


NAME	DEEPAK GANJEWALA	
DESIGNATION	PROFESSOR	
EMAIL ID	dganjewala@amity.edu ; deepakganjawala73@yahoo.com	
CONTACT NUMBER	9540541376	
RESEARCH INTERESTS	Biosynthesis and regulation of plant secondary metabolites, Medicinal and aromatic Plants; Phytochemical analyses, Bioprospecting, Transcriptomics and Metabolomics, Biotransformation of secondary metabolites.	

EDUCATIONAL QUALIFICATIONS:

Name of College / University	Degree	Year
University of Lucknow, Lucknow and Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow (UP)	Ph. D. (Biochemistry)	2002
Devi Ahilya Vishva Vidyalya, Indore (MP)	M. Sc. (Biochemistry)	1996
Dr. Hari Singh Gaur University, Sagar (MP)	B. Sc.	1994

Title of Ph.D. thesis: “Biochemical and molecular characterization of geraniol rich lemongrass (Cymbopogon flexuosus Nees ex Steud) Wats mutant cv. GRL-1”

EXPERIENCE (in chronological order): Total 20 Years Research & Teaching

Designation	Type of post held (teaching/ research)	Name of the Institute	Year (From – To)
Lecturer	Research and teaching	Sardar Bhagwan Singh Post Graduate Institute of Biomedical Sciences and Research, Balawala, Dehradun-248 161 (U.A.)	2002-2004
Lecturer	Research and teaching	Sai Institute of Paramedical and Allied Sciences, Dehradun-248 161 (U.A.)	2004-2005
Assistant Professor	Research and teaching	Cancer Hospital and Research Institute, Gwalior-474009 (M.P.)	2005-2006
Assistant Professor	Research and teaching	Vellore Institute of Technology University, Vellore-632 014, T.N.	2006-2010
Professor	Research and teaching	Amity Institute of Biotechnology, Amity University, Noida 201303 (U.P.)	2010- continue

No. of Ph.D. students supervised	2 (awarded) 2 (ongoing)
No. of Post-Doc	2
No. of M.Tech. Students supervised:	Several
No. of B.Tech. Students supervised:	Several

Details:

Research papers:

1. Hina Bansal and **Deepak Ganjewala*** (2020). Identification of Active Constituents and Bioactivities of *Cymbopogon* Species Essential oil with Focus on Integrated-Pathways Networks Using a Complex Network Approach. *Frontiers in Bioengineering and Biotechnology* (Under revision)
2. Gurminder Kaur, **Deepak Ganjewala ***, Vidisha Bist, Praveen C. Verma (2019). Antifungal and larvicidal activities of two acyclic monoterpenes; citral and geraniol against some phytopathogenic fungi and insects. *Archives of Plant Pathology and Protection* 52 (5-6) 458-469.
3. Praveen Chandra Verma, **Deepak Ganjewala**, Gurminder Kaur, Surjeet k Arya, Babita Singh, Sanchita Singh, Yogeshwar V Dhar (2019). Transcriptome analysis of the palmarosa *Cymbopogon martini* inflorescence with emphasis on genes involved in essential oil biosynthesis. *Industrial Crops and Products* 140, 111602. ISSN: 0926-6690
4. Anjali Rai, Anju-Mahendru Singh, **Deepak Ganjewala**, Rajeev Ranjan Kumar, Arvind Kumar Ahlawat, Sumit Kumar Singh, Poornima Sharma, Neelu Jain (2019). Rheological Evaluations and Molecular Marker Analysis of Cultivated Bread Wheat Varieties of India. *Journal of Food Science and Technology*. 56(4):1696-1707. ISSN 0022-1155.
5. Anjali Rai, Anju Mahendru-Singh, K. Raghunandan, Tej Pratap Jitendra Kumar, Poornima Sharma, Arvind K. Ahlawat, Sumit K. Singh, **Deepak Ganjewala**, R. B. Shukla, M. Sivasamy(2019). Marker aided transfer of *PinaD1a* gene to develop soft grain wheat cultivars. *3 Biotech*. 9:183. ISSN: 2190-572X
6. Anjali Rai, **Deepak Ganjewala**, Sumit Kumar Singh, Tej Pratap Jitendra Kumar, Poornima Sharma, Neelu Jain, Anju Mahendru-Singh (2017). Molecular detection of rust resistant gene *Lr34/Yr18* and quality genes in Indian wheat varieties. *Green Farming*. 8 (5): 1056-1061. ISSN (P) :0974-0775
7. Malhotra C, Kapoor RT, **Ganjewala D**, Singh NB (2018). Effect of sodium silicate on the growth and physiological attributes of tomato. *Green Farming* 9 (2): 290-295. ISSN (P): 0974-0775
8. Ashish Kumar Gupta and **Deepak Ganjewala** (2017). Purification and characterization of the 1-deoxy-D-xylulose-5-phosphate synthase from *Cymbopogon flexuosus*. *Acta Biologica Szegediensis* 61 (2): 149-156. ISSN: 1588-4082
9. Malhotra, C., Kapoor, R.T., Ganjewala, D., Singh, N.B. (2017). Sodium silicate mediated response of

PUBLICATIONS

(mention total no. here)

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antioxidative defense system in *Lycopersicon esculentum* mill. under water stress. International Journal of Phytomedicine 9: 364-378.

10. Girish Sharma, I. Vivek, Ashish Kumar Gupta, **Deepak Ganjewala**, Charu Gupta, Dhan Prakash (2017). Phytochemical composition, Antioxidant and Antibacterial potential of Underutilized parts of some fruits. International Food Research Journal 24 (3): 1167-1173.
11. Ashish Kumar Gupta, Ritam Muhury and **Deepak Ganjewala** (2016). A study on antimicrobial activity of essential oils different cultivars of lemongrass (*Cymbopogon flexuosus*). Pharmaceutical Science, 22: 164-169.
12. Chanchal Malhotra, Riti Thapar Kapoor, **Deepak Ganjewala** (2016). Alleviation of abiotic and biotic stresses in plants by silicon supplementation. Scientia Agriculturae, 13 (2), 59-73.
13. Chanchal Malhotra, Riti Thapar Kapoor and **Deepak Ganjewala** (2016). Protective role of sodium silicate against water stress in *Lycopersicon esculentum* mill. International Journal of Pharm and Bioscience, 7(4): (B) 909 -917.
14. Ashish Kumar Gupta and **Deepak Ganjewala** (2015). Developmental regulation of essential oil content and composition in *Cymbopogon flexuosus* cultivar suvarna. Acta Biologica Szegediensis 59(2): 119-125. ISSN: 1588-4082
15. Ashish Kumar Gupta and **Deepak Ganjewala** (2015). A study on biosynthesis of 'citral' in lemongrass (*Cymbopogon flexuosus*) cv. suvarna. Acta Physiologiae Plantarum 37:240-248.
16. Ashish Kumar Gupta, Ruchika Mittal, and **Deepak Ganjewala** (2015). Synthesis of silver nanoparticles using lemongrass (*Cymbopogon flexuosus*) leaf extracts and their antibacterial properties. International Journal of Plant Science and Ecology, 1(5): 225-230
17. Shiv Kumar, Ashish Kumar Gupta and **Deepak Ganjewala** (2015). Phylogenetic relationship of apicomplexans based on *In silico* analysis of 2-C-methyl-D-erythritol-4-phosphate (MEP) pathway enzymes. International Journal of Bioinformatics and Biomedical Science 1 (2): 123-129.
18. Ashish Kumar Gupta and **Deepak Ganjewala** (2015). Geranyl acetate esterase (GAE) inhibitory activity of *Neolamarckia cadamba* fruit extract. Acta Biologica Szegediensis. 59(1): 59-63. ISSN: 1588-4082
19. Ashish Kumar Gupta and **Deepak Ganjewala** (2015) Purification and characterization of the 1-deoxy-D-xylulose-5-phosphate reductoisomerase from *Cymbopogon flexuosus* leaves. Research Journal of Pharmacy and Technology 8(3): 320-327.
20. **Deepak Ganjewala**, Ruchika Mittal, Ashish Kumar

Gupta, Martha Premlatha and Ritika Dawar (2014). Antibacterial properties of lemongrass (*Cymbopogon flexuosus* Steud) Wats essential oils in single form and combination of honey against multi drug resistant pathogenic bacteria. Journal of Biologically Active Products from Nature 4 (4): 278-285.

21. Ashish Kumar Gupta, **Deepak Ganjewala**, Navodit Goel, Namrata Khurana, Saradindu Ghosh, Abhishek Saxena (2014). Bioremediation of tannery chromium: A microbial approach. Research Journal of Pharmacy and Technology 7(1):118-122.
22. **Deepak Ganjewala** and Ashish Kumar Gupta (2013). Phytochemical composition and antioxidant properties of leaf and fruit methanol extract of Kadam (*Neolamarkia cadamba* Roxb.) tree. Journal of Biologically Active Products from Nature 3(4): 232-240.
23. **Deepak Ganjewala** and Ashish Kumar Gupta (2013). A study on phytochemical composition, antibacterial and antioxidant properties of different parts of Indian devil tree (*Alstonia scholaris* Linn.) R. Br. Advanced Pharmaceutical Bulletin 3(2): 379-384.
24. **Deepak Ganjewala**, Ashish k. Gupta and Ritam Muhury (2012) An update on bioactive potential of a monoterpene aldehyde citral. Journal of Biologically Active Products from Nature, 2(4), 186-199.
25. **Deepak Ganjewala**, Asha Devi S., Ashwani Kumar Srivastava (2011) An update on chemical composition and bioactivities of *Acorus* species. Asian Journal of Plant Science 10 (3): 182-189.
26. **Deepak Ganjewala** and Ashwani Kumar Srivastava (2011) Bioactivities of *Bacopa monniera* (Linn.) plant of Ayurveda: An update. Journal of Medicinal and Aromatic Plant Science Biotechnology, 5(2), 02-108.
27. **Deepak Ganjewala**, Asha Devi S and Ashwani Kumar Srivastava (2011) Tissue specific variation in biochemical composition of leaf and rhizome tissue of *Acorus calamus* (L.). International Journal of Plant Biology 2(e4): 12-14.
28. Asha Devi S and **Deepak Ganjewala** (2011) Antioxidant activities of methanolic extracts of *Acorus calamus* (L.) rhizome and leaves. Journal of Herbs, Spices and Medicinal Plants. 17: 1-11.
29. **Deepak Ganjewala**, Shiv Kumar, Asha Devi S, Kumari Ambika, (2010) Advances in cyanogenic glycoside biosynthesis and detection in plants: A review. Acta Biologica Szegediensis 54(1): 1-14. ISSN: 1588-4082
30. **Deepak Ganjewala** and Rajesh Luthra (2010) Essential oil biosynthesis and regulation in genus *Cymbopogon*. Natural Product Communications 5(1):163-172.
31. **Deepak Ganjewala**, Chappidi Nagaraja, Manas Ranjan

Nayak, S. Asha Devi (2010) Effects of sodium nitroprusside on activity of acid and alkaline invertases and alkaline phosphatase in lemongrass (*Cymbopogon flexuosus* Steud) Wats. International Journal of Plant Biology 1 (e2): 9-12.

32. **Deepak Ganjewala** (2009) *Cymbopogon* Essential oils: Compositions and Bioactivities. The International Journal of Essential Oil Therapeutics 3 (2-3): 1-10.
 33. Shalini Kakarla and **Deepak Ganjewala** (2009) Antimicrobial activities of essential oils of lemongrass (*Cymbopogon Flexuosus Steud*) var. Krishna, Cauveri, Nima and Cheerharit. Medicinal and Aromatic Plant Science Biotechnology, 3 (sp1): 107-109.
 34. **Deepak Ganjewala** and Rajesh Luthra (2009) Geranyl acetate esterase controls and regulates the level of geraniol in lemongrass (*Cymbopogon flexuosus* Nees ex Steud) Mutant cv. GRL-1 leaves. Z. Naturforsch 64c: 251-259.
 35. **Deepak Ganjewala**, Shiv Kumar and Rajesh Luthra (2009) An account of cloned genes of methyl-erythritol-4-phosphate pathway of isoprenoid biosynthesis in Plants. Current Issues in Molecular Biology, S1: 34-44.
 36. Deepita Bhakta and **Deepak Ganjewala** (2009) Effects of leaf position on total phenolics, flavonoids and proanthocyanidines and their antioxidant activities in *Lantana camara* (L.). Journal of Scientific Research, 1 (2): 363-369.
 37. **Deepak Ganjewala** (2009) RAPD characterization of three selected cultivars OD-19, GRL-1 and Krishna of East Indian lemongrass (*Cymbopogon flexuosus* Nees ex Steud) Wats. American Eurasian Journal of Botany 2 (1): 37-41.
 38. **Deepak Ganjewala** (2009) Prevalence of cancers in some parts of Madhya Pradesh and Uttar Pradesh. Academic Journal of Cancer Research, 1 (2): 12-18.
 39. Asha Devi and **Deepak Ganjewala** (2009) Antimicrobial properties of *Acorus calamus* (L.) rhizome and leaves extract. Acta Biologica Szegediensis 53 (1): 45-49.
 40. **Deepak Ganjewala**, Silviya Sam, Kishwar Hayat Khan (2009) Biochemical compositions and antibacterial activities of *lantana camara* (l.) plants bearing yellow, lavender, red and white colour flowers. EurAsian Journal of Biosciences, 3: 69-77.
 41. Priya K. and **Deepak Ganjewala** (2009) Preliminary characterization of melanin isolated from fruits and seeds of *Nyctanthes arbor-tristis*. Journal of Scientific Research, 1 (3): 655-661.
 42. **Deepak Ganjewala**, Sunil Boba and Raghavendra AS. (2008) Sodium nitroprusside affects the level of anthocyanin and flavonol glycosides accumulation in pea (*Pisum sativum* L. cv. Arkel) leaves. Acta Biologica Szegediensis 52: 301-305.
- ISSN: 1588-4082**

43. **Deepak Ganjewala**, Shiv Kumar, Kumari Ambika and Rajesh Luthra (2008) Plant Polyacetylenic Glycosides: Distribution, Biosynthesis and Biological Significance. *Pharmacologyonline* 2: 113-131. (IF 0.16)
44. Manish Kumar, Pawan Preet Kaur and **Deepak Ganjewala** (2008) Isolation of Periplasmic Alkaline Phosphatase from *Rhizobium* bacteria. *Research Journal of Microbiology*, 3 (3): 157-162.
45. Rajesh Luthra, Ashok Shrivastava and **Deepak Ganjewala** (2007) Histochemical localization of citral accumulating site in lemongrass (*Cymbopogon flexuosus* Nees ex Steud) Wats cultivar OD-19. *Asian Journal of Plant Science* 6: 419-422.
46. Ashok Kumar and **Deepak Ganjewala** (2007) Antimicrobial properties of *Osmanthus fragrance* Lour. *Research Journal of Medicinal Plants*, 1 (1): 21-24.
47. **Deepak Ganjewala** and Rajesh Luthra (2007) Inhibitors of Essential Oil Biosynthesis in *Cymbopogon flexuosus* Nees ex. Steud. Mutant cv. GRL-1 leaves. *American Journal of Plant Physiology*. 2 (3): 227-232.
48. **Deepak Ganjewala** and Rajesh Luthra (2007) Essential oil Biosynthesis and metabolism of geranyl acetate and geraniol in developing *Cymbopogon flexuosus* Nees ex steud Wats mutant cv. GRL-1 leaf. *American Journal of Plant Physiology*. 2 (4): 269-275.
49. **Deepak Ganjewala** and Rajesh Luthra (2007) Identification of *Cymbopogon flexuosus* cultivars based on polymorphism in the esterase isozymes. *Journal of Plant Science*, 2(5): 552-557.
50. Priya K. and **Deepak Ganjewala** (2007) Antibacterial Activity of *Nyctanthes Arbor-tristis* (Lour.) Flowers, Leaves, Fruits and Seeds. *Research Journal of Phytochemistry*, 1 (2): 61-67.
51. Saroha SPS, Krishna Mehrotra, and **Deepak Ganjewala** (2017). Investigation of colorimetric and differential thermal analysis of rubidium soaps. *International Journal of Chemical and Pharmaceutical Sciences*, 8(2): 22-25
52. Ashish Kumar Gupta and **Deepak Ganjewala** (2015). Purification and characterization of 1-Deoxy-D-xylulose-5-phosphate reductoisomerase from *Cymbopogon flexuosus* leaves. *Research Journal of Pharmacy and Technology*, 8(3):320-327.
53. Asha Devi S, **Ganjewala Deepak**, Subramanian Babu (2012) Anthelmintic activity of rhizome extract of *Acorus calamus* L. in comparison with beta and alpha asarone. *Research Journal of Biotechnology*, 7(4), 112-113. (IF 0.293).
54. Khan KH, **Deepak Ganjewala** and Jain S.K. (2008) Pretreatment with *Emblica officinalis* can reduce typhoid risks. *Trendz BioTechnology* 4: 15-21.
55. Sarika Shiven Nair, Harish Reddy and **Deepak Ganjewala** (2008) Screening and characterization of biopolymers polyhydroxybutyrate producing bacteria. *Advanced Biotechnology*, VII (4): 13-18.
56. Khan KH, **Deepak Ganjewala** and Bhaskara Rao KV

(2008) Recent advancement in typhoid research- a review. *Advanced Biotechnology*, VII (4): 35-41.

57. **Deepak Ganjewala**, Shrivastava A, and Luthra R. (2000) Ontogenic and seasonal variation in Bacoside-A accumulation in *Bacopa monnieri*. *J. Med. & Aromt. Plant Sci.*, 22&23, 231-233.
58. Deepak Ganjewala, Ashok Shrivastava and **Rajesh Luthra** 2000. A tracer technique to evaluate Bacoside-A biosynthetic potential of *Bacopa monnieri* accessions. *J. Med. & Aromt. Plant Sci.*, 22&23: 239-243.

Books/Chapters

1. **Deepak Ganjewala**, Gurminder Kaur and Nidhi Srivastava (2019). *Metabolic Engineering of Stress Protectant Secondary Metabolites to Confer Abiotic Stress Tolerance in Plants*. S. P. Singh et al. (eds.), *Molecular Approaches in Plant Biology and Environmental Challenges, Energy, Environment, and Sustainability*. Springer-Nature Pvt. Ltd., Singapore. PP. 207-228.
2. Gurminder Kaur and **Deepak Ganjewala** (2019). *Stress Protectant Secondary Metabolites and their Metabolic Engineering to Enhance Abiotic Stress Tolerance in Plants*. M. Kumar et al. (eds.), *In vitro Plant Breeding towards Novel Agronomic Traits*, Springer Nature Singapore Pvt. Ltd. PP. 197-216.
3. **Deepak Ganjewala**, Gurminder Kaur, Praveen C. Verma (2019). An update on transcriptome sequencing of hairy root cultures of medicinally important plants. "Hairy Roots-an effective tool of plant biotechnology: genesis to application" [Dr(s) V. Srivastava, S. Mehrotra and S. Mishra; Eds]. Springer-NATURE Singapore Pvt. Ltd., Singapore. PP. 295-310.
4. Deepak Ganjewala (2016). *Secondary Metabolite Credentials and Biological Properties of Litchi Chinensis*. Editors: Manoj Kumar, Vivek Kumar, Ram Prasad, Ajit Varma, *The Litchi: Biotechnology*, Springer-Verlag, Heidelberg, Germany. pp.213-242.
5. **Deepak Ganjewala** (2009). *Lemongrass Essential Oil: Biosynthesis and Regulation*. VDM and Co. KG, Dudweiler Landstr, Saarbrucken, Germany. ISBN-NR: 978-3-639-16025-3
6. **Deepak Ganjewala** and Ashish Kumar Gupta (2013). *Lemongrass (Cymbopogon flexuosus Steud.) Wats Essential Oils Essential Oil*. *Recent Progress in Medicinal and Aromatic Plants*, Vol. 35, Studium Press LLC, USA. pp. 233-274.
7. **Deepak Ganjewala**, Shiv Kumar and Rajesh Luthra (2009). An account of cloned plant genes involved in MEP pathway of isoprenoid biosynthesis in plants. In: *Plant Genomics*, Edited by Hanny A. El-Shemy,

Savana Press, Basingstoke, UK. pp. 35-46.

8. **Deepak Ganjewala**, Kumari Ambika and K.H. Khan, 2008. Ontogenic and developmental changes in essential oil content and compositions in *Cymbopogon flexuosus* cultivars. In: Recent Advance in Biotechnology, Excel India Publishers, New Delhi. pp. 82-92.
9. Kishwar Hayat Khan, Braj Nandan Prasad, **Deepak Ganjewala** and Jain S.K. (2008). Efficacy of lyophilized juice of *Embllica officinalis* against experimentally induced salmonellosis. In: Recent Advance in Biotechnology, Excel India Publishers, New Delhi. pp. 136-143.

Abstracts/Posters

1. Gauri Srivastava, Ruchika Mittal and **Deepak Ganjewala** (2020) **A study on biotransformation of vinblastine and ajmalicine using microbes isolated from soil.** International Conferences on Advances in Biosciences and Biotechnology. Jaypee Institute of Information Technology, Noida, (UP). January 30 to February 1, 2020
2. **Deepak Ganjewala**, Ruchika Mittal, Ashish Kumar Gupta, Tufail Khan and Martha Premlatha (2014). Biosynthesis of silver nanoparticles using lemongrass (*Cymbopogon flexuosus* Steud) Wats leaf extract: phytochemical composition and antibacterial properties. 2nd International Conference and Exhibition on Pharmacognosy, Phytochemistry and Natural Products. August 25-27, 2014, DoubleTree by Hilton Beijing, China.
3. Girish Sharma, Sandeep Arora, **Deepak Ganjewala**, Dhan Prakash and Ashwani Kumar Srivastava. Role of phytochemicals in plant defense against abiotic stresses. Indian-German Workshop in the frame of the program "Initiation of Bilateral cooperation" Organized by Amity Institute of Microbial Technology, Amity University Uttar Pradesh, Noida (U.P.), March 22-24, 2011.
4. Shiv Kumar and **Deepak Ganjewala**. *In Silico* analysis of isoprenoid biosynthesis in *Plasmodium Falciparum* 3D7. International Conference on Biotechnology (INCOB-2008), VIT University, Vellore-632 014 (T.N.), 6-8, February, 2008.
5. Shiv Kumar, Kumari Ambika, Rajesh Luthra and **Deepak Ganjewala**. Bioinformatics insight on *Arabidopsis*- DXS like proteins in higher plants. International Conference on Biotechnology (INCOB-2008), VIT University, Vellore-632 014 (T.N.), 6-8, February, 2008.

<p>PATENTS (<i>total no.</i>) 02 (under processing)</p>	<p>Details: 1. A novel HPLC method for the detection of geraniol synthase enzyme activity 2. An esterase inhibitor from <i>Alstonia scholaris</i> with potential insecticidal property.</p>
<p>RESEARCH PROJECTS Completed: (<i>total no.</i>) 05 Ongoing: (<i>total no.</i>) 01</p>	<p>Details: Microbial biotransformation of commercially and industrially important some alkaloids, Funded by CSIR, New Delhi (2018-2021) Sequencing of transcriptome of commercially important genus <i>Cymbopogon</i> using next generation sequencing techniques, Funded by DST (2017-2020) Use of in situ hybridization technique for localization of enzymatic steps of the MEP pathway towards understanding biosynthesis and regulation of essential oil in lemongrass (2018-2020) Investigations of the molecular regulatory mechanisms underlying essential oil biosynthesis in commercially most important genus <i>Cymbopogon</i>". Funded by CSIR, New Delhi (2011-2014) Metabolic fingerprinting of monoterpene biosynthesis in aromatic grasses of genus <i>Cymbopogon</i> using 1-¹³C-glucose and in combination of quantitative NMR-spectroscopy. Funded by DST, New Delhi (2007-2010) Study of effect of sodium nitroprusside on photosynthesis and secondary metabolism in Pea (<i>Pisum sativum</i> L. cv. Arkel). Indian Academy of Sciences, Bangalore (2008)</p>
<p>AWARDS & HONOURS/ DISTINCTIONS</p>	<p>Details:</p> <ul style="list-style-type: none"> • DST Young Scientist 2007-2010 • Summer Research Fellowship 2008 by Indian Academy of Sciences, Bangalore; Indian National Science Academy, New Delhi; and The National Academy of Science, Allahabad • Indo-Israel Government Scholarship 2009-10 • Who's who in the World: Included in the upcoming 2011 Edition of Marquis Who's Who in the World. 890 Mountain Avenue, New Providence, N.J., USA • Associate Editor: Nanotechnology Development, Pagepress publications, Medit, Italy • Advisory Board Member: World Research Journal of Biochemistry, Bioinfo Publications, India
<p>MEMBERSHIP with Professional/ Academic bodies</p>	<p>Details:</p> <ul style="list-style-type: none"> • Fellow of Society for Applied Biotechnology (FSAB): Karnataka University Dharwad • Life Member: Society of Biological Chemists, India

