

## Dr. Bhakti Balkrishna Salgaonkar

### **Present Address**

Assistant Professor  
Dept. of Microbiology  
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**DoB :** 25<sup>th</sup> August, 1987



### **Research Area:**

Halophilic Archaea; Extremophilic Microorganisms and their Bioprospecting

### **Education**

<b>Exam</b>	<b>Subject</b>	<b>Year of Passing</b>	<b>Division/Grade</b>	<b>Board / University</b>
<b>Ph.D.</b>	Biological Sciences	2016	Distinction	BITS Pilani
<b>Post Graduation</b>	Microbiology	2009	First (A+)	Goa University
<b>Graduation</b>	Microbiology	2007	Distinction	Goa University

**Ph.D. Thesis title:** “Synthesis of Polyhydroxyalkanoates by Halophilic Archaea and Bacteria and their Osmoadaptation”.

### **Professional Positions/Research/Work experience**

<b>Sr. No.</b>	<b>Positions held</b>	<b>Name of the Institute</b>	<b>From</b>	<b>To</b>
1.	Assistant Professor	Goa University	30 <sup>th</sup> Nov 2018	Till Date
2.	CSIR-RA	BITS Pilani	4 <sup>th</sup> May 2017	29 <sup>th</sup> Nov 2018
3.	Assistant Professor	Goa University	8 <sup>th</sup> July 2016	3 <sup>rd</sup> May 2017
4.	Assistant Professor	GCASC, Khandola	2 <sup>nd</sup> July 2015	30 <sup>th</sup> April 2016
5.	CSIR-SRF	BITS Pilani	1 <sup>st</sup> April 2012	31 <sup>st</sup> March 2015
6.	UGC Fellow	BITS Pilani	2 <sup>nd</sup> Sept. 2009	31 <sup>st</sup> March 2012
7.	Assistant Professor	GCASC, Khandola	30 <sup>th</sup> July 2009	31 <sup>st</sup> August 2009

**CSIR:** Council of Scientific and Industrial Research; **RA:** Research Associate; **BITS:** Birla Institute of Technology and Science; **SRF:** Senior Research Fellow; **UGC:** University Grants Commission; **GCASC:** Government College of Arts Science and Commerce.

**CSIR-RA Project title:** “Application of polyhydroxyalkanoates obtained from halophilic archaea as potential biomaterial in tissue engineering”.

**CSIR-SRF Project title:** “Biotechnological application of products from culturable halophilic bacteria and archaea isolated from solar salterns”.

**UGC Project title:** “Study of haloarchaea producing polyhydroxyalkanoates”.

## Awards and Fellowships

S.No	Name of Award	Awarding Agency	Year
1.	<b>BIRAC-SRISTI Appreciation Award</b>	BIRAC	2018
2.	<b>Maharashtra State Eligibility Test (MH-Goa-SET)</b>	UGC	2018
3.	<b>CSIR Lectureship (NET)</b>	CSIR	2017
4.	<b>CSIR-RA (Ref No: 09/919(0030)/2016-EMR-I)</b>	CSIR	2017
5.	<b>GATE</b>	MHRD	2017
6.	<b>ASRB-NET</b>	ASRB	2016
7.	<b>DBT-CTEP Travel (Code: DBT/CTEP/02/201200602)</b>	DBT	2012
8.	<b>CSIR-SRF (Ref No: 09/919(0016)/2012-EMR-I)</b>	CSIR	2012

**BIRAC:** Biotechnology Industry Research Assistance Council; **SRISTI:** Society for Research and Initiatives for Sustainable Technologies and Institutions; **GATE:** Graduate Aptitude Test in Engineering; **ASRB:** Agricultural Scientists Recruitment Board; **MHRD:** Ministry of Human Resource Development; **CSIR:** Council of Scientific & Industrial Research; **DST:** Department of Science & Technology; **DBT:** Department of Biotechnology; **NET:** National Eligibility Test; **SET:** State Eligibility Test

## Publications

- ❖ **Bhakti B. Salgaonkar**, Divya T. Sawant, Saranya Harinarayanan and Judith M. Bragança (2019) Alpha-amylase Production by Extremely Halophilic Archaeon *Halococcus* Strain GUVSC8. *Starch - Stärke*. 71, 5-6 (doi: 10.1002/star.201800018).
- ❖ Deepthi Das, Isha Kalra, Kabilan Mani, **Bhakti B. Salgaonkar**, & Judith M. Braganca (2019). Characterization of extremely halophilic archaeal isolates from Indian salt pans and their screening for production of hydrolytic enzymes. *Environmental Sustainability*, 1-13.
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2018) Sustainable Bioconversion of Cassava Waste to Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) by *Halogeometricum borinquense* Strain E3. *Journal of Polymers and the Environment*, 1-10. (DOI: 10.1007/s10924-018-1346-9).
- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2017) Utilization of Sugarcane Bagasse by *Halogeometricum borinquense* Strain E3 for Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate). *Bioengineering*, 4, 50. (DOI: 10.3390/bioengineering4020050).
- ❖ **Bhakti B. Salgaonkar**, Deepthi Das and Judith M. Bragança (2016) Resistance of extremely halophilic archaea to zinc and zinc oxide nanoparticles. *Applied Nanoscience* 6: 251-258. (DOI: 10.1007/s13204-015-0424-8).
- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2015) Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) by *Halogeometricum borinquense* strain E3. *International Journal of Biological Macromolecules* 78:339-346 (DOI: 10.1016/j.ijbiomac.2015.04.016).
- ❖ Kabilan Mani, Sivaraman Chandrasekaran, **Bhakti B. Salgaonkar**, Srikanth Mutnuri, Judith M. Bragança (2015) Comparison of bacterial diversity from solar salterns and a simulated laboratory study. *Annals of Microbiology* 65(2):995-1005. (DOI: 10.1007/s13213-014-0944-6).

- ❖ Deepthi Das, **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2014) Cadmium resistance in extremely halophilic archaeon *Haloferax* strain BBK2. *Chemosphere Journal* 112: 385–392. (DOI: 10.1016/j.chemosphere.2014.04.058).
- ❖ Vidhya Prabhudessai, **Bhakti B. Salgaonkar**, Judith M. Bragança and Srikanth Mutnuri (2014) Pretreatment of Cottage Cheese to Enhance Biogas Production. *BioMed Research International* Article ID 374562, 6 pages. (DOI: 10.1155/2014/374562).
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2013) Accumulation of polyhydroxyalkanoates by halophilic archaea isolated from traditional solar salterns of India. *Extremophiles Journal* 17:787-795. (DOI: 10.1007/s00792-013-0561-5).
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2013) Characterization of polyhydroxyalkanoates accumulated by a moderately Halophilic Salt pan isolate *Bacillus megaterium* strain H16. *Journal of Applied Microbiology* 114:1347-1356. (DOI: 10.1111/jam.12135).
- ❖ Adit Chaudhary, Imran Pasha M., **Bhakti B. Salgaonkar**, Judith M. Braganca (2014) Cadmium Tolerance by Haloarchaeal Strains Isolated from Solar Salterns of Goa, India. *International Journal of Bioscience, Biochemistry and Bioinformatics* 4 (1), 1. (DOI: 10.7763/IJBBB.2014.V4.299).
- ❖ Kabilan Mani, **Bhakti B. Salgaonkar**, Deepthi Das and Judith M. Bragança (2012) Community solar salt production in Goa, India. *BMC Aquatic Biosystems*. 8:30. (DOI:10.1186/2046-9063-8-30).
- ❖ Kabilan Mani, **Bhakti B. Salgaonkar** and Judith M. Bragança (2012) Culturable halophilic archaea at the initial and crystallization stages of salt production in a natural solar saltern of Goa, India. *BMC Aquatic Biosystems* 8:15. (DOI: 10.1186/2046-9063-8-15).
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani, Anjana Nair, Sowmya Gangadharan and Judith M. Bragança (2012) Interspecific interactions among members of family *Halobacteriaceae* from natural solar salterns. *Probiotics and Antimicrobial Proteins*. 4(2):98-107. (DOI: 10.1007/s12602-012-9097-8).
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2011) Sensitivity of Haloarchaea to eubacterial pigments produced by *Pseudomonas aeruginosa* SB1. *World Journal Microbiology Biotechnology*. 27:799–804. (DOI: 10.1007/s11274-010-0519-z).

### **Book Chapters**

- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2019) Production of polyhydroxyalkanoates by extremophilic microorganisms through valorization of waste materials. Publisher: Elsevier. *Advances in Biological Science Research*, 419-443.
- ❖ Kabilan Mani, **Bhakti B. Salgaonkar** and Judith M. Bragança (2013) Molecular Microbial ecology of solar salterns of Goa and the isolation of culturable Haloarchaea. New India Publishers Chapter 6, Pg. No: 59-74: In *Microbial Diversity and Its Applications*. Barbudde, S.B., R. Ramesh and N.P. Singh.

## Invited talks

- ❖ Delivered a Guest lecture on “**Bioprospecting of Extreme Biomes**”, as a part of the two day state level intercollegiate event “MICROFIESTA 2.0- Creating Awareness on Extreme Biomes” at Department of Microbiology, Government College of Arts, Science and Commerce, Khandola, Marcela, Goa, India on 16<sup>th</sup>, February, 2019.
- ❖ Delivered a Special lecture on “**Microbial Polyhydroxyalkanoates: Next Generation Bioplastics**”, at Department of Biochemistry, Biotechnology & Bioinformatics & Society of Biological Chemists (India), of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-641 043, Tamil Nadu, India on 19<sup>th</sup> September, 2018.
- ❖ Delivered a Guest lecture on “**Polyhydroxyalkanoates: Bioplastics with Green Agenda**”, as a part of the Microtech Cell of the Dept. of Microbiology, P.E.S.’s R.S.N College of Arts and Science on 24<sup>th</sup> August, 2018.
- ❖ Delivered an invited talk on “**Biosynthesis of a Potential Biodegradable Food Grade Polymer by Extremely Halophilic Archaea for Flexible Packaging**” at First **International Conference on Advances in Food Science and Technology**, Organized by Ayurveda-und Venen-Klinik, Austria; Institute for Holistic Medical Sciences (IHMS); and Institute of Macromolecular Science & Engineering (IMSE), Kerala, from 20<sup>th</sup>-22<sup>nd</sup> November 2015, at Kottayam, Kerala, India.

## Oral Presentations

- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2019) Bioconversion of Agricultural waste to Biodegradable Plastics by Halophilic Microorganisms, at Department of Science, Technology & Environment (DSTE) Sponsored, National Seminar on “**Recent Trends in Microbial Technology**”, Organized by Dept. of Botany, Government College of Arts, Science & Commerce, Quepem, Goa-403705, India in association with Microbiologist Society, India”, from 08<sup>th</sup>-9<sup>th</sup> February, 2018.
- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2018) Polyhydroxyalkanoates Production by Extremely Halophilic Archaea from Sustainable Resources, at International Conference on “**Microbial Technology for Better Tomorrow (ICMTBT-2018)**”, Organized by Dr. D. Y. Patil Arts, Commerce & Science College, Pimpri, Pune-411018, Maharashtra, India in association with Microbiologist Society, India”, from 17-19<sup>th</sup> February, 2018. (**1<sup>st</sup> best oral award**)
- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança (2015) Utilization of Commercial and Agro-Industrial Wastes as Substrates for the Biosynthesis of Polyhydroxyalkanoates by Extremely Halophilic Archaea at DST Sponsored National Level Seminar on “**Archaea: Microbes of the Third Domain of Life**”, 28<sup>th</sup> September 2015, P.E.S. College Ponda Goa, India. (**1<sup>st</sup> best oral award**)

## Poster Presentations: (13) (Selected listed)

- ❖ **Bhakti B. Salgaonkar** and Judith M. Bragança, presented poster entitled “*Bacillus megaterium* strain H16 Producing Polyhydroxybutyrate” at Indo-UK International Workshop on **Advanced Materials and Their Applications in Nanotechnology (AMAN2014)**, 17-19<sup>th</sup> May 2014, BITS Pilani Goa Campus, India.
- ❖ **Bhakti B. Salgaonkar**, Kabilan Mani and Judith M. Bragança (2012) Accumulation of Polyhydroxybutyrate by Halophiles from Solar Salterns of India. (Poster Presented) at **9<sup>th</sup>**

**International Congress on Extremophiles 2012**, from 10-13<sup>th</sup> September 2012, at Sevilla, Spain.

**Workshops/Schools/Refresher courses: (16) (Selected listed)**

- ❖ Participated in a Two Weeks (15 days) **Science Academies Refresher Course** on “Biotechnology Techniques in Biodiversity Conservation” Sponsored by (a) Indian Academy of Sciences, Bangalore, (b) Indian National Science Academy, New Delhi, (c) The National Academy of Sciences, Allahabad and organized by Department of Botany, Bharathiar University, Coimbatore- 641046, Tamil Nadu, India from 10<sup>th</sup> – 24<sup>th</sup> September, 2018.
- ❖ Participated and developed a business model on “**Fish Feed using Microbial Products**” during the 6 week Program on Engineering-Economics-Entrepreneurship conducted by Prof. Ashok Kumar Ghosh, sponsored by Fulbright Specialist Program, World Learning, Global Development & Exchange and United States-India Educational Foundation (USIEF) at BITS Pilani K K Birla Goa Campus during 28<sup>th</sup> May, 2018 to 6<sup>th</sup> July 2018.
- ❖ Participated and demonstrated product development during 30 days **Biotech Innovation Ignition School-3 (BIIS-3)** on “Opportunity for Women biotechnology students to work on grassroots innovations and microbial diversity” at Ahmadabad, Gujarat, India from April 30 to May 29, 2018.
- ❖ Participated in thirteen days **South East Asia - India Thematic School on Aquatic Microbial Ecology (ASIAME 2)**, and gave a short talk on “**Polyextremophilic Archaea with Industrial Potential**” at Andaman and Nicobar Centre for Ocean Science and Technology (ANCOST), National Institute of Ocean Technology (NIOT), Dollygunj, Port Blair, India in association with Centre National de la Recherche Scientifique (CNRS), France, from 6<sup>th</sup>-18<sup>th</sup>, November, 2017.
- ❖ Participated in two-day Workshop on **Nomenclature of Archaea and Bacteria** by Prof. Aharon Oren (The Institute of Life Sciences, The Hebrew University of Jerusalem, Israel) at Microbial Culture collection (MCC), National Centre for Cell Science (NCCS), Pune, from 9-10<sup>th</sup> September, 2016.