



Rayat Shikshan Sanstha's  
**Karmaveer Bhaurao Patil College Vashi (Empowered Autonomous)**  
**Department of Microbiology**

### Post Graduate Research Projects

Sr No	Academic Year	Name of the Research Project/ Title of Internship	Name of the student	Addressed Needs (Write local need)	Impact/Outcome
1.	<b>2018-19</b>	Production of probiotics and their application	Pratiksha Ahire	Local	<b>Biotechnological Innovations</b>
2.		Study on isolation and characterization of bacteria and its bioremediation activity for cadmium heavy metal	Arshi Sheikh	Local & Regional	Understanding and mitigating environmental impacts
3.		Studies on fermentation of soyabean meal and corn soyabean mix meal using bacillus, lactobacillus and aspergillus spp.	Arpita Bangar	Local, Regional, National	<b>Public Health and Clinical Applications</b>
4.		Comparative studies on antimicrobial and antioxidant properties of frozen and dried momordica dioica fruit extracts	Pooja Choudhary	National & Global	<b>Human Health and Disease</b>
5.		Development of non-dairy synbiotic yoghurt using a consortium of lactic acid bacteria fortified with prebiotic component fructo-oligosaccharides containing food material.	Mohini Deshmane	Local & Regional	<b>Agricultural Sustainability</b>
6.		Production of exopolysaccharide produced by pk- 1 isolated from crotolaria assamica using groundnut oil cake as a substrate.	Pallavi Deshmukh	National & Global	<b>Biotechnological Innovations</b>
7.		To study isolation, production, optimization of vinegar fermentation from	Aditi Jadhav	Local & Regional	<b>Biotechnological Innovations</b>

	apple and its application			
8.	Extraction of phytochemicals from eucalyptus plant leaves and study of it's antimicrobial and antibiofilm activity against clinical pathogens from urine sample	Shabana Khan	National & Global	<b>Human Health and Disease</b>
9.	Comparative study of antimicrobial activity of carica papaya leaf and peel extract against clinical pathogens	Krutika Manjrekar	National & Global	<b>Human Health and Disease</b>
10.	Biopreservation of food using bacteriocin produced by lactic acid bacteria (lab)	Rutuja Maskar	Local & Regional	<b>Biotechnological Innovations</b>
11.	Green synthesis and characterization of silver nanoparticle from plant extract and its application in water purification and food industry	Vibha Mishra	National & Global	<b>Biotechnological Innovations</b>
12.	Polyhydroxy butyrate using different isolates obtained from soil samples and its application as a food packaging material	Tafheem Momin	National & Global	<b>Biotechnological Innovations</b>
13.	Use of fungal cultures for hydrolysis of rice straw to be used for ethanol production	Poonam Shinde	Local & Regional	<b>Biotechnological Innovations</b>
14.	To study isolation, identification, characterization, and application of riboflavin from <i>Ashbya Gossypii</i> isolated from mangrove soil.	Kiran Surve	Local & Regional	<b>Agricultural Sustainability</b>
15.	Isolation of cellulose degrading bacteria from different sources and determination of their waste degrading potential	Monita Sutar	National & Global	Understanding and mitigating environmental impacts
16.	Production of industrial bio-degreasing formulation using biosurfactant and a consortium of hydrocarbon degrading isolates	Shruti Vighne	National & Global	<b>Biotechnological Innovations</b>
17.	To determine the effect of biofertilizer produce by azotobacter species on yield of wheat and rice	Komal Yewale	Local & Regional	<b>Agricultural Sustainability</b>
18.	Compartive study of antimicrobial and antioxidant activity of tagetes patula(french/brown marigold) and	Namrata Bhingardev	National & Global	<b>Human Health and Disease</b>

		tagetes erecta (african/orange-yellow marigold) on pathogen			
19.	2019-20	Production, Extraction, Optimization and characterization of siderophore by soil isolates and it's application	Pradnya Mukadam	Local & Regional	<b>Agricultural Sustainability</b>
20.		Production, Extraction, Characterization and Optimization of Exopolysaccharide produced by isolate from <i>Alysicarpus glumaceus</i> and <i>Crotalaria spectabilis</i> plant.	Shruti More	Local & Regional	<b>Biotechnological Innovations</b>
21.		Bioremediation and Decolourisation of Textiles Dyes by using Bacteria Isolated from Textile Industrial Effluent	Sweety Tandel	Local & Regional	Understanding and mitigating environmental impacts
22.		Extraction of Ergosterol from Mycelium of Higher Fungi	Parbonee Dey		<b>Biotechnological Innovations</b>
23.		Isolation of keratinolytic bacteria and its applications	Ravikumar Yadav	Local & Regional	<b>Biotechnological Innovations</b>
24.		Isolation, identification and optimization of chromium resistant bacteria for bioremediation of chromium from synthetic waste	Rahul Wadekar	Local, Regional & National	Understanding and mitigating environmental impacts
25.		Preparation of bio-lipbalm using essential oil as preservative and bacterial pigment (prodigiosin) as a natural tint	Shilpa Adhikari	Local & Regional	<b>Biotechnological Innovations</b>
26.		Isolation, Identification and Optimization of Mercury Resistant Bacteria for Bioremediation of Mercury from Synthetic Electronic Waste.	Krutika Khatate	Local & Regional, & National	Understanding and mitigating environmental impacts
27.		Probiotic product development: Isolation, Optimization and characterization	Mayur Atpadkar	Local & Regional	<b>Human Health and Disease</b>
28.		Isolation and identification of melanin producing bacteria; and characterization of bacterial melanin, for study of its applications.	Vidhyesh Karnjavkar	Local & Regional	<b>Biotechnological Innovations</b>
29.	Antibacterial Activity of <i>Plectranthus amboinicus</i> against Multiple Drug Resistant Clinical isolates from urinary tract.	Shinu Yadav	Local	<b>Human Health and Disease</b>	
30.	Screening of heavy metal resistant plant	Priyanka Pandey	Local & Regional	Understanding and mitigating	

		growth promoting bacteria from metalliferous soil.			environmental impacts
31.		Extraction, Optimization and production of bioplastic from agricultural waste	Dhanashri Patil	Local & Regional	Understanding and mitigating environmental impacts
32.		Enhancement of Antibacterial and Antibiofilm potential of silver nanoparticles against MDR pathogens- Amoxicillin conjugated Carica papaya leaf extract mediated synthesis	Pooja Vengurlekar	Global	<b>Human Health and Disease</b>
33.		Study of antimicrobial and phytochemical properties of casuarina equisetifolia fruit extract, synthesis and characterization of nanoparticles	Ajinkya Pawar	Local	<b>Human Health and Disease</b>
34.		Lab sale Sirka production, it's Microbial and Chemical analysis.	Anit Maurya	Local	<b>Biotechnological Innovations</b>
35.		To formulate an bacterial consortium to degrade flower waste.	Jayashri Pawar	Local	Understanding and mitigating environmental impacts
36.		Enrichment, Isolation, Screening and Characterization of Pectinase Producing Bacteria and its Applications	Kajal Phadtare	Local	Understanding and mitigating environmental impacts
37.		Effect of a Novel Bacterial Bio-fertilizer on growth of Grape plant (Crimson seedless)	Sonia Bhekre	Local & Regional	<b>Agricultural Sustainability</b>
38.		The Isolation, Identification production, Optimization of tannase enzyme producing bacteria and it's application.	Komal Chavan	Local	<b>Biotechnological Innovations</b>
39.	<b>2021-2022</b>	Comparative Study Of Cashew Nuts And Shells And Green Synthesis Of Silver Nanoparticles From Cashew Leaves And Their Applications	Chikhalekar Payal Deepak	Local & Regional	<b>Biotechnological Innovations</b>
40.		The Isolation, Identification, Production, Purification of Nattokinase Producing Microorganisms From Various Soil Samples And Soybeans	Dumbre Mayuri Manohar	Local	<b>Biotechnological Innovations</b>
41.		Isolation Of Tannase Producers.	Khose Ashlesha Bhausahab	Local	<b>Biotechnological Innovations</b>
42.		Microbiological Studies For Conversion Of Lignocellulosic Waste Into Biofertilizers.	Asmita Kashinath Gaikwad	Local & Regional	Understanding and mitigating environmental impacts
43.		Study Of Bioactive Properties Of Cheilocostus Speciosus Plant And Its	Gaikwad Sandhya Dattu	Local	<b>Biotechnological Innovations</b>

	Application			
44.	Isolation And Characterization Of Phytase Producing <i>Lactobacillus</i> Species Isolated From Idli Batter And Their Application In Soy Milk Fermentation	Chavan Narayan Anil	Local & Regional	<b>Biotechnological Innovations</b>
45.	Biodegradation And Decolourisation Of Textile Industry Dyes By Microorganisms	Bhusara Mamta Vishwanath Jayashri	Local & Regional	Understanding and mitigating environmental impacts
46.	Study On Siderophore Production By Prominent Isolates And Its Application	Patil Hrutuja Gopinath	Local & Regional	<b>Agricultural Sustainability</b>
47.	Microbial Production Of Lipase From Oil-Contaminated Soil And Its Application In Biodegradation Of Oil Spills	Yadav Ritika Ramjeet	Local & Regional	<b>Biotechnological Innovations</b>
48.	Isolation And Characterization Of Bioluminescent Organism From Marine Fish (Rani Masa)	Pawar Pratiksha Laxman Laxmi	Local & Regional	<b>Biotechnological Innovations</b>
49.	Evaluation Of Antimicrobial And Antioxidant Activity Of Tomato Juice Patch As Dental Bleaching With Hpmc-Pvp Combination Polymer Base Against Dental Plaque-Causing Microorganisms	Jadhav Pritam Anandrao Meena	National	<b>Human Health and Disease</b>
50.	To Check Efficiency Of Isolates For Nickel bioremediation	Kharavtekar Siddhi Kishor	Local	Understanding and mitigating environmental impacts
51.	Biosynthesis Of Silver Nanoparticles And Evaluation Of Its Antimicrobial And Antioxidants Activity	Vedpathak Anuja Girish	Local	<b>Biotechnological Innovations</b>
52.	Study On Production Of Biocellulose Using <i>Azotobacter</i> Spp. And <i>Rhizobium</i> Spp	Marathe Shruti Nitin	Local	<b>Biotechnological Innovations</b>
53.	Study Of Protease Producing Microorganisms And Their Application	Sakpal Anushka Ashok	Local	<b>Biotechnological Innovations</b>
54.	Newer Approach Of Biopolymer Extracted From Microbes.	Gavali Deepali Kailas Vaishali	Local	<b>Biotechnological Innovations</b>
55.	Isolation, Characterisation Of Keratinase Producing Organism And Its Application In Production Of Biofertilizers	Dhiwar Rutuja Saumitrasen Neeta	Local	<b>Agricultural Sustainability</b>
56.	A Study Of Phosphate Solubilizing Bacteria & Fungi From Mangrove Rhizosphere Soil	Mahadik Shruti Sanjay Swati	Local & Regional	<b>Agricultural Sustainability</b>
57.	Study Of Lead Resistant Bacteria From	Tripathi Arpana	Regional &	Understanding and mitigating

		Industrial Effluent Treatment Plant And Their Potential Applications In Bioremediation	Rajeshmani Sheela	National	environmental impacts
58.	<b>2022-2023</b>	Isolation screening identification of bio emulsifier producing organism from different soil sample and it's bio-surfactant and antibiotics resistance	Shreya Bhoir	Regional	<b>Human Health and Disease</b>
59.		Comparison Of Anti-Dandruff Activity Of Synthetic Shampoos And Crude Plant Extracts On Dandruff Causing Isolates.	Shivani Dalvi	Regional	<b>Biotechnological Innovations</b>
60.		Isolation and Characterisation of Phosphate Solubilizing Bacteria from different soil samples	Snehal Durgude	Local & Regional	<b>Agricultural Sustainability</b>
61.		Investigation and identification of indigenous microalgae from freshwater sample	Sakshi Gadhari	Local	Understanding and mitigating environmental impacts
62.		Production of biocellulose using natural isolates and it's applications	Rucha U. Ghodeswar	Local	<b>Agricultural Sustainability</b>
63.		Isolation and Identification of Antibiotic Resistant Bacteria from Clinical Samples	Sayali Jadhav	National	<b>Human Health and Disease</b>
64.		Extension of Shelf Life of MSC by blend of sodium acetate and diacetate	Akash S Jangam	Local	<b>Biotechnological Innovations</b>
65.		Anti-acne activity and phytochemical analysis of bark and leaves extract of <i>Casuarina equisetifolia</i>	Sejal Kadukar	Local	<b>Human Health and Disease</b>
66.		Analysis of ventilator pipe in hospital to check biofilm formation by fungi and bacteria	Piya Khandagle	National	<b>Human Health and Disease</b>
67.		Isolation and identification of dye degrading microorganisms from dye effluent	Nishigandha Magar	Local & Regional	Understanding and mitigating environmental impacts
68.		Characterization and Remediation of cadmium resistant bacteria and check its potential	Vinita. R. More	Local & Regional	Understanding and mitigating environmental impacts
69.		Production of Biofuel from Fruit wastes	Samiya Pathan	National	Understanding and mitigating environmental impacts
70.	Production of Xanthan gum by using Xanthomonas spp. from banana peels as source of carbon	Dhanshree Pawar	Local & Regional	Understanding and mitigating environmental impacts	

71.		Biosynthesis and characterization of gold and silver nanoparticles using bacteria isolated from gold and silver smelting process	Saloni Mohan Pawar	Local & Regional	<b>Biotechnological Innovations</b>
72.		To study the microbial consortium for sewage water treatment	Raksha Phatkare	Local	Understanding and mitigating environmental impacts
73.		Isolation of exopolysaccharide from microbial sources and it's applications	Chaitali Raut	Local	<b>Biotechnological Innovations</b>
74.		To study the antimicrobial activity of prodigiosin produced from <i>Serratia spp.</i> and effect of oil seeds on its production.	Sharmila Shelar	Global	<b>Human Health and Disease</b>
75.		identification of bioactive compounds in leaf Extract of the	Rhucha Sheramkar	Local	<b>Biotechnological Innovations</b>
76.		<i>Tinospora cardifolia</i> Antimicrobial property and Action Against Various Infectious Microorganisms and study of its antimicrobial Properties.	Vaishnavi Sudke	Local	<b>Human Health and Disease</b>
77.		To study pectinolytic organisms using spoiled vegetables to optimize its production and minimize resource costs.	Samidha Surve	Regional	Understanding and mitigating environmental impacts
78.		Comparative study of bacteriocin and spirulina on fruits as biopreservative	Bhavana Thakare	Regional	<b>Biotechnological Innovations</b>
79.		Exploration of microbial diversity in cow dung	Darshana Warke	Local	<b>Human Health and Disease</b>
80.		Development of non-dairy synbiotic yoghurt milk, fortified with prebiotic oligosaccharide	Sundar Yadav	Local	<b>Human Health and Disease</b>

## Under Graduate Research Projects

Sr No	Academic Year	Name of the Research Project/ Title of Internship	Name of the student	Addressed Needs (Write local need)	Impact/Outcome
1.	2021-2022	Isolation and characterization of Vitamin C producing Microorganisms from <i>Tilapia</i> fish gut.	Rugved Bharat Babar	Local	<b>Biotechnological Innovations</b>
2.		Isolation and characterization of Vitamin C producing Microorganisms from <i>Tilapia</i>	Yash Santosh Nagvekar	Local	<b>Biotechnological Innovations</b>



		fish gut.			
3.		Isolation, Production And characterization of EPS from microorganisms from Nodules	Nidhi Rajesh Mahale	Local & Regional	<b>Biotechnological Innovations</b>
4.		Isolation, Production And characterisation of EPS from microorganisms from Nodules	Sanjivani Suresh Padwal	Local & Regional	<b>Biotechnological Innovations</b>
5.		Biofuel production by wild yeast from <i>Sapodila</i> fruit	Rujuta Moreshwar Sakpal	Local & Regional	<b>Agricultural Sustainability</b>
6.		Bioethanol production by Yeast from organic jaggery	Yojana Arun Patil	Local & Regional	<b>Agricultural Sustainability</b>
7.		Isolation, Production and characterisation of EPS from microorganisms from Nodules	Abhinav Machhindra Unde	Local & Regional	<b>Agricultural Sustainability</b>
8.		Isolation, Production and characterisation of EPS from microorganisms mangrove soil	Sanskriti Sunil Shinde	Local & Regional	<b>Agricultural Sustainability</b>
9.		Isolation and identification of pesticides degrading bacteria	Trupti Suryakant Mhaske	Local & Regional	Understanding and mitigating environmental impacts
10.		Isolation and identification of pesticides degrading bacteria	Shrutika Satish Khamkar	Local & Regional	Understanding and mitigating environmental impacts
11.		Identification and Isolation of lipase producing bacteria	Priyanka Santosh Bhosale	Local	<b>Biotechnological Innovations</b>
12.		Identification and Isolation of lipase producing bacteria	Pranjal Ramchandra Matne	Local	<b>Biotechnological Innovations</b>
13.	<b>2022-2023</b>	Isolation, Production, Extraction, characterisation and Optimization of EPS by Bacterial Isolate from ETP of MIDC, Navi Mumbai.	Kartikey Jagannath Chavan	Local	Understanding and mitigating environmental impacts
14.		Isolation and characterization of phosphate Solubilizing fungi and screening of their plant growth promoting activity	Prajakta Prasad Ingawle	Regional	<b>Agricultural Sustainability</b>
15.		Isolation, production, Extraction and characterisation of Exopolysaccharide From Chiner Farm sample	Tanuja Balasaheb Pawar	Local	<b>Biotechnological Innovations</b>
16.		Isolation production and applications of pigment producer Microbes From sewage	Pratik Dnyandev Shinde	Local	Understanding and mitigating environmental impacts



		water			
17.		Isolation, production and applications of pigment producer Microbes from chemical effluent.	Ritu Dhanraj Garad	Local	Understanding and mitigating environmental impacts
18.		Isolation, production and applications of pigment producer From Kachrali lake	Mansi Pradip Juvekar	Local	<b>Biotechnological Innovations</b>
19.		Production of Bioplastic from Microbial source	Tanushri Mahesh Shevde	Local	<b>Biotechnological Innovations</b>
20.		Production of Exopolysaccharide From MarineMicrobes	Shreya Sarjerao More	Local	<b>Biotechnological Innovations</b>
21.		Investigate Bioactive properties of <i>Senegalia rugata</i> .	Smital Avinash Garud	Local	<b>Biotechnological Innovations</b>