॥ विद्या विनयेन शोभते॥

Changu Kana Thakur Arts, Commerce and Science College, New Panvel (Autonomous)

Re-Accredited 'A+' Grade by NAAC 'College with Potential for Excellence' Status Awarded by University Grants Commission 'Best College Award' by University of Mumbai

Department of Biotechnology Research Profile of

Research Centre (For Ph.D. in Science in the subject of Biotechnology)

(Under University of Mumbai)

1. Information of the Research Centre

| 1. | Name of the Incharge of center | : | Dr. Seema S. Kokitkar |
|----|--|---|-----------------------|
| 2. | Date of the establishment: | : | 17/10/2015 |
| 3. | No. of research guides at present | : | 01 |
| 4. | Intake Capacity of the Research Centre | : | 05 |
| 5. | No. of the Ph.D. Scholars awarded PhD degree till date | : | 01 |
| 6. | No. of the Ph.D. Students enrolled for the Ph.D. at the centre | : | 05 |

2. Research Guides in Science in the subject of Biotechnology

| Sr. | Name of the Research Guide | Date of Recognition | |
|-----|--|---------------------|--|
| No. | & Designation | with Letter No. | |
| 1. | Dr. (Mrs.) Seema S. Kokitkar | PG/2/ICD/2015- | |
| | Designation- Assistant Professor & Head Department of Biotechnology | 16/44646 /9-6-2015 | |

2. Details of the Ph.D. students at the Centre: 05

| Sr. | Full Name of the Learner | Name of the | Area of | Date of |
|-----|--------------------------|-----------------------|---------------|--------------|
| No. | | Research Guide | Research | Registration |
| 1. | Ms. Shweta A. Bhagat | Dr. Seema S. Kokitkar | Biotechnology | 02/09/2016 |
| | Ph.D. Awarded | | | |
| 2. | Ms. Rupali D. Nanekar | Dr. Seema S. Kokitkar | Biotechnology | 23/10/2018 |
| | | | | |
| 3. | Ms. Bindu Rajaguru | Dr. Seema S. Kokitkar | Biotechnology | 27/11/2018 |
| | | | | |
| 4. | Mrs. Bhawana P. Nile | Dr. Seema S. Kokitkar | Biotechnology | 10/02/2020 |
| | | | | |
| 5. | Mrs. Smita V. Sawant | Dr. Seema S. Kokitkar | Biotechnology | 10/02/2020 |
| | | | | |
| 6. | Ms. Latika L. Patil | Dr. Seema S. Kokitkar | Biotechnology | 27/06/2024 |
| | | | | |

Research Activities in the Department (Academic Year -2019-2020 to 2024-2025)

A) Publications by the Faculty

| Particulars | No. of Publications |
|--|---------------------|
| Peer Viewed National Journal | 01 |
| Peer Viewed International Journal- UGC CARE | 09 |
| Non-Peer Viewed National Journal | 04 |
| Book Chapters | 04 |
| Total | 18 |

B) Oral Presentations by the Faculty:

| | No. of Oral Presentations |
|---------------------|------------------------------|
| International Level | 20 |
| National Level | 01 |
| State Level | |
| Total | 21 |

| Sl. | Name of all | Title of the Paper | Name of Institute | Date of |
|-----|---|---|---|--------------------------|
| No. | Authors | | | Presentation |
| 1. | S. S. Kokitkar, L. R. Chavan and S. A. Bhagat | Alleviation of adverse effects of salt stress in <i>Triticum</i> aestivum by foliar application of compatible solutes | Gopal Krishna Gokhale College, Kolhapur | 7/11/2017 |
| 2. | S. A. Bhagat S. S. Kokitkar and L. R. Chavan | Isolation of Chlorpyrifos degrading bacteria from contaminated soil and evaluation of their bioremediation potential | Gopal Krishna Gokhale College, Kolhapur | 8/11/2017 |
| 3. | Dr. S. S. Kokitkar and Ms. S. A. Bhagat | Screening and isolation of potential cellulolytic bacteria from soil and optimization of culture conditions for maximum cellulase production. | Prin. L. N. Welingkar Institute of Management, Development & Research, Matunga, Mumbai | 20/12/2019 |
| 4. | Bhagat S.A. Kokitkar S.S. | optimization of pectinase production by bacillus species using submerged fermentation | 3rd International Conference on 'Empirical and Theoretical Research (ICETR- 2022)' organized by International Board for Education, Research and Development | 28/01/2022 29/01/2022 |
| 5. | Smita Sawant | Phytochemical Profiling and GC-MS analysis of n-Hexane extract of <i>Lavandula</i> bipinnata | International Conference, G.N Khalsa college, Mumbai | 08/04/2022 09/04/2022 |

| 6. | Rupali D. Nanekar | Isolation, | University of | 4/08/2022 |
|-----|---------------------------|--|-----------------------------------|------------|
| | and Seema S. | characterization | Mumbai | to |
| | Kokitkar* | and | | 6/08/2022 |
| | | optimization of | | |
| | | hydrocarbons degrading bacteria from oil | | |
| | | contaminated sites | | |
| | | of | | |
| | | raigad region | | |
| 7. | Smita Sawant, | "Phytochemical screening, | International | 10/01/2023 |
| | Seema Kokitkar | antioxidant study and | e-Conference on | 11/01/2023 |
| | | Identification of active compounds using GC-MS of | "Recent Innovations In | |
| | | Lavendula bipinnata leaves. | Science and | |
| | | 24,6114414 21,111444 104,651 | Technology" RIST- | |
| | | | 2023 | |
| 8. | Dr. S. S. | Pseudomonas aeruginosa: | SANDIP University, | 25/02/2022 |
| | Ghangale | The Eco sustainable Tool for | Nashik in | 26/02/2022 |
| | | Bioremediation of Mercury | collaboration with | and |
| | | | Society for Green | 27/02/2022 |
| | | | Environment, India | |
| 9. | Rupali D. Nanekar | Isolation, characterization | Mohanlal Sukhadia | 15/03/2023 |
| | and Seema S. Kokitkar* | and optimization of Diesel degrading bacteria | University, Udaipur | |
| | KUKILKAI | from oil contaminated | Rajasthan | |
| | | Soils of raigad region | | |
| 10. | Bhawana. P. Nile1 | Screening, isolation and | Mohanlal Sukhadia | 15/03/2023 |
| | and Seema. S. | characterization of | University, Udaipur | |
| | Kokitkar * | Cholesterol degrading | Rajasthan | |
| 11. | Smita S. and | bacteria from the soil Sample Phytochemical evaluation, | Mohanlal Sukhadia | 15/03/2023 |
| 11. | Seema K. | antioxidant potential | University, | 10,00,2020 |
| | | & GC-MS analysis of soymida | Udaipur, Rajasthan | |
| | | febrifuga (roxb.) A. Juss | | |
| 12. | Bindu Rajaguru | In vitro propagation of | Mohanlal Sukhadia | 15/03/2023 |
| | and Seema S. Kokitkar | <i>Quisqualis indica: a</i> Medicinal woody plant - as a | University, Udaipur, Rajasthan | |
| | KUKILKAI | sustainable approach | Odaipui, Rajastilaii | |
| 13. | Sushilkumar | Synergistic effect of | International | 22/02/2024 |
| | Ghadage | Azotobacter and L- | Conference on | 23/02/2024 |
| | | tryptophan application for | Connecting | |
| | | improving plant growth | Innovations in | |
| | | | Biotechnology | |
| | | | for Human | |
| | | | Welfare (ICCIBH W- 2024 | |
| | | | C.K. Thakur | |
| | | | College ACS, New | |
| | | | Panvel | |
| | | | (Autonomous) | |

| 14. | Chavan Latika Rajendra | Effect of immobilized phosphate and silicate solubilizing bacteria on growth of Vigna radiata | Mahatma Phule Arts, Science and Commerce College, Panvel | 23/01/2024 |
|-----|--|--|---|--------------------------|
| 15. | Ms. Nanekar Rupali Dinbandhu | "Activity study of catalase, lipases, and catechol 1,2- dioxygenase from petroleum hydrocarbon degrading bacteria" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 16. | Mrs. Bhawana Prashant Nile | "Comprehensive study of cholesterol oxidase production by Bacillus inaquosorum: molecular characterization, phylogenetic analysis, and optimization studies" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 17. | Dr. Sharmila Shashikant Ghangale | "Exploring the therapeutic potential and phytochemical properties of <i>Nelumbo nucifera</i> (Indian Lotus) seeds for Health and wellness" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 18. | Chavan Latika Rajendra | "Encapsulated bio-fertilizer for salinity stress mitigation" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 19. | Dr. Watharkar Anuprita Dineshkumar | "Exploring phytoremediation potential of Ipomea aquatia Forsk to treat Scarlet RR and real textile effluent and subsequent plant health analysis" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 20. | Madhuri Darshan Vaishampayan | "A Preparation of fish feed from plant source and to check Effect on Arassius auratus and Poecilia reticulata" | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |
| 21 | Bindu Rajaguru | Molecular Identification of Combretum indicum, from Navi Mumbai, Maharashtra, using DNA Barcoding Approach | Changu Kana Thakur A.C.S. College New Panvel (Autonomous) | 22/02/2024 23/02/2024 |

C) Poster Presentations by the Faculty

| | No. of Poster Presentations | | |
|---------------------------|--------------------------------|--|--------------|
| National Level | 01 | | |
| International Level | 02 | | |
| Total | 03 | | |
| Name of all authors | Title of the poster | Name of Institute | Date of |
| | | | Presentation |
| Ms. Sonali P. Dongare | Green synthesis of | Changu Kana Thakur | 17/02/2020 |
| | Benzimidazoles | A.C.S. College New Panvel (Autonomous) | 18/02/2020 |
| | | 7 | |
| Ms. Lama Inayet Sirkhot | Synthesis of | Changu Kana Thakur | 22/02/2024 |
| | nanofertilizer using | A.C.S. College New | 23/02/2024 |
| | orange peels and to | Panvel (Autonomous) | |
| | check its effect on | | |
| | Vigna radiata | | |
| Dr. Anuprita D. Watharkar | Lab to land Transfer | International | 17/10/2023- |
| | of green | Conference on | 18/10/2023 |
| | Technology: Ex situ | Advances in | |
| | horizontal | Biotechnology: | |
| | subsurface flow | Current Discoveries | |
| | phytoreactor to | and Future | |
| | treat real textile | Perspectives | |
| | effluent and direct | (ICAB-2023). | |
| | blue GLL and In situ | Amity Institute of | |
| | plantation of Dwarf | Biotechnology, Amity | |

D) Patents/Copyrights

Jasmine to

polluted site.

remediate effluent

| Sr. No. | Title of the Patent/Copyright | Name of the Teacher | Date of Filing | Patent Number/ Copyright Number | Current Status |
|------------|---|------------------------|-------------------|--|-------------------|
| 1. | Comparative analysis between Ascophyllum nodusum extract & fruit peels waste extract on germination & growth of mung bean | Kokitkar and | 13/01/2022 | L-114366/2022 | Granted |

University Mumbai

| 2. | Effect of Fe3O4(Iron oxide) nanoparticles on the growth of Salt stressed <i>Lablab</i> purpureus | Dr. Seema Kokitkar and Ms. Shweta A. Bhagat | 14/02/2022 | L-117620/2022 | Granted 23/09/2022 |
|----|--|---|------------|---------------|-----------------------|
| 3. | Oral suspension Composition of Prunella Cretensis For Antimicrobial Infections | Mr. Sushilkumar Ghadage (*with microbiology Dept.) | 06/03/2023 | 202321015055 | Patent Filled |
| 4. | Assessment of different seed priming treatment and their growth attributes in pulses i.e. Vigna radiata and Vigna aconitifolia | Dr. Seema Kokitkar & Bhawana suryawanshi | 08/08/2023 | L-131653/2023 | Registered |
| 5. | Use of groundnut shell waste as plant growth enhancer | Ms Rupali Nanekar Dr. Seema Kokitkar | 15/05/2023 | L-130569/2023 | Registered |

• Dr. Seema Kokitkar, Ms. Shweta A. Bhagat, Ms. Rupali D. Nanekar and Ms. Bhawana Nile: 20 Bacterial gene sequences has been deposited in GenBank (NCBI). Accession number was provided to individual isolates.
