Faculty Details proforma for DU Web-site

Title	Prof.	First Name	SATYANA-RAYANA	Last Name	TULASI	Photograph
Designation		**Professor**				
Address		**Department of Microbiology University of Delhi South Campus Benito Juarez Road New Delhi-110021**				
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Educational Qualifications

Degree	Institution	Year
Ph.D.	**University of Saugar, Sagar**	**1979**
M.Phil. / M.Tech.	-	-
PG: M. Sc.	**University of Saugar, Sagar**	**1974**
UG: B.Sc.	**S.S.N. College, Narasaraopet (Andhra University)**	**1972**
Any other qualification	-	

Career Profile

Post-Doctoral Research (Bhopal University, Bhopal) 1979 – 83
PDF (Paul Sabatier University & Institute of Applied Sciences, Toulouse, France) 1983 - 87
Reader (Department of Microbiology, University of Delhi South Campus, New Delhi) 1988 – 98
Professor (Department of Microbiology, University of Delhi South Campus, New Delhi) 1998 – Contd.

Administrative Assignments

1. Head, Department of Microbiology (University of Delhi South Campus): 1989 – 1992, 1995 – 1996, 2000 – 2003

2. Deputy Dean (Students' Welfare, UDSC): 1998 - 2004

Areas of Interest / Specialization

Basic, and Applied & Environmental Microbiology [Microbial diversity, Extremophiles, thermostable enzymes (amylases, xylanases, phytases, pectinases, cloning and expression of enzyme encoding genes), carbon sequestration, metagenomics]

Subjects Taught

Prokaryotes (Bacteria and Archaea), Environmental Microbiology, Plant and Microbial Virology, Industrial Microbiology, Microbial Physiology (Enzymes)

Research Guidance

List against each head (If applicable)

1. *Supervision of awarded Doctoral Thesis*: 26 (Two scholars have recently submitted theses)
2. *Supervision of Doctoral Thesis, under progress*: 4
3. *Supervision of awarded M.Phil dissertations*: 2
4. *Supervision of M.Phil dissertations, under progress*: 1
5. *Supervision of M. Sc. Dissertations*: 36

Publications Profile

List against each head(If applicable) (as Illustrated with examples)

1. Books/Monographs (Authored/Edited): 6

1. Thermophilic Microbes in Environmental and Industrial Biotechnology (Eds. T. Satyanarayana, J. Littlechild and Y. Kawarabayasi), Springer, Netherlands (2013), pp. 954.

2. Microorganisms in Environmental Management: Microbes and Environment (Eds. T. Satyanarayana, B.N. Johri and Anil Prakash), Springer, Netherlands (2012), pp.819.

3. Microorganisms in Sustainable Agriculture and Biotechnology (Eds. T. Satyanarayana, B.N. Johri and Anil Prakash), Springer, Netherlands (2012), pp. 829.

4. Yeast Biotechnology: Diversity and Applications (Eds. T. Satyanarayana and G. Kunze), Springer (2009), pp. 746.

5. Microbial Diversity: Current Perspectives and Potential Applications (Eds. T. Satyanarayana and B.N. Johri), I.K. International Publishing House Pvt. Ltd., New Delhi (2005), pp. 1133.

6. Thermophilic Moulds in Biotechnology (Eds.B.N. Johri, T. Satyanarayana, and J.Olsen), Kluwer Acad. Publ., Netherlands (1999), pp. 354.

2. Research papers published in Refereed/Peer Reviewed Journals: 147

1. Mehta, D. and Satyanarayana, T. 2015. Structural elements of thermostability in the maltogenic amylase of *Geobacillus thermoleovorans*. Intern. J. Biol. Macromol. 79: 570-576.

2. Joshi, S. and Satyanarayana, T. 2015. Characteristics and applicability of phytase of the yeast *Pichia anomala* in synthesizing haloperoxidase. Appl. Biochem. Biotechnol. (In Press).

3. Nisha, M. and Satyanarayana, T. 2015. Characteristics of thermostable amylopullulanase of *Geobacillus thermoleovorans* and its truncated variants. Inern. J. Biol. Macromol. 76: 279-291.

4. Jain, I., Kumar, V. and Satyanarayana, T. 2015. Xylooligosaccharides: an economical prebiotic from agroresidues and their health benefits. Indian J. Exp. Biol. 53: 131-142.

5. Nisha, M. and Satyanarayana, T. 2015. The role of N1 domain on the activity, stability, substrate specificity and raw starch binding of amylopullulanase of the extreme thermophile *Geobacillus thermoleovorans*. Appl. Microbiol. Biotechnol. 99: 5461-5474.

6. Kumar, V. and Satyanarayana, T. 2015. Generation of xylooligosaccharides from microwave irradiated agroresidues using recombinant thermo-alkali-stable endoxylanase of the polyextremophilic bacterium *Bacillus halodurans* expressed in *Pichia pastoris*. Biores. Technol. 179: 382-389.

7. Joshi, S. and Satyanarayana, T. 2015. *In vitro* engineering of microbial enzymes with multifarious applications: Prospects and perspectives. Bioresource Technol. 176: 273-283.

8. Kumar, V. and Satyanarayana, T. 2014. Secretion of recombinant thermo-alkali-stable endoxylanase of polyextremophilic *Bacillus halodurans* TSEV1 and its utility in generating xylooligosaccharides from renewable agro-residues. Process Biochem. 49: 1875-1883.

9. Nisha, M. and Satyanarayana, T. 2014. Characterization and multiple applications of a highly thermostable and Ca^{2+}-independent amylopullulanase of the extreme thermophile *Geobacillus thermoleovorans*. Appl. Biochem. Biotechnol. 174: 2594-2615.

10. Jain, I., Vikash Kumar and Satyanarayana, T. 2014. Applicability of recombinant β-xylosidase from the extremely thermophilic bacterium *Geobacillus thermodenitrificans* in synthesizing alkylxylosides. Biores. Technol. 170: 462-469.

11. Verma, D. and Satyanarayana, T. 2014. Novel alkalistable and thermostable xylanase-encoding gene (Mxyl) retrieved from compost-soil metagenome. Encyclopaedia Metagenomics (Springer), pp. 115-136.

12. Singh, B. and Satyanarayana, T. 2014. Fungal phytases: Characteristics and amelioration of nutritional quality and growth of non-ruminants. J. Animal Physiol. Animal Nutrition (In Press).

13. Joshi, S. and Satyanarayana, T. 2014. Optimization of heterologous expression of the phytase (PPHY) of *Pichia anomala* in *P. pastoris* and its applicability in fractionating allergenic glycinin from soy protein. J. Indust. Microbiol. Biotechnol. DOI 10.1007/s10295-014-1407-6 (In Press).

14. Mehta, D. and Satyanarayana, T. 2014. Domain C of thermostable α-amylase of *Geobacillus thermoleovorans* mediates raw starch adsorption. Appl. Microbiol. Biotechnol. 98:4503–4519.

15. Kumar, V. and Satyanarayana, T. 2014. Production of endoxylanase with enhanced thermostability by a novel polyextremophilic *Bacillus halodurans* TSEV1 and its applicability in waste paper deinking. Proc. Biochem. 49 (2014) 386–394.

16. Verma, D. and Satyanarayana, T. 2013. Production of cellulase-free xylanase by the recombinant *Bacillus subtilis* and its applicability in paper pulp bleaching. Biotechnol. Progr. 29(6):1441-1447.

17. Verma, D. and Satyanarayana, T. 2013. Improvement in thermostability of metagenomic GH11 endoxylanase (Mxyl) by site-directed mutagenesis and its applicability in paper pulp bleaching process. J. Indust. Microbiol. Biotechnol. 40: 1373-1381.

18. Kumar, V. and Satyanarayana, T. 2013. Biochemical and thermodynamic characteristics of thermo-alkali-stable xylanase from a novel polyextremophilic *Bacillus halodurans* TSEV1. Extremophiles 17: 797-808.

19. Kumar, V. and Satyanarayana, T. 2014. Production of thermo-alkali-stable xylanase by a novel polyextremophilic *Bacillus halodurans* TSEV1 in cane molasses medium and its applicability in making 3 whole - wheat bread. Biopr. Biosyst. Engin. 37: 1043 – 1053.

20. Joshi, S. and Satyanarayana, T. 2013. Characteristics and applications of a recombinant alkaline serine protease from a novel bacterium *Bacillus lehensis*. Biores. Technol. 131: 76-85.

21. Sharma, A. and Satyanarayana, T. Characteristics of a high maltose-forming, acidstable and Ca2+-independent α-amylase of the acidophilic *Bacillus acidicola*. 2013. Appl Biochem Biotechnol. 171: 2053-2064.

22. Sharma, A. and Satyanarayana, T. 2013. Structural and biochemical features of acidic α-amylase of *Bacillus acidicola*. Intern. J. Biol. Macromol. 61: 416-423.

23. Mehta, D. and Satyanarayana, T. 2013. Dimerization mediates thermo- adaptation, substrate affinity and transglycosylation in a highly thermostable maltogenic amylase of *Geobacillus thermoleovorans*. PLoS One e73612: 1 – 13.

24. Verma, D., Anand, A. and Satyanarayana, T. 2013. Thermostable and alkalistable endoxylanase of the extremely thermophilic bacterium *Geobacillus thermodenitrificans* TSAA1: Cloning, expression, characteristics and its applicability in generating xylooligosaccharides and fermentable sugars. Appl. Biochem. Biotechnol. 170: 119-130.

25. Sharma, A. and Satyanarayana, T. 2013. Microbial acid-stable α-amylases: Characteristics, genetic engineering and applications. Process Biochem. 48: 201-211.

26. Anand, A., Kumar, V. and Satyanarayana, T. 2013. Characteristics of thermostable endoxylanase and β-xylosidase of the extremely thermophilic bacterium *Geobacillus thermodenitrificans* TSAA1 and its applicability in generating xylooligosaccharides and xylose from agro-residues. Extremophiles 17: 357-366.

27. Verma, D. and **Satyanarayana, T.** 2013. Cloning, expression and characteristics of a novel alkalistable and thermostable xylanase encoding gene (Mxyl) retrieved from compost-soil metagenome. PLoS One 8(1): e52459.

28. Kumar, V. and **Satyanarayana, T.** 2012. Thermo-alkali-stable xylanase of a novel polyextremophilic *Bacillus halodurans* TSEV1 and its application in biobleaching. Intern. Biodeter. Biodegr. 75: 138-145.

29. Verma, D. and Satyanarayana, T. 2012. Phytase production by the unconventional yeast *Pichia anomala* in fed batch and cyclic fed batch fermentations. Afr. J. Biotechnol. 11: 13705 – 13709.

30. Singh, B. and Satyanarayana, T. 2012. Production of phytate-hydrolyzing enzymes by thermophilic moulds. African J. Biotechnol. 11: 12314-12324.

31. Kumar, V., Poonam and Satyanarayana, T. 2013. Highly thermo-halo-alkali-stable β-1,4-endoxylanase from a novel polyextremophilic strain of *Bacillus halodurans*. Bioproc. Biosyst. Engg. 36: 555-565.

32. Sharma, A. and **Satyanarayana, T.** 2012. Production of acidstable and high maltose-forming α-amylase of *Bacillus acidicola* by solid state fermentation and immobilized cells and its applicability in baking. Appl. Biochem. Biotechnol. 168: 1025 – 1034.

33. Mehta, D. and Satyanarayana, T. 2013. Biochemical and molecular characteristics of recombinant acidic and thermostable raw starch hydrolyzing α- amylase from an extreme thermophile *Geobacillus thermoleovorans*. J. Mol. Catalysis. B. Enzymatic 85-86: 229-238.

34. Nisha, M. and Satyanarayana, T. 2013. Characterization of recombinant amylopullulanase (gt-apu) and truncated amylopullulanase (gt-apuT) 0f the extreme thermophile *Geobacillus thermoleovorans* NP33 and their action in starch saccharification. Appl. Microbiol. Biotechnol. 97: 6279-6292.

35. Anand, A. and **Satyanarayana, T.** 2012. Applicability of carboxydotrophic bacterial carbon monoxide dehydrogenase in carbon sequestration and bioenergy generation. J. Sci. Indust. Res. 71: 381-384.

36. Sharma, A. and **Satyanarayana, T.** 2012. Cloning and expression of acidstable, high maltose-forming, Ca^{2+}-independent α-amylase from an acidophile *Bacillus acidicola* and its applicability in starch hydrolysis. Extremophiles 16: 515-522.

37. Kaur, P., Verma, D. and **Satyanarayana, T.** 2011. Recycling of spent medium from *Pichia anomala* MTCC-4133 phytase fermentation for the production of useful microbial products. Kavaka 39: 8-14.

38. Verma, D. and **Satyanarayana, T.** 2012. Molecular approaches for ameliorating microbial xylanases. Bioresource Technology 117: 360-367.

39. Verma, D. and Satyanarayana, T. 2012. Cloning, expression and applicability thermo-alkali- stable xylanase of *Geobacillus thermoleovorans* in generating xylooligosaccharides from agro-residues. Bioresource Technol. 107: 333-338.

40. Sharma, A., Kawarabayasi, Y. and Satyanarayana, T. 2012. Acidophilic bacteria and archaea: Acidstable biocatalysts and their potential applications. Extremophiles 16: 1-19.

41. Kumar, V. and **Satyanarayana, T.** 2011. Applicability of thermo-alkali-stable and cellulase-free xylanase from a novel thermo-haloalkaliphilic *Bacillus halodurans* TSEV1 in producing xylooligosaccharides. Biotechnol. Lett. 33: 2279-2285**.**

42. Verma, D. and Satyanarayana, T. 2011. An improved protocol for DNA extraction from alkaline soil and sediment samples for constructing metagenomic libraries. Appl. Biochem. Biotechnol. 165: 454-464.

43**.** Archana, A. and **Satyanarayana, T.** 2011. Optimization of medium components and cultural variables for enhanced production of acidic high maltose-forming and Ca2+-independent α-amylase 5 by *Bacillus acidicola*. J. Biosc. Bioeng. 111: 550-553.

44. Yadav, R., **Satyanarayana, T.** Kotwal, S. and Rayalu, S. 2011. Enhanced carbonation reaction using chitosan-based carbonic anhydrase nanoparticles. Curr. Sci. 100: 520 – 524.

45. Vohra, A., Kaur, P. and **Satyanarayana, T. 2011.** Production, characteristics and applications of the cell-bound phytase of *Pichia anomala*. Antonie van J. Microbiol. 99: 51-55.

46. Yadav, R., Wanjari, S., Prabhu, C., Vivek Kumar, Labhsetwar, N. **Satyanarayana, T.**, Kotwal, S. and Rayalu, S. 2010. Immobilized carbonic anhydrase for the biomimetic carbonation reaction. Energy & Fuels 24: 6196-6207.

47. Kaur, P., Singh, B., Böer, E., Straube, N., Piontek, M., Satyanarayana, T. and Kunze, G. 2010. Pphy – a cell-bound phytase from the yeast *Pichia anomala*: molecular cloning of the gene *PPHY* and characterization of the recombinant enzyme. J. Biotechnol. 149 (2010) 8–15.

48. Sharma, A. S. and Satyanarayana, T. 2010. High maltose-forming, Ca^{2+}-independent and acid stable α-amylase from a novel acidophilic bacterium *Bacillus acidicola* TSAS1. Biotech Lett. 32: 1503 - 1507.

49. Kaur, P. and **Satyanarayana, T.** 2010. Improvement in cell-bound phytase activity of *Pichia anomala* by permeabilization and applicability of permeabilized cells in soymilk dephytinization. J. Appl. Microbiol. 108: 2041-2049.

50. Pardeep Kumar and Satyanarayana, T. 2010. Characterization of a neutral and thermostable glucoamylase from the thermophilic mould *Thermomucor indicae-seudaticae*: activity, stability and structural correlation. Appl. Biochem. Biotechnol. 160: 879 – 890.

51. Singh, B. and Satyanarayana, T. 2010. Plant growth promotion by an extracellular HAP-phytase of a thermophilic mould *Sporotrichum thermophile*. Appl. Biochem. Biotechnol. 160: 1267-1276.

52. Prabhu, C., Wanjari, S., Gawande, S., Das, S., Labhsetwar, N., Kotwal, S., Puri, A.K., **Satyanarayana, T,** and Rayalu, S. 2009. Immobilization of carbonic anhydrase Enriched microorganism on biopolymer based materials. J. Molecular Catalysis B: Enzymatic 60: 13 - 21.

53. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2009. Hyperthermostable, Ca^{2+}-independent and high maltose-forming α–amylase of an extreme thermophile *Geobacillus thermoleovorans*: Cultivation under aerobic and anaerobic conditions and production of enzymes by free and immobilized cells. Applied Biochemistry and Biotechnology 159:464–477.

54. Pardeep Kumar and Satyanarayana, T. 2009. Overproduction of glucoamylase by a deregulated mutant of a thermophilic mold *Thermomucor indicae-seudaticae*. Applied Biochemistry and Biotechnology 158: 113-125.

55. Singh, B. and Satyanarayana, T. 2009. Characterization of HAP-phytase from a thermophilic mould *Sporotrichum thermophile*. Biores. Technol. 100: 2046-2051.

56. Hassan, S., Altaff, K. and Satyanarayana, T. 2009. Use of soybean meal supplemented with cell bound phytase for replacement of fish meal in the diet of juvenile milk fish, *Chanos Chanos.* Pakistan J. Nutrition 8: 341 – 344.

57. Singh, B. and Satyanarayana, T. 2008. Phytase production by *Sporotrichum thermophile* in a cost-effective cane molasses medium in submerged fermentation and its application in bread. J. Appl. Microbiol. 105: 1858-1865.

58. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2008. Biophysical and biochemical characterization of a hyperthermostable and Ca^{2+}-independent α-amylase of an extreme thermophile *Geobacillus thermoleovoran**s*****.*** Applied Biochemistry and Biotechnology 150: 205-219.

59. Minocha, N., Kaur, P., Satyanarayana, T. and Kunze, G. 2007. Acid phosphatase production by recombinant *Arxula adeninivorans*. Appl. Microbiol. Biotechnol. 76: 387-393.

60. Singh, B. and Satyanarayana, T. 2008. Phytase production by a thermophilic mould *Sporotrichum thermophile* in solid state fermentation and its potential applications. Bioresource Technol. 99 (8): 2824-2830.

61. Pardeep Kumar and Satyanarayana, T. 2007. Economical glucoamylase production using alginate-immobilized *Thermomucor indicae-seudaticae* in cane molasses medium. Lett. Appl. Microbiol. 45: 391-397.

62. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2007. Purification, kinetics and applications of raw starch hydrolyzing, hyperthermostable, Ca^{2+} independent α- amylase of an extreme thermophile *Geobacillus thermoleovorans.* Applied Biochemistry and Biotechnology 142 (2): 179-193.

63, Singh, B. and Satyanarayana, T. 2008. Improved phytase production by a thermophilic mould *Sporotrichum thermophile* in submerged fermentation due to statistical optimization. Bioresource Technol. 99: 824-830.

64. Ghosh, A., Bhardwaj, M., Satyanarayana, T., Khurana, M., Mayilraj, S. and Jain, R.K. 2007. *Bacillus lehensis* sp. nov., an alkalitolerant bacterium isolated from soil of Leh, India. International Journal of Systematic and Evolutionary Microbiology 57: 238–242.

65. Noorwez, S.M., Ezhilvannan, M. and Satyanarayana, T. 2006. Production of a high maltose-forming, hyperthermostable and Ca^{2+}-independent amylopullulanase by an extreme thermophile *Geobacillus thermoleovorans* in submerged fermentation. Indian J. Biotechnol. 5: 337-345.

66. Pardeep Kumar and Satyanarayana, T. 2007. Production of a thermostable and neutral glucoamylase using immobilized *Thermomucor indicae-seudaticae*. World J. Microbiol. Biotechnol. 23:509–517.

67. Kumar, S., Pardeep Kumar and Satyanarayana, T. 2007. Production of glucoamylase by thermophilic mold *Thermomucor indicae-seudaticae*. Appl. Biochem. Biotechnol. 142 (3): 221 -230.

68. Pardeep Kumar and Satyanarayana, T. 2007. Optimization of culture variables for improving glucoamylase production by alginate-entrapped *Thermomucor indicae-seudaticae* using statistical methods. Bioresource Technology 98: 1252-1259.

69. Sharma, A., Adhikari, S. and Satyanarayana, T. 2007. Alkali-thermostable and cellulase-free xylanase production by an extreme thermophile *Geobacillus thermoleovorans*. World J. Microbiol. Biotechnol. 23:483–490.

70. Kaur, P., Lingner, A., Singh, B., Boer, E., Polajeva, J., Steinborn, G., Bode, R., Gellisen, G., Satyanarayana, T. and Kunze, G. 2007. *APHO1* from the yeast *Arxula adeninivorans* encodes an acid phosphatase of broad substrate specificity. Antonie van Leeuwenhoek 91: 45 -55.

71. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2007. Improving production of hyperthermostable and high maltose-forming α-amylase by an extreme thermophile *Geobacillus thermoleovorans* using response surface methodology and its applications. Bioresource Technology 98: 345-352.

72. Kaur, P., Kunze, G. and **Satyanarayana, T.** 2007. Yeast phytases: Present scenario and future perspectives. Critical Reviews in Biotechnology 27 (2): 93-109.

73. Singh, B. and Satyanarayana, T. 2006. Phytase production by a thermophilic mould *Sporotrichum thermophile* in solid-state fermentation and its application in dephytinization of sesame oil cake. Applied Biochem. Biotechnol. 133 (3): 239-250.

74. Singh, B. and Satyanarayana, T. 2006. A marked enhancement in phytase production by a thermophilic mould *Sporotrichum thermophile* using statistical designs in a cost-effective cane molasses medium. Journal of Applied Microbiology 101:344-352.

75. Vohra, A., Rastogi, S.K. and Satyanarayana, T. 2006. Amelioration in growth and phosphate assimilation of poultry birds using cell-bound phytase of *Pichia anomala*. World J. Microbiol. Biotechnol. 22(6): 553-558.

76. Sharma, D.C. and Satyanarayana, T. 2006. A marked enhancement in the production of a highly alkaline and thermostable pectinase by *Bacillus pumilus* dcsr1 in submerged fermentation using statistical methods. Bioresource Technol. 97: 727-733.

77. Parvinder Kaur and Satyanarayana, T. 2005. Production of cell-bound phytase by *Pichia anomala* in an economical cane molasses medium: optimization using statistical tools. Process Biochemistry 40: 3095-3102.

78. Uma Maheshwar Rao, J.L. and Satyanarayana, T. 2004. Improvement in secretion of α-amylase by a thermophilic *Geobacillus thermoleovorans*. Indian J. Microbiol. 44: 281-284.

79. Sanjeev Kumar and Satyanarayana, T. 2004**.** Statistical optimization of a thermostable and neutral glucoamylase production by a thermo0phylic mold *Thermomucor indiae-seudaticae*in solid-state fermentation. World J. Microbiol. Biotechnol. 20: 895-902.

80. Kamra, P. and Satyanarayana, T. 2004. Xylanase production by a thermophilic mould *Humicola lanuginose* in solid-state fermentation. Appl. Biochem. Biotechnol. 119: 145-157.

81. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2004. Amelioration in secretion of hyperthermostable and Ca^{2+} -independent α-amylase by some polyamines and their biosynthetic inhibitor methylglyxal-bis-guanylhydrazone. J. Appl. Microbiol. 97:1015-1020.

82. Vohra, A. and Satyanarayana, T. 2004. A cost-effective cane molasses medium for enhanced cell-bound phytase production by *Pichia anomala*. J. Appl. Microbiol. 97: 471-476.

83. Kumar, S. and Satyanarayana, T. 2004. Production of thermostable and neutral glucoamylase by a thermophilic mould *Thermomucor indicae-seudaticae* in solid state fermentation. Indian J. Microbiol. 44: 53-57.

84. Satyanarayana, T., Noorwez, S.M., Kumar, S., Rao, J.L.U.M., Ezhilvannan, M. and Kaur, P. 2004. Development of an ideal starch saccharification process using amylolytic enzymes from thermophiles. Biochemical Society Transactions 32 : 276-278.

85. Kaur, G., Kumar, S. and Satyanarayana, T. 2004. Production, characterization and application of a thermostable polygalacturonase of thermophilic mould *Sporotrichum thermophile* Apinis. Bioresource Technol. 94: 239-243.

86. Kaur, G. and Satyanarayana, T. 2004. Production of extracellular pectinolytic, cellulolytic and xylanolytic enzymes by a thermophilic mould *Sporotrichum thermophiles* Apinis in solid state fermentation. Indian J. Biotechnol. 3: 552-557.

87. Kaur, P. and Satyanarayana. T. 2004. Production and starch saccharification by a thermostable and neutral glucoamylase of a thermophilic mould *Thermomucor indicae-seudaticae*. World J. Microbiol. Biotechnol. 20: 419-425.

88. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2003. Statistical optimization of a high maltose-forming, hyperthermostable and Ca2+-independent α-amylase production by an extreme thermophile *Geobacillus thermoleovorans* using response surface methodology. J. Applied Microbiol. 95: 712-718.

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90. Uma Maheswar Rao, J.L. and Satyanarayana, T. 2003. Enhanced secretion and low temperature stabilization of a hyperthermostable and Ca^{+2} -independent α-amylase of *Geobacillus thermoleovorans* by surfactants. Lett. Appl. Microbiol. 36: 191-196.

91. Archana, A. and Satyanarayana, T. 2003. Purification and characterization of a cellulase-freexylanase of a moderate thermophile *Bacillus licheniformis* A99. World J. Microbiol. Biotechnol. 19: 57-65.

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93. Vohra, A. and Satyanarayana,T. 2002. Purification and characterization of a thermostable and acid-stable phytase from *Pichia anomala*. World J. Microbiol. Biotechnol. 18: 687-691.

94. Vohra, A. and Satyanarayana, T. 2002. Statistical optimization of medium components by response surface methodologyto enhance phytase production by *Pichia anomala*. Process Biochemistry 37(9): 999 – 1004.

95. Parvinder Kaur and Satyanarayana, T. 2001. Partial purification and characterization of glucoamylase of thermophilic mould, *Thermomucor indicae-seudaticae*. Indian J. Microbiol. 41: 195-199.

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8. Kaur, P., Singh, B., Vohra, A., and Satyanarayana, T. 2003. Fabulous phytases: Diverse functions in the living world and commercial prospects. The Botanica 53: 1- 8.

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10. Bali, A. and **Satyanarayana, T**. 2001. Microbial phytases in nutrition and combating phosphorus pollution. Everyman's Science (ISCA) 35: 207-210.

11. Noorwez, S.M. and **Satyanarayana, T**. 1999. Molecular approaches to understanding microbial ecology. Botanica 49: 123-126.

12. Archana, A., **Satyanarayana, T**. and Sharma, A. 1998. Eco-friendly paper making. Science Reporter 35: 24- 27.

13. Bali, A. and **Satyanarayana, T**. 1997. Microbial phytases in mitigating anti-nutritional risks of phytic acid in feeds and foods. Botanica 47: 88-91.

14. Sharma, A., Archana, A. and **Satyanarayana, T**. 1997. Xylanases in eco-friendly paper pulp bleaching technologies. Botanica 47: 163-167.

15. Noorwez, S.M. and **Satyanarayana, T**. 1997. Cold prospects. Science Reporter 34: 92- 93.

16. Noorwez, S.M. and **Satyanarayana, T**. 1996. Extremophiles: biodiversity and biotechnology. Botanica 46: 187-193.

17. **Satyanarayana, T**. 1995. Biotechnological Potential of extreme and hyper thermophiles. Botanica. 45: 29-31.

18. Sen, S. and **Satyanarayana, T**. 1995. Environment friendly detergents. Down to Earth 4(13): 49-50.

19. Srivastava, A. and **Satyanarayana, T**. 1992. Microbes for pulping. Science Reporter 29: 39-42.

20. Srivastava, A. and **Satyanarayana, T**. 1992. Hot prospects. Science Reporter 29(6): 38-41.

21. **Satyanarayana, T**. and Thakur, M.S. 1978. Harmful effects of mycotoxins. Science Reporter 15(3): 198-199.

22. Satyanarayana, T. 1976. What are hallucinogenic mushrooms? Science Reporter 15(3): 191-192.

Conference Reports

1. **Satyanarayana, T**. 2005. Microbial Diversity: Current Perspectives and Potential Applications (held at the department of Microbiology, University of Delhi South Campus, New Delhi, April 2005). Current Science 89: 926 – 928.

2. **Satyanarayana, T**. and Singh, S.P. 2006. Thermophiles 2005: From Evolution to Revolution (held at Griffith University, Gold Coast, Australia, Sept. 2005). Current Science 90: 10 – 12.

3. **Satyanarayana, T.** 2006. Bioprocesses in Food Industries (held at the University of Patras, Greece, June 2006). Current Science 91: 578 – 579.

4. **Satyanarayana, T.** 2007. Thermophiles (held at the University of Bergen, Norway, Sept. 2007). Current Science 93: 1340 – 1342.

5. **Satyanarayana, T.** 2014. Thermophiles 2013 (held at Regensberg, Germany). Curr. Sci. 148-149.

Conference Organization/ Presentations (in the last three years)

List against each head(If applicable)

1. Organization of a Conferences

(i) National AMI conference in 1997
(ii) Thermophiles 2001 International Conference in 2001
(iii) International Microbial Diversity conference in 2005
(iv) Workshop on 'Yeast Biodiversity and Biotechnology' in 2006

2. Participation as Paper/Poster Presenter
Participated in over 110 National and International conferences/symposia and international conferences, and presented our work as invited lectures and posters.

Research Projects (Major Grants/Research Collaboration)

i. A research project entitled "Development of Ectomycorrhizal Inoculum Production and Application Technology" sponsored by DBT was completed in 1997.

ii. A research project entitled, "Process validation and biological evaluation of Asavas and Aristas with special reference to inoculum bearing herbs' sponsored by DST was completed in 2000.

iii. Diversity of Gram-positive bacteria, sponsored by MEF (In operation from March 2000).

iv. Amylopullulanase of *Bacillus thermoleovorans*, sponsored by DST. Completed in Sept. 2004.

v. Glucoamylase of *Thermomucor indicae-seudaticae*, sponsored by UGC in 2003, completed in May 2006
vi. Applicability of cell-bound phytase of *Pichia anomala* in fresh water aquaculture, sponsored by DBT in

2004.

vii. Applicability of cell-bound phytase of the yeast *Pichia anomala* in marine aquaculture, sponsored by ICAR in 2005.

viii. Carbon sequestration using heterotrophic bacteria, sponsored by DBT, and in operation from March 2006.

ix. DST-DAAD Joint research project on 'Novel phytases from non-conventional yeasts' with Prof. G. Kunze (IPK, Gatersleben, Germany), completed in June 2006.

x. DST-JSPS international joint research project on 'Novel carbohydrate metabolic enzymes using environmental genomics technique and their application' with Dr. Yutaka Kawarabayasi, during 2009-2011.

xi. DBT project on 'Metagenomics for xylanase' (2008 –2011).

xii. Cloning and expression of α-amylase of *Geobacillus thermoleovorans*, sponsored by CSIR in 2010.

xiii. Acidic α-amylase of *Bacillus acidicola*, *sponsored* by DST in 2012.

xiv. Carbon monoxide dehydrogenase of Actinobacteria, sponsored by DBT in 2013.

xv. Cloning of phytase of *Sporotrichum thermophile*, sponsored by DBT in 2013.

xvi. Cloning of phytase of *Pichia anomala* in *Pichia pastoris*, sponsored by UGC in 2012.

Awards and Distinctions

1. Fellow of National Academy of Agricultural Sciences, Association of Microbiologists of India, Mycological Society of India, Biotech Research Society of India and Andhra Pradesh Academy of Sciences

2. Recipient of Dr. G.B. Manjrekar award of AMI in 2003

3. Recipient of Dr. V.S. Agnihotrudu award of MSI in 2009

4. Recipient of Malaviya Memorial award of BRSI for 2012

Association With Professional Bodies

1. Editing

A member of Editorial Board of Bioresource Technology and Indian J. Biotechnology.

2. Reviewing

Reviewer for Bioresource Technology, Applied Biochemistry and Biotechnology, Journal of Applied Microbiology, Current Microbiology, Applied Microbiology and Biotechnology, Journal of Basic Microbiology, Process Biochemistry, Journal of Bioscience and Bioengineering, Food technology and Biotechnology, Indian J. Microbiology, J. Scientific and Industrial research, Indian J. Biotechnology, Indian J. Experimental Biology, PLoS One, Kavaka and others.

3. Advisory

President of Association of Microbiologists of India (2015-2016) and MSI (2014-2015)

4. Committees and Boards

Member in the Governing Body of Maitreyi College, Board of research studies of FIAS, Committee of Courses and studies of the department of Microbiology (UDSC), Sikkim University, NEHU, Board of Research Studies of Dayalbagh University, M.D. University, Rohtak, Course Committee of Biotechnology of NIT (Allahabad), DST Committee to monitor Electron Microscopy center at AIIMS, Course Committee of Biotechnology (Jamia Millia Islamia, New Delhi), Member of the DBT Task Force Energy Biosciences, Member of Governing Body of the Centre of Excellence in Marine Microbiology at Goa Unioversity.

5. Memberships

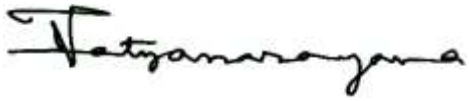
Life member of Indian Science Congress Association, Association of Microbiologists of India, Biotech Research Society of India, Mycological Society of India and International Forum on Industrial Bioprocesses.

6. Office Bearer

(i) Secretary for AMI Unit at UDSC
(ii) Coordinator of the Centre for Bacteria and Archaea of AICOPTAX programme of the Ministry of Environment & Forests from 2005 to 2012.

Other Activities

1. Setting question papers for other Universities
2. Evaluation of Ph.D. and M. Phil. theses of Indian and foreign Universities
3. Member of selection committees of the Universities and National Bodies such as ASRB and CSIR
4. Collaborative research with foreign as well as Indian scientists



You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.