AMITY UNIVERSITY MAHARASHTRA

Established vide Maharashtra Act No.13 of 2014, of Government of Maharashtra, and recognized under Section 2 (f) of UGC Act 1956.

Physical Facilities for Interdisciplinary Research Teams Amongst Science Disciplines

Table of Contents

Introduction

Amity University Maharashtra has a vertical as centers of excellence, which includes the physical facilities for the interdisciplinary science research, including computational infrastructure and wet labs. The information on the center of excellence is mentioned in this document.

1. The Center for Drug Discovery and Development (CD3)

Photographs of each laboratory / and research equipment's established under these centers.

Project sanctioned for Dr. Vinothkannan Ravichandran

Title: Evaluation of MexB-specific efflux pump inhibitors against Pseudomonas aeruginosa and its reverberations on quorum sensing. Budget: Rs. 28,54,000

Funding agency: DST – SERB

Scheme: Start-up Research Grant (SRG)

Project sanctioned for Dr. Shashank Kamble

Title: To unravel the role of Calpain Cleavage Related Mutations (CCRM) in the progression of Uterine Corpus Endometrial Carcinoma (UCEC) Budget: Rs. 18,30,000

Funding agency: DST – SERB

Scheme: Teachers Associateship for Research Excellence (TARE) Fellowship

The funded projects and research work going on under CD3

Objectives and the Outcomes of the research work carried out under CD3

The center for drug discovery and development (CD3) was established in 2022 at the Amity university Maharashtra, Mumbai with the goal to discover novel drugs to fight against life threatening infectious diseases caused by multi drug resistant ESKAPE pathogens and Mycobacterium tuberculosis from natural products. The center will also focus on anticancer drug

development aiming for novel molecular targets with the help of computational approaches. The center consists of a young group of enthusiastic and experienced scientist actively pursuing collaborative research with external collaborators in academic community as well as with industrial partners both in India and abroad.

Objectives

To be a part of the drug discovery process, from basic discovery to applied and translational research, creating cooperative pre-clinical and clinical prospects, and fostering an entrepreneurial and innovative culture.

To be a state-of-the-art resource for a highly productive and renowned group of faculties with research interests overlapping with drug discovery.

To expand the bandwidth of our members and enable multidisciplinary projects beyond our current capabilities towards drug discovery and development.

To focus on the natural products converting into commercial C non-profit libraries and encourage the biological assessment of these entities through internal and external partnerships.

Outcomes of the Research conducted under CD3 Facilities:

Received two extramural grants from DST SERB

10 research proposals applied to various funding agencies.

Published 3 review articles, 2 research papers, 5 book chapters.

Conducted one international seminar on Biofilms.

Conducted seminar on National cancer day.

The list of researchers, faculty, non-teaching staff working under CD3

Dr. Vinothkannan Ravichandran (In-charge), AIB Dr. Nilesh Wagh, AIB

Dr. Shashank Kamble, AIB

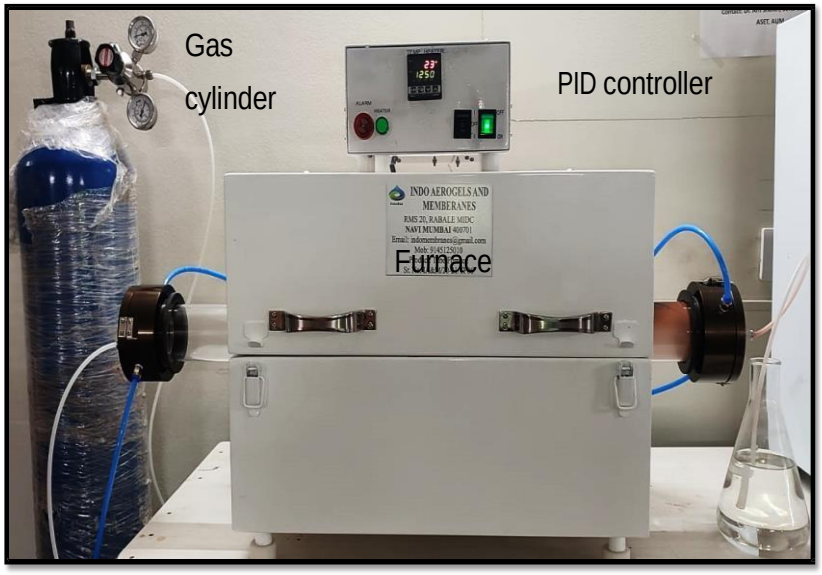
Dr. Vinoth Prasanna Gunasekaran, AIB

2. Center of Nanoscience and Nanotechnology

1) Name of the instrument: Stainless steel reactor system Model: Autoclave with pressure meter Capacity : 1000 ml and Max temperature: 350 ^{o}C	2) Name of the instrument: Heating furnace (hot air oven) Model: Labline and Max temperature: 300 ^{o}C
	

3) Name of the instrument: Tube furnace with Ar gas purging

Model: Chemical Vapor Deposition Max temperature: 1200 ^{o}C Gas cylinder: Ar gas



The funded projects and research work going on under Nanoscience and Nanotechnology Center

Sr. No.	Name of Authors	Title of project	Details	Date of Start
1	Arif D Sheikh	High-efficiency quasi-2D Perovskite solar cells based on metal oxide charges transporting thin films with improved stability	Rs. 46 Lakh sanctioned for the period of 2 years	23 May 2023

Objectives and the Outcomes of the research work carried out under Nanoscience and Nanotechnology Center

Objectives: To investigate the nanostructured materials for various applications like photocatalysis, gas sensing, solar cells, sensors etc

Outcomes in the form of research publications / patents

Type of Publication	No. of Publications
Journals (Scopus)	16
Submitted Projects	1
Book Chapters	2

Five Best Photographs of each laboratory / and research equipment's established under these centers.

Instrumentation Facilities Developed at Host Institute Under SRS Project at AUM

Instrument purchased and installed in the lab:

The list of researchers, faculty, non-teaching staff working under these centers.

Dr. D. J. Late (Faculty)

Dr. A. D. Sheikh (SERB-RS)

3. Centre For Computational Biology & Translational Research (Ccbtr)

Vision:

To improve human health through the pursuit of academic and research excellence in translational science

Mission:

Create a multi-disciplinary research environment wherein biologists, physicist, chemists, computer scientists, mathematicians, statisticians, work as teams and adopt an integrated approach to find

solutions to complex biological challenges

Impart world class higher education and research in relevant applied areas (Computational Biology & Regenerative Medicine)

Develop research partnerships with leading Institutes at the National & International level

Disseminate the knowledge by presenting the work in renowned conferences and publish in high impactor factor journals

Collaborating with Industry Scientists and Clinicians to promote clinical application of the research

Research Areas:

Genomic Data Science:

In this age of "big data", and with the advent of newer and relatively inexpensive technologies, like Next Generation Sequencing (NGS), the need of the hour is to tackle massive amounts of data to make sense of it all. Realizing that growth in data-driven biology requires developing appropriate computational and statistical tools for data analysis, we will bring together researchers with experience in cell & molecular biology, genomics, bioinformatics, statistical computation and data analysis, programming, and machine learning, thus providing an interdisciplinary platform to find solutions towards improving human health and disease. The focus would be to apply statistical tools to data generated from high-throughput technologies (microarray/NGS); analyzing results using programming languages (R/Python); Development of algorithms for data analysis & visualization. Thus, this would result in obtaining high- quality data driven research, for better understanding of a particular disease condition and in turn will help with better

prediction of disease outcomes.

Integrated Omics

The advancement of high throughput technologies, like genomics, proteomics, metabolomics, has greatly increased the ease and reduced the costs of collecting multi-omics data. However, a major challenge lies in attempting to integrate the data sets from various omics platforms to create more meaningful biological and clinically relevant knowledge. Machine learning techniques and methodologies that can facilitate the cross talk of the multi-omics platforms would be employed to understand the complexity of heterogenous data sets. A systems biology approach would be undertaken to study the complex interplay of a host of genes/proteins/metabolites, to provide a more comprehensive view on human diseases, which would help in biomarker discovery.

Structure-based drug design

Drug discovery and development is an expensive process and is time-consuming. Computer-aided drug designing tools can help shorten the timeline, thus substantially reducing the R & D costs. Various software will be used for identification and design of small molecules as inhibitors /probes against various drug targets of therapeutic importance. Further, using computer-assisted analysis In silico designing (epitope mapping) for development of vaccine/diagnostic markers for infectious diseases will be undertaken.

Biomaterials & Tissue Engineering

Stem Cells have emerged as an attractive alternative source of cell therapy due to its inherent property of multiplication and differentiation into a variety of cell types upon giving proper cues and stimulation with suitable growth factors. Although a lot of research has been able to report efficient differentiation, there have been some concerns regarding the generation of mature cell types and also the low percentage of differentiation efficiency when using a two-dimensional (only culture dishes) approach. Thus, successful generation of mature cell types would depend on a combination of cells, growth factors and a suitable 3-D environment to maintain functionality. Various scaffolds/biomaterials will be synthesized and tested for its potential to support differentiation. The research will include optimization of protocols for stem cell differentiation using organoid cultures/ artificial niches to mimic stem cell differentiation, with particular focus on liver diseases.

Patient-derived Induced pluripotent stem cells (iPSCs) research

Stem Cell research is a rapidly evolving area, despite being fraught with innumerable challenges and hurdles that have yet to be overcome to realize its ultimate potential and clinical application. The path breaking discovery of induced pluripotent stem cells (iPSCs) in 2006, has revolutionized the field of stem cell research and translational science and has brought in a lot of excitement and optimism in this area. We

will be looking at developing model systems for studying human development/disease using normal/patient derived iPSCs. Further, the Centre will also focus on the application of genome editing through CRISPR/Cas9 system in patient derived iPSCs. This research will open up newer avenues for studying human diseases and development.

Stem cell tracking and Imaging

Despite the clinical data appearing promising, there are severe limitations to realizing the potential of stem cell-based therapies. One major obstacle has been monitoring the bio-distribution and homing of implanted or injected stem cells in the human body. Hence, an urgent need exists to develop non-invasive and sensitive imaging techniques, which will prove valuable for optimization of therapeutic delivery for cell therapy. We would focus on synthesizing novel biocompatible nanomaterials for molecular imaging and tracking of stem cells. Earlier work carried out in the lab has shown the potential of nanomaterials to be promising agents for tracking/imaging. We would also look at vivo tracking systems for visualizing the nanoparticles. Various animal models for the disease/disorder of interest would be created to study the in vivo tracking of stem cells.

List of members:

1) (Chairperson)

2) Dr. Sagar Barage (Deputy Chairperson)

3) Dr. Virupaksha Bastikar (Member Secretory)

4) Dr. Jaya Lakkakula (Member)

Infrastructure currently available:

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Computer Lab: 1 computer lab with 25 Desktop PC with LAN connection. 1 workstation (128 GB RAM, 2TB HD, 16 cores, GPU: RTX5000) Animal cell culture facility: we utilize animal cell culture facility available at AIB.

Research Outcome

Publications:

1. Suraj Joshi, Payel Ghosh, **Sagar Barage**, Bhakti Basu, Deepti D Deobagkar, Genome-wide lone strand adenine methylation in Deinococcus radiodurans R1: Regulation of gene expression through DR0643-dependent adenine methylation. Microbiological Research, 257: 126964
2. Shrutika Sakpal [1,2], Sayyed Zara Abdeen [2], Shanker Lal Kothari [1], **Virupaksha Bastikar** [3.] Comparative transcriptomic analysis of the malaria parasites Plasmodium falciparum and *Plasmodium vivax* sensitive and resistant strains"; Drug Development & Registration; Vol 11, 1, Feb 2022
3. Shrutika Sakpal*, Shanker Lal Kothari and **Virupaksha Bastikar**, Characterization of human-malarial parasite species based on DHFR and GST targets, resulting in changes in anti-malarial drug binding conformations. Drug Metabolism Letters (DOI: 10.2174/1872312815666220225155728).
4. Apurva Gole, Diya John, Karan Krishnamoorthy, Nilesh S. Wagh, **Jaya Lakkakula***, Mohd Shahnawaz Khan, Hamza Ahmad Mohammad Odeibat, Mohammad Tarique and Md. Rabiul Islam, Role of Phytonanotechnology in the removal of water contamination, Journal of Nanomaterials 22 (2022) 7957007.
5. Amara Lakshmi Lasita, Sakshi Pabrekar, Nilesh S. Wagh, and **Jaya Lakkakula***,Metallic Biomaterials in Biomedical Applications, Functional Biomaterials (Drug Delivery and Biomedical applications), 2022, ISBN 978-981-16-7151-7. Aditya Amrut Pawar, Jyotirmayee Sahoo, Aakash Verma, Abdullah M. Alswieleh, Abhijit Lodh, Rajesh Raut, **Jaya Lakkakula**, Byong-Hun Jeon, Md. Raibul Islam, Azadirachta indica derived silver nanoparticles synthesis and its antimicrobial applications.
6. Deepika Thilakan,[1] Jaie Patankar,[1] Srushti Khadtare,[1] Nilesh S. Wagh,[1] **Jaya Lakkakula**,*1,2 Khalid Mohamed El-Hady,3 Saiful Islam,4 Md. Rabiul Islam,5 Mohd Shahnawaz Khan,6 Nouf Omar Alafaleq,6 and Mohammad Tarique7 Volume 2022 |Article ID 1517849 | https://doi.org/10.1155/2022/1517849
7. Mitra, J., Srilekha, G.K.P., Wagh, N**., Lakkakula, J.** (2022). Application of Nanotechnology in Biofuel Production. In: Chowdhary, P., Khanna, N., Pandit, S., Kumar, R. (eds) Bio-Clean Energy Technologies: Volume 1. Clean Energy Production Technologies. Springer, Singapore. https://doi.org/10.1007/978-981-16-8090-8_13.
8. Snehal Desai, Manish Singh, Anamika Chavan, Nilesh S.Wagh, **Jaya Lakkakula***, Micro- and nanoencapsulation techniques in agriculture, Agricultural Nanobiotechnology (Biogenic

Nanoparticles, Nanofertilizers and Nanoscale Biocontrol Agents), 2022, 297-323, ISBN: 9780323919081

9. Samuel S. Mgiba, Vimbai Mhuka, Nomso C. Hintsho-Mbita, Nilesh S. Wagh, **Jaya Lakkakula***, Nomvano Mketo, Recent Trends in Nanomaterial-Based Advanced Oxidation Processes for Degradation of Dyes in Wastewater Treatment Plants, Advanced Oxidation Processes for Wastewater Treatment, 2022, ISBN :9781003165958.
10. Sanchita Patwardhan, Rajesh W Raut, Nilesh Wagh, **Jaya Lakkakula**, Membrane based technologies for the removal of toxic pollutant, Removal of refractory pollutants from wastewater treatment plants, 2022, 335-365
11. Velhal, K.; Barage, S.; Roy, A.; Lakkakula, J*; Yamgar, R.; Alqahtani, M.S.; Yadav, K.K.; Ahn, Y.; Jeon, B.-H. A Promising Review on Cyclodextrin Conjugated Paclitaxel Nanoparticles for Cancer Treatment. Polymers 2022, 14, 3162. https:// doi.org/10.3390/polym14153162 (IF: 4.43).
12. Sagar Barage, Jaya Lakkakula, Arushi Sharma, Arpita Roy, Saad Alghamdi, Mazen Almehmadi, Md. Jamal Hossain, Mamdouh Allahyani, Osama Abdulaziz. Nanomaterial in food packaging: A comprehensive review. Journal of Nanomaterials, 2022 (IF: 3.791).
13. **J. Lakkakula**, D. Divakaran, R. Srivastava, P. Ingle, A. Gade and R. Raut, "In situ growth of biocompatible biogenic silver nanoparticles in poly-vinyl alcohol thin film matrix," in *IEEE Transactions on NanoBioscience*, 2022, doi: 10.1109/TNB.2022.3208310. **[IF: 3.557].**
14. **Jaya Lakkakula**, Arpita Roy, Karan Krishnamoorthy, Saad Alghamdi , Mazen Almehmadi , Pratik Gujarathi, Prachi Pansare, Mamdouh Allahyani, Osama Abdulaziz, Kamini Velhal, Most. Chand Sultana Khatun, and Md. Jamal Hossain. Alginate based nanosystems for therapeutic applications. Journal of Nanomaterials, 2022 **[IF: 3.791]**
15. Narmin Hamaamin Hussen, Aso Hameed Hasan, Joazaizulfazli Jamalis, Sonam Shakya, Subhash Chander, Harsha Kharkwal, Sankaranaryanan Murugesan, **Virupaksha Ajit Bastikar,** Pramodkumar Pyarelal Gupta, Potential inhibitory activity of phytoconstituents against black fungus: In silico ADMET, molecular docking and MD simulation studies" **Computational Toxicology**, Volume 24, 2022, 100247, ISSN 2468-1113, https://doi.org/10.1016/j.comtox.2022.100247.
16. GJ Navathe, SR Prasad, AM Mane, **SH Barage**, TD Dongale, Viquar Shaikh, MM Karanjkar, SB Teli, PS Patil, NR Prasad, A Critical Review on Design and Development of New Generation Energy Storage Devices. ES Energy & Environment, 2022, 17:11-32.

18. Pooja Salve, Aruna Vinchurkar, Rajesh Raut, Ramesh Chondekar, **Jaya Lakkakula**, Arpita Roy, Md. Jamal Hossain, Saad Alghamdi, Mazen Almehmadi, Osama Abdulaziz, Mamdouh Allahyani, Anas S. Dablool, Md. Moklesur Rahman Sarker and Mohd Fahami Nur Azlina, An Evaluation of Antimicrobial, Anticancer, Anti-Inflammatory and Antioxidant Activities of Silver Nanoparticles Synthesized from Leaf Extract of Madhuca longifolia Utilizing Quantitative and Qualitative Methods, Molecules 2022, 27, 6404
19. Saurabh Kadam, Sakshi Pabrekar, Santosh Sawardekar, **Sagar Barage*** High-throughput and molecular interventions for identification and characterization of rice germplasm. Cereal Research Communications. https://doi.org/10.1007/s42976-022-00320-y

20. Narmin Hamaamin Hussen, Aso Hameed Hasan, Joazaizulfazli Jamalis, Sonam Shakya, Subhash Chander, Harsha Kharkwal, Sankaranaryanan Murugesan, **Virupaksha Ajit Bastikar**, Pramodkumar Pyarelal Gupta Potential inhibitory activity of phytoconstituents against black fungus: *In silico* ADMET, molecular docking and MD simulation studies *Computational Toxicology, Volume 24, November 2022, 100247, ISSN 2468-1113***.**

21. Waifalkar, P. P., Daegwon Noh, Poorva Derashri, **Sagar Barage,** and Eunsoon Oh. 2022. "Role of Estradiol Hormone in Human Life and Electrochemical Aptasensing of 17β-Estradiol: A Review" Biosensors 12, no. 12: 1117. https://doi.org/10.3390/bios12121117

Book Chapter:

1. Yojana Waychal, Shreya Gawas, **Sagar H. Barage,** Bioremediation of Petroleum-Contaminated Soil Pages 157-170 in Book Advances in Bioremediation and Phytoremediation for Sustainable Soil Management" Volume 1 (ISBN (P): 978-3-030-89983-7).

2. Srilekha GKP, Himja Tiwari, Nomvano Mketo, **Jaya Lakkakula***, Application of Nanomaterials in Dairy Industry in Book Advances in Dairy Microbial Products (Elsevier) Jan, 18, 2022, eBook ISBN: 9780323909327

Research Outcome for Jan. 2023- Dec. 2023

B. <u>Publications:</u>

1. Aditya Amrut Pawar, Sanchita Bipin Patwardhan, Sagar Barage, Rajesh Raut, Jaya Lakkakula*, Arpita Roy, Rohit Sharma, Jigisha Anand (2023) Smartphone-based diagnostics for biosensing

infectious human pathogens. Progress in Biophysics and Molecular Biology, 180:120-130.

2. Vandana Johnson, Caroline Biju Kurian, Diya Menon, Nilesh Wagh & Jaya Lakkakula* (27th June 2023), Nanofiltration Applications for Potable Water, Treatment, and Reuse in Sustainable Industrial Wastewater Treatment and Pollution Control in Book Sustainable Industrial Wastewater Treatment and Pollution Control (Springer) pp 149-167 https://doi.org/10.1007/978-981-99-2560-5, 978-981-99-2560-5

3. Roshnee Bose, Maharsh Jayawant, Rajesh Raut, Jaya Lakkakula*, Arpita Roy, Saad Alghamdi, Naeem F. Qusty, Rohit Sharma, Devvret Verma, Mayeen Uddin Khandaker, Abdullah Almujally, Nissren Tamam, Abdelmoneim Sulieman. Cyclodextrin nanoparticles in targeted cancer theranostics. Frontiers in Pharmacology, section Experimental Pharmacology and Drug Discovery, 2023.
4. Sachin Bhusari, Parvindar M. Sah, Jaya Lakkakula, Arpita Roy*, Rajesh Raut*, Ramesh Chondekar*, Saad Alghamdi, Mazen Almehmadi, Mamdouh Allahyani, Ahad Amer Alsaiari, Abdulelah Aljuaid, and Nabeela Al-Abdullah. Green synthesis of silver nanoparticles *via* Taxus wallichiana Zucc. plant-derived Taxol: Novel utilization as anticancer, antioxidation, anti-inflammation, and antiurolithic potential. Green Processing and Synthesis, https://doi.org/10.1515/gps-2023-0051.
5. Chaitali Dhande, Devanshi Mistry, Anandakrishnan Karthic, Rajshri Singh, Sagar Barage* (2023) Computational approaches to identify novel inhibitors for the drug-resistant Mycobacterium tuberculosis DprE1 enzyme. Indonesian Journal of Biotechnology, 28:180-190.
6. Vamika Karn, Varun p. Talati, Shashank Kamble, Virupaksha Bastikar* (2023) Structural variation and transitional analysis of embb receptor with its mutants leading to drug resistance in tuberculosis. Asian Jr. of Microbiol. Biotech. Env. Sc. Vol. 25, No. (3) : 2023 : 484-490.

Book Chapter:

1. Pramodkumar Gupta, Mala Parab, Santosh Chajjed, Virupaksha Bastikar*, Efficacy and Safety of Therapeutic Proteins, Protein-based Therapeutics, ISBN 978-981-19-8248-4, https://doi.org/10.1007/978-981-19-8249-1_10.
2. Virupaksha Ajit Bastikar, Pramodkumar Pyarelal Gupta, Alpana Bastikar, Santosh Subhash Chhajed, Santosh Ajabrao Bothe, Chapter 11 - Bioinformatics serving oncoviral studies, Editor(s): Moulay Mustapha Ennaji, Oncogenic Viruses, Academic Press, 2023, Pages 253-266, ISBN 9780128241561,
3. Pramodkumar Pyarelal Gupta, Viraj Jitendra Sadrani, Priyanshu Pramodkumar Gupta, Mala Makarand Parab, Virupaksha Ajit Bastikar, Chapter 14 - Hepatitis C virus and hepatocellular carcinoma, Editor(s): Moulay Mustapha Ennaji, Oncogenic Viruses, Academic Press, 2023, Pages 243-262, ISBN 9780128241523, https://doi.org/10.1016/B978-0-12-824152-3.00003-2
4. Anwesha Mohapatra, Akhil Nair, Nilesh S. Wagh, Jaya Lakkakula* (24th March 2023) Alginate-

based nanosystems for therapeutic use in the edited book Polymeric Nanosystems Theranostic Nanosystems, Volume 1, 2023, Pages 149-171. Elsevier, https://doi.org/10.1016/B978-0-323-85656-0.00035-8, ISBN: ISBN: 978-0-323-85656-0.

5. Sanchita Patwardhan, Sachin Palekar, Nilesh S. Wagh, Jaya Lakkakula* (14th March 2023) Extended Investigation Processes in Advanced Wastewater Treatment for Water Reuse in the edited book Membrane and Membrane-Based Processes for Wastewater Treatment. CRC Press, https://doi.org/10.1201/9781003165019, ISBN: 9781003165019.
6. Puja Ghosh, Supriya Ghule, Nilesh S. Wagh, Jaya Lakkakula* (27th April 2023) Systematic Industrial Wastewater Treatment by Biomaterial Fabricated Nanofiltration Membrane in the edited book Bio-Nano Filtration in Industrial Effluent Treatment. CRC Press, https://doi.org/10.1201/9781003165149, ISBN: 9781003165149
7. Bhatt, J., Desai, S., Wagh, N.S., Lakkakula, J*. (20th June 2023). New Bioremediation Technologies to Remove Heavy Metals and Radionuclides. In: Shah, M.P. (eds) Industrial Wastewater Reuse. Springer, Singapore. https://doi.org/10.1007/978-981-99-2489-9_14, ISBN: ISBN978-981-99-2489-9

8. Sachin Palekar, Madhuri Dhavale, Nandini Girish, Nilesh Wagh N, Jaya Lakkakula* (30th June 2023) Mutagenesis: A Useful Tool for the Genetic Improvement of the Cultivated Peanut (Arachis hypogaea L.). Biotechnologies and Genetics in Plant Mutation Breeding: Volume 3: Mechanisms for Genetic Manipulation of Plants and Plant Mutants. Apple Academic Press, https://doi.org/10.1201/9781003305101, ISBN: 9781003305101
9. Vandana Johnson, Caroline Biju Kurian, Diya Menon, Nilesh S. Wagh & Jaya Lakkakula (2023) ,Nanofiltration Applications for Potable Water, Treatment, and Reuse, 149-167, Springer, Singapore, https://doi.org/10.1007/978-981-99-2560-5_8, Print ISBN 978-981-99-2559-9 Online ISBN 978-981-99-2560-5.
10. Amara Lakshmi Lasita, Pallavi Pradhan, Nilesh S. Wagh & Jaya Lakkakula,(2023) Cyclodextrin-Based Material for Industrial Wastewater Treatments, 299-337,Springer Nature Singapore, https://doi.org/10.1007/978-981-99-3292-4_15. Print ISBN 978-981-99-3291-7, ISBN 978-981-99-3292-4.
11. Vani Tiwari, Vedha Sahithya, Nilesh Wagh, and Jaya Lakkakula (2023) Green Synthesis of Nanomaterials from Algae Materials to Remediate Environmental Pollution, ISBN: 9781774916100
12. Njabulo S Mdluli, Nilesh S Wagh, Jaya Lakkakula*, Philiswa N Nomngongo, Nomvano Mketo, Emerging Nanofiber Technology for the Removal of Metal Ions in Wastewater Treatment Plants, 1-13, CRC Press, ISB N-9781003164982.

Events Organized: Jan 2023-Dec 2023:

Dr. Jaya Lakkakula, Co-Convenor, National Science Day-Amivigyaan 2023(Theme-Global Science for Global well-being), Feb 28-March 1, 2023.

Dr. Sagar Barage, Co-Convenor, expert Talk on Why go to Space? by Dr. Nat Gopalswamy on Feb 27, 2023.

Organized Seminar on the occasion of ‘World Alzheimer's Day’ in association with Alzheimer’s and Related Disorders Society of India (ARDSI), Mumbai Chapter. Date and Time: 21 September 2023 at 11:50 to 01:00 PM.

Ongoing collaborations

7. BAIF, Pune:

BAIF Development Research Foundation, Pune, Maharashtra is a NGO working for sustainable livelihood and Quality of life of Tribal and rural communities since 1967, presently working in 16 states of India.

We have signed material transfer agreement with BAIF to spare available rice germplasm for research. The aim of collaboration is to conduct research to study rice diversity and identify unique traits among genotypes which will be helpful in many ways for nutrition, climate change and other issues

Doctoral Fellowship:

Mr. Saurabh S. Kadam received Chatrapati Shahu Maharaj National Research Fellowship-2020 for doctoral research on topic “Spectroscopic intervention for identifying important cultivated rice accessions from Konkan region”.