



**Professor**

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<b>Name</b>	<b>SHETH NIRAJ TUSHARBHAI</b>
<b>Designation</b>	Professor in Microbiology
<b>Work Address</b>	Department of Biogas Research and Microbiology, Faculty of Science and Applied Science, Talim Kendra Campus, Gujarat Vidyapith, SADRA-382320, District: Gandhinagar, Gujarat, India
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<b>E-Mail</b>	<a href="mailto:niraj@gujaratvidyapith.org">niraj@gujaratvidyapith.org</a>
<b>Date of Birth</b>	April 1 <sup>st</sup> 1975
<b>Nationality</b>	Indian
<b>Languages known</b>	Gujarati, Hindi and English

**Brief Information on Doctor of Philosophy**

**Research Title:** Microbial Treatment of Reactive dyes containing waste

**Research Guide:** Professor Dr. Shailesh R. Dave

**University:** Gujarat Vidyapith, Gujarat, India.

## EDUCATIONAL QUALIFICATION

No.	Degree	Year	College/University	Result
1	B.Sc. Microbiology	April-1995	Gujarat Science College, Gujarat University, Ahmedabad	65%
2	M.Sc. Microbiology/Env Biotech	April-1997	School of Science, Gujarat University, Ahmedabad	62%
3	M.Phil. Microbiology	September- 2004	Gujarat Vidyapith	67%
4	Ph.D. Microbiology	September- 2009	Gujarat Vidyapith	Degree Awarded

## EMPLOYMENT DETAILS

No.	Name of Company/organization	Designation	Joining Date	Date of Leaving	Reason
1.	Department of Biogas Research and Microbiology, Faculty of Science and Applied Science, Talim Kendra Campus, Gujarat Vidyapith, SADRA- 382320	<b>Professor</b>	April 1 <sup>st</sup> , 2016		Promotion (CAS)
<b>Associate Professor</b>		July 16 <sup>th</sup> 2012		Promotion (CAS)	
<b>Lecturer in Microbiology</b>		July 16 <sup>th</sup> 1998			

## RESEARCH EXPERIENCE

M.Sc. Dissertations (Microbiology) submitted under my Guidance.

No.	Name of Student	Title of Dissertation	Year of Award
1	Ashruti U. Pawar	Isolation and characterization of Bacteria from Down Flow Fixed Film Reactor	2012
2	Bhoomi K. Patel	Physico-Chemical and enzymatic saccharification of wood chips	2012
3	Krutika Rawal	Isolation and Characterization of Anaerobic Sulfate Reducing Bacteria	2012
4	Sneha Kalaria	Toxicity Assessment of biologically treated dye effluent	2013
5	Bhoomika Bhimani	A Lab scale study on dye decolorization by anaerobic bacteria	2013
6	Bhoomika Patel	Isolation and characterization of alkalophilic dye degrading bacteria	2014
7	Nikul Choudhari	Quality Assessment of Commercial Available Liquid Bio-fertilizers	2015
8	Ruchika R. Acharya	Assessment of antimicrobial activity of chemically synthesized quinoline derivatives on enteric bacteria	2016
9	Rasila Rangadiya		
10	Kamla Kapadiya		

## RESEARCH EXPERIENCE

M.Sc. Dissertations (Microbiology) submitted under my Guidance (contd.).

No.	Name of Student	Title of Dissertation	Year of Award
11	Kinjal Bhadurshinh Gohil (515705)	Antimicrobial activity of Mother tincture	2017
12	Nikita Kanani (515717)		
13	Manishkumar Pravinbhai Parmar (21607226)	A study of antibacterial activity of alcoholic extracts of indian medicinal plants against few pathogens	2018
14	Rushita Kishorbhai Solanki (21607234)		
15	Hardik Talshibhai Makwana (21607246)		
16	Ayushi Deepakbhai Vaishnav	Antimicrobial activity of novel synthesized compounds	Submitted in June, 2019
17	Nikunj Maheshbhai Rathod		
18	Dhvanika Yogeshbhai Mangroliya		

## RESEARCH PROJECTS

Sr. No.	As a Principal Investigator				
	Title	Funding Agency	Amount	Year/ duration	Status
1.	Metabolic Characterization of Reactive Dye Decolourizing Bacterial Flora of an on going Fixed Film Down Flow Bioreactor	Gujarat Council on Science and Technology (GUJCOST)	17,500	2011/1 Y	completed
2.	Valorization of Vegetable and Fruit Market Waste by Bioconversion ( <b>Multi-Institutional</b> )	Gujarat State Biotechnology Mission (GSBTM) Research Support Scheme 2018-19	53,49,674	2019/3Y	Ongoing
As a Co-Investigator					
1.	Exploring Bioremediation Strategies for Treatment of Chromophore Linked Contaminated Wastewater Using Sequential Anaerobic-Microaerophilic Reactors	Gujarat State Biotechnology Mission (GSBTM-FAP-2014)	18.81 Lakhs	2014/2 Y	completed
2.	Degradation of Tannery waste & phenolic compounds by novel anaerobic tannin degrading bacterial isolate in pure & mixed culture	Gujarat State Biotechnology Mission (GSBTM-FAP-2011)	14.50 Lakhs	2011/2 Y	completed

### **Involvement in Institute Development:**

1. Actively participated in establishment and development of Department of Microbiology and Laboratories.
2. Actively involved in the growth of students' scientific learning aptitude.
3. Actively participated in establishment of higher education in rural area.
4. Strongly supported Gandhian Philosophy based education system in higher education of core science.
5. Effectively worked for development of students through National Service Scheme, sports and cultural activities.

### **TEACHING AND RESEARCH ACTIVITIES**

<b>Sr. No</b>	<b>Name of Paper</b>	<b>B.Sc.:Semester Theory and Practicals</b>
1	Molecular Genetics of Prokaryotes	SEM-5
2	Principles of Immunology	SEM-5
3	Medical Microbiology	SEM-6
4	Hematology and Blood Banking	SEM-6
<b>Sr. No</b>	<b>Name of Paper</b>	<b>M. Sc.:Semester Theory and Practicals</b>
1	Molecular Biology and Bacterial Genetics	SEM-2
2	Dissertation	SEM-4
3	Ph.D. guidance	One student presently working under my guidance

### **RESEARCH AREA AND ACTIVITIES**

<b>Sr. No.</b>	<b>Research Area</b>	<b>Since Year</b>
1	Bioremediation of Textile Reactive Dyes containing wastes	2002
2	Liquid and carrier based Bio-fertilizers	2011
3	Assessing natural, semi-synthetic and other synthetic compounds for antimicrobial activity	2016

### **RESEARCH PUBLICATION IN JOURNALS**

1. **Sheth Niraj T. (2016).** Reactive dye decolorization by alkalophilic bacteria isolated from bentonite mines. *International Journal of Recent Scientific Research* (ISSN: 0976-3031) Vol. 7(4), 10038- 10043. **SJ Impact Factor: 5.971.**

2. **Sheth Niraj T.**, Desai Jigeesha K., Patodiya Mehula M., Bhatt Nikhil S. and Duggirala Srinivas M. (2015). Field scale comparative study on application of DAP, Urea and Humic acid on soil flora and crop productivity. *Vidyapith*, Vol. -4, October – December – 2015, 17-31. (ISSN: 0976-5794).
3. Patel Bhumi, **Sheth Niraj T.**, Duggirala Srinivas M. and Bhatt Nikhil S. (2015). Vermiconversion of potato waste by *Eisenia foetida* and its application on the growth of *Vigna radiata* and *Trigonella foenumgraecum*. *Vidyapith*, Vol. -4, October – December – 2015, 48-64. (ISSN: 0976-5794).
4. **Sheth Niraj T.**, Bhimani Bhumika M., Pansuriya Hirenkumar G., Bhatt Nikhil S. and Duggirala Srinivas M. (2015). Study on reactive dye decolourization by anaerobic bacteria. *Vidyapith*, Vol. -4, October – December – 2015, 65-81. (ISSN: 0976-5794).
5. **Sheth Niraj T.** (2014) Optimization for Enhanced Biodegradation of Textile Dye Reactive Violet 5R by *Pseudomonas aeruginosa* NGKCTS. VIDYAPITH, Vol. -3, July – September – 2014, 71-88. (ISSN: 0976-5794.)
6. Duggirala Srinivas M., **Sheth Niraj T.**, Pawar Ashruti U. And Bhatt Nikhil S. (2013) Isolation and Characterization of Bacteria from Dye Wastewater Treating Down Flow Fixed Film Reactor (DFFR). *International Journal of Engineering Research & Technology* (IJERT) Vol. 2 (10), 3270-3280. (ISSN: 2278-0181). **Impact Factor: 1.76.**
7. Duggirala Srinivas M., **Sheth Niraj T.**, Bhatt Nikhil S., and Vanjani Unnati .N (2013) Remediation of Textile Reactive Dyes Using Anaerobic Rumen Consortium. *International Journal of Recent Scientific Research* (ISSN: 0976-3031) Vol. 4(9), 1400- 1405. **SJ Impact Factor: 3.908.**
8. **Sheth Niraj T.** and Dave S. R. (2010) Enhanced biodegradation of Reactive Violet 5R manufacturing wastewater using down flow fixed film bioreactor. *Bioresource Technology* 101 (2010) 8627–8631. (ISSN: 0960-8524). **5-Year Impact Factor: 5.330.**
9. **Sheth Niraj T.** and Dave S. R. (2009) Optimization for enhanced decolourization and degradation of Reactive Red BS C.I. 111 by *Pseudomonas aeruginosa* NGKCTS. *Biodegradation* (2009) 20: 827–836. (ISSN: 1572-9729). **Impact Factor: 2.492.**

### **WORKSHOP/TRAINING PROGRAMS ATTENDED**

1. ‘Training Programme on Disaster Management’ – Organized by Rajiv Gandhi National Institute of Youth Development (RGNIYD): 27<sup>th</sup>-29<sup>th</sup> October, 2010.
2. ‘Training of Trainers on Social Harmony and National unity Programme’– Organized by Rajiv Gandhi National Institute of Youth Development

(RGNIYD) in collaboration with NSS Regional Centre, Ahmedabad: 19<sup>th</sup>-23<sup>rd</sup> July, 2010.

3. Symposium on Appropriate Technology: 18<sup>th</sup>-20<sup>th</sup> November, 2009.
4. 'BIOLOG Training Programme' – Organized by the Department of Microbiology, School of Sciences, Gujarat University, Ahmedabad: 16<sup>th</sup>-25<sup>th</sup> May, 2005.

### **CONFERENCE PRESENTATIONS**

#### **PAPER AND POSTER PRESENTED IN INTERNATIONAL/NATIONAL CONFERENCE**

1. Hirpara P., Dave S., **Sheth N.**, and Bhatt N. (2013) A study on biodegradation of Phenol. International Conference on Integrating Basic and Traditional Research in Modern Biology. 27-28 December, 2013. Department of Microbiology and Biotechnology Centre, Maharaja Sayajirao University of Baroda, Baroda, Gujarat, India.
2. **Sheth Niraj T.** and Dave S. R. (2010) Decolourization of Textile dye Reactive Violet 5R by *Pseudomonas aeruginosa* NGKCTS. UGC Sponsored National Seminar on 'Current Trends in Microbiological Sciences'. Ahmedabad 23<sup>rd</sup>-24<sup>th</sup> January, 2010.

#### **ORAL PAPER PRESENTED IN NATIONAL and REGIONAL CONFERENCE**

1. Aghera Payal, Balapure Kshama, D. Srinivas, **Sheth N.**, and Bhatt Nikhil (2015) Exploring the potential of enriched bacterial consortium KN to degrade chromophore linked azo dye. 'Advances in Environmental Sciences and Technology: A Way Forward to Clean and Green Environment.' Vallabh Vidyanagar, Anand. 28<sup>th</sup> February, 2015.
2. **Sheth Niraj T.** and Dave S. R. (2009) Decolourization of Reactive Red BS C.I. 111 by *Pseudomonas aeruginosa* NGKCTS. Regional Conference on 'Microbial Technology for Sustainable Environment.' Ahmedabad, 2<sup>nd</sup>-3<sup>rd</sup> March, 2009.

### **EXTENTION & CO-CURRICULAR PARTICIPATIONS:**

No.	Name of Event	Place	Year
1	Earthquake Relief Camp	Surendranagar District	2001
2	Served as NSS-Program officer	Dept. of Microbiology, Sadra	2004-2011
3	Gujarat Vidyapith-Sevak Shibir	Dethli Vedchhi	2004, 2011, 2014
4	NSS-Flood Relief Camp	Dethli	2003
5	Educational tour	Gujarat, Simla,	1998;

		Chandigarh, Solan	2012
6	Padyatra	Districts of Gujarat	2008-2014
7	Udyog Activity	Sadra	2012-2014
8	<i>Gandhi Katha</i> : Assigned Duty by Vidyapith and Our Department	Sadra	2012

### **Administrative Work:**

1. Holding the additional responsibility as in-charge Deputy Registrar (Administration) w.e.f. 28<sup>th</sup> October, 2013 to 4<sup>th</sup> June, 2019 (fore noon) and as in-charge confidential cum legal Department, Gujarat Vidyapith, w.e.f. 4<sup>th</sup> June 2019, (afternoon).
2. Conducted UG, PG, M.Phil and Ph.D. examinations.
3. Admission counseling.
4. Laboratory administrative work.
5. Research project administrative work.

### **Membership:**

1. Life Member of – Association of Microbiologists of India (AMI)
2. Life Member of – The Biotech Research Society, India (BRSI)

### **Examiner ship:**

1. Regular Departmental Examination
2. External Examiner in Gujarat University (Practical, Paper setter), S.Y.B.Sc. and T.Y.B.Sc.

### **Academic and NGO's: -**

#### **Extension Activities:**

1. Part of NSS activity popularization of Biogas technology and Non conventional Energy.
2. Creating awareness amongst rural people, school children and farmers regarding health and sanitation, organic farming and drinking water, through padyatra.
3. Organized and conducted health check up camp and blood donation camp, through NSS program.
4. Participated in social forestation activity, through NSS program.