

Dr (**Mrs.**) **Kiran Kalia** Professor in Biochemistry (Since 1998) Director, NIPER, Ahmedabad (on Lien) Department of Biosciences Sardar Patel University, Vallabh Vidyanagar 388120 Tel:+91-2692 234412 Ex 108 Tel (M): 09824335881 Fax:+91-2692-226865/236475/2310421 Email kiran kalia_in@yahoo.com;kirankalia@gmail.com

Academic Qualification:

M.Sc (Biochemistry) lucknow University 1979 Ph.D Kanpur University 1984 (Worked at Industrial Toxicology Research Centre, Lucknow)

PROFESSIONAL EXPERIENCE

Professor: Department of Biosciences, Sardar Patel University Sept1998 onwards

Reader: Department of Biosciences, Sardar Patel University Oct1987-Sept1998

Lecturer: Department of Biosciences, Sardar Patel University Mar1986-Sept1998

Teaching Experience (P.G. classes): 27Years (Since March1986)

Research experience: 33 Years (Since Jan 1980) Fields of specialization under the Subject/Discipline

a) Teaching:

Immunology, Enzymology, Metabolism, Protein Biochemistry

b) Research:

Diabetes and its secondary complications Metal bioremediation by microbial cells Metal Toxicology

AWARDS / HONORS RECEIVED

- Awardees of Government of India National Award of Bharat Scout and Guide 1974 by His Excellence President of India Shri V.V. GIRI recognizing as PRESIDENT GUIDE of India
- Awarded overseas research associate ship of Department of Biotechnology, New Delhi, 2006-7 to work at Purdue University, USA.
- Awarded Indian National Science Acedemy(INSA) Research fellowship to work at NII,

New Delhi.

- Awarded Council of Scientific and Industrial Research Fellowships JRF, SRF, PDF and Research Associate ship during pre and post Ph.D. research
- Best Paper publication award of 2005 of Faculty of Sciences, Sardar Patel University, Vallabh Vidyanagar.
- Hariom Ashram Award of Best Paper in 2007
- Fellow of Gujarat Science Academy
- Member of Editorial Board of Journal of cell and Tissue Research.
- Member of Editorial Board of Journal of Environmental Biology.
- Review Committee member of Journal of hazardous chemicals (Elsevier Publication) Review Committee member of Journal of Hazardous chemicals (Elsevier Publication) Human and Experimental Toxicology, Journal of Diabetes and Endocrinology, African Journal of Pharmacy and Pharmacology etc.

Life Memberships of Academic and Professional Bodies:

- Indian Science Congress, India
- Society of Biological Chemists, India (President of Local SBC Chapter of Vallabh Vidyanagar)
- Society of Toxicology, India
- Organization of Women Scientists in Developing World(OWSD), Italy
- Indian Association of Micronutrients, New Delhi

RESEARCH EXPERIENCE: 33 Years (Since 1980)

- Increased Glycosylation of IgG, IgA in type 1 and type 2 DM patients with nephropathy and a positive correlation suggesting the glycosylation of IgG as an equivalent marker for advanced glycosylation as GHb and may have some role to play in the on onset of diabetic nephropathy by altering their immuno reactivity leading to micro-vascular complications. Urinary excretion of IgG in diabetic individuals could be useful in early detection of diabetic nephropathy
- The expression of D allele in ACE gene is associated with increasing the risk of developing diabetic complications. The expression of Mn-SOD (Ala-9Val) and (Val16Ala) polymorphism are a susceptible genetic factors for diabetes and diabetic nephropathy but not with other secondary complications of diabetes, whereas, the EC-SOD (Arg213Gly) was not found to be associated with development of diabetes as well as not related to the development of any diabetic complication in Western Indian population.
- The sub cellular distribution study suggests that the nuclei may serve as the primary pool for intracellular Mn; mitochondria and microsomes may play an insignificant role with maximum Mn accumulation in PC12 cells, Homogeneous manganese binding 63 KD glycoprotein without –SH groups was purified from brain, liver and serum tissue. The presence of manganese was found to increase the lead binding to its respective protein of 20 KD in brain
- Transmission electron microscopic and energy dispersive X-ray analysis (EDAX) data

showed preferential accumulation of manganese by Pseudomonas aeruginosa in the cell wall. Bacillus coagulants was found to bind with both lead and cadmium indicating their role in transport/accumulation of the metal.

Arsenic accumulation and reduction in Pseudomonas Sp. was studied and metal coordination using XANES and EXAFS inside the cells suggesting the reduction of arsenate to arsenite. ars operon was characterized and sequenced which is encoded by three open reading frame transcribing in a same direction for the proteins ars R, ars B and ars C. (Gene bank accession No. AY702476). The arsenite binding protein was purified by affinity chromatography and characterized as DNA protection during starvation (DPS) protein by EIMS. DIGE, 2D- PAGE and MS was used to identify the differentially expressed proteins under arsenate stress.

Ph. D. STUDENTS GUIDED: Twenty five (25) Students Completed their Ph.D: 18 Students working presently for Ph.D: 7 Ph.D. Students working presently

Sr. No.	Name of Student	Title	Year of Registration
1	Jay Upadhyay	Micro- RNA as biomarker for early detection of type 2 diabetes mellitus	2012
2	Dhara Jajal	Association of SNPs in PPRG & VEGF with type II diabetic micro vascular complications in western Indian population	2011
3	Sejal Desai	Role of SNPs & its association with oral cancer in western Indian population	2011
4	Devang Khambholja	Detoxification of arsenic by marine bacterial isolates	2011
5	Dhara Patel	Comparative study of excretion of Cystatin C and other renal proteins in diabetic nephropathy	2009
6	Shilpa Shah	Isolation and molecular characterization of cellulolytic fungi	2008
7	Navneetkumar Singh	Multiple drug resistant <i>Staphylococus</i> aureus "a molecular approach"	2008

MAJOR RESEARCH PROJECTS

Ongoing Research Projects: Four

Association of single nuclotide polymorphismwith Type 2 diabetes and diabetic nephropathy in western Indian population

Sponsored by University Grants Commission, New Delhi (2013-16) INR 13,75,000

One time grant of University Grant Commission, New Delhi for Basic Research In Science (2013) – INR 7,00,000

Role of SNPs and its association with oral cancer in western Indian Population Sponsored by Department of Science and Technology (WOS-A) New Delhi (2012-15) INR18,40,000

Potential of marine bacterial isolates in arsenic bioremediation

Sponsored by Ministry of earth Sciences (MOES), New Delhi (2010-13) INR 21,33,090 only.

Projects Completed: Eleven

Sr.No	Title of project	Amount INR.	Year	Funding Agency
1	Single nucleotide gene polymorphism and its association with insulin resistance, type2 diabetes and diabetic nephropathy-	9,03,000	2007- 2010	UGC
2	Functional abnormality of glycosylated IgG in diabetes mellitus and their role in progression of secondary complication such as diabetic nephropathy	6,93,000	2005- 2007	GSBTM
3	Interaction of some micronutrients like fluoride, zinc and selenium with arsenic on the toxicity and treatment	9,89,000	2004- 2007	DRDO (DRL) Tejpur
4	Biochemical and molecular characterization of arsenic resistance in Pseudomonas stutzeri DSM5190Tincluding the role of some thiol chelators	4,95,000	2004- 2007	DRDO (DRDE) Gwalior
5	Bioremediation and decolorization of distillery spent wash (Co-Investigator)	16,19,000	2004- 2007	DBT, New Delhi
6	Graft copolymers of sodium salt of partially carboxy methylated guar gum synthesis, characterization and potential application (Co-Investigator)	3,70,000	2002 - 2005	UGC
7	Non-enzymatic glycosylation of Immunoglobulins and their impaired functional aspects in Diabetic nephropathy	5,10,000	2002 - 2005	UGC
8	Synthesis, characterization and application of potential graft of partially copolymer of Sodium salt of Carboxy Methyl Cellulose (Co-Investigator)	6,00,000	1999- 2000	UGC
9	Advance glycosylation of immunoglobulins and other proteins and their impaired functional effects in diabetes mellitus	7,00,000	1997- 2001	UGC

10	Immunological aspects of diabetes mellitus.	10,000	1997- 1998	UGC
11	Effect of Manganese on Lipid Composition of Grey and white matter in developing rat brain	20,000	1991	UGC

RESEARCH PUBLICATIONS:

Total Publications: 65

Citation indices	All	Since 2008
<u>Citations</u>	500	412
<u>h-index</u>	11	10
<u>i10-index</u>	11	10

Ph.D. thesis entitled, "Effect of interaction of metals on some biomolecules"

- 1. Kiran M. Malhotra, Girja S. Shukla and S. V. Chandra (1982). Neurolochemocal change in rats coexposed to lead and copper. Arch. Toxicol. 49, 331-336 I.F. 2.918,
- 2. S.V. Chandra, Kiran M. Malhotra and Girja S. Shukla (1982). GABAergic neurochemistry in manganese exposed rats. Acta Pharmacol, Toxicol. 51, 456-458, I.F. 2.45,
- 3. Girja S. Shukla, Kiran M. Malhotra and S.V. Chandra (1983). Effect of manganese on rat brain microsomal (Mg+2, Na+, K+) -ATPase- in vivo and in vitro studies. Env. Res. 32, 212-219 I.F. 3.816,
- 4. Kiran M. Malhotra, R.C. Murthy, R.S. Srivastava and S.V. Chandra (1984). Concurrent exposure of lead and manganese to iron deficient rats: Effect of lipid peroxidation and contents of some metals in the brain. J. Appl. Toxicol, 4, 22-25 I.F. 2.487,
- 5. Kiran Kalia, S.V. Chandra and P.N. Vishwanathan (1984). Nature of 54Mn binding protein in rat brain, liver and serum. Acta. Pharacol. Toxicol. 54, 247-252 I.F. 2.45,
- 6. Kiran Kalia, S.V. Chandra and P.N. Vishwanathan (1984). Effect of 54Mn and lead interaction on their binding with tissue protein. Ind. Hlth. 22, 207-218 I.F.0.95
- 7. Kiran Kalia, Girja S. Shukla and S.V. Chandra (1984). Lead and copper interaction: Hematocrit, ALAD and Cerruloplasmin in rats. Adv. Bioscien, 3, 75-79.
- 8. Kiran Kalia, R.C. Murthy and S. V. Chandra (1984). Tissue deposition of 54Mn in lead pretreated rats. Ind. Hlth. 22, 49-52 I.F.0.95
- 9. S.V. Chandra, Kiran Kalia and Tahir Husain (1985). Biogenic amines and some metals in brain of cadmium exposed diabetic rats. J. Appl. Toxicol. 5(6), 378-381 I. F. 2.478,
- 10. Kiran Kalia, M. Mohd Ali and S.C. Chandra (1986). Combined effect of interaction of metals ions on the synaptosomal uptake of 3H-Choline. J. Env. Biol. 7(3), 139-147 I.F. 0.62
- 11. Kiran Kalia, M.H. Desai and M.K. Chakraborthy (1988). Resistant in groundnut

- varieties toward aflatoxin production by Aspergillus flavus.Ind. J.Agri. Sci. 58(2), 121-123
- 12. Girja S. Shukla, Kiran Kalia, N. Mathur and S.V. Chandra (1988). Age dependent distribution and retention of 109Cadmium in the selected organs of rat. Chemosphere, 17, 661-670 I.F 3.612
- 13. Kiran Kalia, Bharti Bhatt and Kadamb Patel (1990). Effect of manganese and copper interaction on lipid peroxide potential in brain and liver of protein deprived rats. Biologia Indica. 1(2), 49-54
- 14. Kiran Kalia, Hitesh Patel and J. A. Inamdar (1991). Characterization of manganese uptake by microbial cells. Proceeding of International Conference on biomembranes in Health and Disease, Vol.1, 181-186.
- 15. Scaria K. Varghese, R. B. Subramanian, M. Natraja, Kiran Kalia and J.A. Inamdar (1992). In vitro studies in vites nequndo L. Indian Botanical Contractor, 9(3), 147-150
- 16. Scaria K. Varghese, J.A. Inamdar, Kiran Kalia, R.B. Subramanian and M.Nataraj (1993). Micropropogation of Aegel marmelos (L) Corr. Phytomorphology. 43 (1&2), 87-92.
- 17. Scaria K. Varghese, J.A. Inamdar, Kiran Kalia, R. B. Subramanian, M. Natraja, and (1993). In vitro organogenesis in Enicostema hyssopifolium (wild) veerdoon. Proceeding of Indian Nat. Aca. Sci. 63 (B) II, 219-222.
- 18. Kiran Kalia and K.V. Pavani (1993). Metal-Metal interaction free radical formation as a mechanism of toxicity. Journal of pure & Applied Sciences "Prajana", 2, 1-5.
- 19. Kadamb Patel, Bharti Bhatt and Kiran Kalia (1994). Lipid peroxidation and Glucose 6 phosphate dehydrogenase in RBC of non insulin dependent diabetes mellitus. International J. of Toxicology, Occupational and Environment Health, 2, 37-4
- 20. Kiran Kalia, Urmi Mukherjee and M.C. Saxena (1995). Effect of some chlorinated pesticides on human placental amino acid uptake. Journal of pure & Applied Sciences "Prajana", 3, 7-14
- 21. B. Punjarath, Kiran Kalia, R.B. Subramanian and J.A. Imandar (1996). Effect of some growth regulators on Niger Seed Oil. Journal of Oil Technologist Association in India, 28 (1), 15-16
- 22. K.V. Pavani and Kiran Kalia (1996). Accumulation of lead by Bacillus Coagulans. Pollution Res. 15(2), 173-175 Citation -2
- 23. B. Punjarath, Kiran Kalia, R.B. Subramanian and J.A. Imandar (1996). Colchicine induced aberrant stomatal development in the cotyledons of Niger (Guizotia abyssinica cass L.) Journal of Indian Bot. Sco. 75, 1-4
- 24. B. Punjarath, Kiran Kalia, and J.A. Imandar (1997). Impact of season (climate) on the morphological and biochemical character of Niger Oil seed plant (Guizotia abyssinica cass L.) Journal of pure & Applied Sciences "Prajana" 7, 9-12
- 25. Kiran Kalia, K.V. Pavani and Jagdish S. Patel.2001. Accumulation of cadmium by Bacillus coagulans. Indian J. of Toxicology. 8(2) 93-98.
- 26. K. B. Rajpor, J. B. Dave, Kiran Kalia, C. P. Patel and H. C. Trivedi. 2001. Modification of sodium salt of partially carboxy methylated cellulose by graft copolymerization with methyl acrylate. Trends in Carbohy. Chem7,45-52.
- 27. Kiran Kalia, Seema Sharma and Kinnari Mistry. 2002. Serum fructose amine, sailic acid and glycated immunoglobulins in diabetic nephropathy Proceedings of 2nd Int. symp. on Molecular medicine

- 28. Kiran Kalia, Baljit Punjrath, R. B. Subramanian and J. A. Inamdar. 2002. Fatty acid composition and Nutritional studies of Niger seed oil and cake. Proceeding of Int. Seminar on world scenario in oileo chem and surfactants industries"
- 29. KiranKalia, K.V.Pavani, Jagdish S. Patel and Prerna Patel.2003. Cell envelope protein induction in Bacillus Coagulans by accumulation of lead and cadmium. Asian J. Microbiol. Biotech. & Environ. Sci. 5 (4), 533-536
- 30. Kiran Kalia, Seema Sharma and Kinnari Mistry.2004. Non enzymatic glycosylation of immunoglobulins in Diabetic nephropathy. Clin. Chem. Acta.347,169-176 [I.F.=2.54]
- 31. Manoj modi, Uma Pathak, Kiran Kalia and S. J. S. Flora. 2005 Arsenic antagonism studies with monoisoamyl DMSA and zinc in male mice. Environ. Toxico & Appl. Pharma.19, 131-138.[I.F.=2.7]
- 32. Kiran Kalia and Prerna C Patel. 2005. Mechanism of arsenic resistance in microbial cells- A Review. Journal of Tissue research: 5(1):369-380 I.F.=3.14 (NAAS)
- 33. Kiran Kalia and Swaran J.S.Flora. 2005. Strategies for safe and effective therapeutic measures for chronic arsenic and lead poisoning- A Review. Journal of occupational health: 47:205 (1): 1-25. I.F.=2.84
- 34. Jignesh H. Trivedi, Kiran Kalia, Natu K. Patel, and H. C. Trivedi 2005. Modification of sodium salt of partially carboxymethylated Guar Gum by Graft copolymerization with Methyl Acrylate. Polymers & Polymer Composites 13,01-09 I.F.= 0.326
- 35. Jignesh H. Trivedi, Kiran Kalia, Natu K. Patel and H. C. Trivedi 2005. Ceric-induced grafting of vinyl monomers onto sodium salt of partially carboxy methylated Guar Gum: Effect of substrate structure and liquor ratio. J. Pure & Applied.Science. 13, 44-56
- 36. Jignesh H. Trivedi, Kiran Kalia, Natu K. Patel and H. C. Trivedi 2005. Grafting of vinyl monomers onto sodium salt of partially carboxymethylated Guar Gum: Comparison of their reactivity. Polymer-Plastics Technology. & Engineering- 44,01-11 I.F= 1.28,
- 37. Jignesh H. Trivedi, Kiran Kalia, Natu K. Patel and H. C. Trivedi. 2005. Graft copolymerization of sodium salt of partially Carboxymethylated Guar Gum with Methyl Methacrylate: an Examination of reaction Variables. J.of Applied Polymer Science 96,1855-1864 I.F= 1.3,
- 38. Jignesh H. Trivedi, Kiran Kalia, Natu K. Patel and H. C. Trivedi. 2005. Ceric-Induced Grafting of Acrylonitrile onto Sodium salt of partially Carboxy methylated Guar Gum. Carbohydrate Polymers 60,117- 125 I.F= 3.99,
- 39. Kalia K., Patel J.S., Joshi D.N. and Srivastava D 2006. Isolation of zinc resistant bacterial isolates, its accumulation and interaction with cellular proteins. Journal of Cell and Tissue Research 6,651-656
- 40. Jagdish S.Patel, Prerna Patel and KiranKalia 2005. Isolation and characterization of nickel uptake by nickel resistant bacterial isolate (NiRBI). Biomed. Environ. Sci. 19,110-117. I.F= 1.35,
- 41. Gaurav S. Dave and Kiran Kalia 2007 Hyperglycemia induced oxidative stress in type-1 and type-2 diabetic patients with and without nephropathy. Cellular and Molecular Biology 53, 68-78 I.F. 1.46
- 42. Prerna Patel, Florence Goulhen, Chistopher Boothman, Andrew G. Gault ,John M. Charnock, Kiran Kalia, Jonathan R. Lloyd 2007. Arsenate detoxification in a Pseudomonad hypertolerant to arsenic. Arch. Microbiology 187(3) 171-183. [I.F.=1.927]
- 43. Kiran Kalia, Gagan Deep Narula, G.M.Kannan and S.J.Flora. 2007. Effects of combined

- administration of captopril and DMSA on arsenite induced oxidative stress and blood and tissue arsenic concentration in rats. Comparitive Biochemistry and Physiology, Part C 144, 372-379[I.F.=2.58]
- 44. Gaurav Dave and Kiran Kalia 2008 Hyperglycemia reactive oxygen species and pathophysiology of diabetic nephropathy. J. Cell and Tissue Research vol 8(2) 1367-1377 I.F= 3.114 (NAAS)
- 45. Jignesh H. Trivedi, T.A.Bhatt, Kiran Kalia, Natu K. Patel and H. C. Trivedi. 2008. Grafting of Ethyl Methacrylate onto Sodium salt of partially Carboxy methylated Guar Gum by Tetravalent cerium Ion. J. of polymer material 25(4),541-555 I.F= 1.204
- 46. Kiran Kalia, Wendy Jiang and Wei Zheng. 2008 Manganese Accumulates Primarily in Nuclei of Cultured Brain Cells. Neuro toxicology 2008 May;29(3):453-9 [I.F.=3.85]
- 47. Joshi, D.N., J.S.Patel ,S.J.S.Flora and Kiran Kalia 2008 Arsenic accumulation by Pseudomonas stutzeri and its response to some thiol chelating agents. Environmental Health Preventive Medicine 13(5), 257-263[I.F.=1.12]
- 48. Dhaval Joshi and Kiran Kalia 2008 Detoxification of Arsenic by microbial cells. In "Handbook of the Toxicology of Chemical Warfare Agents" (R.C. Gupta, Eds). Elsevier, Inc. USA p. 1083-1100
- 49. Kinnari Mistry and Kiran Kalia 2008 Nonenzymatic glycosylation of IgG and their urinary excretion in patients with diabetic neophropathy Indian J Clin biochem 23(3) 159-165 [I.F.=3.85]
- 50. K.Kalia, W. Zheng, W Zheng (2009) Importance of mitochodriain manganese-induced cellular toxicity:Response to letter by Gunter et a:The case for Manganese Interaction with Mitochondria Neurotoxicology 30(4),727
- 51. Simon S Parmar, Gaurav S. Dave, Hitesh V. Patel and Kiran Kalia 2009. Hepatoprotective value of some plant extracts against carbon tetrachloride toxicity in male rats. Journal of Cell and Tissue Research Vol. 9(1)1737-1743 I.F.3.114 (NAAS)
- 52. Joshi, D.N.., Flora S.J.S. and Kiran Kalia (2009) Bacillus species strain DJ1. potent arsenic hypertolerent bacterium isolated from the industrial effluent of India. Journal of hazardous Material 166,1500-1505 [I.F.=4.36]
- 53. Mistry, K., Sharma, S. and Kalia, K. (2009)Possible role of glycated complement proteins in progression of diabetic nephropathy Journal of Cell and Tissue Research Vol. 9(2) 1891-1897
- 54. Patel Hitesh V. and Kiran Kalia (2010) Sub-chronic arsenic exposure aggravates nephrotoxicity in experimental diabetic rats. Indian J. Exp. Biol. 48: 762-768 I.F= 1.3,
- 55. Macwan C, Patel HV, Kalia K. (2010) A comparative evaluation of in-vitro antioxidant properties of bamboo Bambusa arundinacea leaves extracts. Journal of Cell and Tissue Research,; 10(3):2413-2418
- 56. Parmar SR, Patel HV, Kalia K.(2010) Hepato-protective activity of some plants extract against paracetamol induced hepatotoxicity in Wistar rats, Journal of Herbal Medicine and Toxicology; 4:101-106.
- 57. Patel HV, Kalia K. (2010) Sub-chronic arsenic exposure induces oxidative stress in skeletal muscle and epididymal fat pad: Possible role in development of arsenic induced diabetes mellitus. Journal of Cell and Tissue Research, 2010; 10(3):2397-2403.I.F.3.114 (NAAS)
- 58. Sood, P.P., Chiragini, H.M. and Kalia K.(2011) Antioxidative effect of bamboo leaves

- extract and DL-α- Lipoic acid alone or as combined therapy on lead induced nephritic and neuronal oxidative impairment. Journal of Cell and Tissue Research 11:2471-2478.
- 59. Kalia K. and Patel HV. "The diabetogenic effect of arsenic" Chapter in book "Environmental Pollution, Ecology and Human Health", (Ed. GP Reddy, SJS Flora, RM Basha) Narosa Publishing House, New Delhi.
- 60. Patel, H.V., Kalia K., Mannari J.(2012) Angiotensin converting enzyme (ACE) gene polymorphism increases the susceptibility of diabetic nephropathy in Western Indian Type 2 diabetic patients. International Journal of Diabetes in Developing Countries", 2011; 31 (4), 223-228. [I.F 0.509]
- 61. Mohan S., Kalia K., Mannari J.(2012) Diabetic Nephropathy and Associated Risk Factors for Renal Deterioration. International Journal of Diabetes in Developing Countries 32(1), 52-59 [I.F 0.509]
- 62. Sandesh Mohan, Kiran Kalia ,Jyoti Mannari (2012). Association Between Urinary IgG and Relative Risk for Factors Affecting Proteinuria in Type 2 Diabetic Patients. Ind J Clin Biochem. 27(4) 333-339
- 63. Mohan S., Kalia K., Mannari, J (2013). Urinary IgG is a Pure Strong Indicator of Diabetic Nephropathy than Microalbuminuria in Type 2 Diabetic Patient. International Journal of Diabetes in Developing Countries 33(1) 46-54
- 64. KALIA, K.,1 CHIRAGINI, H. M.1* AND SOOD, P. P.2(2013) 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 Vol. 13(1) 3431-3438
- 65. Hitesh Vashrambhai Patel and Kiran Kalia (2013) Role of hepatic and pancreatic oxidative stress in arsenic induced diabetic condition in Wistar rats (2013) Journal of Environmental Biology, Vol. 34, 231-236, March 2013

Participation as Resource Faculty:

- Participated as faculty at two weeks Summer School "Biotechnology in Pharmacy" at A.R. College of Pharmacy, Vallabh Vidyanagar 1993.
- Resource person and delivered two lectures at "Biotechnology and Bioprocess Engineering programme under ISTE at DDIT, Nadiad, Dec 2003.
- Resource person in UGC sponsored refresher course at Dept. of Microbiology, M. S. University, Vadodara 2004.
- Resource person in UGC sponsored refresher course at Dept. of Botany, Gujarat University, Ahmedabad 2004.
- Resource person in one month winter school at department of Biosciences, Sardar Patel University, Vallabh Vidyanagar 2004.
- I have functioned as Principal organizer of the refresher course in our department
- Series of lectures were delivered at Department of Biochemistry, Saurastra University, Rajkot under UGC visiting faculty programme: 2001, 2003 and 2004.

Resource person at Academic staff college of Sardar Patel University in 2009, 2010, 2011 and 2012.

Invited Lectures/Presentations (2000-2013):

- Visiting Faculty at National Institute of Pharmaceutical Education and Research (NIPER) - Ahmedabad
- Delivered guest lectures at, University Putra Malaysia, Kaulalumpur, Malaysia, October,2002
- Malaysia University Technical, JB, Malaysia, October, 2002.
- National University of Singapore, Singapore, October, 2002
- Series of lectures were delivered at Department of Biochemistry, Saurastra University, Rajkot under UGC visiting faculty programme., 2001, 2003 and 2004.
- Resource person and delivered two lectures at "Biotechnology and Bioprocess Engineering programme under ISTE at DDIT, Nadiad, Dec. 2003
- Series of lectures to faculty members of Dept. of Biological Sciences (Botany, Zoology, Biotechnology and Microbiology) at N.V.Patel Science College, Vallabh Vidyanagar 2003.
- "NIDDM and oral anti diabetic" Invited lecture at workshop on "Introduction to drug discovery" at PERD Centre, Ahmedabad 2004
- Resource person in UGC sponsored refresher course at Dept. of microbiology, M. S. University, Baroda 2004.
- Resource person in UGC sponsored refresher course at Dept. of Botany, Gujarat University, Ahmedabad 2004.
- Resource person in one month winter school at department of Biosciences, Sardar Patel University, Vallabh Vidyanagar 2004.
- Invited lecture entitled "Arsenic resistance in Microbial cells" at Defense Research and Development Establishment (DRDE), Gwalior 2004.
- Invited lecture entitled "Arsenic detoxification in microbial cells" at Defense Reseach Laboratory, Tejpur (Assam)2004.
- Invited Talk "Beneficial effects of Zinc supplementation during chelation of arsenic with monoisoamyl DMSA in male mice "-7th International Symposium on chelating agents in Biomedicine, Toxicology and Therapeutics (2004) at Czech Republic
- Invited Talk" Role of reactive oxygen species (Oxidative Stress) in the etiology of Diabetic Complications" 4th World congress on Cellular and Molecular Biology (2005) at Poitiers, France.
- Platform Presentation at 47th Annual Meeting of Society of Toxicology (2008) at Seattle- USA
- Invited talk at International conferences on "Arsenic and its environmental impact" at lucknow (2010)

Plateform Presentation at 3rd conference of Organisation for Women Scientists in Developing World earlier know as TWOWS, at Beijing China. (2010)