FACULTY PROFILE

Dr. Seema J Patel
Professor
Department of studies in Biotechnology
Qualification : *M.Sc.,Ph.D.*
Areas of Specialization : *Microbiology*
E mail : *seemajp.kv@davangereuniversity.ac.in*
Website: Google Scholar Link :
https://scholar.google.com/citations?hl=en&user=K1KsLe8AAAAJ&hl=en

Vision

I would like to assist students develop their skills and abilities in reaching their potential in the field of Biotechnology. I wish to contribute my skills in academics and be a part of research activities in my field for the benefit of society.

Educational Qualifications

Sl. No.	Degree	Specialization/ Subjects	University	Year of Award/ Passing
1	**PhD.**	Industrial Microbiology	Kuvempu University Under the guidance of Dr. R Onkarappa	2009
2	**NET**	Lifesciences	UGC CSIR	2000
3	**SLET**	Lifesciences	Lectureship eligibility	2000
4	**PG**	Microbiology	Kuvempu university	1999
5	**UG**	Botany, Biochemistry, Microbiology	Kuvempu university	1997

Professional Details (Academic/Research Experience)

Sl. No.	Designation	Institution/University	UG/PG	From	To
1	Professor	Davangere University	PG	2024	Till date
2	Associate Professor	Davangere University	PG	2019	2024
3	Professor	GMIT, Davangere	UG & PG	2015	2017
4	Assistant Professor	GMIT, Davangere	UG & PG	2009	2015

5	Senior Lecturer	GMIT, Davangere	UG	2008	2009
6	Lecturer	GMIT, Davangere	UG	2004	2008
	Guest Lecturer	Sahyadri Science college, Shivamogga	UG	1999	2004

Areas of Research Interest:	
1.	Industrial Microbiology
2.	Biofuels
3.	Probiotics

Academic/Administrative responsibilities:	
1.	BOE member in Microbiology at Kuvempu University in 2008-09
2.	BOE member in Microbiology at Sahyadri Science College (Autonomous) in 2010-11
3.	BOE member in Biotechnology at Visvesvaraya Technological University in 2011-12, 2014-15
4.	Worked as Head of the department of biotechnology at GMIT from 2010 to 2011
5.	Worked as NAAC, NBA Co-ordinator for department of Biotechnology at GMIT
6.	PG coordinator for Department of Biotechnology at GMIT 2012-17.
7.	Chairman of DOS in Biotechnology, Davangere University (July2019-January2020, 2022-24)
8.	BOE Chairman - DOS in Biotechnology, Davangere University 2019-20,23-24
9.	Member Secretary for Internal complaints Committee, Davangere University 2020-21
10.	Chairman for Internal complaints Committee, Davangere University
11.	BOS chairman - DOS in Biotechnology, Davangere University 2023-25

Research Publications:	
a) International Journals	
1.	Seema J Patel*, R Onkarappa and Shobha K S, Fungal pretreatment studies on rice husk and bagasse, , EJEAFChe, 6(4), 2007, 1921-1926.
2.	Seema J. Patel*, Nithin Venugopalan, S. Pradeep, Screening For Antimicrobial Activity Of Weeds, The Internet Journal of Microbiology., 4(1), 2007.
3.	Seema J. Patel*, R. Onkarappa, K. S. Shobha, Study Of Ethanol Production From Fungal Pretreated Wheat And Rice Straw, The Internet Journal of Microbiology. 4(1). 2007
4.	Seema J. Patel*, R. Onkarappa, K. S. Shobha, Comparative Study of Ethanol Production from Microbial Pretreated Agricultural Residues. J. Appl. Sci. Environ. Manage., 11(4), 2007 137 - 141.
5.	Seema J. Patel*, R. Onkarappa & S. Gurumurthy, The Internet Journal of Microbiology, 7(1), 2009.
6.	Seema J. Patel*, Onkarappa R., Gurumurthy S.B. and Shobha K.S, Production and Isolation of Laccases from Cellulytic Fungi, Developmental Microbiology and Molecular Biology., 2(2), 2011, 93-99
7.	, Seema J. Patel*, Onkarappa R. and Gurumurthy S.B,. Ethanol production from lignocellulose hydrolyzates by different yeastsAsian. J. of Exp. Bio. Sci., 3(2), 2012, 350-354.
8.	Hamsa N S*, Vandana P Nair, Vivek Chandramohan, Dr. Seema J Patel, Pharmacophore elucidation and docking studies on anti-inflammatory compounds of medicinal plants for ulcerative colitis, Asian J Pharm Clin Res, , 6, Suppl 3, 2013, 56-61
9.	Vandana P Nair*, Hamsa N S, Vivek Chandramohan, Dr. Seema J Patel, In-Silico Docking studies for the Comparative Analysis of Natural and Synthetic Compounds against *Leptospira Interrogans*, Int. J. Drug Dev. & Res., 5(3), 2013, 361-370
10.	Varsha D Savanth*, Seema J Patel, Enhanced production of xylanase from local fungal isolates and effectiveness in pulp treatment, International Journal of Innovative Research in Science, Engineering and Technology, 2(12), 2013, 7670-7676
11.	Varsha D Savanth*, Seema J Patel, Production and characterization of xylanase from local fungal isolates by submerged fermentation, Asian Jr. of Microbiol. Biotech. Env. Sc. 16,(1) 2014,: 75-80
12.	Shobha KS*, Seema J Patel, Onkarappa R, Antagonistic potential of actinomycetes of Sharavathi estuary of Karnataka, India, Journal of biological and scientific opinion,

	2(1), 2014,10-14
13.	Seema J Patel*, Jyothi, Sowmya S R, Apoorva, Amrin banu, Comparative Study of Invitro Antioxidant and Antiacne Activity of Wine and Fruit Juices, International Journal of Innovative Research in Science, Engineering and Technology. 2015, 4 (2), 492-496.
14.	Shobith G M, Pallavi Rajpurohit, Seema J Patel*, Effect of Different Substrates and Effluent on Vermicomposting by Surface Feeder Species, International Journal of Science and Research, 4(2), 2015, 951-953.
15.	Seema J Patel*, Shalini D B, Sripriya PA, Priyanka S, Sowmya BM, ,Invitro Evaluation of Botanicals and Biocontrol Agents against Pomegranate Bacterial Blight Pathogen, International Journal of Innovative Research in Science, Engineering and Technology, 2015, 4 (3), 1210-1215.
16.	Seema J Patel*, Promith Bhattacharya, Suman Banu, Lakshmi Bai, Namratha, Phytoremediation of Copper and Lead by Using Sunflower, Indian Mustard and Water Hyacinth Plants, International Journal of Science and Research, 4 (3), 2015, 113-115.
17.	Seema J Patel*, Maithri M, Dharani Prasad, Praneetha VA and Yashaswini, Production, Purification and Characterization of Bacteriocins from Lactic Acid Bacteria, Int. J. Pure App. Biosci. 3 (1), 2015, 236-240.
18.	Seema J Patel*, Varsha D Savanth, Review on fungal xylanases and their applications, International journal of advanced research, 3 (3), 2015, 311-315.
19.	Maheshwari L Patil*, Seema J Patel, Pharmacogenomic analysis of single-nucleotide polymorphisms of Angiotensin-I converting enzyme gene in stroke, Asian Journal of pharmaceutical and clinical research, 8(2), 2015, 308-310.
20.	Seema J Patel*, A comprehensive review on probiotics, Int. J. Pure App. Biosci. 3 (2), 2015, 286-290.
21.	Seema J Patel*, Review on Biosorption of Dyes by Fungi, International Journal of Innovative Research in Science, Engineering and Technology, 5(1), 2016, 1115-1118.
22.	Divya, V*, Anitha P. Muttagi, Seema J Patel, Gurumurthy, H. and Prashantha Nagaraja,Gene expression profile of ovarian cancer dataset that helps to predict potential biomarkers, International Journal of Current Research in Life Sciences, 4 (8), 2015, 321-327.
23.	S Pooja*., Anitha P. Muttagi, Seema J Patel, Gurumurthy, H. and Prashantha Nagaraja, Whole transcriptome cerebral cortex gene analysis in Alzheimer's diseases, Computational Molecular Biology, 6(2), 2016, 1-9

24.	Reshma Jacob J*, Seema J Patel, Prashantha CN, Transcriptome analysis of mRNA expression profiling to predict potential Biomarkers induced in breast cancer-brca1, Asian Journal of pharmaceutical and clinical research, 9 (6), 2016, 270-273.
25.	Bilwashri H * and Seema J Patel, Analysis of gene expressions in both melanoma and melanocyte cell Lines by chip-seq technology, International Journal of Recent Scientific Research, 7 (11), 2016, 14181-14188,
26.	Seema J Patel*, Komal B Harihar, Sagar Hugar and Vanditha M G, Evaluation of Anti-Acne and Anti-Dandruff Activity of Seed Protein Extracts, International Journal of Pharmacognosy and Phytochemical Research 2017; 9(5); 654-656.
27.	Seema J Patel, Prabhurajeshwar*, Kavya TU, Kirankumar SP, Meghana D Hegde, Rakesh Kumar S, Comparative Study on Probiotic Bacterial Isolates and Formulation into Product, International Journal of Biotechnology Research and Development (IJBTRD), Volume 2, Issue 1, January-June 2020, pp. 53–61
28.	Characterization and in vitro Applications of Immobilized Protease from Local Varieties of Papaya, Seema J. Patel*, Amith S. Hiremath, M. Chethana,, S. S. Dhanalaxmi and K. S. Lakshmi, Annals of Agri-Bio Research, 2021, 26 (2),133-137.
29.	Srividya D., Seema J. Patel , Anil H. Shyam Mohan, Isolation and identification of killer yeasts from Psidium gujava, Journal of Applied Biology & Biotechnology 2023; 11(4); 99-108. DOI: 10.7324/JABB.2023.111162
30.	Varsha D. Savanth, B.S. Gowrishankar, K.B. Roopa, Seema J. Patel, Effect of Agro-industrial Residue Composition on the Production of Endo-1, 4-β-Xylanase by *Bacillus pumilus*, Indian Journal of Agricultural Research.2023 doi:10.18805/ IJARe.A-6076.
31.	Srividya D., Seema J. Patel* and Anil H. Shyam Mohan, In vitro anti-microbial and probiotic characterization of killer yeast isolated from Citrus aurantifolia, Asian Journal of Microbiology, Biotechnology & Environmental Sciences, Vol. 26, Issue, 1, 2024; Page No.(120-129), https://doi.org/10.53550/AJMBES.2024.v26i01.022
32.	Rakshitha Simha, Seema J. Patel*, Shruthi Shirur Dakappa and Koushik Bandlu Raghuram, Characterization and Screening of Antagonistic Activity of Endophytic Fungi Isolated from *Muntingia calabura*, Annals of Agri-Bio Research, 30(1): 103–111, 2025, https://doi.org/10.53941/agribio.2025.1000013, ISSN 09719660,
33.	Ganesh G Tilve and Seema J Patel*, Harnessing Over Ripe Fruits for Isolation and Optimization of Xylose Utilizing Yeasts and Analysis of its Fermentation Products, International Journal of Environmental Sciences, Vol. 11 No. 24s, 2025, 4966-4980, https://doi.org/10.64252/qxmzmn94
34.	Ganesh G Tilve and Seema J Patel*and Shivalingsarj Desai, Exploring the Industrial

	Application of Xylitol Derived from Over-Ripe Fruit Fermentation by Formulation of Xylitol-Based Toothpaste, Journal of Chemical Health Risks 2025, 15(6), 2349-2355 | https://doi.org/10.52783/jchr.v15.i6.11148
35.	Gajendrakumar Pujar, Seema J Patel*, Koushik B R and Ganesh G Tilve. Bioprospecting of thermotolerant and ethanol tolerant fermentative potential yeasts from indigenous fermented foods. Advanced engineering sciences, Volume 58, Issue 01, 2026, 2800-2812.
36.	Bilwashri Hadagali, Seema Jayananda Patel*, Shivalingsarj Desai and Ganesh G Tilve, Exploring yeast biodiversity in fruit waste for cellulose degradation and proteomic profiling, Malaysian Journal of Microbiology, Vol 22(3) 2026, pp. 395-404. http://dx.doi.org/10.21161/mjm.251135
37.	Bilwashri H, Seema J Patel*, Gajendrakumar Pujar, Ganesh G Tilve, Shivalingsarj Desai, Integrated in silico structural and functional characterization of cellulase enzymes from cellulolytic yeasts, Genetics and Molecular Research 25 (4s): 2026, https://doi.org/10.4238/mvxg4w81
38.	Kishore Kumar B, Seema J Patel, Gajendra Kumar P. Isolation and characterization of pectinase-producing yeast from the gut microbiota of silkworms (*Bombyx mori.* L). Journal of Applied and Natural Science, 2026, 18(2), 979 - 984. https://doi.org/10.31018/jans.v18i2.7546
39.	Koushik Bandlu Raghuram , Seema J. Patel,* Jayalakshmi Kabbur Rajashekar and Ganesh Gopal Tilve, Biogenic synthesis of zinc oxide nanoparticles using Pichia cactophila-derived β-glucan as a novel capping agent: Characterization, antioxidant, antibacterial, and cytotoxicity evaluation, Biotechnology Notes 7, 2026, 142–155. https://doi.org/10.1016/j.biotno.2026.06.004
b) National Journals	
1.	R Onkarappa*, Seema J Patel and Shobha K S, , Biosorption of congo red a textile dye by fungi , Journal of ecotoxicology and environmental monitoring, 16(6), 2006, 515-519.
2.	R Onkarappa*, Shobha K S and Seema J Patel, Comparative efficacy of fungicides and biocontrol agents against fungal rots in vanilla-invitro, Karnataka Journal of Agricultural Sciences, 19(1),2006, 170-173.
3.	Bioleaching of congo red a textile dye by some common fungi, R Onkarappa*, Seema J Patel and Shobha K S, Karnataka Journal of Agricultural Sciences, 19(1), 2006, 174-176.
4.	Seema J Patel*, B Basavarju, Manjunath, Puneeth, Chetan and Umesh, Erudition Of Genetic Diversity Of Finger Millet In Haveri District, Research & Reviews in

	BioSciences, 1(3), 2007, 119-122.
5.	Seema J Patel*, R Onkarappa, B Basavaraju, Pramod, Pradeep, Mohan and Santhosh, Cellulase production from *Trichoderma reesei* and *Aspergillus niger* on different lignocellulosic wastes, Biotechnology, an Indian Journal, 1(3), 2007, 126-129.
6.	K.S.Shobha* and Seema J. Patel, Screening of actinomycetes for antifungal metabolites production from Kodachadri Soils. Biotechnology, an Indian Journal, 3(2), 2009.
Patents	
1.	Patent titled " CYSTEINE-FUNCTIONALIZED GOLD NANOSTRUCUTURES AS CHEMICAL SENSORS". Patent No. 202141036928 A, No. of pages: 11) ISSUE No. 34/2021 dt. 20-08-2021, Government of India, Patent Office, Intellectual Property Building, Chennai-600032, India
2.	Patent filed, titled "NMDA receptors anatagonist from natural sources for Parkinson disease". Patent No. 202341055613A

Book Published / Book Chapters Published:

- **Title : Plant and animal tissue culture**
  Authors : Dr. Seema J Patel
  Publisher: Lulu Publications, US, 2017
- **Title : Clinical Biotechnology**
  Authors : Dr. Seema J Patel
  Publisher: Educreation, Delhi, 2017
- **Title : Pharmaceutical Biotechnology**
  Authors : Dr. Seema J Patel
- **Publisher:** Sara Publication, Ahmedabad, 2017
- **Book chapter -** Fungal enzymes for second generation ethanol production in book "Recent advances in Microbial, Agricultural and Environmental Biotechnology"**(**RAiMAEB-vol:1) ISBN-978-81-940490-6-7, InSc publishing 2021
- **Book chapter –** Medicinal potential of phytochemicals as a source of drug for the treatment of Onchocerciasis (River blindness). In book Neglected tropical diseases and phytochemicals in drug discovery, 2022, John Wiley & Sons Inc.
- **Book chapter -** Screening of Novel Metabolites from Actinobacteria. In: Yaradoddi, J.S., Kontro, M.H., Ganachari, S.V. (eds) Actinobacteria. Rhizosphere Biology. Springer, Singapore. https://doi.org/10.1007/978-981-16-3353-9_9 (2021).
- **Book chapter -** Microbial Nanoparticles-An alternative to traditional nanoparticle synthesis. In: Singh – Environmental applications of Microbial Nanotechnology, Eds, Pradeep Singh, Vijaykumar, Mansi Bakshi 2022, Elsevier, ISBN: 978-0-323-91744-5

DOI: 10.1016/b978-0-323-91744-5.00019-9
➢ **Book chapter** – The Current Opportunities And Future Prospects Of Microbial Nanotechnology. In: Recent Trends In Multidisciplinary Research (Rtmr-2023) Eds. C. Shanmuga Priya, Seema Shukla, Association of Global Academician and Researchers (AGAR) Publications , Tamil Nadu , India ISBN 978-93-91387-26-6
➢ **Book chapter** – Impact of metal oxide on human health and environment. In:Nanotechnology: Current uses, future applications in Biomedicine Eds. Siddappa B Kakkalameli Azharuddin B Daphedar 2023, SHINEEKS Publishers, ISBN 978-1-63278-970-9
➢ **Book chapter -** Harnessing nature's richness: Delving into the impact of phytochemicals from fruit peels on health and wellness In: Plant derived bioactive compounds in human health and disease Eds. Surajit Pathak and Antara Banerjee 2025, DOI: 10.1201/9781003486237, CRC press, Taylor & Francis group, ISBN: 978-003-48623
➢ **Book chapter –** Nano-Fertilizers: Smart Nutrient Delivery Systems for Sustainable and Precision Agriculture In : Fundamentals and emerging Applications of nanoscience and nanotechnology 2025. JPS Scientific Publications, ISBN: 978-93-48679-89-5

Research Guidance Details (M.Sc., Engg by Research):

Sl.No	Name of the Scholar	University	Registration month & Year	Research Area
1.	Varsha D Savanth	VTU	2010 Awarded in 2013	Biotechnology

Research Guidance Details (Ph.D.,):

Awarded

Srividya D

Ganesh G Tilve

Ongoing

Sl.No	Name of the Scholar	University	Registration month & Year	Research Area
1	Kishorekumar B Ph.D./Biotechnology/08/2021-22	Davangere University	10 December 2022	Microbial Biotechnology
2	Koushik B R 23PHDBIOTECH04	Davangere University	1st April 2023	Microbial Biotechnology
3	Bilwashri 23PHDBIOTECH05	Davangere University	1st April 2023	Microbial Biotechnology
4	Gajendra 23PHDBIOTECH08	Davangere University	1st April 2023	Microbial Biotechnology

5	Sumathi B S Ph.D./BT/06/2023-24	Davangere University	22nd April 2024	Microbial Biotechnology
6	Rashmi G J Ph.D./Biotechnology/05/2024-25	Davangere University	30th June 2025	Microbial Biotechnology

Conference/ Workshops/Trainings attended/organized:
International/National Conferences:
Organized various national seminars, conferences and webinars *Attended many national and international conferences, workshops, FDPs and webinars* *Given various invited talks as guest speaker*

Achievements/Awards / Abroad visit / Professional Membership	
1.	Zindal Jubilee gold medal For scoring highest marks in M.Sc., Microbiology
2.	Life member for Indian Society for Technical Education (ISTE)(LM43084)
3.	Life member for AFSTI (AFSTI/LM/4-2020/DVG/3511)
4.	Life member for BRSLI - BRSI LM 2525
5.	Life member for Institute of Researchers INRes – LM022320
6.	Life member for KAAS – KL328
7.	Academic Excellence award by Institute of Researchers in March 2023