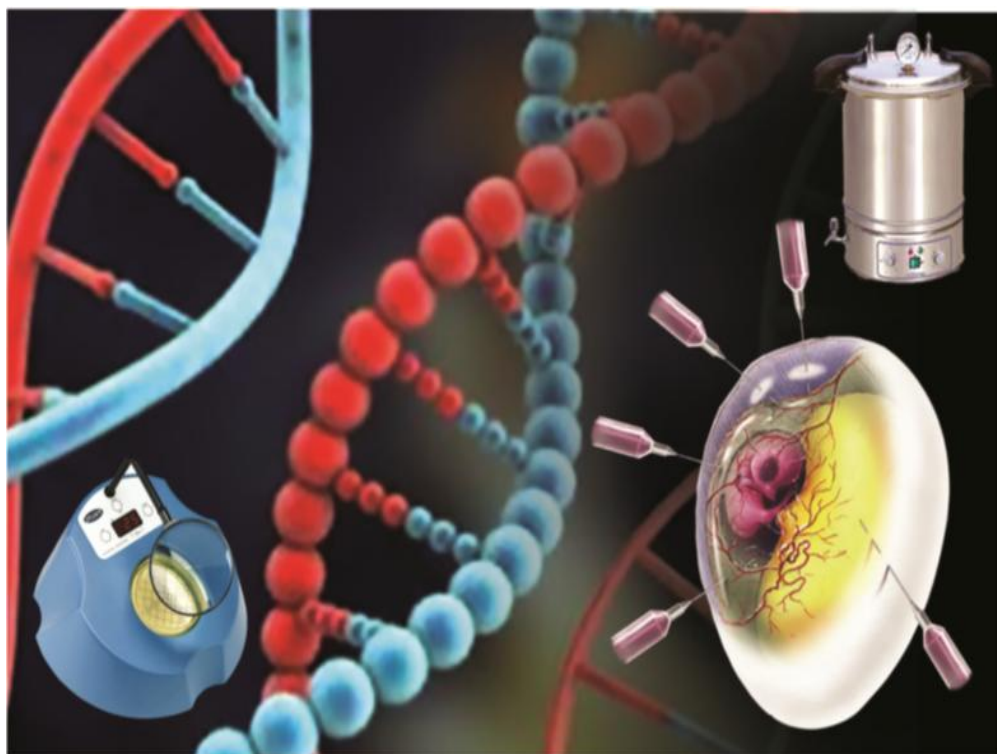


# BIOTECHNOLOGY

CPE, RUSA & DBT Star College Scheme Beneficiary  
PSGVP Mandal's  
S. I. PATIL ARTS, G B PATEL SCIENCE &  
STKV SANGH COMMERCE COLLEGE,  
SHAHADA 425409, (M.S.), INDIA.



**Profile of The Department**

**2016-2021**

<b>Name of the Department</b>	<b>:</b>	<b>Biotechnology</b>
<b>Year of Establishment</b>	<b>:</b>	<b>2008</b>

### 1. Details of the Programs Offered by the Department

Sr. No.	Program level	Name of the program / Course	Duration	Entry Qualification	Medium of Instruction	Sanctioned Student Strength	Number of Students Admitted
1	UG	Biotechnology	3 years	H S C or Equivalent	English	60	40
2	Ph.D.	Biotechnology	Research work	M.Sc.	English	08	05

### 2. Teaching posts (sanctioned and filled)

Post	Sanctioned	Filled
Professor	00	00
Associate Professor	00	00
Assistant Professor	02	00
Others (CHB)	03	03

### 3. Faculty profile with name, qualification, designation, experience etc:

Name	Qualification	Designation	Specialization	Experience
Prof. R. Z. Sayyed	M.Sc. Ph.D.	Professor	Microbiology	18 (UG) 16 (PG)
Mr. R. D. Mali	M.Sc.(SET)	Asst. Prof	Microbiology	03
Ms. J. N. Patil	M.Sc.	Asst. Prof.	Microbiology	01
Ms. D. Y. Chaudhari	M.Sc.	Asst. Prof.	Microbiology	01
Mr. K. H. Nagesh	M.Sc.	Asst. Prof.	Bioscience	16

### 4. Non-teaching staff: Lab Assistant - 00 and Lab Attendant - 01

### 5. Students Admitted Year wise (2016-2022)

Year	No. of students admitted
2016-17	32
2017-18	44
2018-19	39
2019-20	33
2020-21	29
2021-22	30

### 6. The Ratio of Teacher to Students: 1:66

## 7. Class wise Result

Year	T.Y. B.Sc.		
	Registered students	Pass students	Percentage of passing
2016-17	06	04	66.66
2017-18	14	09	64.28
2018-19	06	02	33.33
2019-20	12	12	100
2020-21	14	13	92.85
2021-22	06	05	83.33

## 8. Meritorious Students - College Toppers

Sr. No.	Name of Alumni	Year of Passing
1	Patil Karishma Yashwant	2016-2017
3	Tatiya Muskan Mukesh	2017-2018
4	Patil Shrushti Ashok	2017-2018
5	Shirsath Shital Mohan	2017-2018
6	Merchant Aamena Mustafa	2018-2019
7	Shaikh Mittas Bee Kalim	2019-2020
8	Theertha Sahadevan	2019-2020
9	Shirsath Spana Raghunath	2020-2021
10	Yelave Priyanka Sanjay	2021-2022

## 9. Students progression

Name of the Student	Progression (M.Sc./Job)
Mahajan Dipak Devidas	Production-Supervisor, Meghmani Organics Ltd., Bharuch, Gujrat.
Jaiswal Jai Ambalal	M.Sc.-Biotechnology, K.B.C.N.M.U. Department of Life-Sciences, Jalgaon, Maharashtra
Patel Gunjan Harishkumar	M.Sc.-Nutrition & Dietetics, Parul University, Vadodara, Gujrat.
Dhangar Chetan Pandurang	Glenmark Pharamceuticals Ltd., Indore, Madhya Pradesh.
Mange Snehlata Suresh	M.Sc.-Biotechnology, R.C. Patel College of Sciences, Shirpur, Maharashtra
Jadhav Dipak Suklal	M.Sc.-Biotechnology, R. C. Patel College of Sciences, Shirpur, Maharashtra.
Pawar Rahul Gokul	M.Sc.-Biotechnology, P.G. College, Jalgaon, Maharashtra.

Gurubakshani Mamta Yuvraj	M.Sc.-Biotechnology, R. C. Patel College of Sciences, Shirpur, Maharashtra.
Patel Leena Ishwar	M.Sc.-Biotechnology, R. C. Patel College of Sciences, Shirpur, Maharashtra.
Sahadevan Theertha	M.Sc., Parul University, Vadodara

#### 10. Faculty awarded Ph.D. during the assessment period

Sr No	Name of Research Student registered	Title of the research	Date of Declaration
1	Dr. H. P. Jadhav	Studies on the hydrolytic enzyme(s) produced by rhizospheric microorganism(s) to combat phytopathogens.	2020

#### 11. Faculty on Academic Bodies of Parent and other University

Name of the Faculty	Academic Body	University/Institute
Prof. Dr. R. Z. Sayyed	Board of studies	KBC North Mah Univ., Jalgaon
	Board of studies	Sathye College (Autonomous), Mumbai
	Faculty	KBC North Maharashtra Univ., Jalgaon
Dr. M. M. Jogi	Board of studies	KBC North Maharashtra Univ., Jalgaon

#### 12. Awards/Honours received by individual teachers

Name of the Faculty	Name of the Award	Year	Award Agency
Prof. Dr. R. Z. Sayyed	Fellow Indian Phytopathological Society	2021	Indian Phytopathological Society, New Delhi
	Research Excellence (Publication)	2020	KBC North Mah. Univ, Jalgaon, India.
	Outstanding Achievement Award	2020	Kalp Lab, Mathura, India
	Springer-Society Award	2020	Society for Environmental Sustainability, Lucknow.
	Award for Excellent	2020	Society for Environmental Sustainability, Lucknow.
	Excellence in PGPR Research Award,	2019	Asian PGPR Society & National University of Uzbekistan
	Prof. Man Mohan Sharma Award	2018	Marathi Vigyan Parishad, Mumbai.

	Excellence in PGPR Research Award,	2017	Asian PGPR Society & Instt. of Biology, Indonesia
	Best Teacher Award	2016	North Maharashtra University, Jalgaon.
Dr. H. P. Jadhav	Best Oral Presentation, International e-Conference	2020	Sandip University, Nasik, (MH) India
	First Best Presentation Award	2019	AKS University, Satna (M.P.), India
	First Oral Presentation Award	2017	PSGVP ASC College , Shahada

### 13. Infrastructural facilities

- a. Internet facility for staff and students: Yes, Wi-fi enabled
- b. Well-equipped Laboratories

Name of facility	Name of Laboratory	Area (sq.ft.)
UG Laboratories	Rutherford Laboratory	32x19
	Laboratory	32x19

### 14. Faculty recognition as PG Teacher and M.Phil / Ph.D. Guide

Name of the Faculty	Recognition	University/ Institute
Prof. Dr. R. Z. Sayyed	PG Teacher M.Phil Ph.D. Guide in Biotechnology	KBC NMU, Jalgaon

### 15. M.Phil / Ph.D. students Guided and working

■ Guided =04; Working = 01

Sr No	Guide	Name of Research Students	Title of the research topic	Date Completed
1	Prof. R. Z. Sayyed	Hitendra P. Jadhav	Studies on the hydrolytic enzyme(s) produced by rhizospheric microorganism(s) to combat phytopathogens.	07/06/2021
2		Mahesh S. Sonawane	Studies on bacterial biodiversity & search for siderophore producer in the gut of insect from Western Ghat	06/02/2020
3		Harshal M. Bhamare	Studies on production and possible applications of microbial laccase	06/02/2020

4		Sonal J. Wani	Evaluation of Microbial Degradation of Poly- $\beta$ -Hydroxy Butyrate (PHB)	04-09-2017
5		Vipool A. Thorat	Impact of Abiotic Stresses on Rhizospheric Microbiome and Metabolome and Sorgoleone Synthesis by Roots of Sorghum bicolor	On-going

#### 16. Areas of research interest

- Plant-Microbe Interactions
- Microbial Polymers
- Bioremediation
- Microbial Biotransformation

#### 17. Research projects ongoing/completed in assessment period:

Sr. No.	Name of the Staff member	Title of the Project	Funding agency	Grant Received (Lacs)	Status
1	Dr. R. Z. Sayyed	DBT Star College Scheme for Strengthening of Life Sciences (Coordinator of the scheme)	DBT	104..00	Completed
2		Development of singe Technology having multi-potential of plant growth promotion, disease control and 3bioremediation	UGC, New Delhi (Major Project)	10.24	Completed
3		Molecular approaches for improving the production of PHB	DST (Young Scientist)	20.38	Completed
4		College with Potential for Excellence	UGC	145.00	Completed
5		Development of siderophore based biocontrol agents for controlling diseases in banana	BARC DAE-BRNS (Young Scientist)	9.50	Completed
6		Development of efficient methods for production and recovery of PHB: A biodegradable polymer	UGC, New Delhi Major Project	6.27	Completed

### 18. Books Authored/ Edited by faculty

Sl. No	Faculty	Title	Publisher, ISBN	Year
1.	Prof. R. Z. Sayyed	Antioxidants in Plant-Microbe Interaction	Springer-Nature, India 978-981-16-1349-4	2021
2.		Microbial Surfactants Volume I: Production and Applications	CRC Press, Taylor & Francis, USA 978-0367-52118-9	2021
3.		Soil Bioremediation: An Approach Towards Sustainable Technology	Wiley Blackwell, US 978-1-119-54795-2	2021
4.		Plant Growth Promoting Rhizobacteria for Sustainable Stress Management Vol 1 Rhizobacteria in Abiotic Stress Management	Springer-Nature Singapore 978-981-13-6535-5	2019
5.		Plant Growth Promoting Rhizobacteria for Sustainable Stress Management Vol II Rhizobacteria in Biotic Stress Management	Springer-Nature Singapore 978-981-13-6985-8	2019
6.		Plant Growth Promoting Rhizobacteria (PGPR): Prospects for Sustainable Agriculture	Springer, Singapore 978-981-13-6789-2	2019
7.		Renewable Resources and Environment	Discovery Pub. Delhi 978-93-5056-893-4	2018
8.		<i>Alcaligenes faecalis</i> for plant nutrition and disease control	Lambert Pub, Germany 978-3-330-06195-8	2017
9.		Recent Trends in PGPR Research for Sustainable Crop Productivity	Scientific Publ., Jodhpur 978-81-7233-990-6	2016
10.		Advances in Bio-Medico Science	Excell India Publ, New Delhi 978-93-85777-30-1	2016
11.		Advances in Plant Sciences	Pathak Sara Pub, Ahmadabad 978-1-73032-656-1	2016

### 19. Publications by Faculty

Name of Faculty	Publications in peer reviewed journals	Books/ Chapters	Citations	h-index	i10 index
Prof. Dr. R. Z. Sayyed	56	21	5737	38	100
Dr. M. M. Jogi	02	-	-	-	-
Dr. H P Jadhav	10	03	330	10	10
<b>TOTAL</b>	<b>68</b>	<b>24</b>			

## 20. Seminars/ Conferences/Workshops Organized/ attended

Sr. No.	Title	Date	Level	Name of Coordinator /Organizer
1	6 <sup>th</sup> National PGPR Conference- Barkatullah Univ., Bhopal	03 & 04/09/2021	National	Prof. R. Z. Sayyed (Organizing Chairman)
2	International Conference on Sustainable Agriculture and e-cotourism, Udayana Univ, Bali, Indonesia	28-30/08/2021	International	Prof. R. Z. Sayyed (Organizing Coordinator)
3	6 <sup>th</sup> International PGPR Conference, National Univ. of Uzbekistan, Tashkent, Uzbekistan	18-22/08/2019	International	Prof. R. Z. Sayyed (Organizing Co-Chairman)
4	5 <sup>th</sup> National Conference on PGPR for Sustainable, AN University, Guntur	23-25/02/2019	National	Prof. R. Z. Sayyed (Organizing Secretary)
5	4 <sup>th</sup> National Conference on PGPR, Mizoram Univ, Mizoram	11-12/05/2018.	National	Prof. R. Z. Sayyed (Organizing Secretary)
6	Syllabus framing workshop for M.Sc. I	16/07/2018	University	Prof. R. Z. Sayyed (Organizing Secretary)
7	International e-Conference on Role of Science and Technology in Sustainable Developments	17-18/08/2020	International	Oral Presentation
8	International e-Conference on Emerging Trends in Bioscience and Technology	1-3/06/2020	International	Oral Presentation
9	International Conference on Advances and Innovations in Biotechnology for sustainable development (AIBioSD-2019)	5-7/04/2019	International	Oral Presentation
10	Avishkar-2017	28-29/12/2017	University	Poster Presentation
11	National Conference On Recent Emerging Trends in Plant Sciences	23/09/2017	National	Poster Presentation
12	Avishkar-2017	12-13/01/2017	University	Poster Presentation
13	Avishkar-2017-2018	12-13/01/2017	University	Poster Presentation
14	Avishkar-2018-2019		University	Poster Presentation



## 21. Membership of the Professional bodies/ Journals

Name of Faculty	Name of the Body/ Journal	Position held
Prof. Dr. R. Z. Sayyed	Indian Phytopathological Society	Life Member
	Asian PGPR Society	President
	Association of Microbiologists of India (A.M.I.)	Life Member
	Biotechnology Research Society of India	Life Member
	Microbiologists Society, India (M.S.I.)	Life Member
	Indian Phytopathological Society (I.P.S.)	Life Member
	Asian PGPR Society for Sustainable Agriculture	Life Member
Dr. M. M. Jogi	Association of Chemistry Teachers, KBCNMU	Life Member
	Asian PGPR Society for Sustainable Agriculture	Life Member
	Association of Microbiologists of India (A.M.I.)	Life Member
Dr. H. P. Jadhav	Indian Women Scientist Association	Life Member
	Asian PGPR Society for Sustainable Agriculture	Life Member

## 22. Seminars/ conferences/ workshops organized by the Dept:

Sr. No.	Name of Conference/ Seminars / Workshops	No. of Participants	National/ University	Dates
1	Syllabus restricting workshop at MSc I (MB-BT-BC), PSGVP Mandal's ASC College, Shahada	30	University	18 Jul 2018
2	Workshop on How to use e-resources	52	College level	18 Feb 2019
3	Conference Intellectual Property Rights and Patent Filling	555	National e-conference	11 Feb 2021
4	Workshop on Audit Course	600	National	05 May 2021
5	Workshop on Bioentrepreneurship	128	National	27 July 2021
6	Microcopy Workshop for Junior College students	60	College	14 Oct 2021

## 23. Give details of student enrichment programmes (special lectures/workshops/ seminars) with external experts

For enrichment of the students Guest lectures are arranged.

- 1) Dr. Parveen Rahi, NCCS, Pune delivered a lecture on Research Carrier in Microbiology
- 2) Dr. Avinash Sharmam, NCCS, Pune Delivered lecture on Identification and Preservation of Microbial cultures
- 3) Mr. Mitesh Khairnar, NCCS, Pune Delivered a talk on Ribotyping and MALDI-TOF methods for identification of Microbial cultures
- 4) Dr. Prashant R Dane, Ion Exchange, India Limited, Hyderabad

#### **24. Outreach program**

Students of Jagma English Medium School were invited. Dr. Parveen Rahi, NCCS, Pune delivered a lecture on Research Carrier in Microbiology.

#### **25. List the teaching methods and Innovative Practices adopted by the faculty**

- Interactive lecture method using blackboard, Group discussions, Problem solving sessions, Seminars, HA,
- Use of LCD Projector for PG Students to support lectures.

#### **26. Research Collaborations**

- Research collaboration with Microbial Cell Center, NCCS, Pune
- Shri Satpuda Copoerative sugar Mill, Purushottam Nagar, Shahada
- S I Biozyme Pvt Ltd, Shahada

#### **27. SWOC analysis of the department and Future plans**

### **Strengths**

- Qualified, experienced & research-spirited faculty
- University recognized well equipped research laboratory
- Good research outcome with less availability of funds
- Active participation in Social activities (Blood Donation, Voter Awareness Day, Tree Plantation, Samata Rally, Election Duties etc.
- Voluntary involvement of students in co-curricular and extra-curricular activities.
- Organization of "Talent search and chemistry ability test" to motivate knowledge in chemistry.

### **Weakness**

- 70% population of the area is a tribal in habitat.
- Students are weaker in language of medium of instructions.
- Non availability of major industries in the vicinity.
- Non availability of sophisticated analysis facilities nearby.

### **Opportunities**

- Well groomed campus and supportive management.
- Better job opportunities in industrial sectors.
- Industrial and academic collaboration.
- On Campus placement for students.

### **Challenges**

- To make available research funds from various agencies.
- Soft skill development programs for students.
- Awareness programmes on issues like Food adulteration, Organic Farming, Water Potability, Health & hygiene in nearby villages.
- Development of e-learning resources.

## Future plans of the department

- Promote more research activities.
- Industrial collaboration for enhancing employability.
- Skill enhancement by hands on training.
- Organize workshops and Conferences for students.
- Increase progression to higher education and placement.