

## Resume



**Name:** Dr. Kumudini Belur Satyan

**Date of Birth:** 04. 09. 1975

**Sex:** Female

**Marital Status:** Married

**Address:** 3092/3, 14<sup>th</sup> B Main, 8<sup>th</sup> C Cross, R. P. C. Layout, Vijayanagar 2<sup>nd</sup> Stage,  
Bangalore - 560040, Karnataka, India

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**Educational Qualification:** MSc (1997), MPhil (1998) in Seed technology, PhD (2004) in Applied botany

**Research Experience:** 25 years

**Research Interests:** Stress physiology in plants and biofuels

**Plant Stress:** Plants face abiotic and biotic stress under varying environmental conditions. Studies are being carried out to induce tolerance in plants to mitigate biotic and abiotic stress. The physiological, biochemical, and molecular changes that take place in the plants and

**Biofuel:** The world is facing scarcity of fossil fuels, and it becomes necessary to look for alternative fuels. Algal biofuels are ecofriendly and economical. Studies to isolate and improve upon algal strains to produce high levels of lipids are being carried out.

### **Work Experience:**

- Working as **Associate Professor** at the Department of Biotechnology, School of Sciences (Block – I), JAIN (Deemed-to-be University), Bengaluru from 2<sup>nd</sup> February 2005 till date.
- Worked as **Guest Lecturer** at the Department of Botany, Regional Institute of Education (NCERT), Mysore for students of B. Sc. Ed. Course from 1<sup>st</sup> January 2002 to 31<sup>st</sup> July 2002.

### **Responsibilities held:**

#### **Associate Professor (July 2018 – Till date)**

- Teaching MSc Biotechnology students
- Guiding MPhil/PhD students
- Placement coordinator, School of Sciences (Block-1)
- Alumni coordinator, School of Sciences (Block-1)

#### **Assistant Professor (Feb 2009 – July 2018)**

- Teaching MSc Biotechnology students
- Guiding MPhil/PhD students
- Preparing departmental presentations
- Arranging industrial visits
- Networking with students

**Lecturer (Feb 2005 – July 2009)**

- Teaching MSc Biotechnology students
- Preparing departmental presentations

**Guest Lecturer (Jan – July 2002)**

- Teaching BSc Ed students

**Reviewer for:**

1. Bioremediation Journal
2. Journal of Agricultural Extension and Rural Development
3. BMC Plant Biology
4. Scientific African
5. Biocontrol
6. PLOS One
7. BioNanoScience

**Projects Funded from External Agencies**

<b>Sl. No.</b>	<b>Project scheme</b>	<b>Project Investigator</b>	<b>Title of the Project</b>	<b>Budget (in Rs.)</b>	<b>Status</b>
1	DST-SYST	Dr. Kumudini Belur Satyan	Accumulation of host defense compounds during induction of resistance against ragi blast disease	20.1 L	Completed, 2020

**Achievements:**

- Awarded the **Smt. Guman Devi Verma Memorial Best Woman Scientist Award – 2019** by the **Indian Society of Mycology and Plant Pathology** at its 40th Annual Conference and National Symposium on “Microbial Based Strategies for Improvement of Soil and Plant Health” held from 24th to 26th 2019 at Karnatak University, Dharwad
- **Funded by Department of Science and Technology (DST), GoI** under the Scheme for Young Scientists & Technologist (SYST) scheme in December 2015
- **Resource Person as Subject Expert for Faculty Development Programme** (Pre-University Teachers) held on 12<sup>th</sup> May 2012
- **First prize** in essay competition in **National Science Day-2012** at Administrative Management College, Bangalore in association with KSTA on ‘**Clean Energy Options and Nuclear Safety**’ from 26<sup>th</sup>-28<sup>th</sup> Feb 2012
- Senior Research Fellow (CSIR, New Delhi, India) at the DOS in Applied Botany and Biotechnology, University of Mysore, Mysore from October 2002 – January 2005
- Junior Research Fellow (Danish International Developmental Assistance, Denmark) at the DOS in Applied Botany and Biotechnology, University of Mysore, Mysore from January 1999 – December 2001

### Research Guidance:

<b>MPhil/PhD students</b>	
<b>Guided</b>	<b>Guiding</b>
MPhil: 7	PhD:
PhD: 6 (Guide) 2 (Co-Guide)	4 (Guide) 1 (Co-Guide)

## List of Publications:

1. Chhandama, M.V.L., Chetia, A.C., Satyan, K.B., Supongsena Ao, Ruatpuia, J.V., Rokhum, S.L. 2022. Valorisation of food waste to sustainable energy and other value-added products: A review. *Bioresource Technology Reports*, 17, 100945
2. Chhandama, M.V.L., Satyan, K.B., Changmai, B., Vanlalveni, C., Rokhum, S.L. 2021. Microalgae as a feedstock for the production of biodiesel: A review. *Bioresource Technology Reports*, 15, 100771 – Cite score: 3.8
3. Chhandamma ML and Kumudini BS. 2021. Optimization of lipid accumulation in *Pleurastrum insigne* for biodiesel production. *Research Journal of Biotechnology* 16 (10): 144-155 – IF: 0.22
4. Jain JR, Manohar SH, Roy TK and **Kumudini BS**. 2021. Phenolic acid and flavonoid patterns in twelve *Sechium edule* varieties. *Acta Scientific AGRICULTURE* 5(4) – IF: 0.734
5. Jayamohan NS, Patil SV and **Kumudini BS**. 2020. Seed priming with rhizosphere isolated *Pseudomonas putida* trigger innate resistance against fusarium wilt in tomato through activation of PR proteins and phenylpropanoid pathway. *Pedosphere* 30(5): 651–660 – IF: 3.736
6. Mahadik S and **Kumudini BS**. 2020. Enhancement of salinity stress tolerance and plant growth in finger millet using fluorescent pseudomonads. *Rhizosphere* 100226 – IF: 3.129
7. Patil SV, **Kumudini BS**, Pushpalatha HG, De Britto S, Ito S-ichi, Sudheer S, Singh DP, Gupta VK, Jogaiah S. 2020. Synchronised regulation of disease resistance in primed finger millet plants against the blast disease, *Biotechnology Reports* 27: e00484 – cite score: 6
8. Dhanya RV and **Kumudini BS**. 2020. Isolation and characterization of microalgae isolated from freshwater sources in Karnataka for biofuel production. *Research Journal of Biotechnology*, 15 (5): 42-49 – IF: 0.45
9. Govardhana M and **Kumudini BS**. 2020. In-silico analysis of cucumber (*Cucumis sativus* L.) Genome for WRKY transcription factors and cis-acting elements. *Computational Biology and Chemistry* 85: <https://doi.org/10.1016/j.compbiolchem.2020.107212> - IF: 1.850

10. Patil SV and Kumudini BS. 2019. Seed priming induced blast disease resistance in finger millet plants through phenylpropanoid metabolic pathway. *Physiological and Molecular Plant Pathology* 108: 101428, <https://doi.org/10.1016/j.pmpp.2019.101428> - IF: 1.646
11. Patil SV and Kumudini BS. 2019. Induction of blast disease resistance upon seed priming with *Pseudomonas* sp. in finger millet. *Plant Archives* 19(2): 3185-3190 – IF: 0.27
12. Thilagam D, Kumudini BS and Manohar SH. 2019. Regeneration of *Sechium edule* from nodal explants through synthetic seeds. *Plant Cell Biotechnology and Molecular Biology* 20(13&14): 577-586 – IF: 0.38
13. Bhavana GP, Kumudini BS and Aswath C. 2018. Micropropagation of *Anthurium* through suspension culture using *in vitro* shoots. *Journal of Applied Horticulture* – 20(3): 196-201 – IF: 0.16
14. Jayamohan NS, Patil SV and Kumudini BS. 2018. Reactive oxygen species (ROS) and antioxidative enzyme status in *Solanum lycopersicum* on priming with fluorescent *Pseudomonas* spp. against *Fusarium oxysporum*. *Biologia* DOI 10.2478/s11756-018-0125-3 -IF: 1.24
15. Jayamohan NS, Patil SV and Kumudini BS. 2018. Validation of molecular heterogeneity of fluorescent *Pseudomonas* spp. and correlation with their potential biocontrol traits against fusarium wilt disease. *Agriculture and Natural Resources* 52 - Indexed
16. Deori M, Jayamohan NS and Kumudini BS. 2018. Production, characterization, and iron binding affinity of hydroxamate siderophores from rhizosphere associated fluorescent *Pseudomonas*. *Journal of Plant Protection Research* 58: 36-43 - Indexed
17. Bhavana GP, Kumudini BS and Aswath C. 2018. A regenerative protocol and SEM study for *in vitro* propagation of *Anthurium* crossed lines via indirect somatic embryogenesis. *Bioscience Biotechnology Research Communications* 11: 31-40 - Indexed
18. Jain JR, Satyan BS and Manohar SH. 2017. A comparative assessment of morphological and molecular diversity among *Sechium edule* (Jacq.) Sw. accessions in India. *3 Biotech* DOI 10.1007/s13205-017-0726-5 - IF: 1.798

19. Govardhana M and **Kumudini BS**. 2016. Isolation and characterization of drought tolerant PGPR from rhizosphere of drought prone areas and enhancement of plant growth promotion in Cucumber. *Acta Biologica Indica* 5: 93-100 – IF: 0.517
20. Dhanya VR and **Kumudini BS**. 2016. Increased algal lipid production under nitrogen and salt stress in green algae *Chlorella pyrenoidosa* Chick. *Acta Biologica Indica* 5: 101-107 - IF: 0.517
21. Varsha T and **Kumudini BS**. 2016. Fluorescent *Pseudomonas* mediated alleviation of trivalent chromium toxicity in ragi through enhanced antioxidant activities. *Proceedings of National Academy Sciences, India Section B. Biological Sciences* DOI 10.1007/s40011-016-0816-x - IF: 0.95
22. Thilagam D, **Kumudini BS** and Manohar SH. 2016. Regeneration of *Sechium edule* (Jacq) SW. from sterile *in vitro* nodal explants and assessment of clonal fidelity using ISSR and RAPD markers. *International Journal of Agricultural Science and Research* 6: 285-292.
23. Patil SV, Jayamohan NS and **Kumudini BS**. 2016. Strategic assessment of multiple plant growth promotion traits for shortlisting of fluorescent *Pseudomonas* spp. and seed priming against ragi blast disease. *Plant Growth Regulation* 80: 47-58 - IF: 2.388.
24. Jain JR, **Satyan BS** and Manohar SH. 2016. Standardization of DNA isolation and RAPD-PCR protocol from *Sechium edule*. *International Journal of Advanced Life Sciences* 8(3): 359-363 – Indexed
25. Jayamohan NS, Manohar SH and **Kumudini BS**. 2015. Genomic and outer membrane protein diversity fingerprints of siderophore producing fluorescent *Pseudomonas* spp. using RAPD, Rep-PCR and SDS-PAGE profiling. *Biologia* 70(9): 1150-1158 - IF: 1.24
26. Sethia B, Mustafa M, Manohar S, Patil SV, Jayamohan NS and **Kumudini BS**. 2015. Indole acetic acid production by fluorescent *Pseudomonas* spp. from the rhizosphere of *Plectranthus amboinicus* and their variation in extragenic repetitive DNA sequences. *Indian Journal of Experimental Biology* 53: 342-349 - IF: 0.783
27. Swain SK and **Kumudini BS**. 2014. Bioremediation of textile azo dye congo red using bacterial isolates from textile wastewater. *Journal of Advanced Microbiology* - Indexed

28. Hari Priyaa G and **Kumudini BS**. 2014. Green synthesis of silver nanoparticles using garlic (*Allium sativum*) extracts. *International Journal of Biological Research* 3(4):1-12 - Indexed
29. Hari Priyaa G and **Kumudini BS**. 2014. Biological synthesis of silver nanoparticles using ginger (*Zingiber officinale*) extract. *Journal of Environmental Nanotechnology* 3(4):32-40 - Indexed
30. Jayamohan Subramanian and **Kumudini Satyan**. 2014. Isolation and selection of fluorescent pseudomonads based on multiple plant growth promotion traits and siderotyping. *Chilean Journal of Agricultural Research*. 74(3): 319-325 - IF: 0.883
31. KS Nishma, B Adrisyanti, SH Anusha, P Rupali, K Sneha, NS Jayamohan and BS Kumudini. 2014. Induced growth promotion under in vitro salt stress tolerance on *Solanum lycopersicum* by fluorescent pseudomonads associated with rhizosphere. *International Journal of Applied Sciences and Engineering Research*. 3(2): 422-430 – IF: 0.40
32. Anitha G and **Kumudini BS**. 2014. Isolation and Characterization of Fluorescent Pseudomonads and their Effect on Plant Growth Promotion. *Journal of Environmental Biology*. 35(4):627-634 - IF: 0.781.
33. Shobha G and **Kumudini BS**. 2012. Antagonistic effect of the newly isolated PGPR *Bacillus* spp. on *Fusarium oxysporum*. *Int. Journal of Applied Sciences and Engineering Research*, 1 (3): 463-474 - Indexed
34. Jayamohan NS and **Kumudini BS**. 2011. Host pathogen interaction at the plant cell wall. *International Research Journal of Pharmacy and Pharmacology* 1(10): 242-249 – Indexed
35. Varalakshmi KN, **Kumudini BS**, Nandini BN, Solomon J, Suhas R, Mahesh B. and Kavitha AP. 2009. Production and characterization of alpha-amylase from *Aspergillus niger* JGI24 isolated in Bangalore. *Polish Journal of Microbiology* 58(1):29-36 - IF: 0.897.
36. Varalakshmi KN, **Kumudini BS**, Nandini BN, Solomon JD, Mahesh B, Suhas, R and Kavitha AP. 2008. Characterization of Alpha Amylase from *Bacillus* sp.1 isolated from paddy seeds. *Journal of Applied Biosciences* 1(2): 46 – 53 – Indexed
37. Alva S, Anupama J, Savla J, Chiu YY, Vyshali P, Shruti M, Yogeetha BS, Bhavya D, Purvi J, Ruchi K, **Kumudini BS** and Varalakshmi KN. 2007. Production and characterization of fungal amylase enzyme isolated



from *Aspergillus* sp. JGI 12 in solid state cultivation. *African Journal of Biotechnology* 6 (5) 576-581- IF: 0.573

38. Shailasree S, Ramachandra Kini K, Deepak S, **Kumudini BS** and Shetty HS. 2004. Accumulation of hydroxyproline-rich glycoproteins in pearl millet seedlings in response to *Sclerospora graminicola* Infection. *Plant Science* 167: 1227-1234 - IF: 3.591.
39. **Kumudini BS** and Shetty HS. 2002. Association of enhanced lignification and callose deposition with constitutive and induced systemic resistance of pearl millet *Sclerospora graminicola*. *Australasian Plant Pathology* 31: 157-164 - IF: 0.537.
40. **Kumudini BS**, Vasanthi NS and Shetty HS. 2001. Hypersensitive response, cell death and histochemical localization of hydrogen peroxide in the host and non-host seedlings infected with downy mildew pathogen *Sclerospora graminicola*. *Annals of Applied Biology* 139: 217-225 - IF: 2.48

### **Pariprashna**

1. **Kumudini BS** and Shobha G. 2010. Signal transduction in plant microbe interaction – A Review. *Pariprashna* 4(2) and 5(1), 65-77. ISSN 0976-7150
2. **Kumudini B S. 2007.** Marker assisted selection in agriculture *Pariprashna* 2(2), 24-27.
3. **Kumudini BS. 2006.** Intellectual property rights – with special reference to patents. *Pariprashna* 1(3): 10-16.
4. **Kumudini BS. 2005.** Structural defense responses in plants – Can they be induced? *Pariprashna* 1: 16-27.

### **Book Chapters:**

1. **Kumudini BS**, Michael VL Chhandama and Dhanya V Ranjit. 2022. Usage of microalgae: A sustainable approach to wastewater treatment. In: **Biotechnology for zero waste** Eds: Chaudhery Mustansar Hussain, Ravi Kumar Kadeppagari, WILEY-VCH. Doi: 10.1002/9783527832064.ch11

2. **Kumudini BS** and Patil SV. 2021. Antioxidant-mediated defense in triggering resistance against biotic stress in plants. In: **Biocontrol Agents and Secondary Metabolites**. Woodhead Publishing. Pp 383-393
3. **Kumudini BS** and Patil SV. 2020. Role of Plant Hormones in Improving Photosynthesis. In: Ahmad P, Ahanger MA, Alyemeni MN, Alam P (eds) '**Photosynthesis, Productivity and Environmental Stress**'. Wiley & Sons Ltd., pp 215-240. DO:10.1002/9781119501800.ch11.
4. **Kumudini BS**, Jayamohan NS, Patil SV and Govardhana M. 2018. Primary plant metabolism during plant-pathogen interactions and its role in defense. Elsevier book on *Plant Metabolites and Regulation under Environmental Stress* Academic Press, 215-222 (Invited)
5. **Kumudini BS** and Patil SV. 2018. Plant-microbe interactions belowground during stress. Biotechnological Solutions for Sustainable Environmental Management (Invited), Tumkur University, Tumakuru
6. **Kumudini BS**, Jayamohan NS. and Patil SV. 2017. Integrated mechanisms of plant disease containment by rhizospheric bacteria: Unraveling the signal cross talk between plant and fluorescent *Pseudomonas*. In: Meena V., Mishra P., Bisht J., Pattanayak A. (eds) **Agriculturally Important Microbes for Sustainable Agriculture**. Springer, Singapore DOI:10.1007/978-981-10-5343-6\_9 (Invited)

### **List of International and National Conferences/Symposia attended:**

#### **International**

**International Conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects (ICFM 2022)** at Zonal Agricultural Research Station, Mandya, UASB, Karnataka, India, from January 19-22, 2022. Sunita Mahadik and **Kumudini BS**, a poster entitled "Seed Priming with Organic and Biological Formulations for the Enhancement of Physiological and Biochemical Parameters in Finger millet under Salinity Stress"

1. 50<sup>th</sup> year celebration of International Society for Plant Pathology (ISPP) in collaboration with American Phytopathological Society (APS) at the **International conference for Plant Pathology (ICPP-2018)** at Boston,

Massachusetts, USA from 29<sup>th</sup> July - 3<sup>rd</sup> August 2018. Savita VP & **Kumudini BS**. Poster entitled “Antioxidant-mediated survival strategy in primed finger millet plants against blast disease”.

2. **5<sup>th</sup> Annual South Asia Biosafety Conference** at Taj West End, Bangalore from 11<sup>th</sup> – 13<sup>th</sup> September 2017. Savita VP & **Kumudini BS**. Poster entitled “Development of a barrier against the ragi blast pathogen entry upon priming: A study on the phenylpropanoid pathway”.
3. **5<sup>th</sup> Annual South Asia Biosafety Conference** at Taj West End, Bangalore from 11<sup>th</sup> – 13<sup>th</sup> September 2017. Mallu Govardhana & **Kumudini BS**. Poster entitled “Computational approaches for genome-wide analysis for WRKY transcription factors in cucumber (*Cucumis sativus L.*)”.
4. **5<sup>th</sup> Annual South Asia Biosafety Conference** at Taj West End, Bangalore from 11<sup>th</sup> – 13<sup>th</sup> September 2017. Dhanya R & Kumudini BS. Poster entitled “Lipid enhancement by pH salt stress in *Chlorella sorokiniana*”.
5. **5<sup>th</sup> Annual South Asia Biosafety Conference** at Taj West End, Bangalore from 11<sup>th</sup> – 13<sup>th</sup> September 2017. Michael Chhandama & Kumudini BS. Poster entitled “Estimation of lipid content from stress-induced microalgae for biodiesel production”.
6. **International Conference on Advanced Algal Biotechnology** at VIT, Vellore from 10<sup>th</sup> – 12<sup>th</sup> August 2016. Michael VLC and **Kumudini BS**. Poster entitled “Estimation of lipid production from stress induced microalgae for biodiesel production”.
7. International conference on **Green Technologies for Sustainable Ecosystems & Trade Show** (February 26-27, 2016), St. Joseph’s College, Bengaluru. Bhavana P and **Kumudini BS**. Poster entitled “Somatic Embryogenesis a tool for Multiplication of *Anthurium*”.
8. International Conference on **New Horizons in Biotechnology** at Trivandrum from 22<sup>nd</sup> – 25<sup>th</sup> November 2015. Rekha BR, Patience E, Savita VP, Armandeep Singh, Jayamohan NS and **Kumudini BS**. Poster entitled “Induction of resistance in ragi against *Magnaporthe grisea* (Hebert) Barr. using isolates of *Bacillus* and *Pseudomonas* spp.

9. International Conference on **New Horizons in Biotechnology** at Trivandrum from 22<sup>nd</sup> – 25<sup>th</sup> November 2015. Varsha T and **Kumudini BS**. Poster entitled “Alleviation of chromium toxicity in ragi (*Eleusine coracana* L.) using fluorescent pseudomonad isolates”.
10. Workshop on **Advances in Algal Biotechnology** at IIT, Bombay on November 21<sup>st</sup> 2015. Dhanya V Ranjit and **Kumudini BS**. Poster “Effect of nitrogen and salt stress in green algae *Chlorella pyrenoidosa* – a promising biodiesel feedstock”.
11. Workshop on **Advances in Algal Biotechnology** at IIT, Bombay on November 21<sup>st</sup> 2015. Michael VLC and **Kumudini BS**.
12. Two days International Conference on **Biodiversity, Agriculture, Environment and Forestry** at Ooty, Tamil Nadu from 11<sup>th</sup> – 12<sup>th</sup> November 2015. Mallu Govardhan and **Kumudini BS**.
13. Two days International Conference on **Biodiversity, Agriculture, Environment and Forestry** at Ooty, Tamil Nadu from 11<sup>th</sup> – 12<sup>th</sup> November 2015. Dhanya V Ranjit and **Kumudini BS**. Paper “Increased algal lipid production under nitrogen and salt stress in the green algae *Chlorella pyrenoidosa* Chick”.
14. **International Conference on Emerging Trends in Biotechnology** at JNU, New Delhi from 6<sup>th</sup>-9<sup>th</sup> October 2014. Bedhya S, Mariam M, Sneha M, Savita P, Jayamohan NS, **Kumudini BS**. Paper title “Optimization of indole acetic acid production in fluorescent *Pseudomonas* from *Plectranthus amboinicus* and their variation in extragenic repetitive DNA sequences”.
15. **International Conference on Microbial World: Recent Innovations and Future Trends** at KIIT, Bhubaneswar from 22<sup>nd</sup> – 25<sup>th</sup> Nov 2012 and presented a paper entitled “Isolation and characterization of fluorescent pseudomonads and their effect on plant growth promotion”
16. **International Conference On Mycology And Plant Pathology: Biotechnological Approaches** held at Banaras Hindu University from 27<sup>th</sup> – 29<sup>th</sup> Feb 2012 and presented a paper entitled “Isolation and

characterization of new isolates of fluorescent pseudomonads and their effect on growth promotion of tomato seedlings” – **Won the Best Poster Presentation Award**

17. **Third Global Conference of the Indian Society of Mycology and Plant Pathology** held at Maharana Pratap Agricultural University, Udaipur from 10<sup>th</sup> – 13<sup>th</sup> Jan, 2012 and presented a paper entitled “Identification and characterization of novel isolates of *Pseudomonas* spp. from tomato and marigold rhizosphere”.
18. **The International Joint Workshop on PR-Proteins and Induced Resistance** held at Elsinore Denmark, from 5<sup>th</sup> - 9<sup>th</sup>, 2004 and presented a paper entitled “A histological illustration of host responses in induced resistant pearl millet against downy mildew”.
19. **Asian Congress on Mycology and Plant Pathology** held at the DOS in Applied Botany and Biotechnology, **University of Mysore, Mysore** from 1<sup>st</sup>-4<sup>th</sup> of October 2002 and presented a paper entitled “Induction of Resistance in Pearl Millet and Associated Host Defense Responses – A Histological Perspective”.
20. **Third Annual Workshop of the DANIDA ENRECA Project on SAR** at the Department of Plant Pathology, **Royal Veterinary and Agricultural University, Copenhagen, Denmark** from 12<sup>th</sup>-15<sup>th</sup> May 2001 and presented a paper entitled “Induction of resistance in pearl millet against *S. graminicola* and associated host defense responses – A histological perspective”.
21. **Second Annual Workshop of the DANIDA ENRECA Project on SAR** at the Department of Plant Protection, **Can Tho University, Can Tho, Vietnam** from 30<sup>th</sup> Nov-4<sup>th</sup> Dec 1999 and presented a paper entitled “Histopathological illustration of induced resistance in pearl millet-downy mildew interaction”.
22. **First Annual Workshop of the DANIDA ENRECA Project on SAR** at the DOS in Applied Botany and Biotechnology, **University of Mysore, Mysore** from 6<sup>th</sup>-8<sup>th</sup> Dec 1998 and presented a paper entitled “Histological Illustration of Pathogen Development and Host Defense Responses during Induction of Resistance in Pearl Millet against Downy Mildew Disease”.

## National

1. National Conference on “**BIOINSPIRE –2021-Science and Technology for Sustainable Development with Women Empowerment**” organized by JAIN (Deemed to be University), on 22<sup>nd</sup> - 23<sup>rd</sup> October 2021; Sunita Mahadik, **Kumudini BS**, **oral presentation** entitled “Evaluation of Salinity Stress Tolerance in Seven Finger Millet Genotypes at Germination and Seedling Stage”
2. National Conference on Phytochemicals and Microbial Bioactive Compounds - Role in Agriculture and Human welfare on 3 - 4 October, 2019, organized by **Department of Microbiology and Biotechnology Bangalore University, Bengaluru-56** Sunita Mahadik, **Kumudini BS**, a poster entitled, “Enhancement of Salinity Stress Tolerance in Finger Millet using Fluorescent Pseudomonads”.
3. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Jyothi R Jain, **Kumudini BS**, SH Manohar, Oral presentation entitled “Genetic Diversity of *Sechium edule*”.
4. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Savita V Patil and **Kumudini BS**, Oral presentation entitled “Reinforcement of Disease Resistance in Ragi against Blast Disease through Seed Priming”.
5. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Bhavana GP, **BS Kumudini** and C Aswath, Oral presentation entitled “A simple regenerative protocol for indirect somatic embryogenesis of *Anthurium*”.
6. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Dhanya V Ranjit and **Kumudini BS**, Oral presentation entitled “Effect of mixotrophic and heterotrophic cultivation on the lipid content in *Chlorella sorokiniana* by two-stage cultivation”.

7. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Sunita Mahadik and **Kumudini BS**, Poster presentation entitled “Isolation and screening of fluorescent pseudomonads for beneficial traits to alleviate the abiotic stress factors”.
8. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Mallu Govardhana, and **Kumudini BS**, Poster presentation entitled “Analysis of cucumber (*Cucumis sativus* L.) CCCH IX subfamily gene candidates”.
9. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Shaina Thakur, Muniba Ferthouz SJ, Jincy John, Roshan N, Ranjith Kumar P, Savita V Patil and **Kumudini BS**, Poster presentation entitled “Isolation and characterization of PGPR for plant growth promotion”.
10. National Conference on **Future India - Science and Technology: Research Innovations in Biology** on 14<sup>th</sup> to 15<sup>th</sup> February 2019 organized by JAIN (Deemed to be University); Michael V L Chhandama and **Kumudini BS**, Poster presentation entitled “Optimization of lipid production by microalgae for biodiesel production”.
11. National Conference on **Emerging Trends in Production of Biofuels and their Impact on Global Economy (ETPBIGE)** on 27<sup>th</sup> and 28<sup>th</sup> July 2018 organized by CHRIST (Deemed to be University); Dhanya V Ranjit and Kumudini BS, Poster presentation entitled “Efficiency of wastewater as growth medium for microalgae for biodiesel production”
12. National Conference on **Emerging Trends in Production of Biofuels and their Impact on Global Economy (ETPBIGE)** on 27<sup>th</sup> and 28<sup>th</sup> July 2018 organized by CHRIST (Deemed to be University); Dhanya V Ranjit and Kumudini BS, Oral presentation entitled “PGPR as growth promoters of *C. sorokiniana* for biodiesel production”
13. National Conference on **Biodiversity and Bio-prospecting for Sustainable Development-2018** from 23<sup>rd</sup>-24<sup>th</sup> Feb 2018 organised by Institution of Excellence, Mysore University, Mysore; Savita VP & **Kumudini BS**. Oral presentation entitled “Insight into the mechanism of reinforcement of disease resistance by priming ragi seeds against the blast pathogen”.

14. 70<sup>th</sup> Annual Meeting and National Symposium on “**Plant Health Management: Embracing Eco-Sustainable Paradigm**” during February 15<sup>th</sup>-17<sup>th</sup>, 2018 at Assam Agricultural University, Jorhat, Assam organised by Indian Phytopathological Society. Savita VP & **Kumudini BS**. Oral Presentation “Antioxidant-mediated survival strategy in primed ragi plants against blast disease”.
15. UGC sponsored National Conference on **Mind Body Matters: An Interdisciplinary Insight** held at Jyoti Nivas College Autonomous, Bangalore from 1<sup>st</sup> – 2<sup>nd</sup> February, 2018; **Kumudini BS** Poster entitled “Use of nanoparticles synthesized from PGPR for induction of resistance”.
16. National Symposium (SZ) on **Emerging trends in plant health management in relation to climate change** at College of Horticulture, Bengaluru from 12<sup>th</sup> – 13<sup>th</sup> September 2017. Savita VP & **Kumudini BS**. Oral Presentation entitled “Antioxidant-mediated survival strategy in primed ragi plants against blast disease”.
17. National Symposium (SZ) on **Emerging trends in plant health management in relation to climate change** at College of Horticulture, Bengaluru from 12<sup>th</sup> – 13<sup>th</sup> September 2017. Savita VP & **Kumudini BS**. Poster entitled “Single consortium-primed establishment of resistance in ragi against *Magnaporthe grisea* (Hebert) Barr”.
18. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Jayamohan NS. Savita VP and **Kumudini BS**. Poster entitled “Validation of molecular heterogeneity of fluorescent *Pseudomonas* spp. and correlation with their potential biocontrol traits against *Fusarium* wilt disease”.
19. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Thilagam D, **Kumudini BS** and Manohar SH. Poster entitled “Regeneration of *Sechium edule* (Jacq.) Sw. from sterile *in vitro* nodal explants and assessment of clonal fidelity using ISSR and RAPD markers”.
20. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Dhanya VR and **Kumudini BS**. Poster entitled “Isolation and characterization of microalgae from freshwater for biodiesel production”.



21. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Jyothi RJ, **Kumudini BS** and Manohar SH. Poster entitled “Use of direct amplification minisatellite-region DNA (DAMD) in evaluation of genetic diversity in *Sechium edule*”.
22. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Savita VP and **Kumudini BS**. “Regulation of Phenylpropanoid Pathway: A defense response during Ragi blast disease upon seed priming”.
23. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Mallu Govardhana and **Kumudini BS**. Poster entitled “Drought-tolerant plant growth promoting rhizobacteria (PGPR) associated with ROS, antioxidative enzyme status and differential protein expression profiling under drought stress of *Cucumis sativus* (L)”.
24. National Conference on Science and Technology for National Development. Health, Environment and Agriculture, **ISCA, Bangalore Chapter** (October 5-7, 2016), Jain University. Bhavana GP, **Kumudini BS** and Channareddy A. Poster entitled “*In vitro* mass propagation of *Anthurium* through somatic embryogenesis.
25. **NCERAFIB 2015** held at **Maharani’s Science college for women**, Bangalore (March 12-13, 2015). ‘Induction of disease resistance by isolates of *Bacillus* and fluorescent *Pseudomonas* on ragi blast”.
26. **KSTA 2015** held at **Oxford College, Bangalore (Feb 5-6, 2015)**. ‘*In vitro* assessment of antagonistic activity and mycolytic enzyme production of *Pseudomonas* spp. against *Magnaporthe grisea*’.
27. **Biotech Crops for Food Security in India** organised by FBAE, Bangalore in association with ABLE, India on Feb 27<sup>th</sup> 2012.
28. **99<sup>th</sup> Indian Science Congress** held at KIIT, Bhubaneshwar, from 3<sup>rd</sup> - 7<sup>th</sup> Jan, 2012 and presented a paper entitled “Characterization of newly isolated *Bacillus* spp. and their effect on *Fusarium oxysporum*”.
29. **National Seminar on Fungal Biodiversity and Bioprospecting in the Age of Global Warming** held at Goa University, Goa from 29-30<sup>th</sup> Oct, 2009 and presented a paper entitled “Laboratory evaluation of the entomopathogenic fungi, *Aspergillus niger* and *Metarrhizium anisopliae* for controlling selected pests”.

30. **National Seminar on New Frontiers in Plant Pathology** held at the Department of P. G. Studies and Research in Applied Botany, Kuvempu University, Shimoga on 26 and 27<sup>th</sup> September 2006 and presented a paper entitled “Isolation and screening of microbes for the amylase production and comparative analysis of their enzyme activity”.
31. **National Seminar on Fungal Biodiversity, Biotechnology and Biotechnology** held at the Centre for Postgraduate Studies, Shri Bhagawan Mahaveer Jain College, **Bangalore** on 2<sup>nd</sup> and 3<sup>rd</sup> February, 2006 and presented a paper entitled “Production of Fungal Amylases by Solid State Fermentation”.
32. **2001- National Seminar on Seed Science and technology in the New Millenium: Vistas and Vison** held at the DOS in Applied Botany and Biotechnology, **University of Mysore, Mysore** from 6<sup>th</sup>-8<sup>th</sup> August, 2001 and presented a paper entitled “Induction of resistance in pearl millet by seed treatment and associated host defense responses - A histological perspective”.
33. **First workshop on Plant Growth Promoting Rhizobacteria** at the DOS in Applied Botany and Biotechnology, **University of Mysore, Mysore** from 28<sup>th</sup> - 29<sup>th</sup> March, 2000 and presented a paper entitled “Induction of resistance using tri-sodium ortho-phosphate in pearl millet against downy mildew and associated structural changes in the host and the pathogen”.
34. **Indian Science Congress** held at the **University of Pune, Pune** from 3<sup>rd</sup>-7<sup>th</sup> January 2000 and presented a paper entitled “Structural changes associated with induction of resistance in pearl millet downy mildew interaction”.
35. **Symposium on Biotechnology of Plant Protection – Application and Technology Development** at CAS in Botany, Banaras Hindu University, Varanasi from 25<sup>th</sup> -27<sup>th</sup> February 2000 and presented a paper entitled “Involvement of lignin and callose during systemic acquired resistance in pearl millet against downy mildew disease”.
36. **National Symposium on Seed Science and Technology** held at the DOS in Applied Botany and Biotechnology, **University of Mysore, Mysore** from 5<sup>th</sup>-7<sup>th</sup> August 1999 and presented a paper entitled “Effects of pre-treating seeds with *Datura* leaf extracts on the defense responses of pearl millet against the downy mildew pathogen *Sclerospora graminicola*”.

### **Invited Talks/ Conferences:**

- **Invited talk** entitled “Plant for -microbe interactions belowground during stress”. in **Biotechnological Solutions Sustainable Environmental Management**, Tumkur University, Tumakuru on 15<sup>th</sup> February 2018.
- **Invited talk** entitled “Functional dynamics of Plant and Rhizobacteria” at Mother Theresa Women’s University at Kodaikanal on 30<sup>th</sup> January 2017

### **Workshops/ Short Courses Attended:**

- Participated in ICAR, New Delhi sponsored Short Course on ‘**Rootstocks in Resilient Horticulture Production System**’ organized by the Division of Plant Physiology & Biochemistry from 19<sup>th</sup>-28<sup>th</sup> August 2013
- **Science Academics’ Lecture Workshop on Biology 21<sup>st</sup> Century** organized by SRN Adarsh College in association with **Indian Academy of Sciences**, Bangalore 24<sup>th</sup> -25<sup>th</sup> May 2013
- Attended **Workshop Bioneers’13** sponsored by Indian Academy of Sciences, Bangalore, The Indian National Science Academy, New Delhi, and The National Academy of Sciences, Allahabad held on 29<sup>th</sup>-31<sup>st</sup> Jan 2013
- **Three-day Faculty Development Workshop** in Centre for Research in Social Sciences and Education, **Jain University**, Bangalore from 17<sup>th</sup> -19<sup>th</sup> July 2012

### **Professional Membership:**

- **Asian PGPR Society** - Lifetime membership
- **ISCA** - Lifetime membership