Curriculum Vitae

Name: Dr. Jigna G. Tank

Designation: Assistant Professor (Senior Scale)
Institution: Department of Biosciences, Saurashtra University, Rajkot-360005, Gujarat, India

Experience: Total 16.5 Years (Research 16.5 Yrs, Teaching 12.5 Years)

1. Assistant Professor (Selection Grade). June 2023 to till date at Department of Biosciences, Saurashtra University
2. Assistant Professor (Senior Scale). June 2018 to June 2023 at Department of Biosciences, Saurashtra University
3. Assistant Professor, June 2014 to June, 2018 at Department of Biosciences, Saurashtra University
4. Senior Research Fellow, February 2014 to June 2014 at Gujarat State Biotechnology Mission
5. Junior Research Fellow, March 2013 to February 2013 at Gujarat State Biotechnology Mission
6. Junior Research Fellow, June 2010 to October 2012 at Department of Biosciences, Saurashtra University
7. Assistant Professor, June 2009 to April 2010 at DKV Arts and Science College, Jamnagar

Educational Qualifications:

Ph.D. (Plant Science), 2013, Saurashtra University
M.Phil. (Plant Biotechnology and Genetic Engineering), 2008, Saurashtra University,
M.Sc. (Plant Science), 2007, Saurashtra University

Programs and Courses: Teaching to PG students

Programs	Course Teaching
1. **M.Sc. (**Botany, Biotechnology) 2. **M.Phil.** (Botany) **3. Ph.D.** (Botany)	Plant Anatomy, Embryology, Population Genetics, Biodiversity, Bioinformatics, Plant Growth and Development, Plant Resource Utilization, Environmental Sciences, Molecular biology and Genetics, Bioinformatics, Analytical Techniques

Research Expertise

Sr. No.	Thrust Area	Brief Outline of Research
1 2 3	Plant cell signaling Plant defense mechanisms Bioresource utilization	• Effect of cell growth regulators on cell division, differentiation and endoreduplication • Histochemical localization of phytohormones, phytochemicals, proteins, DNA and RNA molecules in plant cells • Isolation and identification of plant defensive and adaptive proteins • Antimicrobial, larvicidal and insecticidal activity of plant proteins. • Standardization of solid and liquid biofuel production techniques using plant material • Biopolymer isolation and its potential use in pharmaceutical and Biotechnological industries

Ph.D. Guided: 05 Scholars

Sr. No.	Year	Name of the Student	Thesis Title
1	2022	Varshabahen V. Patale	Morphological, Anatomical and Physiochemical assessment of mangroves at Diu, The Union Territory of India
2	2019	Ms. Sima V. Joshi	A study on effects of calcium on some plants of semi – arid regions
3	2019	Ms. Sheena Alooparampil	Studies on economically important compounds from four leguminous plants
4	2020	Mr. Vibhakar Chowdary	Molecular level studies on plant secretary products and its benefits
5	2020	Ms. Kavya Tanna	Potrayal of geospatial technologies in studying Urban vegetation of Saurashtra Region

Ph.D. Guiding: 02 Scholars

Sr. No.	Reg. Year	Name of the Student	Research Title
1	2021	Ms. Mehta Palak	Comprehensive physiological, biochemical and proteomic analysis to reveal salinity adaptation mechanisms of some halophytes.

2	2025	Ms. Urvashi Bhindi	Characterization of lectin proteins from tubers and its applications

M.Phil. Guided: 02 Scholars

Sr. No.	Year	Name of the Student	Thesis Title
1	2019-2020	Ms. Hiral P. Goswami	Study on Economically Important Secondary metabolites from marine algae
2	2018-2020	Mr. Ravi V. Viradiya	Influence of phytohormones on growth physiology of Momordica charantia Linn.

M.Sc. Dissertation: Guided 40 Students

Research Projects:

Sr. No.	Title of the Project	Funding Agency	Year	Grant Mobilized	Status
1	DBT-Microscopy for all (Foldscope)	Department of Biotechnology	2018-2019	8 lakh	Completed
2	IQAC Golden Jubilee Project	IQAC Saurashtra University	2017-2019	1 lakh	Completed
3	Biofuel production from forest seeds	University Grants Commission	2015-2017	6 lakhs	Completed
4	DBT sponsored Sristi-BIRAC Grass Root Innovation Project (Jatin Solanki)	Sristi-BIRAC	2016-2017	1 lakh	Completed
5	DBT sponsored Sristi-BIRAC Grass Root Innovation Project (Ravi Viradiya)	Sristi-BIRAC	2016-2017	1 lakh	Completed
6	IQAC Seed Money Project	IQAC Saurashtra University	2025-2027	1 lakh	Ongoing
7	Gau Krishi Vidhya Kendra	Saurashtra University	2025-till date	7 lakh	ongoing

Event Grants

Sr. No.	Title of Event	Funding Agency	Grant received
1	National Conference on Innovations in Biological Sciences	Gujarat State Biotechnology Mission, Department of Science and Technology, Government of Gujarat, Gandhinagar, India	Rs. 79000
2	Training to students and Faculty members on use of Foldscope	Department of Biotechnology, Government of India, New Delhi	Rs. 10000

Awards: 12

Year	Awards
2007	**Awarded 1st prize** at **National Conference on Plant Physiology**, organized by Indian Society for Plant Physiology, Dapoli, Maharashtra in November, 2007 for presentation of research poster "Changes in indole-acetic acid and zeatin level during endoreduplication"
2016	**Awarded 1st prize at DBT Sponsored National level Symposium on Advancement in Science and Technology,** organized by Shree M. N. Virani Science college, Rajkot, Gujarat in January 2016 for presentation of research poster "Anatomical observation of alkaloids synthesis and accumulation in *Gymnosporia montana* (Roth) benth leaf.
2016	**Awarded 1st prize** at **9th National Level Science Symposium-2016 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in February 2016 for presentation of research poster "Identification of β-sitosterol from leaves of *Salvadora persica* L.
2017	**Grass root innovations appreciation award from Sristi-BIRAC-DBT**
2017	**Grass root innovations appreciation award from Sristi-BIRAC-DBT**
2020	**Awarded 2nd Prize at at National Conference on Innovations in Biological Sciences, organized by** UGC-CAS Department of Biosciences, Saurashtra University, Rajkot-360005, Gujarat, India, 2020 for presentation of research poster "Recent Scenario of Desertification Near Area of Adesar in Kutch District of Gujarat State"
2021	**Awarded 1st prize** at **International Science Symposium-2021 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in April 2021 for Best poster presentation of research in Research Scholar section "Changes in diversity of herbaceous plants with seasonal changes in Mandavi region of Kutch."

2021	**Awarded 2nd prize** at **International Science Symposium-2021 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in April 2021 for Best poster presentation of research in Research Scholar section "Assessment of water quality at natural habitat of *Avicennia marina* at coastal region of Diu."
2021	**Awarded 1st prize** at **International Science Symposium-2021 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in April 2021 for Best poster presentation of research in PG Section"Construction of Protein Protein interaction network regulating flowering phenomenon in plants by Flowering Locus C protein."
2022	**Awarded 2nd prize** at **International Science Symposium-2022 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in January 2022 for Oral presentation of research in Research Scholar section "Comparative analysis of galactomannan isolated from six varieties of *Cyamopsis tetragonoloba* L. for its potential to form hydrogel."
2022	**Awarded 1st prize** at **International Science Symposium-2022 on Recent trends in Science and Technology,** organized by Christ College, Rajkot, Gujarat in January 2022 for Oral presentation of research in PG Section "in silico studies on interaction of Proteins regulating vernalization process in *Arabidopsis thaliana*."
2022	**Awarded 1st prize** at **International e-conference on Mitigating Contemporary Environmental issues by Sustainable Approaches (ICMCESA-2022),** organized by Acharya Narendra Dev College, University of New Delhi, in February 2022 for Oral presentation of research in Research scholars Section "Comparative analysis of Vegetation and Urbanization at Porbandar city of Saurashtra through geospatial techniques."

Publications in Peer-Reviewed Journals: Total 25

Sr. No.	Publications	Impact Factor
1	Tank JG Pandya RV and Thaker VS (2007) Changes in Indole-acetic acid and zeatin levels during endoreduplication J. Sci. Agric. Res. 68(242):59-70, ISSN: 0354-5695	-
2	Tank JG and Thaker VS (2011) Cyclin dependent kinases and their role in regulation of plant cell cycle, BiologiaPlantarum 55(2) :201-212, ISSN: 0006-3134	**1.12**
3	Tank JG and Thaker VS (2012) Changes in DNA and RNA level with endoreduplication can be determined using α-naphthyl red dye. CIBtech Journal of Bioprotocols Vol. 1 (1) pp. 23-31, ISSN: 2319-3840	-
4	Madnani DM, Tank **JG ,** Pandya RV and Thaker VS (2012) A rapid, sensitive and Economic Method for Isolation of High Quality DNA from ButeaMonosperma as Compared to Commercial Kits CIBtech Journal of Bioprotocols Vol. 1 (1) pp. 32-36 (ISSN: 2319-3840)	-
5	Nakum N, Tank JG, Pandya R V and Thaker VS (2013) Influence of phytohormones on growth and development of internodes of *Vitisquadrangularis.* Plant Archives Vol. 13(1) pp.469-476, ISSN:0972-5210	**0.26**
6	Tank, J. G., Pandya, R. V., & Thaker, V. S. (2014). Phytohormones in regulation of the cell division and endoreduplication process in the plant cell cycle. RSC Advances, 4(24), 12605-12613. DOI:10.1039/C3RA45367G. (ISSN 2046-2069)	**4.04**
7	**Tank JG and** Thaker VS (2014) Systemic Control of Cell Division and Endoreduplication by NAA and BAP by Modulating CDKs in Root Tip Cells of *Allium cepa.* BioMed Res Int Volume 2014, Article ID 453707	**3.25**
8	Dudhatra PJ, Solanki KG, **Tank JG**, Sheth BP and Thaker VS (2014) Haplotype Studies in Bacterial Species Surviving in Different Areas. Journal of Pure and Applied Microbiology 8(4): 3345-3355(ISSN 0973-7510)	**0.80**
9	Solanki KG, Dudhatra PJ, Sheth BP, **Tank JG** and Thaker VS (2014) Nucleotide diversity in *16s rdna*gene in bacterial species surviving in different areas. Plant Archives 14:1035-1046(ISSN:0972-5210)	**0.261**
10	**Tank JG**, Pandya RV and ThakerVS (2015) IAA and Zeatin controls cell division and endoreduplication process in quiescent center cells of *Allium cepa* root Ind. J Plant Physiol. 20(2), pp.124-129.Doi 10.1007/s40502-015-0148-5(**ISSN**: 0019-5502)	**1.70**
11	Rakhashiya, P. M., Patel, P. P., Sheth, B. P., **Tank, J. G.**, & Thaker, V. S. (2016). Detection of virulence and pathogenicity genes in selected phytopathovars. Archives of Phytopathology and Plant Protection, 49(1-4), 64-73. https:// doi.org /10.1080 / 03235408 .2016.1157378	**1.14**
12	Tank, J. G., Pandya, R. V., & Thaker, V. S. (2017). Changes in radical scavenging activity of normal, endoreduplicated and depolyploid root tip cells of Allium cepa. *Saudi Journal of Biological Sciences*, *24*(7), 1538-1546. https://doi.org/10.1016/j.sjbs.2016.08.009	**4.05**
13	Reema, B., Detroja, D., Pandya, R. V., & Tank, J. G. (2017). Salvadora persica: a potential source for treatment of hypercholesterolemia. *Plant Archives*, *17*(2), 955-960.	**0.26**
14	Solanki, S. K., Pandya, R. V., & Tank, J. G. (2019). Acacia species: a probable feedstock for biodiesel production. *Plant Archives*, *19*(1), 1926-1931.	**0.26**

15	Viradiya, R. V., Pandya, R. V., & Tank, J. G. (2019). Biodiesel Production from Highly Viscous Seed Oils. *Journal of Biofuels*, *10*(2), 51-63.	-
16	Divya B Detroja, Reema A Bloch, Rohan V. Pandya, Jigna G. Tank (2020) Alkaloids and phenols accumulation in growing leaf cells of *Gymnospora montana* (roth) benth., Biochem. Cell. Arch.Vol. 20, No. 1, pp. 301-308, 2020	**0.17**
17	Patale, V., & Tank, J. G. (2022). Ecological assessment of heavy metals accumulation in sediments and leaves of Avicennia marina along the Diu coast of the northeast Arabian Sea. Oceanologia, 64(2), 276-286.	**2.53**
18	Patale, V. V., & Tank, J. G. (2022). Evaluation of the edaphic and water properties of Diu coast (Saurashtra, Gujarat, India) in relation to the population density of Avicennia marina. Applied Water Science, 12(4), 1-16.	**5.50**
19	Tank, J. G., & Pandya, R. V. (2022). Anti-Proliferative activity of surfactins on human cancer cells and their potential use in therapeutics. Peptides, 170836.	**3.00**
20	Prajapati, Dharmendra, Anil Patani, Margi Patel, Daoud Ali, Saud Alarifi, Virendra Kumar Yadav, Jigna Tank, and Ashish Patel (2023). Effects of Sulfate on the Physiology, Biochemistry of Activity of Group 1 Sulfate Transporters in Seedlings of Brassica pekinensis. *Horticulturae*, *9*(7), 821.	**2.92**
21	Patani, Anil, Dharmendra Prajapati, Daoud Ali, Haresh Kalasariya, Virendra Kumar Yadav, Jigna Tank, Snehal Bagatharia, Madhvi Joshi, and Ashish Patel. (2023). Evaluation of the growth-inducing efficacy of various Bacillus species on the salt-stressed tomato (Lycopersicon esculentum Mill.). *Frontiers in Plant Science*, *14*, 1168155.	**6.63**
22	Alooparampil, S. J., & Tank, J. G. (2023). Assessing the potential of galactomannan isolated from six varieties of Cyamopsis tetragonoloba L. for hydrogel formation and controlled drug delivery. *Polymer Bulletin*, *80*(8), 8819-8844.	**2.84**
23	Chowdhary, V. A., & Tank, J. G. (2023). Biomolecules Regulating Defense Mechanism in Plants. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, *93*(1), 17-25.	**0.28**
24	Baraiya, K., Yadav, V.K., Choudhary, N., Ali, D., Raiyani, D., Chowdhary, V.A., Alooparampil, S., Pandya, R.V., Sahoo, D.K., Patel, A. and Tank, J.G. A Comparative Analysis of the Physico-Chemical Properties of Pectin Isolated from the Peels of Seven Different Citrus Fruits. *Gels*, *9*(11), 908	**4.60**
25	Patel, K.J., Akbari, D., Pandya, R.V., Trivedi, J.N., Mevada, V.A., Wanale, S.G., Patel, R., Yadav, V.K., Tank, J.G., Sahoo, D.K. and Patel, A. (2023). Larvicidal proficiency of volatile compounds present in Commiphora wightii gum extract against Aedes aegypti (Linnaeus, 1762). *Frontiers in Plant Science*, *14*, 1220339.	**6.63**
26	Alooparampil, S. and Tank, J.G., 2025. Characterization of α-amylase inhibitor peptides from phaseolin proteins of Phaseolus lunatus L. and Phaseolus vulgaris L. for their potential use in the regulation of carbohydrate metabolism. *Food Bioscience*, p.107800.	**6.91**
27	Patel, M., Islam, S., Joshi, M., Baid, S., Patel, B., Tank, J.G., Sahoo, D.K. and Patel, A., 2026. Unveiling the Unique Microbial Diversity of Dhala Impact Crater: Comparative Insights with Crater and Non-crater Soil. *Geomicrobiology Journal*, *43*(5), pp.559-576.	
28	Taraviya, M., Patel, B., Thanki, R., Priyadarshi, G., Mehta, P., Chowdhary, V., & Tank, J. G. (2025). Novel galactomannan-based hydrogels for enhanced stability and controlled release of insulin and erythropoietin: A promising approach in drug delivery systems. *Journal of Molecular Structure*, 144238.	

Publication of Book Chapter & Conference Proceedings: Total 09

Sr. No.	Details of Publication
1	Tank, J. G., & Pandya, R. V. (2026). Renewable Energy Sources for Sustainable Development: An Overview. *Biofuels and Bioenergy: Environmental Sustainability and Climate Change Mitigation*, 115-155. Springer nature
2	Chowdhary, V., Alooparampil, S., Pandya, R. V., & Tank, J. G. (2021). Physiological Function of Phenolic Compounds in Plant Defense System. In Phenolic Compounds-Chemistry, Synthesis, Diversity, Non-Conventional Industrial, Pharmaceutical and Therapeutic Applications. IntechOpen. ISBN 978-1-83969-347-2 published on 23rd February 2022 Intechopen
3	Tank, J. G., & Pandya, R. V. (2021). A Comparative Account on Biodiesel Production from Forest Seeds. In Biofuel from Microbes and Plants (pp. 129-164). CRC Press. ISBN9780429262975. CRC press
4	Kuldeep D. Shekhaliya, Jigna G. Tank, Rohan V. Pandya (2019) Foldscope: A primary tool for detection of bioactive compounds in plant cells, in, Foldscope and its application, Ed. Arun Dev Sharma, Published by National Press Associates, New Delhi, ISBN 978-93-85835-68-1, pp. 105-116.

5	Ravi V. Viradiya, Rohan V. Pandya and Jigna G. Tank (2019) Phytohormonal consequences on morphogenesis of *Momordica charantia* Lin. Plant in Proceedings of the 2nd International Conference on Exploring the Role of Present Day Biology in Social and Sustainable Development, Ed. S. Vadakan, S. Menon, N. Ghosh Published by Archers & Elevators Publishing HouseBangalore, ISBN: 978-93-88805-76-6, pp. 45-53.
6	Kuldeep Shekhaliya, Pravina M. Zala, Rohan V. Pandya, Jigna G. Tank (2019) Characterization of fluropores which emit autofluoresence in plant cells in Proceedings of the 2nd International Conference on Exploring the Role of Present Day Biology in Social and Sustainable Development, Ed. Sebastian Vadakan, Sudeshna Menon, Nandini Ghosh Published by Archers & Elevators Publishing House Bangalore, ISBN: 978-93-88805-76-6, pp. 76-84.
7	Payal L. Korant and Dr. Jigna G. Tank (2019) Flurophores Localization and Identification in Stem Tissue of *Jathropha Curcus.* Proceedings of 11 th National Science Symposium (February 03, 2019) Organized by Christ College, Rajkot. ISBN: 9788192952147.
8	Sojitra, H., & Tank, J. G. (2020). Influence of Phytohormones on Embryonic and Vegetative Growth of *Caesalpinia Crista*. *Available at SSRN 3554195*. Proceedings of National conference on Innovations in Biological Sciences. Organized by UGC-CAS Department of Biosciences, Saurashtra University, Rajkot. https://dx.doi.org/10.2139/ssrn.3554195
9	Shekhaliya, K., & Tank, J. G. (2020). Changes in Growth Physiology of *Vigna unguiculata* in Hydroponic System. *Available at SSRN 3565920*. Proceedings of National conference on Innovations in Biological Sciences. Organized by UGC-CAS Department of Biosciences, Saurashtra University, Rajkot. https://dx.doi.org/10.2139/ssrn.3565920