

FACULTY PROFILE



1. Name: DR. S. UMESHA

2. Designation: Associate Professor

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4. Phone No.: + 91 821 2419884

5. Qualification: MSc, MPhil, PhD, Post Doc (USA), FISBT.

6. Area of Specialization: Molecular Diagnostics of Plant, Food and Animal Pathogens, Plant Biotechnology, Molecular Plant Pathology, Host-Pathogen Interactions, Molecular Diagnostics of Plant Pathogens, Seed Bacteriology, Tissue Culture.

7. Awards/Recognitions:

- Smt Guman Devi Verma Award for Best Research by Indian Society of Mycology and Plant Pathology. 2013-14 Akola, Maharashtra, India.
- Best Research paper award in National Conference on Environmental Sciences and Health Hazards held at Dharwad, India, during 19-21st November 2012
- Best poster award in National Conference on Biotechnology and society, held at Kuvempu University, Shankaraghatta, India, during 19th and 20th April 2012.
- Best poster award in Eleventh all India conference on cytology and genetics, held at Bangalore, India, during 23 -25 January 2012.
- Awarded Jagajyothi Sri Basaveshwara Kayakashree Award 2010 on 29th July 2010-11, from Vishwa Veerashaiva Samskruthi Prathisthana, Bangalore, India.
- Fellow Member - International Society of Biotechnology, India.
- Elected, Plant Sciences - Sectional Committee Member, for south zone of Indian Science Congress Association - 2009-10, Kolkata, India.
- Awarded Overseas Fellowship for the year 2005-06 from Department of Bio Technology, Government of India, New Delhi and carried out Post Doctoral Research at Virginia Tech University, Virginia, USA, for the period from March 2007 to March 2008.
- Elected, Zonal Councilor, for south zone of Indian Phytopathological Society- 2006-07, New Delhi, India.
- Awarded "DST-SERC Fast Track Research Proposal entitled, "Development of Sensitive Seed health Testing methods for the detection of *Clavibacter michiganensis*

ssp. Michiganensis and management of Bacterial Canker Disease in Tomato" under young Scientists' scheme, Department of Science and Technology, Govt. of India, New Delhi.

- Awarded "Professor K.S. Jagadishchandra Young Scientist award for Plant Sciences for the Calendar year 2000-2001", University of Mysore, Mysore 570 006, India.
- Best research paper presentation award at ISMPP Annual Conference at University of Agricultural Sciences, Dharwad, Karnataka, during 8-9 Oct 2009.
- Best research paper presentation award at National Symposium of Seed Science and Technology at University of Mysore during 5-9 Aug 1999.

8. Number of Projects:

i) Ongoing

Sl. No.	Title of the project	Funding Agency	Amount (in Rupees)	Year (From-To)
1.	Development of diagnostic techniques for detection of food borne Pathogens/ toxins and their management (PI)	DBT; Govt. of India, New Delhi	34, 37,600-00	2014-2017
2.	Training and Demonstration on Cultivation of Cut Flowers and Orchids for Rural Entrepreneurship in Mysore and Chitradurga Districts of Karnataka (PI)	DBT; Govt. of India, New Delhi	30,00,000-00	2014-2017

ii) Completed

Sl. No.	Title of the project	Funding Agency	Amount (in Rupees)	Year (From-To)
1.	Development of Sensitive Seed health Testing methods for the detection of <i>Clavibacter michiganensis</i> ssp. <i>michiganensis</i> and management of Bacterial Canker Disease in Tomato (PI)	DST-SERC; Govt. of India, New Delhi	5,20,800-00	2002-2006
2.	Investigations on Bacterial Spot of Tomato and its Management (PI)	UGC; Govt. of India, New Delhi	7,74,600-00	2005-2008
3.	Investigations on Epidemiology and Management of Bacterial Blight of Cotton caused by <i>Xanthomonas axonopodis</i> pv. <i>malvacearum</i> (Co-PI)	Dept. of Agric. Govt. of Karnataka, Bangalore	12,00,000-00	2002-2006
4.	Development of PCR-SSCP technique for the specific diagnosis of bacterial spot and wilt pathogens in tomato (PI)	UGC; Govt. of India, New Delhi	11,28,300-00	2009-2012

9. Number of Ph.D. candidates successfully completed: 06
10. Number of Ph.D. candidates currently working: 06
11. Number of M.Phil. candidates successfully completed: 24
12. Number of M.Phil. candidates currently working: 02

13. Publications:

i) Books (Authors, Title, Publisher, Year of Publication, Pages):

Umesha, S. 2012. Plant Biotechnology. TERI Publishing House, New Delhi (In Press) ISBN: 9788179935033.

ii) Articles in Journals (Authors, Title, Year, Journal, Volume, Pages)

1. Avinash, P, **Umesha, S.** and Shirin, M. 2015. Biochemical and Molecular characterization of oxidative burst during interaction between eggplant and *Ralstonia solanacearum*. Journal of Phytopathology (Submitted).
2. Kaunain Roohie, R. and **Umesha, S.** 2015. Identification of genes associated with black rot resistance through suppression subtractive hybridization in Cabbage. Physiological and Molecular Plant Pathology (Submitted).
3. Chandan, S., **Umesha, S.** and Balamurugan, V. 2015. Use of *rpoB* gene analysis for detection and identification of *Leptospira* species by direct sequencing. Journal of Advances in Environmental Health Research (Submitted).
4. **Umesha, S.**, and Kaunain Roohie, R. 2015. Differential expression of defense genes in cabbage during infection with *Xanthomonas campestris* pv. *campestris*. European Journal of Plant Pathology (Under Review).
5. Roohie, R.K. and **Umesha, S.** 2015. Identification of differentially expressed genes during *Pseudomonas fluorescens* mediated systemic resistance in cabbage phyllosphere. Journal of Phytopathology (Under Review).
6. **Umesha, S.**, Jyothi, N. and Roohie, R.K. 2015. Detection of black rot pathogen and *Fusarium* wilt pathogen in cabbage by Multiplex PCR. Canadian Journal of Biotechnology (Under Review).
7. Shiva Kumar, J., **Umesha, S.** and Shivaprasad, K. 2015. Detection of quorum sensing molecules and biofilm formation in *Ralstonia solanacearum*. Journal of Basic Microbiology (Under Review).
8. Chandan, S., **Umesha, S.**, Shivaprasad, K., Revanasiddappa, H.D. and Balamurugan, V. 2015. Spectral characterization of *Phyllanthus amarus* and its anti-leptospirosis activity. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy (Under Review).
9. **Umesha, S.** and Avinash, P. 2015. Multiplex PCR for simultaneous identification of *Ralstonia solanacearum* and *Xanthomonas perforans*. 3Biotech. <http://dx.doi.org/10.1007/s13205-014-0223-z> (in Press).
10. Manukumar, H.M. and **Umesha, S.** 2015. Assessment of membrane stabilizing activity from honey: An *in vitro* approach. Acta Scientiarum Polonorum Technologia Alimentaria. 14(1): 85-90.

11. Chandrasekhar, B. and **Umesha, S.** 2015. Detection, Identification and Phylogenetic Analysis of Indian *Ralstonia solanacearum* isolates by comparison of partial *hrpB* gene sequences. *Journal of Phytopathology*. 163: 105-115.
12. Chandan, S., and **Umesha, S.** 2014. Molecular Detection of *Leptospira* using polymerase chain reaction based on *LipL32* and *rpoB* gene. *Journal of Veterinary Science and Technology*. 3(1): 16-23.
13. Shirin, M, **Umesha, S.** and Behrouz J. 2014. Pharmacognostic, Physico-chemical and Phytochemical evaluation of *Pachygone ovatea* (poir.) Miers Ex Hook. F. ET Thomas leaf. *International Journal of Pharma and Bio Sciences*. 5(4): 39-53.
14. **Umesha, S.**, Chandan, S., Gopinath, S.M. and Shareef, M.I. 2014. Detection of *Leptospira* in canine samples using PCR based on *LipL32* gene and biochemical profiles in canine Leptospirosis. *Journal of Cell Science and Molecular Biology*. 1(1): 1-05.
15. Roohie, K. R. and **Umesha, S.** 2014. Assessment of defense responses in resistant and susceptible cabbage cultivars during infection with *Xanthomonas campestris* pv. *campestris*. *Journal of Mycology and Plant Pathology* 44 (1): 41-45 (**Smt Guman Devi Verma Best Research Paper**).
16. Chandrashekar, S. and **Umesha, S.** 2014. 2, 6-Dichloroisonicotinic acid enhances the expression of defense genes in tomato seedlings against *Xanthomonas perforans*. *Physiological and Molecular Plant Pathology* 86:49-56.
17. Avinash, P. and **Umesha, S.** 2014. Identification and genetic diversity of bacterial wilt pathogen in brinjal. *Archives of Phytopathology and Plant Protection* 47(4):398-406.
18. Vanitha, S.C. and **Umesha, S.** 2014. PCR based specific detection of *Ralstonia solanacearum* in seed, soil and plant material. *International Journal of Pharma and Bio Sciences* 5 (1): 681-688 (B).
19. Chandan, S., **Umesha, S.**, Shiva Prasad, K., Revanasiddappa, H, D. and Balamurugan, V. 2014. Pseudo-peptides as novel antileptospiral agents: Synthesis and spectral characterization. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 118:1152-57.
20. Roohie, R. K. and **Umesha, S.** 2013. DNA polymorphism analysis using SSCP and RAPD for *Xanthomonas campestris* pv. *campestris* genotyping. *African Journal of Biotechnology* 12 (50): 6913-6921.
21. Kavitharaj, V., Kumar, J.R., Mallesha, L., Archana, M., Mohan, K.N.S., Chethankumar, M. and **Umesha, S.** 2013. Virtual screening and biological evaluation of piperazine derivatives as human acetylcholinesterase inhibitors. *International Journal of Alzheimer's Disease*. 2013: 1- 13.
22. Chandan, S. and **Umesha, S.**, 2013. Rapid and sensitive method for detecting *Leptospira* by PCR-SSCP analysis. *JPR: BioMedRx: An International Journal* 1(9): 912-17.
23. Shivalingaiah and **Umesha, S.** 2013. *Pseudomonas fluorescens* inhibits *Xanthomonas oryzae* pv. *oryzae*, the bacterial leaf blight pathogen in rice. *Canadian Journal of Plant Protection* 1 (5): 147-153.
24. Shivalingaiah, **Umesha, S.** and Sateesh, M.K. 2013. *Coculus hirsutus* extract inhibits *Xanthomonas oryzae* pv. *oryzae*, the bacterial leaf blight pathogen in rice. *Archives of Phytopathology and Plant Protection* 46 (15): 1885-1894.
25. **Umesha, S.** and Shiva Kumar, J. 2013. Bacterial quorum sensing and its applications in Biotechnology. A review Article. *International Journal of Pharma and Bio Sciences* 4(2): 850-862.

26. **Umesha, S.**, Shirin Marahel, and Mohammad Aberomand. 2013. Antioxidant and antidiabetic activities of medicinal plant: A short review. *International Journal of Research in Phytochemistry and Pharmacology* 3(1):40-53.
27. **Umesha, S.** and Chandrasekhar, B. 2013. Analysis of Plant-Pathogen Interactions by Proteomics. A Review Article. *International Journal of Pharmacology and Biological Sciences* 7(2):1-18.
28. Lakshmeesha, T.R., Sateesh, M.K., Vedashree, Sofi, M.S. and **Umesha, S.** 2013. Efficacy of botanicals on soybean seed-borne *Fusarium equiseti*. *VCFL Sciences Journal* 3(1):9-17.
29. Chandan, S., **Umesha, S.** and Balamurugan, V. 2012. Antileptospiral, antioxidant and DNA damaging properties of *Eclipta alba* and *Phyllanthus amarus*. *Journal of Veterinary Science and Technology* 4(4): 231-8.
30. Jayadevappa, H.P., Nagendrappa, G., **Umesha, S.** and Chandrashekar, S. 2012. Synthesis and antimicrobial study of N-[2-(2- piperidine 1 – yl-ethoxy) phenyl] acetamide analogues. *Journal of Applied Pharmaceutical Science* 2 (3): 192-196.
31. Roohie, R. K. and **Umesha, S.** 2012. Development of Multiplex PCR for the specific detection of *Xanthomonas campestris* pv. *campestris* in cabbage and correlation with diseases incidence. *Journal of Plant Pathology and Microbiology* 3(4):127-35.
32. Chandrashekar, S. and **Umesha, S.** 2012. Induction of antioxidant enzymes associated with bacterial spot pathogenesis in tomato. *International Journal of Food, Agriculture and Veterinary Sciences* 2(2):22-34.
33. Shivalingaiah, **Umesha, S.** and Sateesh, M.K. 2012. Detection of *Xanthomonas oryzae* pv. *oryzae* in rice seeds. *The Asian and Australasian Journal of Plant Sciences and Biotechnology* 6 (1): 44-47.
34. **Umesha, S.**, Chandan, S. and Nanjundaswamy, L. 2012. Colony PCR-Single Strand Conformation Polymorphism for the detection of *Ralstonia solanacearum* in tomato. *International Journal of Integrative Biology* 13(1): 45-51.
35. Chandrashekar, S., **Umesha, S.** and Chandan, S. 2012. Molecular Detection of Plant Pathogenic Bacteria using PCR-SSCP. *Acta Biochemica et Biophysica Sinica* 44(3): 217-223.
36. Govindappa, M., **Umesha, S.** and Lokesh, S. 2011. *Adathoda vesica* leaf extract induces resistance in rice against bacterial leaf blight disease (*Xanthomonas oryzae* pv. *oryzae*). *International Journal of Plant Physiology and Biochemistry* 3(1):6-14.
37. **Umesha, S.**, Chandrashekar, S. and Chandan S. 2011. Applications of Polymerase chain reaction-single strand conformational polymorphism to identify disease causing microorganisms. **Review article.** *Biotechnology – An Indian Journal* 5 (2): 100-107.
38. Shivalingaiah and **Umesha, S.** 2011. Characterization of *Xanthomonas oryzae* pv *oryzae* from major rice growing regions of Karnataka. *The Bioscan* 6(1):5-10.
39. **Umesha, S.**, and Kavitha, R. 2011. Induction of Cinnamyl Alcohol dehydrogenase in bacterial spot disease resistance of tomato. *Journal of Bacteriology Research* 3(2):16-27.
40. Vanitha, S.C. and **Umesha, S.** 2011. *Pseudomonas fluorescens* mediated systemic resistance in tomato is driven through an elevated synthesis of defense enzymes. *Biologia Plantarum* 55 (2):317-322.
41. Chandan, S. and **Umesha, S.** 2011. Development of PCR assay for targeting partial LipL21 and LipL41 gene of pathogenic leptospire. *Nepal Journal of Biotechnology* 1:22-30.

42. Chandan, S., **Umesha, S.**, Haraprasad, N. and Chandrashekar, S. 2011. Variability of protein content and its role in kidney stone formation. *Biotechnology – An Indian Journal* 5 (1):56-59.
43. Chandrasekhar, S., **Umesha, S.**, Chethan Kumar, M. and Chandan, S. 2010. Inhibition of Pro-oxidant induced DNA Damage in isolated human peripheral lymphocytes by methanolic extract of *Guduchi (Tinospora cordifolia)* leaves. *International Journal of Pharma Sciences and Research* 1(10): 454-459.
44. **Umesha, S.** and Hariprasad, P. 2010. Plant health Improvement by *Bacillus subtilis* strain GBO3 in tomato against bacterial spot disease. *Indian Phytopathology* 63 (2) 127-130.
45. **Umesha, S.**, Chythra, R., Kavitha, R., Niranjana, S. R., Prakash, H.S., Mortensen, C.N. and. 2010. Molecular Detection of *Xanthomonas citri* ssp. *malvacearum* in cotton seeds. *Research Journal of Biotechnology* 5 (1): 20-26.
46. Vanitha, S.C., Niranjana, S.R., Mortensen, C.N. and **Umesha, S.** 2009. Bacterial wilt of tomato in Karnataka and its Biological control by *Pseudomonas fluorescens*. *BioControl* 54:685-695.
47. Vanitha, S.C., Niranjana, S.R. and **Umesha, S.** 2009. Role of Phenylalanine Ammonia Lyase and Polyphenol Oxidase in host resistance to Bacterial wilt of tomato. *Journal of Phytopathology* 157: 552-557.
48. Choodamani, M.S., Hariprasad, P. Sateesh, M.K. and **Umesha, S.** 2009. Involvement of Catalase in Bacterial blight disease development of Rice incited by *Xanthomonas oryzae* pv. *oryzae*. *International Journal of Pest Management* 55(2): 121-127.
49. Vinaya, K., Kavitha, R., Ananda Kumar, C.S., Benaka Prasad, S.B., Chandrappa, S., Deepak, S.A., Nanjunda Swamy, S., **Umesha, S.** and Rangappa, K.S. 2009. Synthesis and Antimicrobial activity of 1-benzhydryl-sulphonyl-4-(3-(piperidin-4-yl) propyl) piperidine derivatives against pathogens of *Lycopersicon esculentum*: A structure activity evaluation study. *Archives of Pharmacal Research* 32 (1): 33-41.
50. **Umesha, S.**, P. Hariprasad, S.A. Deepak, S. T. Girish and P. Syltie. 2009. Vitazyme Treatment improves seed quality of Paddy, Tomato and Cotton. *Asian Journal of Microbiology, Biotechnology and Environmental Sciences* 11(1):221-226.
51. **Umesha, S.**, Kong, P. and Hong, C.X. 2008. Bacterial Blight of Iris caused by *Pseudomonas syringae* in Virginia. *Plant Pathology* 57:1176.
52. Vanitha, S.C. and **Umesha, S.** 2008. Variations in defense-related enzyme activities in tomato during the infection with bacterial wilt pathogen. *Journal of Plant Interactions* 3 (4): 245-253.
53. Kong, P., Moorman, G., Lea-Cox, J., Ross, D., **Umesha, S.**, Richardson, P. and Hong, C. 2008. Zoospore responses to environmental pH of seven *Phytophthora* species commonly isolated from irrigation reservoirs at ornamental plant nurseries. *Phytopathology* 98: S84.
54. Santhoshkannada, A.N., **Umesha, S.**, Hariprasad, P. and Niranjana, S.R. 2008. Bacterial Blight Pathogen Concentration in Cotton Seeds; Its Role on Seed Quality Parameters of Fuzzy and Acid Delinted Seeds. *Archives of Phytopathology and Plant Protection* 41(8): 597-607.
55. **Umesha, S.**, Kong, P. and Hong, C.X. 2008. Bacterial Blight of Iris caused by *Pseudomonas syringae* in Virginia. *New Disease Reports*.
56. **Umesha, S.**, Richardson, P.A., Kong, P. and Hong, C.X. 2008. A novel indicator plant to test the hypersensitivity of phytopathogenic bacteria. *Journal of Microbiological Methods*. 72: 95-97.

57. Kavitha, R. and **Umesha, S.** 2008. Regulation of Defense-Related Enzymes Associated with Bacterial Spot Resistance in Tomato. *Phytoparasitica* 36 (2): 144-159.
58. Girisha, S.T., Muniyamma, M. and **Umesha, S.** 2007. Impact of Sewage water on Protein, Carbohydrate and Amino acid contents of the fodder grass *Brachiaria mutica*. *Journal of Ecobiology* 21 (3): 241-246.
59. Hariprasad, P. and **Umesha, S.** 2007. Induction of Systemic Resistance in Field Grown Tomato by PGPR against *Xanthomonas vesicatoria*- Incitant of Bacterial Spot. *Journal of Mycology and Plant Pathology* 37(3): 460-463.
60. Kavitha, R. and **Umesha, S.** 2007. Prevalence of Bacterial Spot of tomato in Karnataka and effect of biological seed treatment on the disease incidence. *Crop Protection* 26: 991-997.
61. **Umesha, S.** 2006. The Occurrence of Bacterial Canker in Tomato Fields of Karnataka and the Effect of Biological Seed Treatment on Disease Incidence. *Crop Protection* 25 (4): 375-381.
62. **Umesha, S.** 2006. Phenylalanine Ammonia Lyase Activity in Tomato Seedlings and its relation to Bacterial Canker Disease Resistance. *Phytoparasitica* 34 (1): 68-71.
63. Girisha, S.T., Muniyamma, M. and **Umesha, S.** 2006. Heavy Metals impact on *Brachiaria mutica*, a fodder grass during sewage water irrigation. *Journal of Industrial Pollution Control* 21 (2): 285-290.
64. Girisha, S.T., Muniyamma, M. and **Umesha, S.** 2006. Effect of sewage water on soil chemical composition. *Journal of Ecotoxicology and Environmental Monitoring* 16 (3): 279-284.
65. Nayeemulla Shariff, M. S. Sudarshana, **S. Umesha** and P. Hariprasad. 2006. Antimicrobial Activity of *Rauvolfia tetraphylla* (L.) and *Physalis minima* (L.) - Leaf and Callus Extracts. *African Journal of Biotechnology* 5 (10): 946-950.
66. Sudisha, J., Niranjana, S.R., **Umesha, S.**, Prakash, H.S. and Shetty, H.S. 2006. Transmission of seed-borne infection of Muskmelon by *Didymella bryoniae* and effect of seed treatments on disease incidence and fruit yield. *Biological Control* 37 (2): 196- 205.
67. **Umesha, S.** and Girish, N. 2005. Induction of resistance against Bacterial Canker Disease of Tomato by Salicylic Acid and β -amino butyric acid. *Journal of Mycology and Plant Pathology* 35 (2): 264-267.
68. **Umesha, S.**, Kavitha, R. and Shetty, H.S. 2005. Transmission of Seed-borne infection of Chilli by *Burkholderia solanacearum* and effect of biological seed treatment on disease incidence. *Archives of Phytopathology and Plant Protection* 38 (4): 281-293.
69. Shaukath, A.K., Shashikanth, S., **Umesha, S.** and Kavitha, R. 2005. Synthesis and Antimicrobial study of novel heterocyclic compounds from hydroxybenzophenones. *European Journal of Medicinal Chemistry* 40 (11): 1156-1162.
70. Girish, N. and **Umesha, S.** 2005. Effect of Plant Growth Promoting Rhizobacteria on Bacterial Canker of Tomato. *Archives of Phytopathology and Plant Protection* 38 (3): 235-243.
71. Kavitha, R., **Umesha, S.** and Shetty, H.S. 2005. Dose dependent impact of Dominant seed-borne fungi on seed germination and seedling vigor of cotton seeds. *Seed Research* 33 (2): 187-194.
72. Girisha, S.T. and **Umesha, S.** 2005. Mineral Nutrient content variations due to urban sewage water irrigation in *Brachiaria mutica*. *Ecology, Environment and Conservation* 11 (3-4): 479-482.

73. Girisha, S.T. and **Umesha, S.** 2005. Phyllosphere studies in Sewage water irrigated fodder grass *Brachiaria mutica*. Indian Journal of Environment and Ecoplanning 10 (3): 625-630.
74. Girisha, S.T., Muniyamma, M. and Umesha, S. 2004. Anatomical Changes in Fodder grass due to Domestic Sewage Water Irrigation. Indian Journal of Environmental Protection 24 (10): 727-730.
75. Gurukar, S., Niranjana, S.R., **Umesha, S.**, Kumar, P.L. and Shetty, H.S. 2003. Effect of Seed Pelleting and Soil Amendment of Biocontrol agents on the incidence of Charcoal rot and yield of Soybean. Asian Journal of Microbiology, Biotechnology and Environmental Science 5 (1): 123-130.
76. **Umesha, S.**, Shylaja, M.D. and Shetty, H.S. 2000. Lytic activity in pearl millet: Its role in downy mildew disease resistance. Plant Science 157: 33-41.
77. **Umesha, S.**, Nagarathna, K.C., Shetty, S.A., and Shetty, H.S. 1999. Selection of downy mildew resistant somaclones, from a susceptible B line of pearl millet. Plant Cell, Tissue and Organ Culture 58: 159-162.
78. **Umesha, S.**, Shylaja, M.D., Shetty, S.A., Krishnappa M. and Shetty, H.S. 1998. Biocontrol of downy mildew disease of pearl millet using *Pseudomonas fluorescens*. Crop Protection 17: 387-392.

DNA Sequence Deposits

1. Kaunain Roohie R. and **Umesha S.** 2014. Sequences submitted to dbEST **LIBEST_028425** *Brassica oleracea* var. *capitata* - Pfu SSH Library JZ585524, JZ585525, JZ585526, JZ585527, JZ585528, JZ585529, JZ585530, JZ585531, JZ585532, JZ585533.
2. Kaunain Roohie R. and **Umesha S.** 2014. Sequences submitted to dbEST, **LIBEST_028420** *Brassica oleracea* var. *capitata* SSH Library JZ585251, JZ585252, JZ585253, JZ585254, JZ585255, JZ585256, JZ585257, JZ585258, JZ585259 JZ585260, JZ585519, JZ585520, JZ585521, JZ585522, JZ585523.
3. Shivakumar, J. and **Umesha, S.** 2014. *Ralstonia solanacearum* DNA, *lpxC* upstream region. NCBI Gene bank Accession No. AB910593, AB910594, AB910595, AB910596, AB910597, AB911030, AB911031, AB911032, AB911033, AB911034, AB911035, AB911036, AB911037, AB911038, AB911039, AB911324, AB911325, AB911326, AB911327, AB911328, AB911329, AB911330, AB911331, AB911332, AB911333, AB914680, AB914681, AB914682, AB914683, AB914684.
4. Chandan, S., **Umesha, S.** and Balamurugan, V. 2013. Partial gene sequence of *16S rRNA* gene of *Leptospira*. NCBI Gene bank Accession No. KF591093, KF591094, KF591095, KF591096, KF591097, KF591098, KF591099, KF591100, KF591101.
5. Chandrashekar, S. and **Umesha, S.** 2013. Partial gene sequence of *hrp* gene of *Xanthomonas perforans*. NCBI Gene bank Accession No. KF495201- KF495207.
6. Chandrashekar, S. and **Umesha, S.** 2013. Partial gene sequence of 16S rRNA gene for *Ralstonia solanacearum*, *Xanthomonas perforans* and *Xanthomonas oryzae* pv. *oryzae*. NCBI Gene bank Bankit No. 1663296, 1663302, 1663303.
7. Chandrasekhar, B. and **Umesha, S.** 2013. Partial gene sequence of *hrp* gene of *Ralstonia solanacearum*. NCBI/DDBJ Gene bank Accession No: AB859039, AB859717 AB859041, AB859040, AB859042, AB858989, AB859716, AB859718, AB859719, AB860181, AB859720, AB860183, AB860182, AB860184, KF220587, KF220588, AB861515, AB861517, AB861516, AB861518.

8. Kaunain Roohie R. and **Umesha S.** 2013. *Xanthomonas campestris* pv. *campestris* 16S rRNA partial sequence. Deposited to NCBI gene bank Accession No.KC855543.
9. Avinash, P. and **Umesha, S.** 2013. *Ralstonia solanacearum* 16S rRNA partial sequence. Deposited to NCBI gene bank Accession No.KF 017596, KF021616, KF021617.
10. Shivalingaiah, C. and **Umesha, S.** 2012. *Xanthomonas oryzae* pv. *oryzae* strain DOSB5 hypothetical protein partial sequence. Deposited to NCBI gene bank Accession No. KC200267.
11. Chandan, S., **Umesha, S.** and Balamurugan, V. 2012. Partial gene sequence of *rpoB* gene of *Leptospira*. NCBI Gene bank Accession No. KC282884, KC282885, KC282886, KC282887, KC282888, KC247146, KC247147, KC247148, KC247149, KC24750, KC147204, KC192545, KC192546, KC192547, KC292639, KC292640, KC292641, KC292642, KC292643, KC292644.
12. Avinash, P. and **Umesha, S.** 2012. *Ralstonia solanacearum* *lpxC* upstream region genomic sequence. Deposited to NCBI gene bank Accession No. JX628912.
13. Avinash, P. and **Umesha, S.** 2012. *Xanthomonas axonopodis* pv. *vesicatoria* *hrpb* region genomic sequence. Deposited to NCBI gene bank Accession No. JX628913.
14. Vanitha, S.C. and **Umesha, S.** 2009. *Ralstonia solanacearum* *lpxC* upstream region genomic sequence. Deposited to NCBI gene bank Accession No. GQ379236

Papers published in edited proceedings

1. **Umesha, S.**, P. A. Richardson, P. Kong, C.X. Hong. 2007. Characterization of Phytopathogenic bacteria from Irrigation reservoirs at two commercial nurseries in eastern Virginia. In: Proceedings of VA/WV water research symposium held during Nov 26-30, 2007, at Virginia Tech, Blacksburg, **Virginia, USA.**
2. **Umesha, S.** 2005. Biocontrol of Bacterial Canker of disease of Tomato using *Pseudomonas fluorescens*. In the proceedings of “1st International Symposium of Biological Control of Bacterial Plant Diseases” held during October 23-26, 2005 at “Technical University of Darmstadt and Federal Biological Research Center for Agriculture and Forestry (BBA), Institute for Biological Control, Heinrichstr. 243, 64287, **Darmstadt, Germany**”.
3. **Umesha, S.**, P. Hariprasad, S.A. Deepak, S. T. Girish and P. Syltie. 2006. Cotton – a seed germination and seedling study. Vitazyme 2006 Field Trial Results Booklet: **Vital Earth Resources**, Inc., Gladewater, TX-75647, **USA**, p19-20.
4. **Umesha, S.**, P. Hariprasad, S.A. Deepak, S. T. Girish and P. Syltie. 2006. Rice – a seed germination and seedling study. Vitazyme 2006 Field Trial Results Booklet: **Vital Earth Resources**, Inc., Gladewater, TX-75647, **USA**, p30-31.
5. **Umesha, S.**, P. Hariprasad, S.A. Deepak, S. T. Girish and P. Syltie. 2006. Tomatoes – a seed germination and seedling study. Vitazyme 2006 Field Trial Results Booklet: **Vital Earth Resources**, Inc., Gladewater, TX-75647, **USA**, pp40.

Book Chapters Contributed

1. Girisha, S.T. and **Umesha, S.** 2006. Phyllosphere Studies in Sewage Water Irrigated Fodder Grass *Brachiaria mutica*. In: **Green Technologies for Sustainable Agriculture** (Arvind Kumar and Pushpalatha Dubey, eds), Daya Publishing House, New Delhi, India (**ISBN: 8170354196**) p 41-46.

2. Girisha, S.T. and **Umesha, S.** 2006. Variation in the Morphological Characters of *Brachiaria mutica* Due to urban Sewage Water Irrigation. In: **Concepts of tropical Agriculture** (Arvind Kumar, ed), Daya Publishing House, New Delhi, India (ISBN: 8170354471) p 288-296.

Extension activities; popular articles published in periodicals

1. **Umesha, S.** and Shetty, H.S. 1997. *Sasyarogagala Jaivika Niyanthrana - Raitharigonda Varadhana* (in Kannada), **Prajavani - Krishiranga**, Jan 1, 1997.
2. Shetty, H.S., Shylaja, M.D. and **Umesha, S.** 1998. Effective management of disease in Bajra. **The Hindu**, Dec 8, 1997.
3. Shetty, H.S., Shylaja, M.D. and **Umesha, S.** 1998. Pearl millet and mildew disease, **Indian Express - Science Express**, June 23, 1998.
4. **Umesha, S.** and Shetty, H.S. 1998. *Sasyarogasamrakshaneyelli Aanvayika Vijnanada Koduge* (in Kannada), **Vignana Karnataka** 19 (3-4): 41-47.
5. **Umesha, S.** and Shetty, H.S. 2000. *Beejothpadaneyalli Swavalambhane* (in Kannada), **Vijaya Karnataka - Krishi Vijaya**, 27, March 2000.

A no. of Lectures were delivered to farmers in the area of plant disease management and Seed health testing methods.

v) Monographs/Reports (if any): NIL

14. Conference/Seminar organized:

Sl. No.	Status as organizer	Title of the conference/seminar	Date
1.	Organizing Committee member	1999 – National Symposium on Seed Science and Technology	August 5-7, 1999
2.	Organizing Committee member	2001-National Seminar on Seed Science and Technology in the New Millennium	August 5-7, 2001
3.	Organizing Committee member	2004 – National Seminar On Emerging Trends In Applied Botany, Seed Science And Technology	November 4-6, 2004
4.	Organizing Committee member	International Conference on Seed Health in Agricultural Development	June 9-12,2008
5.	Organizing Committee member	30 th Annual Conference and Symposium on Advances in Biotechnology for Plant protection	November 17-19,2008
6.	Organizing Committee member	Dr. Norman E. Borlaug Commemoration National Conference on Plant Diversity and Plant Health	March 11-12, 2010

15. Conference/Seminar chaired/Co-chaired:

Sl. No.	Title of the seminar	Organized by	Date
1.	National Conference on Advances in Plant Pathology	CAS in Botany, Madras University, Chennai, India	27-28 Mar 2013
2.	National Conference on Environmental Sciences and Health Hazards	Department of Biotechnology Karnataka University Dharwad, India	19-21 Nov 2012
3.	Impact of Pollution on Biodiversity; Role of Biological Sciences	Veerashaiva College, Sri Krishnadevaraya University, Bellary, Karnataka, India.	17-18 Feb 2012
4.	5th International Bacterial Wilt Symposium	Oils Crops Research Institute of Chinese Academy Agricultural Sciences, Wuhan, China	20-24 Jun 2011
5.	ISMPP Annual Conference	University of Agricultural Sciences, Dharwad	8-9 Oct 2009
6.	First International Biotechnology Conference	Sikkim Manipal Institute of Technology, Majitar, Gangtok	28-30 Dec 2008
7.	30th Annual conference and Symposium on Advances in Biotechnology for plant protection	Department of Applied Botany and Biotechnology, University of Mysore, Mysore, India.	17-19 Nov 2008

16. Conference/Seminar participated:

Sl. No.	Title	Organized by	Year/ Month	Only Participated	Participated & presented the paper
1.	National Symposium on Conventional and biotechnological Perspectives of Understanding the behavior of living organisms Invited Lecture	Department of Biotechnology Karnataka University Dharwad, India	15-16 November 2013	-	✓
2.	National conference on Medicinal plants Invited Lecture	Department of Botany, Sikkim University, Sikkim, India	3-5 October 2013	-	✓
3.	National Conference on Advances in Plant	CAS in Botany, Madras University,	27-28 March	-	✓

	Pathology Invited Lecture	Chennai, India	2013		
4.	National Conference on Environmental Sciences and Health Hazards. Invited Lecture	Department of Biotechnology Karnataka University Dharwad, India	19–21 November 2012	-	✓
5.	Impact of Pollution on Biodiversity; Role of Biological Sciences Invited Lecture	Veerashaiva College, Sri Krishnadevaraya University, Bellary, Karnataka, India	17-18 Feb 2012	-	✓
6.	5 th International Bacterial Wilt Symposium	Oils Crops Research Institute of Chinese Academy Agricultural Sciences, Wuhan, China	20-24 June 2011	-	✓
7.	XXXII All India Botanical Conference and International Symposium on, “Diversity of Plant and Microbes: Present Scenario”	Kuvempu University, Shimoga, Karnataka, India	2009/ Dec	✓	-
8.	ISMPP annual conference	Dharwad, India.	2009 /Oct	-	✓
9.	96 th Session of Indian Science Congress	North-Eastern Hill University, Shillong, Meghalaya, India	2009/ Jan	✓	-
10.	First International Biotechnology Conference	Sikkim Manipal Institute of Tech., Majitar, Gangtok, Sikkim, India.	2008/ Dec	-	✓
11.	30 th Annual conference and Symposium on Advances in Biotechnology for plant Protection	Dept. of Applied Botany & Biotech., Univ. of Mysore, Mysore, India	2008 /Nov	-	✓
12.	2 nd Symposium on Seed Health in Agricultural Development	Dept. of Applied Botany & Biotech., Univ. of Mysore, Mysore, India	2008/ Jun	-	✓
13.	National Symposium on “Diversity and	Univ. of North Bengal,	2008/ Jan	-	✓

	Functionality of Plant and Microbes	Siliguri 734 013, WB, India.			
14.	NCBI workshop on NCBI 4 Pack: Web based analysis on; structural analysis Quickstart, BLAST Quickstart, Identification of Disease genes, Correlation of Disease genes to Phenotypes	NCBI, Washington DC, USA	2007 /Nov	✓	-
15.	VA/WV water research Symposium National Seminar on “Molecular Plant Pathology and Biotechnology for Sustainable crop Production”	Dept. of Applied Botany & Biotech., Univ. of Mysore, Mysore, India	2007 /Nov	-	✓
16.	National Symposium on “Biodiversity and Biotechnology: Research and Development Needs in Edible Mushrooms and Crop Disease Management”	Dept. of Plant Pathology, G. B. Pant Univ. of Agri. & Tech., Pantnagar-263 145, Utnchl. India.	2006/ Nov	-	✓
17.	National Symposium on Biotechnological Methods for Crop Disease Management	Dept. of Plant Pathology, Annamalai Univ., Annamalai Nagar 608 002, TN, India	2006/ Mar	-	✓
18.	National Symposium on Emerging Plant Diseases, their diagnosis and management	Dept. of Botany, Univ. of North Bengal, Siliguri 734 013, WB, India	2006/ Feb	-	✓
19.	XII National Seed Seminar on Prosperity through Quality Seed	Acharya NG Ranga Agri. Univ., Hyderabad 500030, AP, India	2006/ Feb	-	✓
20.	Asian Conference on “Emerging Trends in	CAS in Botany, Univ.	2005/ Dec	-	✓

	Plant-Microbe Interactions”	of Madras, Chennai, India.			
21.	Global (International) conference II Plant Health – Global Wealth	Rajasthan College of Agriculture, RAU, Udaipur-313 001, India,	2005/ Nov	-	✓
22.	1 st International Symposium of Biological Control of Bacterial Plant Diseases	Tech. Univ. of Darmstadt & Federal Biological Research Center for Agri. & Forestry, Institute for Biol. Control, Heinrichstr. 243, Germany	2005/ Oct	-	✓
23.	Centenary Symposium on Plant Pathology	Central Potato Research Station, Shimla-171 001, H.P., India.	2005/ Apr		✓

17. Chairman/Member of Authority/Committee etc:

Sl. No.	Chairman/Member /Secretary	Committee/Authority	Year (From-To)
1.	Chairman	BOE in Applied Botany, University of Mysore, Mysore	2014-15
2.	Member	BOE-Biotechnology; Gulbarga Univ., Gulbarga	2014-15
3.	Member	BOE-Biotechnology;MangaloreUniv., Mangalore	2014-15
4.	Member	BOS- Applied Botany; Univ. of Mysore, Mysore	2013-16
5.	Member	BOS-Biotechnology; Univ. of Mysore, Mysore	2013-16
6.	Member	BOE-Biotechnology;Karnataka, University, Dharwad	2011-13
7.	Member	BOS- Botany, CAS in Botany, Madras Univ. Chennai	2013-16
8.	Chairman	BOE in Applied Botany, University of Mysore, Mysore	2012-13
9.	Chairman	BOE; Botany; Davanagere Univ., Davanagere	2012-13
10.	Member	BOS;Microbiology; (UG); Bangalore Univ. Bengaluru	2011-13
11.	Chairman	BOE; Biotechnology (PG); Univ. of Mysore, Mysore	2011-12
12.	Member	BOS; Biotechnology (UG); Univ. of Mysore, Mysore	2010-13

13.	Member	BOS; Applied Botany (PG); Univ. of Mysore, Mysore	2010-13
14.	Member	BOE; Biotechnology, KSOU, Mysore	2010-11
15.	Member	BOE; Applied Botany, University of Mysore, Mysore	2010-11
16.	Member	BOE; Biotechnology, University of Mysore, Mysore	2010-11
17.	Member	BOE; Botany, Kuvempu University, Sahyadri College, Shimoga, Karnataka	2010-11
18.	Member	BOE; Biotechnology, Kuvempu University, Sahyadri College, Shimoga, Karnataka	2009-11
19.	Chairman	BOE; Board of Question Paper setter, BSc-Forestry, Kannur University, Kannur, Kerala	2009-10
20.	Chairman	BOE in Applied Botany, University of Mysore, Mysore	2009-10

18. Membership to professional Organization/Associations:

Sl. No.	Name of the Association/Organizations	Life member/Ordinary member
1.	International Society of Biotechnology, India	Fellow Member
2.	Indian Science Congress Association, Kolkata.	Life Member
3.	Indian Society of Mycology and Plant Pathology, Udaipur	Life Member
4.	Indian Phytopathological Society, New Delhi.	Life Member
5.	Indian Society of Seed technologists, New Delhi	Life Member
6.	Society of Biotechnologists, Mysore	Life Member
7.	Association of Microbiologists of India	Life Member

19. Any other Information:

Popular articles published in periodicals:

1. **Umesha, S.** and Shetty, H.S. 1997. *Sasyarogagala Jaivika Niyanthrana - Raitharigonda Varadhana* (in Kannada), **Prajavani - Krishiranga**, Jan 1, 1997.
2. Shetty, H.S., Shylaja, M.D. and **Umesha, S.** 1998. Effective management of disease in Bajra. **The Hindu**, Dec 8, 1997.
3. Shetty, H.S., Shylaja, M.D. and **Umesha, S.** 1998. Pearl millet and mildew disease, **Indian Express - Science Express**, June 23, 1998.
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5. **Umesha, S.** and Shetty, H.S. 2000. *Beejothpadaneyalli Swavalambhane* (in Kannada), **Vijaya Karnataka - Krishi Vijaya**, 27, March 2000.

Recognized Guide to Supervise Ph.D. in **Applied Botany, Biotechnology and Microbiology** subjects, of University of Mysore.

(SIGNATURE)