



Editor in Chief: Dr. Chandrakant Bonde



Editor: Ms. Hemangi Rathod



It gives us immense pleasure to present this edition of the SSR College of Pharmacy newsletter — a reflection of the vibrant academic, research, and co-curricular activities that continue to shape our institution.

At SSR College of Pharmacy, we are committed to fostering innovation, critical thinking, and ethical responsibility in the field of pharmaceutical sciences. This issue highlights some of the recent achievements of our students and faculty, academic collaborations, seminars, workshops, and community outreach initiatives that continue to inspire growth and excellence.

Our college remains dedicated to nurturing future pharmacists who are not only skilled and knowledgeable but also socially responsible contributors to healthcare. We applaud the consistent efforts of our students, faculty members, and alumni who make SSR College of Pharmacy a hub of academic brilliance.

We hope this edition serves as a source of pride, motivation, and information for our readers. We look forward to your continued support and contributions in making each edition more engaging and impactful.

Warm regards,

EDITORIAL BOARD

- Dr. Smita Bonde



- Dr. Sonal Desai



- Dr. Himanshu Solanki



- Dr. Parixit Prajapari



- Mr. Vipul Prajapati



- Ms. Lata Manani



- Ms. Priya Shukla





71th Liberation Day of Dadra and Nagar Haveli

Celebration of Anti-ragging Week from 11 August to 18 August.

On the auspicious occasion of the 71th Liberation Day of Dadra and Nagar Haveli, SSR College of Pharmacy organized a Warli painting competition. This event was held on the 1st of August, 2025, to celebrate and honour the rich cultural heritage of the region Warli painting, a cherished art form indigenous to Dadra and Nagar Haveli, served as a perfect medium to commemorate the history and traditions of the land.

Dr. Sarika Patel in charge Principal of SSR College of Education was invited to serve as the evaluator for the competition. The competition saw enthusiastic participation from 28 students, showcasing their creativity and connection to the cultural roots.

The Anti-Ragging Week was celebrated at SSR College of Pharmacy on **11th August 2025** with the objective of spreading awareness among students about the harmful effects of ragging and promoting a safe and inclusive campus environment.

Winners of the Poster Competition:

- First Prize: Tejal Patil
- Second Prize: Jainik Baria
- Third Prize: Tanvi Prajapati

Winners of the Slogan Competition:

- First Prize: Ansari Kaukshnaji
- Second Prize: Sanket Saru
- Third Prize: Vaishnavi Gupta



The first prize was awarded to **Tanvi Yogesh Pardeshi**, a student of Third Year B.Pharm from SSR College of Pharmacy. The second prize was jointly secured by **Patel Hitenbhai Pravinbhai** from Final Year B.Pharm, SSR College of Pharmacy, and **Taral Vinod Raut** from Third Year B.Com, SSR College of Arts, Commerce and Science. The third prize was shared by **Snehi Rajesh Bhandari** from Third Year B.Pharm, SSR College of Pharmacy, and **Sadhna Chaudhary** from Second Year MBA, SSR College of IMR. All the winners were congratulated for their outstanding creativity and contribution to the event. The winners were awarded certificates of recognition for their remarkable contributions.

This event not only highlighted the importance of preserving and promoting local art forms but also provided a platform for young artists to display their skills and celebrate the legacy of Dadra and Nagar Haveli.





The program commenced with a brief introduction and orientation session on Anti-Ragging Week, delivered by Ms. Jenifer Laurence, highlighting the legal implications, preventive measures, and the institution's strict zero-tolerance policy towards ragging. This was followed by the screening of a short documentary, aimed at sensitizing students and helping them understand the real-life impact of ragging on victims. After the orientation, the Poster Competition and Slogan Competition were conducted to encourage students to creatively express their thoughts and ideas against ragging. The competitions were judged by Mr. Nishit Parekh and Ms. Jenifer Laurence.

The event witnessed enthusiastic participation from students, reflecting their awareness and commitment to building a ragging-free campus. The program concluded with words of appreciation from the judges, who lauded the creativity and strong messages conveyed by the participants.

Overall, the celebration successfully reinforced the importance of respect, empathy, and unity among students, marking another step towards creating a safe and supportive learning environment at SSR College of Pharmacy.

One-Day Workshop on Intellectual Property Rights (IPR)

A one-day workshop on Intellectual Property Rights (IPR) was organized by the Institution's Innovation Council (IIC) of SSR College of Pharmacy, Sayli, Silvassa, on 26th August 2025. The workshop aimed to provide insights into the significance of IPR in the pharmaceutical field, familiarize students with case studies, and highlight current trends in patents and legal issues related to the industry. A total of 95 students from Final Year and Third Year B.Pharm participated in the event.

Objectives of the Workshop

To make the students aware of their rights for the protection of inventions carried out in their project work.

To provide knowledge on the process of registering inventions in India and foreign countries, and to enhance understanding of patents, copyrights, trademarks, designs, and the Information Technology Act.

The program commenced with the Inauguration & Lamp Lighting Ceremony (10:00 – 10:30 PM) by all Chairpersons.

This was followed by a Welcome Address and speeches:

Dr. Chandrakant Bonde, Principal, SSR College of Pharmacy, delivered his speech highlighting the importance of IPR awareness for budding pharmacists.

Dr. Smita Bonde, President of IIC, SSR College of Pharmacy, also addressed the gathering, emphasizing innovation and entrepreneurship in the pharmacy profession. The workshop was highly interactive and enriched the knowledge of the students regarding intellectual property rights, patent filing process, and their application in Pharmaceutical science.



National Sports Day (Chess Tournament) Organized by SSR College of Pharmacy

To commemorate National Sports Day on the birth anniversary of hockey legend Major Dhyan Chand, SSR College of Pharmacy organized a one-day Chess Tournament on 29th August 2025. The event was aimed at promoting the value of sports in student life, especially those that foster critical thinking, patience, and mental resilience. National Sports Day is observed across India to honor Major Dhyan Chand's contribution to Indian sports, and the college embraced the occasion by conducting a chess tournament that highlighted the importance of mental agility alongside physical fitness.

The tournament was organized under the guidance of the college's Sports Coordinator, Mr. Mehul Rohit, who played a pivotal role in planning and executing the event smoothly. The event was inaugurated with a brief address highlighting the legacy of Major Dhyan Chand and the importance of including sports as an essential part of holistic education. Chess, as a game of strategy and intellect, was chosen to



align with the values of discipline, focus, and sportsmanship that the day stands for.

The tournament saw active participation from students across various departments and years. The event followed a knockout format, with each match drawing enthusiastic attention from peers and faculty alike. Participants demonstrated excellent strategic skills, calmness under pressure, and sportsmanlike conduct throughout the event. The college campus was filled with excitement as each round progressed toward the final match. Faculty members, students, and guests gathered to witness the intense final



round, which showcased a high level of skill and determination from the finalists. The smooth execution of the event was made possible by the dedicated efforts of Sports Club members who volunteered for various responsibilities such as registration, coordination, table setup, timekeeping, and assistance to referees.



The event concluded with a certificate distribution ceremony, where all participants were appreciated and awarded certificates for their active involvement and sportsmanship. The winners and runners-up received special recognition from the Principal, Dr. Chandrakant

Bonde, who also addressed the gathering. In his speech, he emphasized the importance of integrating sports into academic life and praised the initiative of the Sports Committee for organizing such an intellectually enriching competition. He also commended the volunteers and the Sports Coordinator for their commitment and organization. The Chess Tournament not only encouraged competitive spirit but also strengthened the bonds among students from different academic backgrounds. It served as a perfect reminder of the importance of sports and mental exercises in developing leadership, patience, and decision-making abilities among youth. Overall, the event was a great success, leaving a positive impact on students and staff alike. It truly reflected the spirit of National Sports Day and paid a meaningful tribute to Major Dhyani Chand through the lens of strategic gameplay and community engagement.

Teacher's Day Celebration 2025

Teachers' Day was celebrated with great enthusiasm at SSR College of Pharmacy, Sayli, on 5th September 2025. The program was organized to honor and appreciate the invaluable contributions of teachers in shaping the future of students. The celebration was graced by the presence of our respected Principal, Dr. Chandrakant Bonde, faculty members, and students from various years.



The event began with a warm welcome extended to all dignitaries, faculty members, and students. To mark the auspicious beginning, the traditional lamp lighting ceremony was conducted by Principal Dr. Chandrakant Bonde and dignitaries, symbolizing the spreading of knowledge and wisdom. The Faculties then enjoyed a series of games conducted by the organizing committee. Students from third year presented a power-packed group dance. The celebration continued with a graceful solo dance by final year student Drashti Tandel, a melodious singing performance by Emmanuel, and finally a nostalgic and energetic group dance by final year students.

A short note was presented on the significance of the day, commemorating the birth anniversary of Dr. Sarvepalli Radhakrishnan, who emphasized that teaching is not merely the imparting of and joy among all present. Gifts



were then distributed to the teachers as a token of appreciation and gratitude.

The program concluded with a heartfelt Vote of Thanks delivered by Mrs. Avni Desai, who expressed gratitude to the Principal, faculty, organizing committee, and students for making the celebration a grand success.



Information, Education, and Communication (IEC) Campaign

The Department of Health and Family Welfare, in collaboration with the State AIDS Control Society, UT of Dadra & Nagar Haveli and Daman & Diu, successfully conducted an Intensified IEC (Information, Education, and Communication) Campaign at SSR College of Pharmacy on 10th September 2025.



The campaign aimed to spread awareness regarding

HIV/AIDS, its prevention, and the importance of community participation in eradicating stigma associated with the disease. Through interactive discussions and awareness sessions, the program emphasized health education as a key tool for ensuring safe practices and informed decision-making among youth.

The session was conducted by **Miss Rajpriya Patel**, who highlighted the following key points:

- Understanding HIV/AIDS and its modes of transmission.
- Availability of treatment facilities and counseling services.
- Role of students and community members in reducing stigma and supporting affected individuals.

The campaign also included student participation, poster displays, and distribution of educational materials. Students actively engaged in the session and showcased their awareness efforts through various activities. Certificates of appreciation were awarded to participants as recognition of their contribution.

Guest lecture on HPLC Trouble Shooting

The institute organized a guest lecture on "HPLC Troubleshooting" on 15th September 2025. The session was delivered by Shri Dhananjay Patil, Senior Research Associate at Spincotech Limited, Vapi, Valsad. The lecture aimed to enhance the knowledge of participants regarding common operational issues in High-Performance Liquid Chromatography (HPLC), their root causes, and practical strategies to resolve them. Shri Dhananjay Patil shared his rich industrial experience, focusing on real-time case studies and problem-solving approaches.

Key highlights of the lecture included:

Identification and diagnosis of common HPLC problems (baseline noise, peak tailing, pressure fluctuations, ghost peaks, changes in retention time). Preventive measures to minimize instrument downtime, the Importance of column care, mobile phase preparation, and instrument maintenance.

Hands-on troubleshooting strategies are useful in both research and laboratories.

A total of 70 students and 06 faculty members attended the lecture. The session was highly interactive, with participants actively engaging in question-and-answer discussions. The knowledge shared was practical, insightful, and directly applicable to laboratory practices. The lecture was well appreciated by faculty, research scholars, and students. The session concluded with a vote of thanks by Dr Sonal Desai-Professor, Department of Quality Assurance, acknowledging Shri Dhananjay Patil's valuable contribution and his willingness to share expertise with the academic fraternity.



Hindi Diwas Celebration – 2025

Hindi Diwas is celebrated every year on **14th September** to commemorate the adoption of Hindi as one of the official languages of India. At SSR College of Pharmacy, Hindi Diwas was celebrated on **17th September 2025** with the objective of highlighting the importance of Hindi in our culture, promoting its use among students, and encouraging them to appreciate its literary richness.



This year's celebration aimed to blend cultural, educational, and creative aspects of the language. The event witnessed *active participation from students alike*, showcasing the collective enthusiasm and dedication towards honoring our national language.



The event was thoughtfully designed and carried out in two phases – formal ceremonies, competitions, and lecture sessions in the **Library**, followed by a cultural performance in front of the **Pharmacy Building**.



Competition Results

Poetry Competition

First Prize: Sachi Pawar (Final Year B. Pharm)

Second Prize: Khan Mohommad (Final Year B. Pharm)

Third Prize: Omkar Sarak (Final Year B. Pharm) & Pragya Yadav (Third Year B. Pharm)

Elocution Competition

First Prize: Krishna Upadhyay (Final Year B. Pharm)

Second Prize: Mansi Patel (Third Year B. Pharm)

Third Prize: Yash Karale (Third Year B. Pharm)

The Hindi Diwas Celebration 2025 was a grand success, filled with energy, enthusiasm, and meaningful participation. The day highlighted the cultural significance of Hindi while fostering literary and oratory skills among students. The combination of formal events, competitions, and a cultural skit created a holistic celebration that inspired everyone to represent and promote Hindi as an integral part of India identity.

World Pharmacist Day

SSR College of Pharmacy marked World Pharmacist Day on 25th September 2025 with great enthusiasm and purpose, embracing this year's theme: "Pharmacists: Think Health, Think Pharmacist. The day-long celebration featured a series of thoughtfully curated events aimed at underscoring the indispensable role of pharmacists in modern healthcare and fostering greater public awareness about their contribution.



✧ Highlights of the Day:

- ✧ Health Check-up Camp – Promoting preventive care among students and staff
- ✧ Pharma Awareness Rally & Skit – Spreading the message through impactful street performances
- ✧ Quiz Competition – Showcasing the academic prowess of budding pharmacists
- ✧ Elocution – Encouraging thought leadership and public speaking on key healthcare topics
- ✧ Poster Presentation – Visual expression of innovative pharmaceutical ideas
- ✧ Prize Distribution Ceremony – Recognizing talent, effort, and excellence.

✧ The celebration witnessed enthusiastic participation from students, faculty, and guests, truly reflecting the spirit of the pharmacy profession. Events like these not only educate and inspire but also reaffirm our shared commitment to global health and community well-being. A heartfelt thanks to Dr. Chandrakant Bonde, principal of SSR College of Pharmacy, Dr. Parixit Prajapati, overall coordinator of World Pharmacist Day, Gujarat State Pharmacy Council for financial support, all activity coordinators, faculty participants, and supporters for making this day memorable!



Two-day Workshop on Isolation and Extraction of Phytochemicals

The 2-Day Workshop on Extraction and Isolation of Phytochemicals was held on 22nd and 23rd September 2025 at Calves and Leaves Initiatives Pvt. Ltd., Vapi, Gujarat, in association with Shri B. V. Patel Education Trust, Ahmedabad and SSR College of Pharmacy, Silvassa, UT of Dadra & Nagar Haveli. The workshop was conducted by Dr. K. S. Laddha (Ex. Professor of Pharmacognosy, ICT, Mumbai)

The program was designed with the objective of providing participants with both theoretical knowledge and practical exposure to the extraction, isolation, and analysis of phytochemicals. It aimed to train faculty, researchers, and industry professionals in modern phytochemical techniques while strengthening the connection between traditional medicinal plant knowledge and its industrial applications in herbal, ayurvedic, and nutraceutical sciences.





Key Highlights

Live demonstration of pulverization, extraction, and isolation techniques of medicinal plants. Industry-oriented discussions linking research to commercialization.

Hands-on learning sessions guided by Dr. K. S. Laddha.

Interaction with experts from Calves N Leaves Initiatives Pvt. Ltd. and academic institutions.



Garba Celebration

The vibrant festival of Navratri was celebrated with great enthusiasm and joy at the SSR College campus on 27th September 2025. The event was a collaborative effort among all institutions under the SSR umbrella, including SSR College of Education, SSR Institute of Management, SSR College of Arts, Commerce and Science, and SSR College of Pharmacy. The program commenced at 03:30 pm with the traditional Mataji Aarti, where students, staff, and faculty members from all constituent colleges of the campus participated with devotion. The event not only celebrated the cultural essence

of Navratri but also fostered unity and collaboration among the various institutions. It was a perfect blend of tradition, talent, and togetherness. The Navratri celebration was a grand success, fostering togetherness and festive spirit among all colleges of the SSR family.



Skill Development Program

Under the aegis of IQAC, SSR College of Pharmacy, Silvassa has initiated a skill development drive by engaging students in real-time projects.

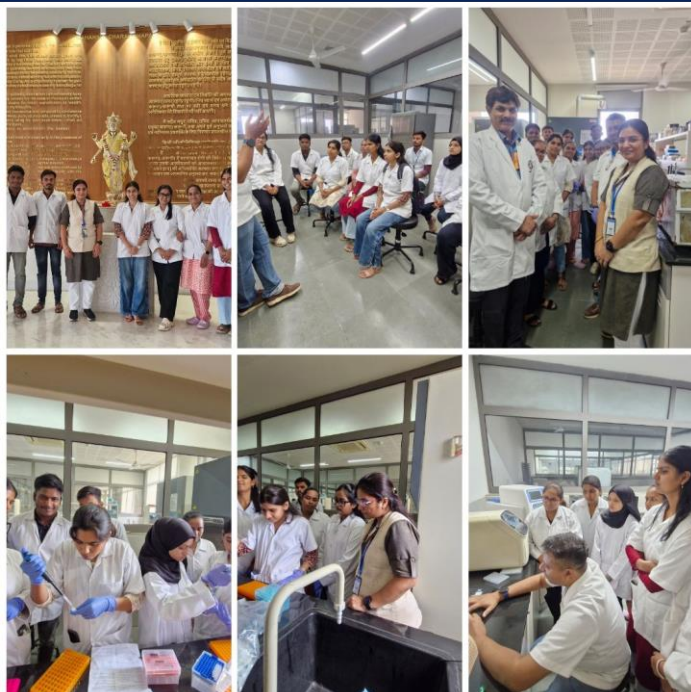
As a part of this initiative, students from SSR College of Pharmacy, Sayli, Silvassa, visited the Microbiology Laboratory at Namo Medical College under the supervision of Ms. Lata M. Manani.

With the expert guidance of Dr. Narayan Kamath and Dr. Mustafa Vohra, students received hands-on training and acquired essential skills through participation in a real-time project, including:

- ✓ Sample collection and RNA extraction
- ✓ RNA quantification and quality check
- ✓ cDNA synthesis via reverse transcription
- ✓ Real-Time PCR (qPCR) setup and thermal cycling
- ✓ Melting curve analysis using SYBR Green
- ✓ Data analysis and interpretation



Publications and Awards



Students also gained practical experience in nucleic acid isolation using both magnetic bead-based and silica column-based methods—enhancing their laboratory confidence and technical competence. Thanks to Dr. Chandrakant Bonde, Principal and Vipul Prajapati IQAC Co-coordinator for providing platform for this training. A heartfelt thank you to Dr. Narayan Kamath and Dr. Mustafa Vohra for providing this enriching, skill-based learning experience.

SSR COLLEGE OF PHARMACY, SILVASSA
Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Mr. Shubham
PG Student

Dr. Smita Bonde
Professor

Mr. Hemant Shelke
PG Student

For Publication of Review article entitled "A comprehensive review on natural polysaccharides based in situ gels for nasal drug delivery" in "International Journal of Biological Macromolecules" journal
(Impact Factor 8.5)

Contents lists available at ScienceDirect

International Journal of Biological Macromolecules

Journal homepage: www.elsevier.com/locate/ijbiomac

A comprehensive review on natural polysaccharides based in situ gels for nasal drug delivery

Shubham Sunawane, Hemant Shelke, Smita Bonde
SSR College of Pharmacy, V/0 of Savitri Phule Nagar in Dahanu Rd, Silvassa 761002, India

ARTICLE INFO

Keywords:
Chitosan
Nasal gel
Nasal drug delivery

ABSTRACT

In situ nasal gels developed from natural polysaccharides have been recognized as a highly promising drug delivery system for the effective treatment of both systemic and localized diseases. These gels are designed to entrap active ingredients within porous in situ polymerized matrices. The incorporation of gel, or hydrogel, following chemical crosslinking, extended residence time, and controlled biodegradability of drugs. Microspheres and hydrogel-based natural polysaccharides such as chitosan, gelatin, alginate, and pectin are the most commonly used natural polymers. The gelation mechanisms include, physical triggered by heat, pH, gel entrapment, temperature stimuli, and by enzymatic crosslinking. In situ gels are readily characterized by rheological behavior and material analysis, ensuring their performance. However, a illustrated feature nasal spray could be used for the diagnosis and biocompatibility studies. These in situ gels are suitable for controlled delivery to allergic rhinitis, asthma, nasal atrophic rhinitis (e.g., sprays, nebulizers, and nasal sprays).

SSR COLLEGE OF PHARMACY, SILVASSA
Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Dr. Chandani Chandarana

For publication of review article entitled "Critical insights into analytical methodologies for lidocaine hydrochloride and diltiazem hydrochloride: a comparative Review" in Future Journal of Pharmaceutical Sciences.
Impact Factor 3.4

Future Journal of Pharmaceutical Sciences

Abstract

Background This study focuses on a fixed-dose combination of lidocaine hydrochloride and diltiazem hydrochloride for the treatment of anal fissures, where lidocaine acts as an anesthetic and diltiazem serves as a slow calcium channel blocker. The objective is to provide a concise overview of the fundamental principles of spectrophotometric and chromatographic methods for quantitative analysis from 2012 to 2022.

Main text This review highlights the development of novel techniques for both individual and simultaneous quantification, including ultraviolet-visible spectrophotometry (UV-Vis), high-performance liquid chromatography, and high-performance thin-layer chromatography. Additionally, it addresses the capability of various analytical methods to detect and measure compounds at microgram to nanogram levels.

Conclusions From 2012 to 2022, significant advancements in spectrophotometric and chromatographic methods for analyzing pharmaceutical compounds such as lidocaine and diltiazem have been made. These advancements have improved the sensitivity, accuracy, and efficiency of quantitative analyses, contributing to better quality control and therapeutic efficacy of pharmaceutical products. Modern techniques can detect and quantify compounds at microgram to nanogram levels, ensuring accurate dosing and safety assessments in pharmaceutical formulations.

Keywords Lidocaine hydrochloride, Diltiazem hydrochloride, UV Spectrophotometry, HPLC, HPTLC



SSR COLLEGE OF PHARMACY, SILVASSA

Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Dr. Smita Bonde

For publication research article entitled "Nose-to-Brain Targeting of Pregabalin via Phospholipid Complex Nanoparticles for Facilitated Epilepsy Therapy: Design, Optimization and In vitro-In vivo Evaluations" in "Colloids and Surfaces A: Physicochemical and Engineering Aspects", Impact Factor: 5.4"



Nose-to-brain targeting of pregabalin via phospholipid complex nanoparticles for facilitated epilepsy therapy: Design, optimization and in vitro-in vivo evaluations

Rashmi Trivedi¹, Smita Bonde², Pooja Mate³, Milind Umekar⁴, Nitya Wankhede⁵, Mohit Umare⁶, Mohit Angolkar⁷, Sharanys Parambetti⁸, Riyaz Ali M. Oumani⁹

¹Department of Quality Assurance, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ²Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ³Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁴Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁵Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁶Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁷Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁸Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India; ⁹Department of Pharmaceutical Chemistry, Pimpri Chinchwad Education Trust, Pimpri, Maharashtra, India

HIGHLIGHTS

- Development of phospholipid complex nanoparticles for facilitated epilepsy therapy.
- Optimization of nanoparticle formulation for enhanced brain targeting.
- In vitro and in vivo evaluation of the developed nanoparticles.
- Pharmacokinetic and pharmacodynamic studies.
- Evaluation of the safety and toxicity of the developed nanoparticles.

GRAPHICAL ABSTRACT



ARTICLE INFO

Keywords:
Nose-to-brain targeting; Pregabalin; Phospholipid complex nanoparticles; Epilepsy; In vitro-in vivo evaluation.

SSR COLLEGE OF PHARMACY, SILVASSA

Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Dr. Chandani Chandarana

For publication of review article entitled "Recent Advances in Bioink Research for Biomedical Applications in Biomedical Materials & Devices (Scopus)"



Biomedical Materials & Devices
<https://doi.org/10.1007/s44174-025-00478-z>

REVIEW

SPRINGER NATURE

Recent Advances in Bioink Research for Biomedical Applications

Chandni Chandarana¹, Dhvani Sane¹, Shivam Mishra¹, Astitva chaubey¹, Uditraj Gohil¹, Bhupendra Prajapati^{2,3,4}

Received: 14 May 2025 / Accepted: 23 July 2025
© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2025

Abstract

Three-dimensional (3D) bioprinting has rapidly advanced as a pivotal technology in biomedical sciences, offering the ability to fabricate functional tissues and organ-like constructs through layer-by-layer deposition of bioinks. Bioinks complex formulations consisting of living cells, biomaterials, and bioactive agents are the cornerstone of successful bioprinting outcomes. This review provides an in-depth analysis of current developments in bioink composition, including natural, synthetic, hybrid, and composite systems. Key properties such as biocompatibility, printability, mechanical strength, and controlled degradability are critically discussed. The paper also explores the integration of nanomaterials and growth factors into bioinks, enabling enhanced structural fidelity, cell viability, and tissue functionality. Notably, the emergence of stimuli-responsive and patient-specific bioinks is expanding the frontiers of personalized medicine and regenerative therapies. Applications in cardiovascular, bone, dental, and skin tissue engineering, along with novel uses in biosensors, wound healing, and organ-on-a-chip technologies, highlight the versatility of next-generation bioinks. Additionally, advancements in bioprinting methods such as extrusion, inkjet, laser-assisted, and stereolithography are discussed in relation to bioink compatibility. Overall, the field continues to evolve with interdisciplinary innovations, establishing bioinks as integral components in the future of clinical translation and biomedical engineering.



SSR COLLEGE OF PHARMACY, SILVASSA

Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Dr. Sonal Desai

Ms. Aesha Bhalodia

Congratulations to Ms. Aesha Bhalodia, student of Second Year M. Pharm.-QA and Dr. Sonal Desai, Professor- Department of QA, for publishing Research article entitled "Greenness analysis of stability indicating RP-HPLC method for determination of lomeglitazone sulphate and glimepiride in tablets" in Springer Nature Journal 'Discover Chemistry', Volume 2, 2025:2025.

RESEARCH

Open Access

Greenness analysis of stability indicating RP-HPLC method for determination of lomeglitazone sulphate and glimepiride in tablets

Aashiya Patel¹, Aesha Bhalodia², Sonal Desai³, Suchi Desai³, Yachita Jochi⁴ and Megha Shah^{1*}



Abstract

The present study focuses on the development and validation of a stability-indicating reversed-phase high-performance liquid chromatography (RP-HPLC) method for the simultaneous quantification of lomeglitazone sulphate (LBS) and glimepiride (GLM) in tablet dosage forms. The separation was achieved using an Inertsil C18 column (150×4.6 mm, 5 µm) using mobile phase consisting of potassium dihydrogen phosphate buffer (pH 2.3): methanol (27:73, v/v) at a flow rate of 1.2 mL/min. The column oven temperature was maintained at 35 °C and UV detection was performed at 228 nm. LBS and GLM were eluted with mean retention time of 2.057 min and 7.489 min, respectively. The method demonstrated linearity in the range of 0.05–10 µg/mL for LBS and 0.05–10 µg/mL for GLM. The method was validated for accuracy, precision, and robustness. The developed method is suitable for the routine quality control of LBS and GLM in tablet dosage forms.

SSR COLLEGE OF PHARMACY, SILVASSA

Permanently affiliated to Savitribai Phule Pune University, Approved by AICTE & PCI
(NBA Accredited for B.Pharm Program 2019-2025)

Congratulations

Ms. Himani Dange

For Winning "2nd Prize" in the conference "The future of Pharmaceutical drug and development : Trends , Challenges and opportunities at LJK University, Ahmedabad



Artificial Intelligence Enhanced CRISPR Based Epigenomic Editing: A Brighter Future in Precision Medicine

Registration No: LJKON_037

Himani Dange, Chandrakant Bonde, Smita Bonde, Paritaj Prapatti
Department of Pharmaceutical Chemistry

Poster No: PTECH50

ABSTRACT

CRISPR-Cas9 system acts as a "molecular scissors" that can cut genes with high precision. Unlike traditional gene-editing methods, CRISPR is faster, cheaper, and more accurate. Epigenomic Editing: Utilizes CRISPR tools (dCas9) to modulate gene expression by altering epigenetic marks (DNA methylation, histone modifications), enabling reversible and subtle interventions. Artificial Intelligence (AI) Integration: Advances CRISPR applications by predicting guide RNA efficiency, minimizing off-target effects, and improving delivery system design. Impact on Medicine: This integration brings us closer to precision medicine, where therapies are tailored to individual patients, reducing side effects and maximizing effectiveness.

INTRODUCTION

CRISPR-Cas9 system acts as a "molecular scissors" that can cut genes with high precision. Unlike traditional gene-editing methods, CRISPR is faster, cheaper, and more accurate. Epigenomic Editing: Utilizes CRISPR tools (dCas9) to modulate gene expression by altering epigenetic marks (DNA methylation, histone modifications), enabling reversible and subtle interventions. Artificial Intelligence (AI) Integration: Advances CRISPR applications by predicting guide RNA efficiency, minimizing off-target effects, and improving delivery system design. Impact on Medicine: This integration brings us closer to precision medicine, where therapies are tailored to individual patients, reducing side effects and maximizing effectiveness.

OBJECTIVE

Review AI-CRISPR integration for epigenomic editing.

Techniques Used in Predictive Models for Epigenomic Modulation

Machine Learning (ML) models predict guide RNA efficiency and off-target effects. Deep Learning (DL) models analyze large-scale epigenomic data to identify patterns and predict gene expression changes. AI-driven optimization of CRISPR components (Cas9 variants, guide RNA design) for improved efficiency and specificity.