

Details of Research Publications during the Period April 2013- March 2014

Articles/Papers published in Academic Journals:

Sr. No.	Department	Published	In Press
1.	Biosciences	63	9
2.	Chemistry	54	1
3.	Computer Science	37	-
4.	Electronics	2	-
5.	Materials Science	6	-
6.	Mathematics	14	-
7.	Physics	57	2
8.	Homescience	8	-
9.	Statistics	11	2
	Total	252	14

Books/Chapters in Book

Sr. No.	Department	Books	Chapters in Book
1.	Biosciences	01	01
2.	Computer Science	04	01
3.	Mathematics	-	-
4.	Physics	-	-
5.	Homescience	-	05
6.	Chemistry	-	-

Papers published in Academic Journals during April 2013- March 2014 Basic Science Departments

Department of Biosciences

1. Singh N. K. Hasan S.S. Kumar J., Raj I., Pathan A.A., Parmar A., Shakil S., Gourinath S. Madamwar D. Crystal structure and interaction of phycocyanin with β -secreatase: A putative therapy for a Alzheimer's diseases. CNS & Neurological Disorders: Drug Target (In Press) (2014).
2. Yachana Jha, Gaurav Sablok, Naidu Subbarao, Raja Sudhakar, MHU Turabe Fazil, R B Subramanian, Andrea Squartini, Sunil Kumar. Bacterial-induced expression of RAB18 protein in *Orzya sativa* salinity stress and insights into molecular interaction with GTP ligand (In Press)(2014).
3. Sanjay S. Karn, Sanjay B. Pandavadara, Rupal A. Vasant, A. V. R. L. Narasimhacharya. Lovastatin improves fluoride induced hypercholesterolemia in albino rats. Fluoride (In Press) (2014).
4. Anjali Bose Shabnam Pathan, Khyati Pathak, Haresh Keharia. Keratinolytic protease production by *Bacillus amyloliquefaciens* 6B using feather meal as substrate and application of feather hydrolysate as organic nitrogen input for agricultural soil. Waste and Biomass Valorization (In Press) (2014).
5. Khyati V. Pathak, Haresh Keharia. Identification of surfactins and iturins produced by potent fungal antagonist, *Bacillus subtilis* K1 isolated from aerial roots of banyan (*Ficus benghalensis*) tree using mass spectrometry. 3 Biotech (In Press) (2014).
6. Khyati V Pathak, Anjali Bose, Haresh Keharia. Characterization of novel Lipopeptides produced by *Bacillus tequilensis* P15 using liquid chromatography coupled electron spray ionization tandem mass spectrometry (LC–ESI–MS/MS). International Journal of Peptide Research and Therapeutics (In Press) (2014).
7. Anjali Bose, Khyati Pathak, Haresh Keharia. Identification and characterization of novel surfactins produced by fungal antagonist *Bacillus amyloliquefaciens* 6B. Biotechnology and Applied Biochemistry (In press) (2014).
8. B. Kavita, Haresh Keharia. Anthraquinone 2-sulphonic mediated reduction of Cr(VI) by *Bacillus* sp. BT1. Desalination and Water Treatment (In Press) (2014).
9. Anjali Bose, Haresh Keharia. Phorbol ester degradation in *Jatropha* seedcake using white rot fungi. 3 Biotech (In Press) (2014).
10. Narra M., Dixit G., Divecha J., Kumar K., Madamwar D., Shah A. Production, purification and characterization of a novel GH 12 family endoglucanase from *Aspergillus terreus* and its application in enzymatic degradation of dignified rice straw. International Biodeterioration and Biodegradation, 88: 150-161 (2014).
11. Narra M., Balasubramanian V., Mehta H., Dixit G., Madamwar D., Shah A. Performance evaluation of aerobic hybrid reactors with different packing media for treating wastewater of mild alkali treated rice straw in ethanol fermentation process. Bioresource Technology, 152: 59-65 (2014).
12. Anwer K., Parmar A., Rahman S., Kaushal A., Madamwar D. Islam A., Hassan M.I., Ahmad F. Folding and stability studies on C-PE and its natural N-terminal truncant. Archives of Biochemistry and Biophysics, 545: 9-21 (2014).

13. Patel V., Munot H., Shouche Y.S. and Madamwar D. Response of bacterial community structure to seasonal fluctuation and anthropogenic pollution on costal water of Alang-Sosiya ship breaking yard, Bhavnagar, India. *Bioresource Technology*, 161, 362-370 (2014).
14. Kalia K, Chiragini H M, Sood P P. In vivo Antioxidative Effect of Bamboo (*Bambusa arundinacea*), Leaves Extract on Arsenic Induced Hepatic Oxidative Stress. *Journal of Cell and Tissue Research*, 14 (1): 4009-4017 (2014).
15. Rupal A. Vasant, Elizabeth R.C. Vincent, Sanjay S. Karn, Narasimhacharya V.R.L. Amaravadi. Multigrain diet mitigates fluoride induced metabolic toxicity. *Journal of Environmental and Occupational Sciences*, 3 (1): 25-30 (2014).
16. Vimal S. Prajapati, Nidhi Soni, Ujjval B. Trivedi, Kamlesh C. Patel. An enhancement of red pigment production by submerged culture of *Monascus purpureus* MTCC 410 employing statistical methodology. *Biocatalysis and Agricultural Biotechnology*, 3: 140-145 (2014).
17. Vimal S. Prajapati, U. B. Trivedi, K. C. Patel. Kinetic and thermodynamic characterization of glucoamylase from *Colletotrichum* sp. KCP1. *Indian Journal of Microbiology*, 54: 87-93 (2014).
18. Vimal S. Prajapati, Nidhi Soni, Ujjval B. Trivedi, Kamlesh C. Patel. An enhancement of red pigment production by submerged culture of *Monascus purpureus* MTCC 410 employing statistical methodology. *Biocatalysis and Agricultural Biotechnology*, 3: 140-145 (2014).
19. Soumya V. and T. V. Ramana Rao. Health promoting and related enzyme activities of muskmelon fruit during its development and ripening. *Journal of Food Biochemistry*, DOI: 10.1111/jfbc.12068 (2014).
20. Nilanjana S. Baraiya, T.V. Ramana Rao, V. R. Thakkar. Enhancement of storability and quality maintenance of carambola (*Averrhoa carmbola* L.) fruit by using composite edible coating. *Fruits*, 69 (3): xx- xx (2014).
21. Neeta B. Gol, T. V. Ramana Rao. Impact of zein and gelatin coatings on the postharvest quality maintenance and shelf life extension of mango (*Mangifera indica* L.) Fruits, 69: 1-15 (2014).
22. Soumya V., T. V. Ramana Rao. Nutritional Quality evaluation of four icebox cultivar of watermelon fruit during their development and ripening. *International Food Research Journal*, 21 (2): 631-639 (2014).
23. Prakash R. Patel, T. V. Ramana Rao. Growth and ripening in Blackplum [*Syzygium cumini* (L.) Skills] *International Journal of Fruit Science*, 14 (2): 147-156 (2014).
24. Pinal B. Vyas, Neeta B. Gol, T. V. Ramana Rao. Postharvest quality maintenance of papaya fruit by using polysaccharide based edible coatings. *International Journal of Fruit Science*, 14 (1): 81-94 (2014).
25. Rita Mahapatra, Siva Satya Mohan Jampala and Dhananjay Patel. 2014. Induction of systemic acquired resistance in *Zea mays* L. by *Aspergillus flavus* and *A. parasiticus* derived elicitors. *Archives of Phytopathology and Plant Protection*, DOI: 10.1080/03235408.2014.884523 (2014).
26. Pinaki B. Patel, Vasudev Thakkar. L-Carvone induces p53, Caspase 3 mediated apoptosis and inhibits the migration of breast cancer cell lines. *Nutrition and Cancer*, 66 (3): 453-462(2014).
27. Chavda Dhiraj, Bhatt Sujata. The histopathological and ultrastructural analysis of microsporidian infection in catla (*Catla catla*) and their effects on antioxidant enzymes

- and protein expression. International Journal of Advanced Research, 2 (1): 608 – 624 (2014).
28. Khyati V. Pathak, Haresh Keharia. Application of extracellular lipopeptide biosurfactant produced by endophytic *Bacillus subtilis* K1 isolated from aerial roots of banyan (*Ficus benghalensis*) in microbially enhanced oil recovery (MEOR). 3-Biotech, 4: 41-48 (2014).
 29. Anjali Bose, Vishal Chawdhary, Haresh Keharia, Ramalingam Bhagwathi Subramanian. Production and characterization of a solvent tolerant protease from a novel marine isolate *Bacillus tequilensis* P15. Annals of Microbiology, 64: 343-354 (2014).
 30. Suthar, B., Pansuriya, J., Kher, M. M., Patel, V. R., Nataraj M. Biochemical changes under chromium stress on germinating seedlings of *Vigna radiata*. Notulae Scientia Biologicae, 6 (1): 77-81 (2014).
 31. Parmar A., Singh N.K., Dhone R. Madamwar D. Influence of light on phycobiliprotein production in three marine cyanobacterial cultures. Acta Physiologiae Plantarum, DOI: 10.1007/s11738-013-1219-8 (2013).
 32. Matkar K., Chapla D., Divecha J., Nighojkar A., Madamwar D. Production of cellulase by a newly isolated strain of *Aspergillus sydowii* and its optimization under submerged fermentation. International Biodeterioration and Biodegradation, 78: 24-33 (2013).
 33. Patel V., Madamwar D. Biodegradation of phenanthrene in bioaugmented microcosm by consortium ASP developed using coastal sediment of Alang-Sosiya ship breaking yard, Gujarat. Marine Pollution Bulletin, 74(1): 199-207 (2013).
 34. Raghavendra T., Basak A., Manocha L. M., Shah A., Madamwar D. Robust nanobioconjugates of *Candida antarctica* lipase B – multiwalled carbon nanotubes: Characterization and application for multiple usages in non-aqueous biocatalysis. Bioresource Technology, 140: 103-110 (2013).
 35. Shah V., Madamwar D. Community genomics: Isolation, characterization and expression of gene coding for azoreductase. International Biodeterioration & Biodegradation, 79: 1-8 (2013)
 36. Shah V., Zakrzewski M., Wibberg D., Eikmeyer F., Schlüter A., Madamwar D. Taxonomic profiling and metagenome analysis of a microbial community from a habitat contaminated with industrial discharges. Microbial Ecology, 66: 533-550 (2013).
 37. Oturkar C. C., Patole M.S., Gawai K. R., Madamwar D. Enzyme based cleavage strategy of *Bacillus lentinus* BI377 in response to metabolism of azoic recalcitrant. Bioresource Technology, 130: 360-365 (2013).
 38. Oturkar C.C., Othman M.A., Kulkarni M.J., Madamwar D., Gawai K.R. Synergistic action of flavin containing NADH dependant azoreductase and cytochrome P450 monooxygenase in azoaromatic mineralization. RSC Advances, 3: 3062-3070 (2013).
 39. Anwer K., Sonani R., Madamwar D., Singh P., Khan F., Bisetty K., Ahmed F., Hassan Mf. I. Role of N-terminal residues on residues on folding and stability of C-phycoerythrin: simulation and urea-induced denaturation studies. Journal of Biomolecular Science and Dynamics, DOI: 10.1080/07391102.2013.855144 (2013).
 40. Chapla D., Dholakiya S., Madamwar D., Amita S. Characterization of purified fungal endoxylanase its application for production of value added food ingredient from agroresidues. Food and Byproducts Processing, 91 (4): 682-692 (2013).

41. Kalia K, Chiragini H M, Sood P P. Effect of Antioxidants (Alpha-Lipoic Acid and Bamboo Shoot Extract, either alone or in combination), in Lead Induced Oxidative Stressed Animals. *Journal of Cell and Tissue Research*, 13 (1): 3431-3438 (2013).
42. Hitesh Patel, Kalia K. Polymorphisms in Mn-SOD and EC-SOD gene and risk of nephropathy in Western Indian type 2 diabetic patients. *International Journal of Diabetes in Developing Countries*, 33 (4): 229-235 (2013).
43. J. H. Bavarva, A. V. R. L. Narasimhacharya. Systematic study to evaluate anti- diabetic potential of *Amaranthus spinosus* on type-1 and type-2 diabetes. *Cellular and Molecular Biology*, 59 (Supp): OL1818- L1825 (2013).
44. Rupal A. Vasant, A. V. R. L. Narasimhacharya. A multigrain protein enriched diet mitigates fluoride toxicity. *Journal of Food Science and Technology*, 50 (3): 528-234 (2013).
45. Rupal A. Vasant, A. V. R. L. Narasimhacharya. Response to Comments by Varol and Varol *Journal of the Science of Food and Agriculture*, 93(2): 428 (2013).
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47. Vimal Prajapati, U. B. Trivedi, K. C. Patel. Optimization of glucoamylase production by *Colletotrichum* sp. KCP1 using statistical methodology. *Food Sciences and Biotechnology*, 22:31-38 (2013).
48. Vimal S. Prajapati, H. Patel, U. Trivedi, K. C. Patel. Kinetic and thermodynamic characterization of lipase produced by *Cellulomonas flavigena* UNP3. *Journal of Basic Microbiology*. DOI: 10.1002/jobm.201300065.1-8 (2013)
49. Umang Bharucha, K. Patel and U. B. Trivedi. Optimization of indole acetic acid production by *Pseudomonas putida* UB1 and its effect as plant growth-promoting rhizobacteria on mustard (*Brassica nigra*). *Agricultural Research*, 2(3):215-221 (2013).
50. Sonu Sharma, T. V. Ramana Rao. Effect of Honey and L-cysteine as antioxidants on the quality attributes of fresh-cut carambola (*Averrhoa carambola* L.) stored at two different temperatures. *International Journal of Postharvest Technology and Innovation*, 3 (4): 362-381 (2013).
51. Neeta B. Gol, Pooja R. Patel, T. V. Ramana Rao. Improvement of quality and shelf life of strawberry with edible coatings enriched with chitosan. *Postharvest Biology and Technology*, 85: 185-195 (2013).
52. Prakash R. Patel, T.V. Ramana Rao. Growth and ripening related changes in Spanish cherry (*Mimusops elengi* L.) *Indian Journal of Plant Physiology*, 18 (2): 172-176 (2013).
53. Sonu Sharma, T. V. Ramana Rao Nutritional quality characteristics of pumpkin fruit as revealed by its biochemical analysis. *International Food Research Journal*, 20 (5): 2309-2316 (2013).
54. Neeta B. Gol, Manu L. Chaudhari, T. V. Ramana Rao. Effect of edible coating on quality and shelf-life of carambola (*Averrhoa carambola* L.) fruit during storage. *Journal of Food Science and Technology*, DOI: 10.1007/s13197-013-0988-9 (2013).
55. Soumya V. Menon, T. V. Ramana Rao. Nutritional quality evaluation of nonnetted muskmelon fruit during its development and ripening *Nutrition and Food Science*, 43 (4): 398-406 (2013).
56. Prakash R. Patel, T. V. Ramana Rao Physiological changes in Karanda (*Carissa carandus* L.) fruit during growth and ripening. *Nutrition and Food Science*, 43 (2): 128- 136 (2013).

57. Payal T. Shah and T. V. Ramana Rao. Physiological, biochemical and cellular changes associated with the ripening of bitter less bitter gourd (*Momordica dioica* Roxb. Ex Wild.) Fruits. The International Journal of Engineering and Science, 2(7): 1-5 (2013).
58. Bhaumik R Dave, Ankit P Sudhir, Pritesh Parmar, Saurabh Pathak, Dharmesh P Raykundaliya, R B Subramanian. Enhancement of Cellulase Activity from a New Strain of *Thermoascus aurantiacus* by Response Surface Methodology. Biocatalysis and Agricultural Biotechnology, 2: 108-115 (2013)
59. Pritesh Parmar, Bhaumik Dave, Ankit Sudhir, Ketan Panchal, R B Subramanian. Physiological, biochemical and molecular response of plants against heavy metals stress. International Journal of Current Research, 5 (1): 80-89 (2013).
60. Pritesh Parmar, R B Subramanian. Isolation of NBS-LRR class resistant gene (I2 gene) from tomato cultivar Heamsona. African Journal of Biotechnology, 12 (42), 6076-6078 (2013)
61. Pritesh Parmar, Ankit Sudhir, Preethi R, Bhaumik Dave, Ketankumar Panchal, R. B. Subramanian, A. D. Patel, K. B. Kathiria. Identification of a SSR marker (TOM-144) linked to Fusarium wilt resistance in *Solanum lycopersicum*. American Journal of Molecular Biology, 3: 241-247 (2013)
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63. Yachana Jha, R. B. Subramanian. Root associated bacteria from the Rice antagonizes the growth of *Mangnaporthe grisea*. Plant pathology and Microbiology, 4 (2): 1-6 (2013).
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65. Pinaki B. Patel, Vasudev Thakkar. Cell proliferation and DNA damage study by SCGE in fission yeast exposed to curcumin and 5-flurouracil. Asian Journal of Cell Biology, 8 (1) : 22-32 (2013).
66. Jajda H.M., Patel R. R., Thakkar V.R. Purification and Identification of *Aspergillus niger* induced novel protein from groundnut (*Arachis hypogaea* L.). Journal of Cell and Tissue Research, 13 (1): 3485-3490 (2013).
67. Shilpa Gupte, Haresh Keharia, Akshaya Gupte. Toxicity analysis of azo Red BS and Methyl Red dye solutions on earthworm (*Pheretima posthuma*), microorganisms and plants. Desalination and Water Treatment, 51: 4556-4565 (2013).
68. Khyati Pathak, Haresh Keharia. Characterization of fungal antagonistic bacilli isolated from aerial roots of banyan (*Ficus benghalensis*) using intact-cell MALDI-TOF mass spectrometry (ICMS). Journal of Applied Microbiology, 114: 1300-1310 (2013).
69. Anjali Bose, Haresh Keharia. Production, characterization and applications of organic solvent tolerant lipase by *Pseudomonas aeruginosa* AAU2. Biocatalysis and Agricultural Biotechnology, 2: 255-266 (2013).
70. Anjali Bose, Dharti Shah, Haresh Keharia. Production of indole-3-acetic acid (IAA) by the white rot fungus *Pleurotus ostreatus* under submerged condition of Jatropha seedcake. Mycology. An International Journal of Fungal Biology, 4: 103-111 (2013).
71. Anjali Bose, Haresh Keharia, M. P. Deshpande. Eco-Friendly photosynthesis of silver nanoparticles using Jatropha seedcake extract. Chinese Physics Letters, 30 (12): 128103 (2013).

72. M. P. Deshpande, Nitya Garg, Kamakshi Patel, Sandip V Bhatt, Haresh Keharia, Anjali Bose. Structural thermal and antimicrobial property of CdSe nanoparticles synthesized by chemical route. *Archives of Physics Research*, 4: 32-39 (2013).

Department of Chemistry

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74. Y. S. Patel., H. S. Patel. Studies on Coordination Polymers Derived from 2, 5-Bis (naphthalene-1-ylcarbamoyl) terephthalic acid. *Journal of Macromolecular Science Part A*, 51 (2): 134-143 (2014).
75. Y. S. Patel., H. S. Patel. Biological evaluation and spectral studies of asymmetrical 3, 5-disubstituted-1, 2, 4-Oxadiazoles. *International Research Journal of Pure and Applied Chemistry*, 4 (3): 315-326 (2014).
76. Hemali B. Lad, Rakesh R. Giri, Chirag V. Patel, Varun G. Bhila, D. I. Brahmbhatt. Microwave assisted preparation of new dicoumarinyl pyrazoline derivatives as antimicrobials, *Current Microwave Chemistry*, 1 (1): 64-74 (2014).
77. Nandhibatla V. Sastry, Amitkummar D. Thummar, Sanjay H. Punjabi. Mixed micelles of trisloxane based silicone and hydrocarbon surfactants systems in aqueous media: dilute aqueous solution phase diagrams, surface tension isotherms, dilute solution viscosities, critical micelle concentrations and application of regular solution theory. *Journal of Surfactants and Detergents*, 16(6): 829-840 (2014).
78. Piyush N. Kalaria, Shailesh P. Satasia, Dipak K. Raval. Synthesis, characterization and biological screening of novel 5-imidazopyrazole incorporated fused pyran motifs under microwave irradiation. *New Journal of Chemistry*, 38: 1512-1521 (2014).
79. Piyush N. Kalaria, Shailesh P. Satasia, Dipak K. Raval. Synthesis, identification and *in vitro* biological evaluation some novel 5-imidazopyrazole incorporated pyrazoline and isoxazoline derivatives. *New Journal of Chemistry*, DOI: 10.1039/C4NJ00244J (2014).
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81. Shailesh P. Satasia, Piyush N. Kalaria, Dipak K. Raval. Catalytic regioselective synthesis of pyrazole based pyrido [2,3-d] pyrimidine-diones and their biological evaluation. *Organic and Biomolecular Chemistry*, 12: 1751-1758 (2014).
82. Rakesh B. Patel, Umesh P. Tarpada, Dipak K. Raval. Study on copolymers synthesized from 2, 3-epoxypropyl-3-(2-furyl) acrylate- styrene and their glass fiber reinforced composites. *Journal of Polymer Engineering*, 33: 303-314 (2014).
83. Shailesh P. Satasia, Piyush N. Kalaria, Dipak K. Raval. Heteropolyanion-based sulfated Ionic Liquid catalyzed formamides synthesis by grindstone chemistry. *Journal of Molecular Catalysis A: Chemical*, DOI: 10.1016/j.molcata.2014.04.005 (2014).
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91. Premal C. Panchal and Hasmukh S. Patel. Hybrid UV curable poly (urethane acrylate) surface coatings using coconut oil based alkyd resin. *Der Chemica Sinica*, 4(5): 52-57. (2013).
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