




## Faculty Details proforma for DU Web-site

Title	Dr.	First Name	<b>Anita Kamra</b>	Last Name	<b>Verma</b>	Photograph
Designation		<b>Associate Professor</b>				
Address		<b>Department of Zoology Kirori Mal College, University of Delhi</b>				
Phone No	Office	<b>+911127667861</b>				
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Email		<a href="mailto:akverma@kmc.du.ac.in">akverma@kmc.du.ac.in</a> , <a href="mailto:akamra23@hotmail.com">akamra23@hotmail.com</a>				
Web-Page						
<b>Educational Qualifications</b>						
Degree	Institution				Year	
<b>PDF</b>	<b>National Institute of Immunology</b>				<b>1994-1997</b>	
<b>Ph D</b>	<b>Magadh University</b>				<b>1988</b>	
<b>PG</b>	<b>University of Delhi</b>				<b>1982</b>	
<b>UG</b>	<b>University of Delhi</b>				<b>1980</b>	
<b>Career Profile</b>						
<b>Dept of Zoology,</b>	<b>K. M. College, Univ. of Delhi</b>	<b>Associate Professor</b>	<b>July, 2003-Contd.</b>			
<b>Dept of Zoology,</b>	<b>A. N. College, Patna</b>	<b>Reader,</b>	<b>Jun 1998-Jun 2003</b>			
<b>Dept of Zoology,</b>	<b>A. N. College, Patna</b>	<b>Lecturer</b>	<b>Jun 1990-Jun 1998</b>			
<b>Research Experience</b>						
<b>Scientist</b>	<b>Dept of Chemistry</b>	<b>2002-2003</b>	<b>Univ. of Delhi</b>			
<b>Sr. Scientist</b>	<b>School of Pharmacy</b>	<b>1998-2000</b>	<b>Univ. of Manchester</b>			
<b>Consultant</b>	<b>National Institute of Immunology</b>	<b>1997-1998</b>	<b>New Delhi</b>			
<b>Areas of Interest / Specialization</b>						
<b>Basic Research : Tumour Biology, Type I Diabetes, Rheumatoid arthritis- Immunology , Toxicology</b>						
<b>Applied Research : Nanomedicine, NanoBiotechnology, Drug Delivery</b>						
<p>Research in the lab includes '<i>Developing Novel Polymer Therapeutics as Nano-medicines</i>', making <i>in-vivo</i> models for quantifying nanoparticulate drug delivery for cancer, Rheumatoid arthritis and Diabetes, developing rationale designs, based on whole body and cellular pharmacokinetics-pharmacodynamic profile of drugs.</p> <p>We are actively involved in developing a novel concept to exploit the colloidal self-assembly complexations' for possible applications as pesticide carrier vehicles, and to use novel Strategies involving Nanomaterials/Nanocomposites and Biosorption for Removal of toxic metals from water.</p> <p>Our lab has a CPCSEA registered Animal Holding facility. We use <i>in vivo</i> models for <b>noninvasive or minimally invasive intravital microscopy</b> techniques that provide insight into the microscopic kinetics of drug/gene delivery. An advanced Animal Cell culture lab where students can get hands-on experience in</p>						

doing experiments cancer cells and in setting up the 'Dorsal Skin-fold Window Chamber' on mice (syngenic and nude) for **non-invasive fluorescence microscopic** studies.

#### Subjects Taught

- a. **Physiology**
- b. **Immunology**
- c. **Biotechnology**
- d. **Biochemistry**
- e. **Nanobiotechnology - M.Tech Nanoscience & Nantotechnology**

#### Research Guidance

- A. **Supervision of Doctoral Thesis,**
  - i. **Awarded : 5**
  - ii. **Submitted : 1**
  - iii. **Under Progress : 4**
- B. **Supervision of M.Phil : 1**
- C. **Supervision of Project Fellows : In progress – 06.**
- D. **Supervision of Summer Interns: Post Graduate (Six Months):**  
M.Tech - 11  
M.Sc. - 05  
**Undergraduate (Two Months): B.Tech/B.Sc. - 25**

#### Publications Profile

##### Patents

- (1) Upadhyay S.N, Vishwakarma R.A, Ghosal S, Shukla S, Bose C and **Kamra, A** (1999)  
Process of isolation and synthesis of 1-(3,4-methylenedioxy-phenyl)-1E-tetradecene and its analogues and a method for activation of effector mechanisms of the immune system against tumours/and or infections using formulations containing these compounds (**US Patent allowed on application # 08/865,152**).
- (2) Ram A. Vishwakarma, Shabri Ghosal, Supriya Shukla, S.N. Upadhyay, Chhanda Bose, **Anita Kamra**, & Suman Dhawan,  
Process for the isolation of an immunomodulatory compound NII-30, capable of activating the immune system, Chemical synthesis of the said product and its use in prevention/treatment of cancer. (**Patent No.: 172Del'97. Dated: 22 Jan. '97**).

##### Chapter in Books :

- i) **A text Book of Biotechnology**, Chapter - **Animal Cell Biotechnology**. John Wiley Publication. Pg.855-915
- ii) **Biotechnology for Sustainable Development**, Chapter on **Promise of Nanotechnology in Rural development : Achievements and Challenges**, McGraw Hill Custom Publishing, Pg 225-238.

**PUBLICATION CITATIONS** : 2016-06-14

**Google Scholar** : Citations = 385, h index = 10

## List of Publications:

1. JP Singh, PM Pandey, **AK Verma (2016)** Fabrication of three dimensional open porous regular structure of PA-2200 for enhanced strength of scaffold using selective laser sintering; Rapid Prototyping Journal, 22 (4). (IF 2.03)
2. S. Bhanoth, A. Kshirsagar, P.K. Khanna, A. Tyagi, A. Leekha, V. Kumar & **Anita K. Verma (2016)** Synthesis, Characterization and Bio-evaluation of Core-Shell QDs with ZnSe, CdS and CdSe Combinations; Adv. Mater. Lett.7.
3. S. Bhanoth, P.K. Khanna, A. Tyagi, **Anita K. Verma (2016)** Cytotoxicity Studies Of II-VI Semiconductor Quantum Dots On Various Cancer Cell Lines; Advanced Materials Letters
4. A Tyagi, K Rawat, **Anita K Verma**, HB Bohidar **(2016)** Mechanistic evaluation of the size dependent anti-microbial activity of water soluble QDs; Analytical Methods
5. S. Bhanoth, A. S. Kshirsagar, P. K. Khanna, A. Tyagi, **Anita K Verma (2106)** Biototoxicity of CdS/CdSe Core-Shell Nano-Structures; Advances in Nanoparticles 5 (5), 1-8
6. A Dey, A Dasgupta, V Kumar, A Tyagi, **AK Verma (2015)** Evaluation of the of antibacterial efficacy of polyvinylpyrrolidone (PVP) and tri-sodium citrate (TSC) silver nanoparticles; International Nano Letters, 1-8
7. L Sheikh, R Vohra, **A K Verma**, S Nayar **(2015)** Biomimetically Synthesized Aqueous ferrofluids Having Antibacterial and Anticancer Properties, Materials Sciences and Applications 6 (03), 242
8. S Puram, K Rawat, A Tyagi, **Anita K Verma**, HB Bohidar **(2015)** Physical, antimicrobial and cytotoxic characterisation of LaF<sub>3</sub>: Eu<sup>3+</sup> ion doped nanocrystals; International Journal of Nanoparticles 8 (2), 184-200
9. S Agarwal, A Leekha, A Tyagi, V Kumar, I Moin, **AK Verma (2015)** Versatility of Chitosan: A Short Review Journal of Pharma Research 43, 125-134
10. Namrata Anand, R K Kanwar, M L Dubey, R K Vahishta, R. Sehgal, **Anita K Verma**, Jagat R Kanwar **(2015)** Effect of lactoferrin protein on red blood cells and macrophages: mechanism of parasite host interaction; Drug Design, Development and Therapy 9 (1), 3821-35
11. S.Zafar, L.M.Negi, **Anita K Verma**, V.Kumar, A.Tyagi, P.Singh, Z.Iqbal, S.Talegaonkar **(2014)**: Stearically stabilized polymeric nanoparticles with a combinatorial approach for multi drug resistant cancer: *In vitro* and *in vivo* investigations; International Journal of Pharmaceutics, 477: 454–468. [Impact Factor 3.99]
12. L.M. Negi, S. Talegaonkar, M.Jaggi, **Anita K.Verma**, R.Verma, S.Dobhal, V.Kumar **(2014)**: Surface engineered nano structured lipid carriers for targeting MDR tumor: Part I. Synthesis, characterization and *in-vitro* investigation. Colloids and surfaces B: Biointerfaces. 10/2014; DOI: 10.1016/j.colsurfb.2014.09.062 [Impact Factor: 4.28].
13. L.M. Negi, S. Talegaonkar, M.Jaggi, Anita K.Verma, R.Verma, S.Dobhal, V.Kumar **(2014)**: Surface engineered nanostructured lipid carriers for targeting MDR tumor: Part II. *In vivo* biodistribution, pharmacodynamic and hematological toxicity studies. Colloids and surfaces B: Biointerfaces 10/2014; DOI: 10.1016/j.colsurfb.2014.09.061 [Impact Factor: 4.28].
14. K. Rawat, S. Agarwal, A.Tyagi, **Anita K. Verma**, H B Bohidar **(2014)** Aspect Ratio Dependent Cytotoxicity and Antimicrobial Properties of Nanoclay, Applied Biochemistry and Biotechnology 06/2014; DOI:10.1007/s12010-014-0983-2.[ ISSN: 0273-2289]I.F 2.02
15. Aakriti Tyagi, Shweta Agarwal, Ankita Leekha and **Anita Kamra Verma (2014)** Effect of Mass and Aspect Heterogeneity of Chitosan Nanoparticles on Bactericidal Activity. International Journal of Advanced Research (2014), Volume 2, Issue 8, 357-367.
16. Shaun C. Offerman, **Anita Kamra Verma**, Brian A. Telfer, David. A. Berk David J. Clarke and Harmesh S. Aojula **(2014)**: Ability of co-administered peptide liposome nanoparticles to exploit tumour acidity

- for drug delivery, *RSC Adv.*, Issue 21, 2014, **4**, 10779-10790. [I.F 2.562]
17. K. Rawat, A. Saxena, **Anita Kamra Verma**, R. Vohra and H. B. Bohidar, (2014) Potential of Gallic acid loaded Polysaccharide-Protein (Agar-Gelatin) Co-Hydrogels in Wound Healing, *J. Pharm. Res.* 2014, 3(3), 14-17. [ISSN: 2319-5622] I.F. 2.667]
  18. Agarwal S, Fatima S, & Verma, A.K. (2014): *In vitro* Antineoplastic potential of chitosan nanoparticles against cervical cancer. *IJPRBS*, 2014; Volume 3(4): 444-456
  19. S. Jadalannagari, K. Deshmukh, M. Kowshik, S. R. Ramanan, **Anita K Verma**, R. Vohra (2014): Lanthanum-Doped Hydroxyapatite Nanoparticles as Biocompatible Fluorescent Probes for Cellular Internalization and Biolabelling. *Science of Advanced Materials* 01/2014; 6:312-319. [IF: 2.51]
  20. S. Sanwlani, K. Rawat, M. Pal, H. B. Bohidar, **Anita K Verma (2014)**: Cellular uptake induced biotoxicity of surface-modified CdSe quantum dots, *J. Nanoparticle Research*, DOI: 10.1007/s11051-014-2382-6. [IF : 2.67]
  21. **Verma, Anita K. (2014)**: Anti-oxidant activities of Biopolymeric Nanoparticles: Boon or Bane! *Journal of Pharmacy Research*, 8 (7), 871-876
  22. **Verma, A.K.**, Kumar, V., Agarwal, S., Leekha, A., Tyagi, A., Moin, I. and Gupta, D. Interplay of Immune Response and Oxidative Induced by Chitosan nanoparticles to possibly combat inflammation (2013). *World Research Journal of Bioscience* ISSN: 2322-0589 & E-ISSN: 2322-0597, Volume 1, Issue 2, 2013, pp. 028-034.
  23. **Anita K. Verma & A. Kumar (2013)** : Pharmacokinetics & Biodistribution of Negatively charged Pectin nanoparticles encapsulating Paclitaxel", *Cancer Nanotechnology: Basic, Translational, and Clinical Research*, *Cancer Nano* (2013) 4:99–102, DOI 10.1007/s12645-013-0041-8.
  24. Chanchal, A, Bohidar H.B. and **Verma A.K. (2013)**: Erosion Kinetics of protein coacervate entrapping mosquito larvicide Cycloheximide (CHX) at various pH. *World Research Journal of Pharmaceutical Research* ISSN: 2322-0562 & E-ISSN: 2322-0570 Volume 1, Issue 2, 2013, pp.-038-042
  25. R. Kumar, J. Arora, A. K. Prasad, N. Islam, **Anita K. Verma (2013)**: Synthesis and antimicrobial activity of pyrimidine chalcones. *Med Chem Res*, 22 (11), 5624-5631, DOI 10.1007/s00044-013-0555-y. [Impact Factor : 1.61]
  26. **Anita K. Verma**, A. Chanchal, R. P. Pandey, R. Vohra, N. Islam & A. K. Misra (2012) Pharmacokinetics and Biodistribution of Paclitaxel–Gelatin Nanoparticles, *International Journal of Green Nanotechnology*, Volume 4, Issue 4, pages 500-510, DOI:10.1080/19430892.2012.738962.
  27. S. Kumar, A Prakash, Kanak Sinha, and **Anita K Verma (2012)** Screening and Evaluation of *in vivo* and *in vitro* Generated Insulin Plant (*Vernonia divergens*) for Antimicrobial and Anticancer Activities. *World Academy of Science, Engineering and Technology*, 70, 540-544.
  28. **Anita K. Verma**; A. Chanchal; K. Chutani (2012): Augmentation of anti-tumour activity of cisplatin by pectin nano-conjugates in B-16 mouse model: pharmacokinetics and in-vivo biodistribution of radio-labelled, hydrophilic nano-conjugates, *Int. J. of Nanotechnology*, 2012 Vol.9, No.10/11/12, pp.872 - 886. [IF:1.09]
  29. S. Bansal, A.Srivastava, G. Mukherjee, R. Pandey, **Anita K. Verma**, P Mishra, B. Kundu (2012) Hyperthermophilic asparaginase mutants with enhanced substrate affinity and antineoplastic activity: Structural insights on their mechanism of action. *FASEB J.*, Mar 2012, 26 (3), 1161-1171. [IF:7.252]
  30. A. Chanchal, S. A. Husain, **Anita Kamra Verma (2012)**: *In-vitro* Physico-chemical evaluation of Biopolymeric Nanoparticles, *Journal of Pharmacy Research* 2012, 5(8), 4042-4044. [IF: 2.667]
  31. Jagat R Kanwar; Jessica Gibbons; **Anita K Verma**; Rupinder K Kanwar (2012) Cell-penetrating properties of the transactivator of transcription and polyarginine (R9) peptides, their conjugative effect on nanoparticles and the prospect of conjugation with arsenic trioxide. *Anti-cancer drugs* 2012;23(5):471-82 [IF : 2.23]

32. P. Kumar, R. Meena, R. Paulraj, A. Chanchal, **A. K. Verma** & H. B. Bohidar (2012) Fluorescence behavior of non-functionalized carbon nanoparticles and their *in vitro* applications in imaging and cytotoxic analysis of cancer cells. *Colloids and Surface B: Biointerfaces*, 2012 Mar 1; 91, 34-40 [IF:3.55]
33. Sinha K. and **Verma, Anita K.** (2012): Evaluation of Anti-microbial and anticancer activities of methanol extract of an *in-vivo* and *in-vitro* grown *Bauhinia variegata*. I. Res. J.Biological Sci. 1(16), 26-30.[ISSN: 2278-3202][IF: 3.384]
34. **A. K.Verma**, R. P. Pandey, A. Chanchal, I. Siddiqui & P. Sharma (2011): Encapsulation of Antigenic Secretory Proteins of *Mycobacterium tuberculosis* in Biopolymeric Nanoparticles for Possible Aerosol Delivery System, Journal of Bionanoscience, Vol. 5, 1–7, 2011. American Scientific Publishers [IF:1.20].
35. Upadhaya R., Pandey R.P., Sharma V. and **Verma Anita K** (2011): Assessment of the Multifaceted Immunomodulatory Potential of the Aqueous Extract of *Tinospora Cordifolia*. *Research Journal of Chemical Sciences*, Vol. 1(6), 71-79, Sept. ISSN 2231-606X.
36. **Anita K Verma**, Abhishek Chanchal and Ajay Kumar (2011) Potential of Negatively charged Pectin nanoparticles encapsulating Paclitaxel; Preparation & Characterization, Proceedings of the IEEE. [IF:3.096]
37. Shailendran D, N Pawar, A Chanchal, H.B Bohidar & **Anita K Verma.** (2011) Characterization and Antimicrobial activity of Nanocurcumin and Curcumin, Proceedings of the IEEE. [IF:3.096]
38. **Anita K. Verma**, Najmul Islam, Abhishek Chanchal and R.P.Pandey. (2011) Biopolymeric vectors for enhancing Gene delivery-A Comparative evaluation, Proceedings of the IEEE.[IF:3.096]
39. **Anita K. Verma**, R. P. Pandey, A. Chanchal, and P. Sharma (2011). Immuno-Potentiating Role of Encapsulated Proteins of Infectious Diseases in Biopolymeric Nanoparticles as a Potential Delivery System . J. Biomed. Nanotechnol. 7, 63-64. [IF: 5.26]
40. **Anita Kamra Verma**, A Chanchal & A Maitra (2010) Co-polymeric hydrophilic nanospheres for drug delivery: Release kinetics, and cellular uptake. Indian Journal of Experimental Biology, 48, No.10, 1043-1052. [IF:0.55]
41. Virendra Prasad, A.J. Shaikh, A.A. Kathe, D.K. Bisoyi, **A.K.Verma**, N. Vigneshwaran. (2010) Functional behaviour of paper coated with zinc oxide-soluble starch nanocomposites. Journal of Material Processing Technology, 210, 1962-1967.[IF:1.726]
42. Anita K. Verma and K. Sachin (2008). Novel Hydrophilic Drug Polymer Nano-Conjugates of Cisplatin Showing Long Blood Retention Profile - Its Release Kinetics, Cellular Uptake and Bio-Distribution, Current Drug Delivery, 5, 120-126 (Bentham Science Publishers) [IF:4.9]
43. B Mohanty, **Anita K Verma**, P Claesson and H B Bohidar. (2007): Physical and anti-microbial characteristics of carbon nanoparticles prepared from lamp soot. Nanotechnology 18 (2007) 445102 (9pp) (Institute of Physics (IoP) Electronic Journals.) [IF:3.652]
44. Svetlana A. Tatarikova, **Anita K Verma**, David A. Berk, Chris Lloyd (2005) Quantitative Fluorescence Microscopy of macromolecules in gel and biological tissue. Physics in Medicine and Biology, Vol.50 (2005) 1–10 (Institute of Physics (IoP) Electronic Journals.) [IF:2.70]
45. Anita Saxena, Kumar Sachin, and H. B. Bohidar, **Anita K. Verma** (2005) : Effect of molecular weight heterogeneity on drug encapsulation efficiency of gelatin nanoparticles. J. Colloids and Surfaces-B: Biointerfaces. 45, Issue 1, 42-48. (Elsevier Publishers). DOI: 10.1016/j.colsurfb. 2005.07.005 [IF:4.28]
46. **Anita K. Verma**, Kumar Sachin, Anita Saxena, and H. B. Bohidar. (2005) Release Kinetics from biopolymeric nanoparticles encapsulating protein synthesis inhibitor- Cycloheximide, for possible therapeutic applications. *Current Pharmaceutical Biotechnology*. Vol 6, 121-130.( Bentham Science Publishers). [IF:2.69]
47. R. Tyagi, S. Lala, **Anita K. Verma**, A.K.Nandy, S. B. Mahto, A. Maitra & Mukul Kumar Basu (2005) Targeted delivery of arjunglucoside I using surface hydrophilic and hydrophobic nanocarriers to combat experimental leishmaniasis. Journal of Drug Targeting, April 2005; 13(3): 161–171(Taylor &

Francis). [IF:2.77]

48. Raeis Ahmad, **Anita Kamra** and Seyed Ehtesham Husnain. (2004) Silk proteins from non-mulberry silk worm *Philosamia ricini* are biochemically and immunochemically distinct from those of mulberry silk worm *Bombyx mori*. *DNA and Cell Biology*, Vol.23, No.3,149-154,2004. (Mary Ann Liebert, Inc.). [IF:2.159]
49. **Anita K Verma** (2003) Rationale Drug design and delivery for treating human diseases, *Third World Impact*, Oct-Dec,
50. S Soni, **Anita K. Verma**, S Mozumdar, A Maitra (2003) 5-fluorouracil derivative in polymeric micelles: A low toxic drug formulation. *Journal of Controlled Release* 91 (1-2), 253-254. [IF.
51. Svetlana A. Tatarkova, Chris Llyod, **Anita Kamra Verma**, Satvinder Khaira, David A. Berk. (2000) Application of fluorescence correlation spectroscopy for pharmacokinetic measurements in tumour tissue. *SPIE*, Vol. 4164, 53-61(2000).[IF:3.659]

#### Conference Organization/ Presentations

1. "Applications of Nanobiotechnology in Clinical Diagnostics"[2015] **Anita K. Verma**. Invited talk at Nano-Biointerface, held in Dec 2015, School of Nanosciences, JNU.
2. Pharmacokinetics & Pharmacodynamics of Quantum Dots, nanoparticles and nanoconjugates: Mechanistic aspects, Anita K. Verma . Invited to speak at **CEP on "Nanotechnology in Health & Medicine" September 9-11, 2015**
3. Biototoxicity and Mechanistic studies of Surface Modified CdSe Quantum Dots, [2015]**Anita K. Verma**, National Conference on Chalcogens[NC3], DIAT Pune
4. Pharmacokinetics & Pharmacodynamics of Quantum Dots, nanoparticles and nanoconjugates: Mechanistic aspects. **Anita K.Verma**, Invited speaker, ICRANN 2014, held on 15-16<sup>th</sup> Dec 2014 at JNU, New Delhi
5. Effect of mass and aspect heterogeneity of chitosan nanoparticles on bacteriocidal activity, A. Agarwal, A. Tyagi, A. Leekha, V. Kumar, and **Anita K. Verma**. **1st International Conference on emerging trends of Nanotechnology in drug discovery, Dept of Biochemistry, South Campus, Univ. of Delhi, 26th-27th May 2014.**
6. To evaluate the *in-vitro* neoplastic potential of chitosan nanoparticles and release kinetics of biopolymeric nanoparticles against cervical cancer. S. Agarwal, S. Fatima and **Anita K Verma**, **20<sup>th</sup> ISCBC International Conference on Chemistry and medicinal plants in translational medicine for healthcare, Dept of Chemistry, Univ of Delhi, 1st 4th March 2014**
7. Biototoxicity of Nanomaterials and Immunomodulation. **Anita K.Verma**, **Nanotechnology Conference: Safety measures and concerns, CFEES, DRDO 20th-23rd Nov 2013**
8. Paradoxical effects of Oxidative stress and immune regulation in tuberculosis. **Anita K Verma**, International Nanomedicine Conference, Sydney, Australia. 1st-3rd July 2013.
9. Protective Efficacy induced by Antigenic Proteins of *Mycobacterium tuberculosis* encapsulated in biopolymeric nanoparticles in Balb/c mice Infected with *M. tb*. **Ramendra Pati Pandey & Anita Kamra Verma**, **European Congress of Immunology**, Glasgow, Scotland, 6-8th Sep 2012.
10. Nanotechnology-An emerging bastion for Women in Science-**Anita Kamra Verma** Resource Person in the two day national conference on "Women in Science" on March 14-15, 2012

11. 1st International Conference on Functional Materials for Defense (ICFMD-2012)
12. *Polymer drug conjugate therapeutics – the new Paradigm*, **Anita Kamra Verma** Invited talk at the **Multi Mega Event of 24<sup>th</sup> Annual National Conference of Indian Society of Atherosclerosis Research and International CME on Atherosclerosis**, 24<sup>th</sup>-25<sup>th</sup> Sep 2011, ISARCON 2011, JIPMER, Puducherry (India)
13. **Anita Kamra Verma** Chaired the session on **Biomarkers and Drug Development**, 2nd World Congress on Biomarkers-2011, 12-14<sup>th</sup> Sep 2011, Baltimore, USA
14. Invited Speaker on “**Biopolymer nanotherapeutics: : Enabling oncology drug development by nanoconjugates & nanoparticles,**” **Anita K. Verma**, 2nd World Congress on Biomarkers-2011, 12-14<sup>th</sup> Sep 2011, Baltimore, USA
15. Invited speaker in the Center for Regenerative Medicine, University of Tübingen, Germany, **Nanomedicines: Smart Liposomal & Biopolymeric Nanoparticles/ Nanoconjugates for Drug Delivery**, **Anita K. Verma**, on 21<sup>st</sup> June 2011, Germany
16. **Immuno-potentiating role of encapsulated proteins of infectious diseases in biopolymeric nanoparticles as a potential delivery system**, **Anita K. Verma**, R. P. Pandey, A. Chanchal, P.Sharma, **International Symposium on The Safe Use of Nanomaterials & Workshop on Nanomaterial Safety: Status, Procedures, Policy and Ethical Concerns** from February 1-3, 2011, IITR, Lucknow.
17. **Resource Person in the National Workshop on “Recent Advances in Bioelectrical Impedance For Body Composition & its Clinical Applications” (RABICA-2011), 26- 27 March 2011, at D. Y. Patil University, Kolhapur, India**
18. **Development of chitosan nanocarriers for the intraepithelial delivery of Antigenic Secretory Proteins of Mycobacterium tuberculosis through mucosal surfaces**, **Anita K Verma**, **International Symposium on TB Diagnostics: Innovating to Make an Impact**. 16<sup>th</sup>-17<sup>th</sup> Dec, 2010 **International Centre for Genetic Engineering & Biotechnology ICGEB Campus, New Delhi, INDIA**
19. **Invited Speaker in the “International Conference on Nanotechnology and Medical Sciences: New Interfaces”** **Anita K. Verma**, 21-23 Oct. 2010, D. Y. Patil University, Kolhapur, India.
20. **Encapsulation of therapeutic proteins of Mycobacterium tuberculosis in Biopolymeric Nanoparticles for possible aerosol delivery system**, **Anita K. Verma**, R P. Pandey, A Chanchal, I Siddiqui, P Sharma . **14<sup>TH</sup> International Congress of Immunology**, Aug 22-27, 2010, Kansai, Japan,
21. “**Pharmacokinetics & in-vivo biodistribution of 99mTc hydrophilic Paclitaxel Loaded Biopolymeric Nanoparticles**” has been accepted for presentation as **Poster 784 in Poster Session III: Nanomedicines** at the 37th Annual Meeting & Exposition of the Controlled Release Society (CRS), July 10 – 14, 2010, at the Oregon Convention Center, Portland, OR,

USA

22. **Nanomedicines: Smart Liposomal & Biopolymeric Nanoparticles for Drug Delivery to cancer tissue.** Anita K. Verma Invited Speaker in "INDO-US Workshop on Nanotechnology: Applications and Implications" during 10-12 November, 2009 at IICT, Hyderabad, India
23. Poster presented in "INDO-US Workshop on Nanotechnology: Applications and Implications" during 10-12 November, 2009 at IICT, Hyderabad.
24. **Polymer conjugates: Pharmacokinetics & in-vivo biodistribution of hydrophilic Nano-conjugates, Liposomes & biopolymeric nanoparticles .** Anita K. Verma Invited talk in the **International Symposium on Nanostructured Materials: Structure, Properties and Applications (ISNM-2009)**, October 28-29, 2009, Kanya Maha Vidyalaya, Jalandhar.
25. **Release Kinetics, and Cellular uptake of hydrophilic polymeric nanospheres prepared by radical crosslinking copolymerization,** Anita K. Verma. Invited talk in the **International Symposium on Nanostructured Materials: Structure, Properties and Applications (ISNM-2009)**, October 28-29, 2009, Kanya Maha Vidyalaya, Jalandhar.
26. **Pharmacokinetics & in-vivo biodistribution of hydrophilic Nano-conjugates,** Anita K. Verma, Invited lecture in the "International Conference on Nanoscience & Nanotechnology" October 15 -16, 2009, AIT, Gurgaon, India
27. Nano-therapeutics: in-vivo biodistribution of  $^{99m}\text{Tc}$  Labelled- Surface coated Paclitaxel Loaded hydrophilic Biopolymeric Nanoparticles for the treatment of Hepatic cancer. Anita K. Verma . *International Conference on Radiation Biology & Translational Research in Radiation Biology*, 2008, 10-12 Nov, Jaipur, India.
28. *Nanomedicine in cancer therapeutics : Pharmacokinetics & in-vivo biodistribution of hydrophilic Drug Loaded Biopolymeric Nanoparticles vs Nano-conjugates.* Anita K. Verma. *International Conference on Biomedical Engineering & Nanotechnology ICBENT-2008*), October 21-23, 2008, Kolhapur, India.
29. Paclitaxel loaded Stimuli-Responsive biopolymeric Nanogel-particles: Preparation, Drug-Release Behaviors, in-vitro Cellular Interaction and biodistribution in tumor bearing mice model. Anita K. Verma, A. Chanchal, Ajay Kumar & H.B.Bohidar. **Indo-Australian Conference on Medical Biotechnology** 2008,11-12 Feb, 2008, National Institute of Immunology, New Delhi, India.
30. Nano-pharmaceuticals: Pharmacokinetics and in vivo Biodistribution of Hydrophilic Paclitaxel Loaded Biopolymeric Nanoparticles, Anita K. Verma, **Invited Lecture International Conference on Nanomaterial Toxicology [ICONOTOX 2008]** 5<sup>th</sup> –6<sup>th</sup> Feb ITRC, Lucknow.

31. Nanobiotechnology in India, **Anita K. Verma**. Expert Group Meeting on Nanotechnology, Sustainability and Developing Economics in the 21<sup>st</sup> Century, UNIDO Headquarters, Vienna International Centre, Austria, 10-12 December 2007
32. Polymer Therapeutics: Surface coated gelatin nanospheres for treatment of hepatic Cancer. **Anita K. Verma**, A. Chanchal, Ajay Vashisht & H.B. Bohidar. **Invite Lecture** in the 5<sup>TH</sup> Annual Conference of "BIOTECHNOLOGY SOCIETY OF INDIA" "**Biotech 2007**" Nov 2007, Lucknow
33. Long Circulating Drug Polymer nano-conjugates of Cisplatin – Pharmacokinetics, Release kinetics and Cellular uptake. **Anita K. Verma**, A. Chanchal, K. Sachin & H.B. Bohidar. **Oral Presentation ESF-EMBO Symposium: Probing Interactions Between Nanoparticles/Biomaterials and Biological Systems: Alternative Approaches to Bio- and Nano-toxicity**. Spain Nov. 2007.
34. Polymeric Nanosystems for Cancer Therapeutics – Liposomes, nanoparticles and nanoconjugates.(2007) **Anita K.Verma**, **Invited Talk in International Conference on Nanomedicine**, Bhubaneshwar, India.
35. "Novel Nanotherapy: Bioresponsive Polyelectrolyte Complexes Based on Polysaccharide". **Anita K. Verma** & K. Sachin. Oral Presentation at International Conference on Nanomedicine 2007, at Bhubaneshwar
36. Dissolution kinetics of Intramolecular aggregates & Self folded gelatin coacervates entrapping Cycloheximide (CHX), at various pH values. A. Chanchal, H.B.Bohidar, **Anita K.Verma**, Oral presentation at International Conference of Nanotechnology, ICNT'06, San Francisco, USA- 30th Oct-Nov2, 2006
37. Influence of physico-chemical variation on the release profile of self-folding pectin cisplatin nano-conjugates. K. Sachin, H. B. Bohidar, **Anita K. Verma**. Poster presented at Indo-US Symposium on Nanotechnology & Advanced drug delivery. Oct 5-6, 2006.NIPER,Chandigarh.
38. Release kinetics and cellular uptake of hydrophilic drug polymer nano-conjugate to enhance blood circulating levels of Cisplatin. **Anita K. Verma**, K. Sachin,A. chanchal, H. B. Bohidar. Oral presentation at Internantional Nanobioscience Conference, Aug,6-8, Pune 2006.
39. Characterization and Stability Studies on Gelatin Nanoparticles. Poster at Nanoinitiative by DST in March, 2005. K. Sachin, A. Saxena, H .B. Bohidar, **A. K. Verma** at Pune.
40. PVP nanocarriers for a hydrophilic drug Richa Tyagi, **Anita Kamra Verma** and S. Mozumdar. Poster in Asean Biotechnology 2004
41. Physical characterization and encapsulation of a prodrug of a  $\beta$ -Lactum drug for a possible oral delivery system R. Tyagi, **Anita K.Verma**, S. Mojumdar Presented a poster in

ICONOSAT 2003, Dec 2003, at Kolkata.

42. Diffusion of macromolecules in gel and living tissue matrix measured by FCS.(2003) S. A. Tatarkova, **Anita Kamra Verma**, D.A. Berk. International Conference on Advanced Laser Technologies.Oral presentation at Cranfield University, UK in Sep 2003.
43. A Low Toxic Drug Formulation of 5-FU Derivative in crosslinked polymeric micelles. **Anita K. Verma**, S. Soni, S. Mazumdar and A.N.Maitra. Paper Presented at Second International Conference on Tumor targeted Drug Delivery systems, held at NIH, Bethesda, Maryland, USA in September 2002
44. Bioimaging & Optical methods for pharmacokinetic studies. David A. Berk, Sveta Tatarkova, **Anita Kamra Verma**, Chris Lloyd, Harmesh Aojula. Bioimaging Initiative Grantholders' Workshop 11-13 July, 2000, at Keele University, UK.
45. Immunotherapeutic Effects of a Glucosylxanthone compound isolated from Mangifera indica against Mastocytoma Tumour implant in mice. **Anita Kamra**, D.N.K. Sarma, Suman Dhawan, Shakti N. Upadhyay. Presented at the INDO-FRENCH SYMPOSIUM on Immunomodulation in December, 1995 N.I.I., New Delhi.

#### Research Projects (Major Grants/Research Collaboration)

##### **Research Collaborations : International**

United Kingdom, Germany, Australia

##### **Research Collaboration : National**

JNU, IIT Delhi, DIAT Pune, DIPAS, INMAS, BITS Pilani-Goa Campus, Jamia Hamdard, Jamia Milia Islamia,

##### **Research Projects Ongoing/Completed**

#### ONGOING PROJECTS

(i) To assess the Adsorption Efficiency and Anti-microbial potential of activated Multi-walled Carbon nanotubes for removal of Lead from water samples. KMC 302; Innovation Project 2015-16

#### COMPLETED PROJECTS

- i) "Biopolymeric Nanoparticulate delivery for Rheumatoid Arthritis. Dr. Anita Karma Verma, Funded by UGC (~12 Lakhs) 2012-2015
- ii) Developing Immunotherapeutic approaches for treatment of Type I diabetes along with replenishing insulin producing stem cells in Balb-c and NOD mice.Dr Rajni Rani & Dr Aniita Kamra Verma, (~85 lakhs DBT), 2012-2015
- iii) Assessment of humoral immune response against Ebola virus glycoprotein peptide using Balb/c mice as model. Dr Anita Kamra Verma, (~10 lakhs) Funded by DRDO.
- iv) Pharmacological evaluations of Sea-buck thorn leaf extract for potential adjuvant activity. DIPAS, DRDO (~10 Lakhs), 2013-2014
- v) Novel Strategies involving Nanomaterials/Nanocomposites and Biosorption for

<p><b>Removal of toxic metals from water. Project Code : KC 104, Dr Raksha, Dr Anita Kamra Verma &amp; Dr Sumitra Mohanty. Funded by University of Delhi (~9 lakhs)</b></p> <p><b>vi) To assess the mutagenic potential of some of commonly encountered environmental pollutants and therapeutic agents. Project code: KMC-106, Dr. Manju A.Lal, Dr.Anita Kamra Verma &amp; Dr.Renu Kathpalia. Funded by University of Delhi (~9 lakhs)</b></p> <p><b>vii) Biopolymeric Stimuli sensitive Nanoparticulate Targeted Drug Delivery for Cancer Therapeutics. Anita Kamra Verma, DU. Funded by ICMR (30 lakhs) 2010-13.</b></p> <p><b>viii) Detection of Polymeric nano-particulate drug delivery system for anti-cancer drug by Quantitative Fluorescence Microscopy. Anita Kamra Verma, DU. Funded by DBT. (Approx: 80 lakhs) 2008-2013.</b></p> <p><b>ix) Design of Novel polymer based non-viral vector for gene delivery. Anita Kamra Verma, DU. Funded ~ 12 Lakhs UGC. 2007-2010</b></p> <p><b>x) Encapsulation of Potentially Immunotherapeutic /Immunoprophylactic peptides in novel biocompatible nanosized Carriers for targeted delivery in IDDM- Funded by DBT. Collaborators: Rajni Rani NII, H.B. Bohidar, JNU, Anita Kamra Verma, DU. (Approx 80 lakhs) 2005-2008</b></p>
<p><b>Awards and Distinctions</b></p> <p>2009 <b>Awarded Charles Darwin Gold Medal</b> in International Conference on Recent Trends in Life Sciences by ‘The International Society for Ecological Communications’</p> <p>2006 Presented my most referenced paper at MIT, Cambridge, USA</p> <p>1985-88 ICAR Junior Research fellowship and SRF.</p>
<p><b>Association With Professional Bodies</b></p> <ul style="list-style-type: none"> <li>• <b><u>Peer review of research grant proposals</u></b> Department of Biotechnology, New Delhi-Task force on NanoBiotechnology/ Nanoparticle mediated Drug / Biomolecule delivery,</li> <li>• <b><u>Advisary</u></b> Project Approval Committee of Dept. of Biodiversity &amp;. Biotechnology, Govt of Madhya Pradesh for Biotech Projects.</li> <li>• <b><u>Peer review of scientific journals</u></b> <ul style="list-style-type: none"> <li>- International Journal of Pharmaceutics</li> <li>- International Research Journal of Biotechnology</li> <li>- Nanoscience and Nanotechnology in Biology and Medicine</li> <li>- Journal of Biomaterials and Nanobiotechnology,</li> <li>- American Journal of Experimental Biology</li> </ul> </li> </ul> <p><b><u>Members of Societies</u></b></p> <ul style="list-style-type: none"> <li>- Zoology Society of India, Life Member</li> <li>- Biotechnology Society of India, Life Member</li> <li>- Member of International Association of Nanotechnology, Inc. Membership ID: AM66990908, 2006</li> <li>- Indian Nano Science Society</li> <li>- Indian Immunological Society</li> </ul>

Other Activities

**As Coordinator, organized the DST Inspire Science Camp 21<sup>st</sup> -25<sup>th</sup> Dec 2015, and  
DST Inspire Science Camp 21<sup>st</sup> -25<sup>th</sup> Dec 2013**

**Nodal Officer : Science Setu,**

**As Coordinator , organized workshop for College Teachers**

- i) BIOCHEMISTRY in Feb 2015**
- ii) IMMUNOLOGY in Sep 2012**

**Resource Person : Lecture series on Immunology and Nanomedicine for UGC-Edusat, CEC**

**Fellowship/Financial assistance:**

- 1. Nominated Head of the Indian Delegates for An International Program on “Reservation and Exploration of Herbal Medicine Resources for Asian Countries” funded by **Ministry of Commerce, People’s Republic of China**, from August 19, 2015 to September 8, 2015.**