testing of herbal medicines, including mixture optimization, chemical targeting, drug combination reaction estimation, statistical modelling for dangerous effects, and the integration with old knowledge and modern science techniques. The capabilities of artificial intelligence aid in legal compliance, easy system integration, and thorough safety evaluations. Because traditional drugs are generally viewed as safe and secure and have been consistently always used for quite a long period of time, particularly when taken in accordance with earlier published information. Because of the active association that happens between traditional practices and data science, herbal treatments will be taken with greater trust in the future, approving their worth as life-threatening components of modern-day medical operations.

**Keywords:** Artificial intelligence, Computing strategies, Herbal drug, Traditional medicines, Drug interaction, Safety assessment.

**SPO-48**

## **Development and Evaluation of Plumbagin Microsponge Gel for Topical Drug Delivery**

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### **Abstract**

When plumbagin microsponge gel is developed and administered topically, it will increase plumbagin's safety and efficacy while also lessening its tendency to cause skin irritation. The microsponge gel was created using the solvent diffusion method. Microsponge is made of water, ethylcellulose, methylene chloride, and polyvinyl alcohol (PVA). Microsponge was prepared using different PVA concentrations, and it was analysed using different test techniques. Particle size, drug content, drug encapsulation efficiency, drug release, X-ray diffraction, diffraction scanning calorimetry, and in vivo animal studies are the characteristics of drug-loaded microsponge. Gels containing plumbagin microsponges were also made using varying PVA concentrations. F3, exhibiting a drug release 80.57% and a particle size within the 5-10  $\mu\text{m}$  range, was determined to be the best batch. While pure medication causes skin irritation on the skin of rats, plumbagin placed into microsponges does not exhibit any skin irritation.

**SPO-49**

**APPLICATION OF NATURAL POLYMER IN DEVELOPMENT OF  
PHARMACEUTICAL FORMULATION.**

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**ABSTRACT:**

Orally disintegrating tablets (ODTs) often dissolve quickly in a matter of seconds. ODT of Valsartan with a naturally occurring disintegrate extracted from Colocasia esculenta tubers. contrasting the isolated natural polymer's disintegration qualities with those of synthetic super disintegrates that are offered commercially. removing natural polysaccharide from Colocasia esculenta tubers, analysing the isolated polymer, and testing tablets.

## SPO-50

### **Development and evaluation of polyherbal antioxidant formulation using QbD approach.**

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#### **Abstract**

**Aim:** To develop a formulation with Antioxidant Properties using Herbal Ingredients.

The goal of the current study was to use herbal elements to create a formulation that has antioxidant characteristics and then evaluate it. The active phytoconstituents of a single plant are insufficient to produce the desired effect; therefore, combining extracts from various plants or herbs in a certain ratio will result in a higher therapeutic impact. The polyherbal tablet formulation used in the current study was created utilizing the Quality by design approach. By using *Curcuma longa*, *Withaniasomnifera*, *Tinospora cordifolia* polyherbal tablet formulation was successfully formulated.



## **SPO-51**

### **Formation of mosquito repellent microencapsulated gel from *Citronella* oil**

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#### **Abstract**

It has been observed that citronella oil (CO) has a mosquito-repelling effect. Unfortunately, its repellency impact was diminished because of its high volatility effect. Therefore, the aim of this study was to use microencapsulation to reduce the oil's rate of evaporation. Microcapsules (MCs) were prepared by the simple coacervation process of gelatin.

**SPO-52**

**NOVEL PROMISING PHYTO-CONSTITUENTS FOR THE  
MANAGEMENT OF SEBORRHEIC DERMATITIS**

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**Abstract:**

Seborrheic dermatitis is commonly known as dandruff. Dandruff is predominantly caused by common skin flora involving fungi like, *Malassezia Spp.* and *Candida albicans*. Genetics, pathophysiology, gender and environment have major impact on growth of these fungi on human skin. (Saunders cw et al 2012) Substantial scientific literature is available supporting the prophylaxis and treatment of dandruff. Marketed synthetic antifungal agents such as (ketoconazole, itraconazole etc) have several adverse reactions including dry scalp, dry hair, headache, alopecia, abnormal hair structure, eye irritation. (Park et. al 2014)

**Aim:** The current study is to accumulate and replace existing antifungal agents with cost-effective active ingredients for the management of dandruff. Our literature search reveals many promising Phyto-constituents for the effective management of seborrheic dermatitis.

**SPO-53**

**Development and Evaluation of Sunscreen Formulation.**

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**Abstract :**

The current study aims to create and evaluate a sunscreen product that provides extra antioxidant properties in addition to UV protection by utilizing the phytoconstituent catechin. The project also aims to develop a formulation that reduces grittiness and increases spreadability using nanosized ZnO<sub>2</sub> and TiO<sub>2</sub>.O/W sunscreen formulation was developed using traditional methods and further evaluated. The formulation showed SPF value of 27 with good spreadability and stability, making it preferable over traditional formulations.

**SPO-54**

**Bioanalytical Method Development, Validation and Quantification of  
Tivozanib in Human Plasma by RP-HPLC**

**Ms. ShraddhaSonawane**

**ABSTRACT**

A simple, selective, precise, and cost-effective method was developed and validated for analysis of Tivozanib in human plasma by using reverse phase high performance liquid chromatography. Tivozanib drug concentration determines human plasma by using the chromatographic analysis in presence of its degradation product. The chromatographic analysis was performed on THERMO C18 column at wavelength 222 nm using mobile phase (methanol: water) and flow rate 0.7 ml/min. The developed method was selective also justify the accuracy, the percentage recovery of Tivozanib was found to be 98-100%. Developed method was precise, % RSD was found to be less than 2%. The linearity was found in concentration range of 2-10 µg/ml with 0.9998 co-relation coefficient value. LOD and LOQ was 0.333 µg/ml and 0.101 µg/ml. respectively. The developed method was validated as per US Food and Drug Administration and International Conference on Harmonization guidelines and has a potential to selectively determine the concentration of Tivozanib in human plasma successfully.

**Keywords:** Tivozanib, Plasma, RP-HPLC, Method Development, Validation.

## SPO-55

### **Synthesis and Insilico study of six key impurities of Bisoprolol: $\beta$ blocker**

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#### **Abstract**

There is a vital role that the impurity standard play in the development of any drug. The goal of the present work has to be synthesis the impurity of the bisoprolol. To concise the work we performed docking study to find potential impurity. Bisoprolol is beta blocker medication preferably block  $\beta_1$  receptor, primarily used to treat high blood pressure and heart associated chest pain. G-protein couple receptor kinase 2 (GRK2) inhibitor play an important role for the potential treatment of heart failure. For Insilico study GRK2 was consider as protein target (PDB id for GRK2-5UVC). To minimise expense in traditional synthesis we performed docking studies 6 types of impurity obtained . Preparation of 2-[(p-Tolyoxy) methyl] oxirane, 4-[(2-Isopropoxyethoxy) methyl] phenol. Preparation of 3, 3'-(Isopropylazanediy) bis (1-(4-((2-isopropoxyethoxy) methyl) phenoxy) propan-2-ol)

## SPO-56

### **Evaluation of Vachadighrita by a Novel Planar Chromatography - HPTLC method**

Ms. Shweta C. Pawar<sup>1</sup>, Mr. Rohan D. Gavali<sup>2</sup>, Mr. Abhijeet Rajput<sup>3</sup> and Dr. Aruna P. Jadhav<sup>4</sup>  
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#### **Abstract**

Vachadighrita is an Ayurvedic formulation known for its ability to improve memory and cognitive function, promote mental clarity and concentration, and treat various neurological disorders. Vachadighrita is made from ghrita and a blend of eight herbs, including *Zingiberofficinale* Roxb. (sunthi), and *Terminalia chebula* Retz. (Haritaki), *Tinospora cordifolia* (Guduchi), *Hedychium spicatum* Ham (Sati), *Embeliaribes* Burm. (Vidanga), *Acorus calamus* (Vacha), *Convolvulus pluricaulis* (Shankhpushpi), and *Achyranthes aspera* (Apamarg). In this research work, a stability-indicating HPTLC method was established. Zingerone,  $\beta$ -sitosterol, vilangin, and quercetin were used as markers. Accelerated degradation studies were performed on these markers. Considering the advanced formulation characteristics, these findings also shed light on the storage and inherent stability conditions of these markers. The method's validation was carried out. All studies followed ICH guidelines. The established method will be useful for the quality control of Vachadighrita.

**SPO-57**

**Development and Assessment of Dual-Drug Loaded Mixed Polymeric  
Micelles for Anti-Diabetic Intervention**

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**Abstract-**

The creation and evaluation of dual-drug-loaded mixed polymeric micelles for anti-diabetic intervention is explored in this work. The objective is to improve treatment outcomes by focusing on several pathways related to the etiology of diabetes. The hydrophobic medications can be encapsulated by the biocompatible micelles. The study looks into the safety of the micelles as well as their synthesis, characterization, and release kinetics. The effectiveness and bioavailability of the micelles are assessed in in vitro investigations and in vivo trials using animal models of diabetes. The findings might inspire the creation of anti-diabetic medicines for the next generation.

**SPO-58**

**FORMULATION AND EVALUATION OF GEL  
FOR TOPICAL TREATMENT OF MELANOMA CANCER  
BY USING B16F10 CELL LINE**

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**ABSTRACT:**

The primary goal of current study is to formulate a gel containing the extract of *plumeria alba* and *allamanda cathartica* targeting topical treatment of melanoma cancer. C57BL/6J mouse is used to generate the murine melanoma cell line B16F10. Skin cancer which is the most prevalent kind of cancer world wide. melanoma is one of the most common recurrent malignancies in humans. Melanoma means which mainly form in cell called melanocytes, produces melanin, a brown pigment that's give your skin its color. This is most serious type of skin cancer because it can spread to other parts of body also. treatment of melanoma targeting through topical route is become more attractive due to its easy application . at the same time treatment through chemotherapy become more challenging in some type of chemotherapy because they causes dry skin , itching and redness or darkness of skin and delivery of antineo-plastic agent through skin it is become more tasking because of their physiochemical properties ( it incluids solubility, melting point , ionization constant, molecular weight) Selected drug plumeria alba and allamanda cathartica formulation of gel. The prepared gel evaluated through different evaluation technique. and various preformulation study was carried out.

**KEYWORD:** *Allamanda cathartica*, B16F10 cell line, hydro alcoholic gel, melanoma cancer, *plumeria alba*.



**SPO-59**

**A REVIEW ON CHALLENGES AND IMPACT OF GREEN CHEMISTRY ON  
ENVIRONMENT**

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**ABSTRACT**

Green chemistry is the practice of developing chemical products and procedures that reduce or completely eliminate the use or production of hazardous compounds. This represents fresh, revolutionary advancement in the study of chemistry. This environmentally friendly approach would safeguard our ecosystem from dangerous and poisonous chemicals. The 12 guiding principles for green chemistry were first put forward by Paul Anastas and John Warner in 1990. The challenges of environmentally friendly chemistry, which also saves lives. Financial, regulatory, and knowledge and experience limitations are only a few of the challenges facing green chemistry. Recycling is an essential part of green chemistry because it safeguards humans, animals, and plants from dangerous chemicals, has a positive impact on the environment, and creates new economic opportunities. Green chemistry has several applications in both daily living and the pharmaceutical industry.

**Keywords:** - Green chemistry, Green technology, Challenges, Environmental impact, Economical impact, Applications.

**SPO-60****NEEM AND TRIPHALA EXTRACT OINTMENT IS AN EFFECTIVE  
AND ECONOMICAL OPTION FOR THE TREATMENT OF CHRONIC  
BED SORES**

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**Abstract**

Bedsore, also known as "Pressure sores" or "Decubitus ulcers" are skin sores or ulcerations due to prolonged pressure on the skin on patients who are bedridden and unable to move or even sit up straight. Nowadays, chronic ulcers are one of the most expensive issues of health problems and also drug resistance has grown in recent years. In this study, the fusion method formulated the herbal ointment using Neem (*Azadirachta indica*) and Triphala (Indian Gooseberry, Bibhitaki, Haritaki). The developed ointment was assessed for physiochemical properties, injury recovery and antimicrobial activity. Colour, odour, consistency, homogeneity, viscosity, stability studies, phase separation, Ph, extrudability were tested and good enough results were obtained. The standard were used which are ATCC strain for gram-positive bacteria (*Staphylococcus aureus*, *Bacillus subtilis*) and gram – negative bacteria (*Pseudomonas aeruginosa*) and zone of inhibition found to be 20.2mm, 27.5mm and 24.3 mm for microorganisms *B.subtilis*, *P.aeruginosa*, *S.aureus* respectively. Also polyherbal ointment was scrutinized in vivo in rats for wound healing action. In herbal ointment treated group, the wound area on day 1 was found to be 250mm<sup>2</sup>. On day 7 and day 14 respectively 50% and 80% reduction in wound area and the formulation showed wound healing action when it was compared with standard ointment which is Povidone.

## SPO-61

### **Development and evaluation of nanosponges based gel for topical delivery of antifungal drug**

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#### **Abstract:**

This study focuses on developing a nanosponge-based gel for improved topical delivery of antifungal drugs. nanosponges, known for high drug-loading capacity and stability, address solubility and release challenges. The research includes nanosponge formulation, gel incorporation, and comprehensive characterization. In vitro and in vivo studies assess drug solubility, skin permeation, and sustained release. The proposed nanosponge-gel aims to enhance therapeutic efficacy, providing a promising solution for effective topical antifungal treatment.

## SPO-62

### **Formulation and Evaluation of Chrysin Loaded Solid Lipid Nanoparticles**

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#### **Abstract**

Chrysin is one of the powerful flavonoids with inhibitory action against protein tyrosine phosphatase 1B (PTP1B). However, chrysin undergoes substantial pre-systemic metabolism through hepatic and intestinal sulphation and glucuronidation, rendering it nearly insoluble in water. Resulting in a potential decrease in pharmacological efficacy due to limited bioavailability. SLNs are a very stable colloidal carrier system that enhances the bioavailability of poorly soluble molecules in water, prevents drug degradation when included, is easy to make, has a regulated release, and has good tolerability

**SPO-63**

**FORMULATION AND EVALUATION OF AN IN-SITU GEL FOR THE  
TREATMENT OF PERIODONTITIS**

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**Abstract:**

The purpose of the study is use of Tamarind Seed Polysaccharide (TSP) in an in-situ gelling system for controlled drug delivery in the treatment of periodontitis, highlighting its potential benefits, such as sustained action and improved patient compliance. Tamarind Seed Polysaccharide (TSP) is suitable for drug delivery due to its viscosity and adhesivity. The in-situ gelling system ensures precise drug administration, enhancing patient compliance. TSP was isolated from tamarind seeds, and an in-situ gel for periodontitis was prepared with curcumin, TSP, and Carbopol. The optimized formulation showed 98.62% drug content and gelation at 37°C, indicating sustained action.

**SPO-64**

## **ARTIFICIAL NERVE NETWORKS FOR TUBERCULOSIS**

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### **Abstract**

Artificial Neural Networks (ANN) are used in diagnosing tuberculosis through analyzing patient clinical data with the help of Matlab software. This research shows that the use of ANN has the potential to increase the accuracy and speed of disease diagnosis. Experiments using clinical datasets achieved 100% accuracy with optimal network architecture. Nevertheless, further development is needed to increase the efficiency of this system in medical practice

## SPO-65

### **Development and Evaluation of Naringenin Nanoparticles against Letrozole-induced polycystic ovarian syndrome in Female Wistar Rats.**

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<sup>2</sup>Associate professor at MET institute of pharmacy, Nashik, India

#### **Abstract:**

Naringenin nanoparticles were created using the biocompatible and biodegradable polymer poly(lactic-co-glycolic acid) (PLGA) 50:50. In order to investigate the effects of the PLGA concentration and the high-pressure homogenizer cycles on the particle size, Polydispersity index (PDI), and percentage entrapment efficiency (%EE), 32 factorial designs were used to optimize the development of nanoparticles. Numerous attributes were analyzed for the optimized batch, such as DSC, SEM, in vitro drug release research, etc. A prepared nano-formulation was tested on animals to evaluate PCOS brought on by letrozole. First, letrozole was administered to the animals in order to screen them for PCOS. Five groups were randomly selected: Clomiphene citrate 1 mg/kg (Clomi citrate), Naringenin Nanoparticles 50 mg/kg (NAR1), Naringenin Nanoparticles 100 mg/kg (NAR2), and Let group (PCOS triggered). The SIRT1 and PGC-1 $\alpha$  expression in changes to the estrus cycle, body weight, ovarian activity, blood levels of hormones such as testosterone (TTST), estradiol (E), luteinizing hormone (LH), follicle-stimulating hormone (FSH), glucose metabolism, and ovarian function were all investigated in the ovary using the ELISA technique. The intestinal composition of the fecal microbiome was also investigated. In summary, naringenin-loaded PLGA nanoparticles (NAR1 and NAR2) prevented the ovarian morphological change associated with letrozole-induced PCOS and demonstrated a protective effect on the levels of various sex hormones, the makeup of the gut microbiota, and MDA, SOD, and CAT. The results of the current study suggest that the use of NAR1 and NAR2 dispersion is a potential alternative for the treatment of PCOS.

## SPO-66

### **Digital Twins: An innovative approach in drug discovery and safety assessment**

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#### **Abstract**

*Datura stramonium* L., commonly recognized as *Datura* or moon flower, holds a ubiquitous presence and is renowned for its multifaceted medicinal attributes encompassing antimicrobial, antidiabetic, anti-asthmatic, anti-inflammatory, neurological properties. Despite its medical importance, the genus *Datura* has 89 species, only 13 of which are recognized. However, phytoconstituents such as hyoscyamine, scopolamine, atropine, and solanine are strong but possibly fatal. Because of its essentially toxic character, even little variations from authorized dosages can result in significant unpleasant responses, making standard pharmacokinetic investigations difficult. The suggested study focuses on a useful tool for facilitating pharmacokinetic investigations of such drugs. This technology entails the use of digital twins to leverage massive datasets derived from historical records of several *Datura* species. This innovative technology will provide a quick, cost-effective, and morally sound alternative to traditional techniques, allowing for the extrapolation of probable *Datura* ingestion repercussions. This method will not only overcome the issues provided by *Datura* toxicity, but it also has the potential to alter drug research, notably in the field of pharmacokinetic studies. This will greatly enhance and simplify pharmaceutical ingredient investigation, offering a paradigm change in medication discovery and safety evaluation.



## **SPO-67**

### **“AI-POWERED PERSONALIZE HEALTHCARE: TAILORING TREATMENT FOR YOU”**

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#### **ABSTRACT**

Artificial Intelligence (AI) in healthcare promises customized treatment for better patient outcome, signalling a revolutionary shift toward personalized medicine. In contrast to traditional methods, AI- powered personalized medicine uses data, machine learning (ML), and sophisticated analytics to create customized treatment regimens. Early identification, customized therapy, and remote patient monitoring. Nevertheless, restrictions on the use of AI in this sector must be carefully considered. This study explores AI’s potential uses as well as its limitations in individual healthcare. A review of the literature finds that although AI can provide insightful analysis and helpful suggestions, the accuracy of the technology greatly depends on the Caliber of the training data. Privacy issue about the gathering, storing, and application of patient data become a major obstacle. Concerns are relied upon for care. furthermore, some patients may not be able to access AI systems since they may be too expensive for smaller healthcare institutions to install, Even with its imperative to tackle this limitation to maximize the advantage of AI while reducing any possible hazards. Insights regarding AI’s current state in customized healthcare and the crucial factor for its ethical and successful integration are to be gained from this research, which should be helpful to healthcare provide, AI developers, legislators, and patients alike.

**Keywords-** Personalized Healthcare, Artificial Intelligence (AI), Healthcare Innovation, Healthcare Technology.

## SPO-68

### **Assessing the surface properties of biogenic silver nanoparticles coating on surgical sutures using artificial intelligence supported RGB analysis**

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#### **Abstract**

Surgical site infection arising from microbial contamination of surgical wounds is a major cause of surgical complications and prolong hospital stay. In recent years, monofilament nylon sutures have been used as ideal wound closure material due to its excellent properties, including limited susceptibility to surgical site pathogen and enhanced wound healing potential. However, to enhance the antimicrobial efficacy of sutures, antibiotic coating has been adopted as an alternative strategy to limit bacteria proliferation, surgical site complication, and inflammatory reaction. Current development and spread of antibiotic resistant pathogenic bacteria promote the risk of wound and surgical site complication, and thus demands alternative and effective strategies. Silver nanoparticles synthesized using *Eucalyptus* aqueous leaf extract was deposited on non-absorbable surgical sutures by *in situ* method. The distribution and percentage of AgNPs deposited on the surface were evaluated by energy dispersive x-ray spectroscopy (EDS) at area of 50  $\mu\text{m}^2$ . EDS provides information about the elemental composition of a sample, when combined with SEM imaging, the grayscale intensity of an image can correspond to the concentration of a particular element. Assigning specific elements to the Red, Green, or Blue channels in an RGB image allows for elemental mapping. Nylon surgical sutures The EDX quantitative revealed Ag concentration of 1.9% Wt on the sutures. Mapping of the sutures surface further showed uniform distribution of synthesized silver nanoparticles on the surface of the sutures. Other elemental components of the paper included carbon, nitrogen, oxygen, and chlorine probably from material in the sutures.

Keyword: Silver nanoparticles, Nylon sutures, *In situ* technique, EDS, RGB



**ACADEMICIAN INNOVATION  
PRESENTATION  
CODE  
SPI-01 TO SPI-02**

**SI-01**

## **NOVEL DRUG DISCOVERY**

### **Implementation of Image Processing technique using Machine Learning Algorithms to identify different Medicinal Plants**

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#### **ABSTRACT:**

This document serves a Word Document and it contains an innovative idea about **Novel Drug Discovery** which focuses on the Image Processing technique & the amazing concept of Machine Learning to design a software or application for identification of different Medicinal Plants by some of their morphological characteristics.

**SI-02**

## **PATIENT-CENTRIC PHARMA**

### **Implementation of Image Processing techniques using Machine Learning Algorithms to Diving Deeper into Radiomics: Seeing Beyond the Human Eye**

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#### **ABSTRACT:**

This document serves as a Word Document, and it contains an innovative idea about PATIENT-CENTRIC PHARMA which enlightens the Image Processing technique & the wonderful concept of Machine Learning to design a software by removing quantitative characteristics from medical pictures, the cutting-edge discipline of radiomics surpasses the capabilities of human eyesight. The texture, shape, and intensity are examples of traits that serve as subliminal indicators of illness development and response to therapy. Radiomics converts medical photos into mineable data by utilizing machine learning algorithms and image processing techniques, which opens a wealth of information that is hidden from view.

#### **KEYWORDS:**

Patient-centric Pharma, Image Processing, Machine Learning.

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