





National Institute of Pharmaceutical Education and Research

NIPER-HYDERABAD NEWSLETTER

Issue-3, January-June, 2021







NATIONAL
INSTITUTIONAL
RANKING
FRAMEWORK
2020







DIRECTOR'S MESSAGE

I am delighted to present National Institute of Pharmaceutical Education and Research (NIPER) Hyderabad Newsletter - **Tarang**, Issue-3, January-June 2021. The year 2021 has brought fresh energy to the Institute as new faculty members and staff have joined the Institute. This will strengthen our cause for providing quality education, research and at the same time help NIPER-Hyderabad in nation building, as the current times require service to the nation and society at large.

I am also proud of the fact that NIPER-Hyderabad has also introduced M.Tech in Medical Devices, M.S. (Pharm.) in Natural Products, Pharmacoinformatics and Regulatory Affairs from this year onwards. These courses are industry-oriented and will contribute greatly for the industry and academic research.

It is also a matter of great pride that students of NIPER-Hyderabad are proving their mettle in all arenas. Our students are pursuing higher studies in renowned universities of the world. Again, this year 100% students have been placed through campus placements in both national and multi-national pharma companies.

I wish to thank each and everyone specially our students, faculty, staff and Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Govt. of India for contributing to the growth of NIPER-Hyderabad.





NEW YEAR-NEW START



Dr. Shashi Bala Singh, Director, NIPER-Hyderabad, addressing faculty and students

ENTERING 2021 WITH GRATITUDE AND NEW CHANCE TO CREATE DREAMS

It was a new day and a new dawn for NIPER-Hyderabad. On this occasion of first day of the year 2021, **Dr. Shashi Bala Singh**, Director, gave an enigmatic speech focusing on adoption of new research skills in the upcoming year. Director's talk inspired many young research fellows at the campus towards aiming at creating a better world with new skills and techniques in the field of research. We believe year 2021 embarks a new journey for research and skill development for students at NIPER-Hyderabad.

Dr. Shashi Bala Singh, Director, wished the faculty, students & staff that the New Year 2021 brings joy, love, peace, productivity, positivity and happiness.

IN THIS ISSUE JAN-JUNE 2021

VISIT OF SECRETARY TO NIPER-HYDERABAD

SCIENTIFIC EVENTS

LEADERSHIP LECTURES

GUEST TALKS

ALUMNI ZONE

AWARDS/ HONORS/ PROJECTS/ PATENTS

PLACEMENTS

CELEBRATIONS

MEDIA COVERAGE

FACULTY AND STAFF









VISIT OF SECRETARY, DEPARTMENT OF PHARMACEUTICALS, TO NIPER-HYDERABAD

Ms. S. Aparna, IAS, Secretary, Department of Pharmaceuticals, visited NIPER-Hyderabad on June 28, 2021. She was received by Dr. Shashi Bala Singh, Director, NIPER Hyderabad. This was followed by a brief presentation by faculty members. She also interacted with the students and visited various R&D facilities in the campus.





PLANTING OF TREE AT CAMPUS

As a positive gesture towards building a green campus **Ms. S. Aparna**, Secretary, DoP, planted a tree in the NIPER-Hyderabad campus and encouraged all to plant more trees as a responsibility towards the nature.





SCIENTIFIC EVENTS



As rightly said Entrepreneurs are future of our country and its progress, a DST sponsored 6 weeks **Technology Entrepreneurship Development Program (TEDP)** was conducted by NIPER-Hyderabad faculty during 01.02.2021 to 19.03.2021. The workshop encompassed of introduction to intellectual property rights followed by brief walkthrough in the field of drug discovery. The course was tailored to develop entrepreneurs in technology development sector of R&D in a structured way. It was a hands-on and task-oriented program.





Department of Pharmacology and Toxicology, NIPER-Hyderabad organized a 5 days hands-on Workshop on Cell Culture Techniques from 8th - 12th February 2021. The workshop was supported by the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Government of India under Pharmaceutical Promotion & Development Scheme (PPDS) to impart training and professional development to working pharmacists. The workshop was aimed at sharpening various cell culture techniques like MTT Test, DNA isolation, RNA isolation, cDNA Synthesis/ Agarose gel electrophoresis, RT-PCR, Flowcytometry/ICC, Protein extraction & Estimation, Gel electrophoresis & Coomassie Staining, Gel Transfer and Blotting practical sessions. The workshop received participations from different institutes of various states of India who were trained on various techniques.



NIPER-Hyderabad organized an INDO-EU webinar with **Prof. Jessica Rosenholm**, University of Åbo Akademi, Finland and **Prof. Thomas Rades**, University of Copenhagen, Denmark on March 2, 2021.

Prof. Jessica Rosenholm, University of Åbo Akademi, Finland talked about mesoporous silica nanoparticles for advanced drug delivery & theranostics and Prof. Thomas Rades, University of Copenhagen, Denmark talked about new developments in co-amorphous drug systems.



SCIENTIFIC EVENTS



A two-day workshop on Hands-on Experience on Instrument and Techniques for Nanotechnology Based Drug Delivery was held at NIPER-Hyderabad, from 22nd to 23rd March 2021. The main objective of this workshop was to build the theoretical as well as practical understanding about nano-based delivery, methods of preparation and evaluation of various nanotechnology-based techniques. Around 40 students from different background like B. Pharmacy, pharmacy, M.S., B.Sc., M.Sc. and PhD pharmaceutical and life sciences attended the workshop. The participants were felicitated with the certificate of participation.



NIPER-Hyderabad also organised a full-fledged faculty development program which took place on March 17, 2021. Prof. Ritu Aneja, affiliated with Georgia State University interacted with NIPER-Hyderabad faculty in a brainstorming workshop entitled as Empowering You.

LEADERSHIP LECTURES





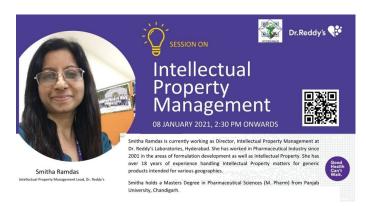


NIPER-Hyderabad organized a series of Leadership lectures. In the series, the first lecture was delivered by **Dr.**Jitendra Sharma, MD & CEO, AP MedTech Zone on Jan 28, 2021.

The second lecture was delivered by Shri K. Satish Reddy. Chairman. Board Governors, of Hyderabad & Chairman, Dr Reddy's. He delivered a lecture on the need for strengthening Industry-Academia during relations the interactive session with the students and faculty NIPER-Hyderabad and the interaction organized NIPERby Hyderabad on March 9, 2021.



GUEST TALKS



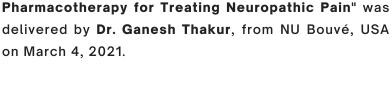
Dr. Ritu Trivedi, Principal Scientist from CDRI, Lucknow delivered a lecture on "Pharmaceutical approaches for treating Osteoarthritis" organized by NIPER-Hyderabad on Jan 15, 2021.

Samitha Ramdas, Director, Intellectual property management at Dr. Reddy's delivered an Lecture on "Intellectual Management" organized by NIPER-Hyderabad on Jan 08, 2021.





Dr. Tarun K. Sharma, Senior Research Scientist, THSTI, Faridabad delivered lecture on "Harnessing Aptamer Technology for innovations in Biomedical Diagnostics" organized by NIPER-Hyderabad on April 23, 2021.



of



Invited Lecture "Harnessing Aptamer Technology for Innovation in Biomedical Diagnostics"

Non-addictive

Safer



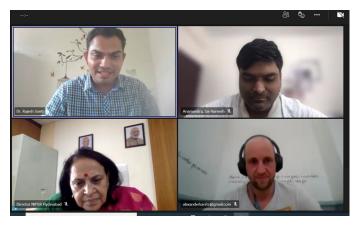


Webinar on **Pancreatic cancer** pathobiology: Tiny vesicles with mighty roles June 7,2021 at 10:00 AM

Dr. Girijesh K. Patel, Sr. Research Associate, Texas Tech University Health Sciences Center delivered a webinar organized by NIPER Hyderabad **Pancreatic** on Cancer Pathobiology: Tiny Vesicles with Mighty Roles on June 7, 2021

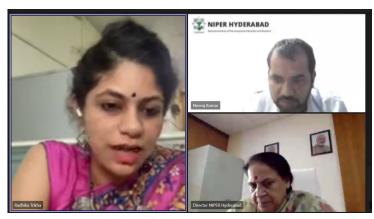


GUEST TALKS



Dr Alexander Kanitz, Scientist/Software Engineer, University of Basel-Switzerland spoke on Open Science & Digital Health & Dr Hareesh Anamandra, SAP Labs Innovation Centre, Bangalore spoke on Artificial Intelligence in Pandemic during webinar titled Adoption of digital technologies during COVID-19 Pandemic organized by NIPER-Hyderabad on June 18, 2021.

Dr. Radhika Trikha, Senior Policy Fellow, Department of Science and Technology, Government of India spoke on a webinar entitled STI based Public-Private Partnerships: The Need for Industry-Academia Linkages in India organized by NIPER-Hyderabad on June 23, 2021.







What is a patent?

A patent is an exclusive right granted for an invention.

The word patent originates from the Latin patere, which means "open letters".

A patent is a "Territorial Right".

There is No WORLD Patent.

The patent follows "quid-pro-quo" rationale.

Inventor file the invention in the patent office, which in turn get published and therefore to the public. In return, the government will give a limited monopoly on the invention, for about 20 years, to keep competitors at bay.

The program was organized by NIPER-Hyderabad as a part of 75 years of Indian Independence.



ALUMNI ZONE



Jagrut Vaishnav



Fundamentals of Market Access

Date: 20th Feb 2021 Time: 11.00 AM Link: https://qrgo.page.link/3X4Rm



Rahul Nahire
PhD, SC(ASCP) CM, TC(NRCC)
Laboratory Director- Lighthouse
Lab Services, Holly Springs, NC

Study and Job Opportunities in the USA and Abroad

Date: 05th Mar 2021 Time: 06.00 PM Link: https://qrgo.page.link/RJNzm



Prinesh Patel, PhD Sr. Product Specialist Waters India Pvt. Ltd. Ahmedabad

Trends in Pharmaceutical, Industrial and Research Applications of LC/MS Way from Academia to Industry

> Date: 17th April 2021 Time: 11.00 AM Link: https://qrgo.page.link/vnX9e



My winding road to Limerick - An excerpt of my experience in academia and industry

Are you worried about your research? Whether to go for Ph.D. or work in industry? Finding difficulty in dealing with failures in research or life? I will share my account of how I dealt with all of these and will attempt to answer all your questions. Further, I will share some tips in applying for the Ph.D. positions abroad and how to prepare the resources.

- MR. HARSH BARUA

M.S. (Pharm) NIPER Hyderabad, 2019 Pursuing Ph.D.- University of Limerick, Ireland

A proactive approach can make your Post Graduation , a combination of Science & Business

It is all about self motivation and a proactive approach during your Post Graduation that can help you enhance technical as well as managerial skills. This opens doors for opportunities in both scientific as well as managerial roles in placements.

MR. DHARMESH NILESH MEHTA
 M.S. (Pharm) NIPER Hyderabad, 2017-19
 Assistant Manager - Business Development
 Gangwal Chemicals, Mumbai



A webinar on "Fundamentals of Market Access" was organized by NIPER-Hyderabad on February 13, 2021. The speaker Mr. Jagrut Vaishnav, Operational and Strategic Assistant to the Global Patient Access at Novartis delivered a talk on various operational inputs in global projects and insights into training and pricing of deliverables and their market access across the product lifecycle.

Mr. Rahul Nahire delivered a webinar on "Study and Job Opportunities in USA and abroad" on 5th March 2021. The speaker designed his talk explaining application procedures and universities in USA along with golden opportunities in job arena for students abroad. His talk enlightened many students to dream higher and achieve great heights.

Dr. Prinesh Patel delivered a talk entitled "Trends in pharmaceuticals, industrial and research applications of LC-MS from Academia to Industry" organized by NIPER-Hyderabad on April 20, 2021.

Mr. Harsh Barua delivered a talk entitled "My winding road to Limerick: An excerpt of my experience in academia and industry" organized by NIPER-Hyderabad on May 29, 2021. In his talk, he provided insights to pursue PhD at abroad universities. His talk was an encouragement to students to aim higher studies with proper guidance from our star alumni network.

Mr. Dharmesh Nilesh Mehta delivered an inspirational talk on 26 June, 2021. He talked on how a proactive approach during post graduation can help in gaining skills that can open opportunities in both scientific and managerial roles.



AWARDS/ HONORS

- Dr Priyanka Bajaj, NIPER Hyderabad, Process Chemistry faculty has been selected for membership in the prestigious Indian National Young Academy of Sciences (INYAS)-INSA
- Ms. Bhavana Valamla, PhD research scholar under the supervision of Dr Neelesh Kumar Mehra, secured second best oral presentation award in the International seminar on Current Trends in Chemical and Pharmaceutical Sciences (CTCPS-2021)

NEW PROJECTS SANCTIONED

- Effect of type 2 diabetes mellitus on expression of molecular chaperons and protein aggregation in hippocampus of ageing brain, Dr. Shashi Bala Singh. Rs. 67,52,400/funded by DST.
- BioNEST (Bioincubators Nurturing Entrepreneurship for Scaling Technologies), Dr.
 Srinivas Nanduri. Rs. 4,94,00,000/- funded by BIRAC (BioNEST).
- Analysis of the role of extracellular vesicles (Exosomes) in drug tolerant persister cells and its contribution to cancer-initiating cells in breast cancer, Dr. Santosh Kumar Guru.
 Rs. 24,88,000/- funded by SERB.
- Biocatalytic Process Development and Enzyme Immobilization for Synthesis of Oxcarbazepine to Eslicarbazepine, Dr. Priyanka Bajaj. Rs. 25,60,000/- funded by Ami Lifesciences (P) Ltd.
- Development and evaluation of oral drug delivery systems for colon targeting of drugs for the local & systemic actions, Dr. Saurabh Srivastava. Rs. 8,26,000/- funded by NBI Biosciences (P) Ltd.
- Development of Precision Diabetes tools using Omics approach, Dr Vasundhra Bhandari.
 Rs. 1,07,95,000 funded by Spectrum Sequencing Pvt Ltd.
- To study efficacy of therapeutic plant molecule in animal models to treat Chronic Obstructive Pulmonary Disease (COPD) by the lung regeneration/repair process, **Dr. Dharmendra Khatri.** Rs. 16,68,000/- funded by NBI Biosciences Pvt. Ltd.
- Pharmacological activities and pre-clinical screening of the promising unani medicines
 against hepatic disease, Dr Neelesh Kumar Mehra, Dr Dharmendra Khatri & Dr Pankaj K
 Singh. Rs. 24,53,360/- funded by Central Council for Research in Unani Medicine.
- AICTE Training and Learning (ATAL) Faculty Development Program, Dr. B. Lakshmi. Rs.
 93,000/- funded by AICTE.
- Quality Control and Quality Assurance in Pharma Industry, Dr. S. Gananadhamu. Rs. 51,30,000/- funded by Government of Telangana & DBT.
- Workshop on Animal Cell Culture, **Dr. Pankaj Kumar Singh**. Rs. 18,00,000/- funded by Government of Telangana & DBT.
- Workshop on Molecular Docking Virtual Screening & Computational Biology, Dr.
 K.Venkat Rao. Rs. 18,00,000/- funded by Government of Telangana & DBT.



• Entrepreneurial Development in Pharma Sector, **Dr. B. Lakshmi** and **Mr. Sanjeev Lohani**. Rs 48,00,000/- funded by Government of Telangana & DBT.

PATENT FILED

Pharmaceutical composition of Tofacitinib for the Management of Atopic Dermatitis,
 Atmakuri Sri Vidya, Shweta Nene, Saurabh Srivastava, Shashi Bala Singh, Application
 No. 202141019173

PLACEMENTS

The vibrant and brilliant students of NIPER-Hyderabad (Batch 2019-21) from various disciplines have received placements in multi-national companies. 100% of the students have been placed through campus placements in both national and multi-national pharma companies like Johnson & Johnson, Novartis, Dr Reddy's Laboratories Ltd., Genpact, Hetero, Tech Mahindra, Granules India etc.



PLACEMENTS



CELEBRATIONS



NIPER-Hyderabad observed **Nation Science Day** on 26th Feb, 2021 and arranged a guest lecture by **Mr. Rahul Bhargava**, Qualified Packaging Technologist. The theme of this interaction was "Packaging of sensitive drug products".



World Health Day was observed in the Institute on 7th April, 2021 with leading resource person and expert panelist Dr. Undurti Narasimha Das, CEO/CSO, UND Life Sciences, WA, USA. The theme of this interaction was "Good Health-Good Life".



NIPER-Hyderabad celebrated **72nd Republic Day** on 26th Jan. 2021. **Prof. Nanduri Srinivas**, Dean, unfurled the national flag in the Campus. The event was attended by all the faculty members, staff and students. Prof. Nanduri delivered a cognitive speech about the importance of Republic Day and the way in which we can contribute to the progress of the Nation as an individual and as a pharmacy professional. **Dr. S. Gananadhamu**, Registrar also enlightened the assembly by the words of wisdom.



International Women's Day was celebrated on March 08, 2021 and a special lecture by Dr. Jayeeta Bhaumik from CIAB India, was organized. On the occasion of International Women's Day 2021, our faculty, staff and students got together to call out gender bias & inequality and celebrate our achievements towards Women Empowerment.



Faculty and staff actively participated during International Day of Yoga-2021 on 21st June 2021. Director, Dr. Shashi Bala Singh explained the importance of Yoga in our daily life and emphasized that its daily practice shall strengthen the immunity and respiratory systems. Registrar, Prof. JPN Mishra motivated all faculty & staff to include yoga as a part of daily life.



MEDIA COVERAGE







-ఔషధాల తయాలీ, టెక్మాలజీ వినియోగంపై సదస్సు

బాలానగర్, మార్చి 19(ఆండ్రజ్యోతి): బాలానగర్లోని వైవర్ (నేషనల్ ఇనిస్టిట్యాట్ ఆఫ్ ఫార్మ ఎద్యూశేషన్ అండ్ రీసెర్స్)లోని డిపార్ట్మెంట్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీ ఆధ్వర్యంలో నంస్థ ఆడిటోరియంలో టెక్నాలజీ ఆధారిత పారిశామిక రంగ ఆటివృద్ధి నూతన, ఔషదాల తయారీపై శుక్ర వారం వర్సువల్ అవగాహనా కార్యకమాన్ని నిర్వహించారు. సెంట్రట్ ఇనిస్టిట్యూట్ ఆఫ్ పెట్లో కెమికల్ ఇంజనీరింగ్ అండ్ టెక్నాలజీ డ్రిస్సివల్ డైరెక్టర్ డా. ఎనికే జైన్ నదస్సును ప్రారంఖించి, మాట్లాదారు. పార్మారంగంతో మేదస్సుకు పదునుపెట్టి నూతన ఔషధాల తయారీపై దృష్టిపెట్టిన వారికి మంచి భవి ష్యత్తు ఉంటుందన్నారు. ఈ కార్యకమంలో వైపర్ డైరెక్టర్ శశిబాలాసింగ్, ప్రోగ్రాం కో ఆర్థినేటర్ డా. లక్ష్మీ. డా. నిరజ్, డా. వినయ్, డా. నంజీప్, మంజూర్ తదితరులు పాల్వొన్నారు.



'Chillermill' World's First Hybrid Renewable Energy Powered Freezer for Covid-19 Vaccine

By Bhoomika Singh / Updated On Sat, Mar 6th, 2021



Hyderabad-based commercial cold chain appliances manufacturer Rockwell Industries Lmt. launched the world's first-ever storage chiller and freezer that runs completely on the hybrid renewable energy source (wind and solar energy) on Thursday.

The all-new Off-grid vaccine chiller/ freezer 'Chillermill' is useful to store COVID-19 vaccine at the required temperatures, ranging from Rs. 40,000 to 1 Lakh. The entire system is certified by the National Institute of Pharmaceutical Education & Research (NIPER) Hyderabad. Also, the company has rolled out its new Covid-19 vaccine freezer series.



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- Baby, S.; Durgesh, G. V.; Shankaraiah, N. Unraveling KDM4 histone demethylase inhibitors for cancer therapy, Drug Discovery Today 2021, in press (doi.org/10.1016/j.drudis.2021.05.015)
- Sunny, S.; John, S. E.; Shankaraiah, N. Exploration of C-H activation strategies in construction of functionalized 2-aryl benzoazoles: a decisive review, Asian. J. Org. Chem. 2021, in press (doi.org/10.1002/ajoc.202100297)
- John, S.; Gulati, S.; Shankaraiah, N. Recent Advances in Multi-component Reactions and their Mechanistic Insights: A Triennium Review, Org. Chem. Front., 2021, in press (doi.org/10.1039/D0Q001480J)
- Bora, D.; Galla, M. S.; Shankaraiah, N. The role of sulphonamides and N-sulphonyl ketimines/aldimines as directing groups in the field of C-H activation, Chem. Asian J. 2021, in press (doi.org/10.1002/asia.202100304)
- Nellaiappan K, Kumari P, Khatri DK, Singh SB. Diabetic Complications: An Update on Pathobiology and Therapeutic Strategies. Curr. Diabet. Rev. 2021, in press, DOI: 10.2174/1573399817666210309104203
- Baijayantimala Swain.; Kamtam Aashrita.; Priti Singh.; Andrea Angeli.; Abhay Kothari.; Dilep K. Sigalepalli.; Venkata M. Yaddanapudi.; Claudia T. Supuran.; Mohammad Arifuddin. Design and Synthesis of benzenesulfonamide-linked imido[2,1-b][1,3,4]thiadiazole derivatives as carbonic anhydrase I and II inhibitors. Arch Pharm DphG, 2021, in press, doi.org/10.1002/ardp.202100028
- Kadbhane A., Patel M., Srivastava S., Singh P. K., Madan J., Singh, S. B., Khatri D. Perspective Insights of Schematically Manoeuvred Extracellular Vesicles as a Novel Tool against Neurodegenerative Disorders: An Expository Appraisal. Drug Deliv Sci Technol, 2021, in press DOI: 10.1016/j.jddst.2021.102526
- Soni, J. P.; Yeole. Y.; Shankaraiah. N. β-Carboline Based Molecular Hybrids as Anticancer Agents: A Brief Sketch, RSC Med. Chem. 2021, 12, 730-750
- Sigalapalli, D. K.; Kiranmai, D.; Devi, G. P.; Tokala, T.; Sana, S.; Tripura, C.; Jadhav, G. S.; Kadagathur, M.; Shankaraiah, N.; Nagesh, N.; Babu, B. N.; Tangellamudi, N. D. Synthesis and biological evaluation of novel imidazo[1,2-a]pyridine-oxadiazole hybrids as anti-proliferative agents: Study of microtubule polymerization inhibition and DNA binding, Boorg. Med. Chem. 2021, 43, 116277
- Riyazahmed, K. S.; Bora, D.; Shankaraiah, N. Application of transition metal-catalyzed C-H activation strategies in the synthesis and functionalization of β -carbolines, Asian J. Org. Chem., 2021, 10, 1050–1066
- Sathish, M.; Sakla, A. P.; Nachtigall, F. M.; Santos, L. S.; Shankaraiah, N. TCCA-mediated oxidative rearrangement of tetrahydro- β -carbolines: facile access to spirooxindoles and the total synthesis of (\pm)-coerulescine and (\pm)-horsfiline, RSC Adv., 2021, 11, 16537
- Gulati, S.; John, S. E.; Shankaraiah, N. Microwave-assisted multicomponent reactions in heterocyclic chemistry and mechanistic aspects, Beilstein J. Org. Chem., 2021, 17, 819–865
- Kadagathur, M.; Shaikh, A. S.; Jadhav, G.; Sigalapalli, D. K.; Shankaraiah, N.; Tangellamudi, N. D. Cyclodesulfurization: An Enabling Protocol for Synthesis of Various Heterocycles, ChemistrySelect 2021, 6, 2621-2640



- Yadav, U.; Vanjari, Y.; Laxmikeshav, K.; Tokala, R.; Niggula, P. K.; Kumar, M.; Talla, V.; Kamal, A.; Shankaraiah, N. Synthesis and in vitro Cytotoxicity Evaluation of Phenanthrene Linked 2, 4-Thiazolidinediones as Potential Anticancer Agents, Anti-cancer Agents in Med. Chem., 2021, 21, 1127–1140
- Soni, J. P.; Joshi, S. V.; Chemitikanti, K. S.; Shankaraiah, N. The Riveting Chemistry of Poly-Aza-Heterocycles Employing Microwave Technique: A Decade Review, Eur. J. Org. Chem., 2021, 1476-1490
- Dhokne, P.; Sakla, A. P.; Shankaraiah. N. Structural Insights of Oxindole based Kinase Inhibitors as Anticancer Agents: Recent Advances, Eur. J. Med. Chem. 2021, 216, 113334
- Tokala, R.; Shankaraiah, N. Microwave-assisted oxidation reactions; Green Sustainable Process for Chemical and Environmental Engineering and Science, Elsevier, 2021, 285-313 (Book Chapter)
- Sana, S.; Reddy, V. G.; Reddy, T. S.; Tokala, R.; Bhargava, S. K.; Shankaraiah, N. Cinnamide Derived Pyrimidine-Benzimidazole Hybrids as Tubulin Inhibitors: Synthesis, In silico and Cell Growth Inhibition Studies, Bioorg. Chem. 2021, 110, 104765
- Bora, D.; Kushal, A. Shankaraiah, N. Anticancer potential of spirocompounds in medicinal chemistry: A pentennial expedition, Eur. J. Med. Chem. 2021, 215, 113263
- B Sherkhane, G Chayanika, A Sood, DK Khatri, SB Singh. Mitochondrial remodeling—a vicious cycle in diabetic complications. Mol. Biol. Rep. 2021, 1-11
- Khan I, Preeti K, Fernandes V, Khatri DK, Singh SB. Role of MicroRNAs, Aptamers in Neuroinflammation and Neurodegenerative Disorders. Cell Mol Neurobiol. 2021, 1-21
- Khatri DK, Kadbhane A, Patel M, Nene S, Atmakuri S, Srivastava S, Singh SB. Gauging the role and impact of drug interactions and repurposing in neurodegenerative disorders. Curr. Res. Pharmacol. Drug Discovery. 2021, 2, 100022
- Arruri VK, Gundu C, Khan I, Khatri DK, Singh SB. PARP overactivation in neurological disorders. Mol. Biol. Rep.2021, 3, 2833-2841.
- Arruri VK, Gundu C, Kalvala AK, Sherkhane B, Khatri DK, Singh SB. Carvacrol abates NLRP3 inflammasome activation by augmenting Keap1/Nrf-2/p62 directed autophagy and mitochondrial quality control in neuropathic pain. Nutr. Neurosci. 2021, 1-6.
- Sharma N, Modak C, Singh PK, Kumar R, Khatri D, Singh SB. Underscoring the immense potential of chitosan in fighting a wide spectrum of viruses: A plausible molecule against SARS-CoV-2 Int. J. Biol. Macromol. 2021, 179, 33-44
- Bharat Goel, Essha Chatterjee, Biswajit Dey, Nancy Tripathi, Nivedita Bhardwaj, Arun Khattri, Santosh Kumar Guru, and Shreyans K. Jain. Identification and Evaluation of Apoptosis-Inducing Activity of Ipomone from Ipomoea nil: A Novel, Unusual Bicyclo-[3.2.1] Octanone Containing Gibberic Acid Diterpenoid.: ACS Omega. 2021, 6, 8253-8260



- Priyanka, N. M.; Arijit, N.; Venkata Rao, K. Insights into the recent synthetic advances of organoselenium compounds. ChemistrySelect, 2021, 6, 663 679
- Pooja Reddy, M.; Priyanka N. M.; Venkata Rao, K. Potential herbal drugs and phytochemicals to minimize the risk of COVID-19: A review. J. Pharmcogn. Phytochem. 2021, 10, 670-675
- Ambekar T, Pawar J, Rathod R, Patel M, Fernandes V, Kumar R, Singh SB, Khatri D.
 Mitochondrial Quality Control: Epigenetic Signatures and Therapeutic Strategies. Neurochem.
 Int. 2021, 148, 105095
- Kadbhane A, Patel M, Srivastava S, Singh PK, Madan J, Singh SB, Khatri DK. Perspective Insights and Application of Exosomes as a Novel Tool against Neurodegenerative Disorders: An Expository Appraisal. J. Drug Delivery Sci. Technol. 2021 16: 63:102526.
- Valamla, B., Mehra, N. K., Jain. K., Dendrimers-Guest Interaction Chemistry and Mechanism. In Edited book Dendrimers Nanomedicine: Concept, Theory and Regulatory Perspectives. CRC Press, UK, 2021, Editor(s): Dr. Neelesh Mehra and Dr. Keerti Jain. Pages 1-19.
- Ojha, B., Jain, V., Mehra, N.K., Jain, K. Nanotechnology: introduction and basic concept. Dendrimers-Guest Interaction Chemistry and Mechanism. In Edited book Dendrimers Nanomedicine: Concept, Theory and Regulatory Perspectives. CRC Press, UK, 2021, Editor(s): Dr. Neelesh Mehra and Dr. Keerti Jain. Pages 171-187
- Gauro, R., Jain, V., Popli, H., Mehra, N.K., Jain, K. Macromolecular Architecture and Molecular Modeling Of Dendrimers. In Edited book Dendrimers Nanomedicine: Concept, Theory and Regulatory Perspectives. CRC Press, UK, 2021, Editor(s): Dr. Neelesh Mehra and Dr. Keerti Jain. Pages 77-89
- Dendrimers in Nanomedicine: Concept, Theory and Regulatory Perspectives. Publisher: CRC Press, UK. Editor(s) Dr. Neelesh Kumar Mehra & Dr. Keerti Jain. 2021 ISBN no.: 9780367466053, 2021, 328
- Hopfner, SM.; Lee BS.; Kalia NP.; Miller MJ.; Pethe K.; Moraski GC.; Structure guided generation of thieno[3,2-d] pyrimidin-4-amine Mycobacterium tuberculosis bd oxidase inhibitors; RSC Med. Chem., 2021, 12, 73–77.
- Sodhi, RK.; Grewal, A.K.; Madan, J.; Jhajj, T.G.S.; Kuma, R, Recent approaches to target apoptosis in neurological disorders; in Clin. Perspectives Targeted Therapies Apoptosis. 2021, 217-283, Elsevier
- Singh, S.; Sharma, N.; Bansal, A.; Kanojia, N.; Sethi, S.; Madan, J.; Sodhi, R.K. Apoptosis modulating nanochemotherapeutics in the treatment of cancer: Recent progress and advances.; in Clin. Perspectives Targeted Therapies Apoptosis. 2021; 153-207, Elsevier
- Kadbhane, A.; Patel, M.; Srivastava, S.; Singh, P.K.; Madan, J.; Singh, S.B.; Khatri, D.K. Perspective insights and application of exosomes as a novel tool against neurodegenerative disorders: An expository appraisal. J. Drug Deliv. Sci. Technol. 2021, 63, 102526



- Sodhi, R.K.; Madan, J. Clinical Perspectives and Targeted Therapies in Apoptosis: Drug Discovery, Drug Delivery and Disease Prevention. Elsevier, 2021, ISBN:9780128157633
- Chahal, S.K; Sodhi, R.K.; Madan, J.; Singh, Y. Diabetic Neuropathy: Pathophysiology and Therapeutic Options in Diabetes and diabetic complications: Current status and Future Prospective, Nova Science Publishers, Inc. 2021, USA ISBN: 978-1-53619-177-6
- Bajwa, N.; Singh, P.A.; Jyothi, V.G.S.S.; Sodhi, R.K.; Baldi, A.; Sardana, S.; Chandra, R.; Madan, J. Chronicle of nanomicelles in drug delivery: from bench to bedside in Frontiers in Drug Delivery-Nanomaterials: Evolution and Advancement towards Therapeutic Drug Delivery 2021, 1: 161-210, Bentham Science, UAE
- Nikhil Baliram Gaikwad.; Pathan Afroz.; Mohammad Naiyaz Ahmad.; Grace Kaul.; Manjulika Shukla.; Srinivas Nanduri.;Arunava Dasgupta.;, Sidharth Chopra.;Venkata Madhavi Yaddanapudi. Design, synthesis, in vitro and in silico evaluation of new 3-phenyl-4,5-dihydroisoxazole-5-carboxamides active against drug-resistant mycobacterium tuberculosis J. Mol. Struct, 2021, 129545
- Santosh Kumar Sahoo, Bandela Rani, Nikhil Baliram Gaikwad, Mohammad Naiyaz Ahmad, Grace Kaulb, Manjulika Shukla, Srinivas Nanduri, ,Arunava Dasgupta,, Sidharth Chopra, Venkata Madhavi Yaddanapudi, Synthesis and structure-activity relationship of new chalcone linked5-phenyl-3-isoxazolecarboxylic acid methyl esters potentially active against drug resistant Mycobacterium tuberculosis. Eur. J. Med. Chem, 2021, 222, 118530
- Wankar, A. K.; Rindhe, S. N.; Doijad, N. S.; Heat stress in dairy animals and current milk production trends, economics, and future perspectives: the global scenario, Tropical Animal Health and Production 2021, 53, 70
- Harsha Jain, Aditi Rajan Bhat, Harshita Dalvi, Chandraiah Godugu, Shashi Bala Singh, Saurabh Srivastava, Repurposing approved therapeutics for new indication: Addressing unmet needs in psoriasis treatment; Current Research in Pharmacology and Drug Discovery. 2021, 2, 100041
- Saurabh Shah, Nagarjun Rangaraj, Shashi Bala Singh and Saurabh Srivastava, Exploring the Unexplored Avenues of Surface charge in Nano-medicine; Colloids and Interface Science Communications. 2021, 42, 100406.
- Aditi Bhat, Harshita Dalvi, Harsha Jain, Nagarjun Rangaraj, Shashi Bala Singh, Saurabh Srivastava, Perspective Insights of Repurposing the Pleiotropic Efficacy of Statins in Neurodegenerative Disorders: An Expository Appraisal; Current Research in Pharmacology and Drug Discovery. 2021, 02, 100012
- Shweta Nene, Saurabh Shah, Nagarjun Rangaraj, Neelesh Kumar Mehra, Pankaj Kumar Singh, Saurabh Srivastava, Lipid based Nanocarriers: A Novel Paradigm for Topical Antifungal Therapy; Journal of drug delivery science and technology. 2021, 62, 102397



- Modani, S., Tomar, D., Tangirala, S., Sriram, A., Mehra, N. K., Kumar, R., Singh, P. K. An updated review on exosomes: biosynthesis to clinical applications. J Drug Target, 2021, 1-16
- Nene, S., Shah, S., Rangaraj, N., Mehra, N. K., Singh, P. K., & Srivastava, S. Lipid based Nanocarriers: A Novel Paradigm for Topical Antifungal Therapy. Drug Deliv Sci Technol, 2021, 102397
- Sharma, N., Modak, C., Singh, P. K., Kumar, R., Khatri, D., Singh, S. B. Underscoring the immense potential of chitosan in fighting a wide spectrum of viruses: A plausible molecule against SARS-CoV-2? J Drug Deliv Sci Technol. 2021, 179, 33-44
- Cherix, A.; Sonti, R.; Lanz, B.; Lei, H.; In Vivo Metabolism of [1,6-13C2] Glucose Reveals Distinct Neuroenergetic Functionality between Mouse Hippocampus and Hypothalamus Metabolites 2021; 11, 50
- Kumar, S.; Nunewar, S.; Usama, K.S.; Kanchupalli, V. "Rh(III)-Catalyzed [3+2] Annulation & C-H alkenylation of Indoles with 1,3-Diynes via C-H activation" Eur. J. Org. Chem. 2021, 15, 2223-2229
- Nunewar, S.; Kumar, S.; Talakola, S.; Nanduri, S.; Kanchupalli, V. "Co(III), Rh(III) & Ir(III)-Catalyzed Direct C-H Alkylation/ Alkenylation/ Arylation with carbene precursors" Chem Asian J. 2021, 16, 443-459
- Kumar, S.; Nunewar, S.; Oluguttula, S.; Nanduri, S.; Kanchupalli, V. "Recent advances in Rh(III)/Ir(III)-catalyzed C-H functionalization/annulation via carbene migratory insertion:" Org. Biomol. Chem., 2021, 19, 1438-1458
- Nunewar, S.; Kumar, S.; Pandhare. H; Nanduri, S.; Kanchupalli, V. "Rh(III)-Catalyzed Chemodivergent Annulations between Indoles and Iodonium Carbenes: A Rapid Access to Tricyclic and Tetracyclic N-Heterocylces" Org. Lett. 2021, 23, 4233–4238
- Mehra, N.K. Dendrimers in Nanomedicine. Cutting Edge Magazine. 2021, 15-18
- Malasala, S.; Polomoni, A.; Ahmad, N.; Shukla, M.; Kaul, G.; Dasgupta, A.; Chopra, S.; Nanduri,
 S. Structure Based Design, Synthesis and Evaluation of New Thienopyrimidine Derivatives as Anti-Bacterial Agents. Journal of Molecular Structure 1234, 130168.
- Akunuri, R.; Vadakattu, M.; Bujji, S.; Veerareddy, V.; Madhavi, Y. V.; Nanduri, S. Fused-Azepinones: Emerging Scaffolds of Medicinal Importance. European journal of medicinal chemistry 2021, 220, 113445.
- Malasala, S.; Polomoni, A.; Chelli, S. M.; Kar, S.; Madhavi, Y. V.; Nanduri, S. A Microwave-Assisted Copper-Mediated Tandem Approach for Fused Quinazoline Derivatives. Organic & biomolecular chemistry 2021, 19 (8), 1854–1859.
- Gatadi, S.; Madhavi, Y. V.; Nanduri, S. Nanoparticle Drug Conjugates Treating Microbial and Viral Infections: A Review. Journal of Molecular Structure 2021, 1228, 129750
- Bansod, S.; Saifi, M. A.; Godugu, C. Inhibition of Discoidin Domain Receptors by Imatinib Prevented Pancreatic Fibrosis Demonstrated in Experimental Chronic Pancreatitis Model. Sci. Rep. 2021, 11 (1), 1–12.



- Bansod, S.; Saifi, M. A.; Godugu, C. Inhibition of Discoidin Domain Receptors by Imatinib Prevented Pancreatic Fibrosis Demonstrated in Experimental Chronic Pancreatitis Model. Sci. Rep. 2021, 11 (1), 1–12.
- Gangadevi, V.; Thatikonda, S.; Pooladanda, V.; Devabattula, G.; Godugu, C. Selenium Nanoparticles Produce a Beneficial Effect in Psoriasis by Reducing Epidermal Hyperproliferation and Inflammation. J. Nanobiotechnology 2021, 19 (1), 1–19.
- Jain, H.; Bhat, A. R.; Dalvi, H.; Godugu, C.; Singh, S. B.; Srivastava, S. Repurposing Approved Therapeutics for New Indication: Addressing Unmet Needs in Psoriasis Treatment. Curr. Res. Pharmacol. Drug Discov. 2021, 100041.
- Bansod, S.; Saifi, M. A.; Godugu, C. Molecular Updates on Berberine in Liver Diseases: Bench to Bedside. Phyther. Res. 2021.
- Pooladanda, V.; Thatikonda, S.; Muvvala, S. P.; Devabattula, G.; Godugu, C. BRD4 Targeting Nanotherapy Prevents Lipopolysaccharide Induced Acute Respiratory Distress Syndrome. Int. J. Pharm. 2021, 601, 120536.
- Pooladanda, V.; Thatikonda, S.; Sunnapu, O.; Tiwary, S.; Vemula, P. K.; Talluri, M. V. N. K.;
 Godugu, C. IRGD Conjugated Nimbolide Liposomes Protect against Endotoxin Induced Acute
 Respiratory Distress Syndrome. Nanomedicine Nanotechnology, Biol. Med. 2021, 33, 102351.
- Ali, S. A.; Saifi, M. A.; Pulivendala, G.; Godugu, C.; Talla, V. Ferulic Acid Ameliorates the Progression of Pulmonary Fibrosis via Inhibition of TGF-β/Smad Signalling. Food Chem. Toxicol. 2021, 149, 111980.
- Hirawat, R.; Saifi, M. A.; Godugu, C. Targeting Inflammatory Cytokine Storm to Fight against COVID-19 Associated Severe Complications. Life Sci. 2021, 267, 118923.
- Anchi, P.; Swamy, V.; Godugu, C. Nimbolide Exerts Protective Effects in Complete Freund's Adjuvant Induced Inflammatory Arthritis via Abrogation of STAT-3/NF-KB/Notch-1 Signaling. Life Sci. 2021, 266, 118911.
- Saifi, M. A.; Poduri, R.; Godugu, C. Nanomedicine: Implications of Nanotoxicology. Drug Discov. Dev. From Targets Mol. to Med. 2021, 393–415.
- Bansod, S.; Godugu, C. Nimbolide Ameliorates Pancreatic Inflammation and Apoptosis by Modulating NF-KB/SIRT1 and Apoptosis Signaling in Acute Pancreatitis Model. Int. Immunopharmacol. 2021, 90, 107246.
- Bansod, S.; Chilvery, S.; Saifi, M. A.; Das, T. J.; Tag, H.; Godugu, C. Borneol Protects against Cerulein-induced Oxidative Stress and Inflammation in Acute Pancreatitis Mice Model. Environ. Toxicol. 2021, 36 (4), 530–539.
- Vivek Dhiman, Ankit Balhara, Saranjit Singh, Shristy Tiwari, Samanthula Gananadhamu, MVN Kumar Talluri. Characterization of stress degradation products of nintedanib by UPLC, UHPLC-Q-TOF/MS/MS and NMR: Evidence of a degradation product with a structure alert for mutagenicity, Journal of Pharmaceutical and Biomedical Analysis, 2021, 199, 114037.



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