

Biographic – Resume

Shailendra Kumar Gupta Scientist Gr. IV(2) Indian Institute of Toxicology Research (CSIR) MG Marg, Lucknow India 226001	E-Mail: skgupta@iitr.res.in shailendra15@gmail.com Mobile:+91 9839533951
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PROFESSIONAL EXPERIENCE:

- 1) Present designation: **Scientist Group IV(2), Bioinformatics centre, System Toxicology Group, Indian Institute of Toxicology Research, Lucknow** since 23rd April 2007.
- 2) Researchers, System Biology and Bioinformatics Group, University of Rostock, Rostock Germany from July 03, 2009 – February 26, 2010.
- 3) Worked as a **Senior Research Officer in Biomedical Information Center, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow** from 12th September 2006.
- 4) Worked as **Director in Society for Biological Research & Rural Development**, from 1st July 2005 to 11th September 2006.
- 5) Worked as a **Senior Programmer at Bioinformatics centre, Biotech Park, Lucknow** from 21 January, 2004 to 30 June, 2005
- 6) Worked at **Bioinformatics Centre of CIMAP, Lucknow** as a **Project Assistant / Trainee** from 7th May, 2002 to 19th January, 2004.

ACADEMIC EXPERIENCE:

- 1) Worked as a Senior Guest Faculty Member in Bioinformatics Center at DOEACC, Lucknow from March 2004 to July 2005.
- 2) Worked as a Visiting faculty in Bioinformatics at Bioinformatics Institute of India, Lucknow

PERSONAL PROFILE:

Father's Name : Sri R.D. Gupta
Date of Birth : 15th January 1977
Marital Status : Married
Nationality : Indian
Permanent Add. : House No.- C-1/46, Gulmohar vihar, Juhi,
Kanpur(UP) 208014 India
Phone : +91 9839533951
Passport no. : H4512696

ACADEMIC QUALIFICATION:

- **Ph.D. (Bioinformatics)** from Integral University, Lucknow.
Title: “An automated tool to predict metabolic pathway instances across organism and predicting missing links”
Supervisor: Prof. Qamar Rahman, Prof & Dean, Integral University, Lucknow India
Co-supervisor: Prof. Olaf Wolkenhauer, Prof & Chair, System Biology & Bioinformatics, University of Rostock, Germany
- **Masters in Computer Application (MCA)** from MD University, Rohtak India
Year of passing: 2004
- **Masters in Science (M.Sc.)** Botany from Kanpur University, Kanpur India
Year of passing: 1999

HONORS & AWARDS:

- Young Scientist Award – 2011 by Council of Science & Technology, Govt. of Uttar Pradesh, India.

PROJECT EXPERIENCE:

- 1) **Project title:** To investigate the role of curcumin/nano-curcumin on neuronal cell proliferation mediated via wnt signaling pathway.
Designation: Team member.
Description: We are investigating the molecular mechanism responsible for neuronal cell proliferation when cells are exposed with curcumin/ nano-curcumin. We have identified several molecular targets for curcumin in wnt signaling network necessary for neuronal cell proliferation.
Duration: ongoing project
- 2) **Project title:** To study the nature of cellular immune response directed towards RD1-encoded secretory antigens of M. tuberculosis, in different categories of patients with Tuberculosis (TB). Project sponsored by Department of Biotechnology, Govt. of India.
Designation: Team member.
Description: The project is funded by Department of Biotechnology (DBT), Govt. of India. Principal investigator for the project is Dr. Debasis Biswas, Deptt of Microbiology, Himalayan Institute of Medical Sciences, Dehradun, Uttaranchal India. Project aimed to identify markers for discrimination between active and latent TB.
Duration: ongoing project
- 3) **Project title:** Environmental Information System Distributed Information Centre on Toxic Chemical. Project sponsored by Ministry of Env. & Forest, Govt. of India
Designation: Team member
Description: It's a ministry of Environment & Forest, Govt. of India sponsored project. number of database generated on toxic chemicals and made available through

www.envisiitr.org.in My role is to generate ideas, their implementation and technical aspects involved.

Duration: ongoing project

- 4) **Project title:** Comprehensive Traditional Knowledge Digital Library. Sponsored by Council of Scientific and Industrial Research, Govt. of India
Designation: Team member
Description: It's a CSIR network project to digitalized traditional knowledge of plants for patent offices. In the first phase, our institution is collecting data on toxicology profile of more than 1200 Indian medicinal plants. My work is to coordinate activity related to data collection, verification and report generation.
Duration: 2007-2012
- 5) **Project title:** Identification and functional analysis of microRNAs involved in malignant melanoma progression (DFG funded project)
Designation: Team member
Description: Identification of differentially expressed miRNAs and their influence on target genes during melanoma progression (metastasis) using a miRNA expression screen of different tumor stages
- 6) **Project title:** Decision support system for health risk assessment and prediction. Sponsored by Council of Scientific and Industrial Research, Govt. of India
Designation: Project In-charge
Description: the project is based on artificial intelligence and neural network approach to predict the health risk due to environmental pollutant and occupational hazards.
Duration: April 2007 - March, 2012
- 7) **Project title:** UP Environment Information System (UP-ENVIS) Management. Sponsored by Ministry of Environment and Forest, Govt. of India.
Designation: - Project In-charge
Description: This database is the part of Environment Information System, Govt. of India. Database contains information about air, soil, water pollutant and all the statistical information about UP. The database is available online through the website <http://www.upenvis.nic.in>
Duration: 6 months
- 8) **Project title:** Establishment of Biotech Park at Biotechnology city, Lucknow. Sponsored by Council of Science and Technology, UP and DBT, Govt. of India
Designation:- Senior Programmer
Nature of Work:- Web Administrator for the website <http://www.biotechpark.org.in>
Software and database development, Human resource development in the field of Bioinformatics.
Duration: 17 months
- 9) **Project title:** Database on Indian medicinal Plants for Epilepsy
Designation: - Project In-charge
Description:- The Database contains information of more than 40 Indian medicinal plants used in the treatment of epilepsy. Major Fields of the database are plant habitat,

description, chemical constituents, part of the plant used in the disease, chemical structures etc.

Duration: 4 months

10) Project title: Effect of Artemisinin analogues on plant root nematode.

Designation: team member

Description: management of nematode culture, identification and analysis of artemisinin analogues on nematode. Data collection and analysis

Duration: 6 months

Current area of research

My current research activities includes the integration of bioinformatics and system biology to enhance the understanding of complex biological process such as neurodegenerative disorders / cancers due to the exposure of hazardous drugs, chemicals and environmental stressors. Identification of biological targets of bioactive phytochemicals for anticancer and antiaging activities and investigating molecular insight of their mode of action using computational approaches integrated with wet lab analysis. Activities also involve the use of fuzzy logic and artificial neural network models to develop decision support system for health risk assessment by integrating diagnostic tools for Lung functional abnormalities; Neurological disorder; and Cancer. Other activities include computational adsorption studies of organic moieties on nanomaterials surfaces in order to predict the toxicity of composites to design safety guidelines for the use of nanomaterials in occupational settings and immune-informatics work.

Research Papers Published:

- Prabha P, Singh DP, **Gupta SK**, de Farias ST, Rai A. Comparative analysis to identify determinants of changing life style in *Thermosynechococcus elongatus* BP-1, a thermophilic cyanobacterium. *Bioinformation* 2013, 9(6): 299-308. **(IF: 1.15)**
- Mudiam MKR, Chauhan A, Singh KP, **Gupta SK**, Jain R, Ch R, Murthy R. Determination of *t,t*-muconic acid in urine samples using a molecular imprinted polymer combined with simultaneous ethyl chloroformate derivatization and pre-concentration by dispersive liquid-liquid microextraction. *Analytical and Bioanalytical Chemistry* 2012, doi: 10.1007/s00216-012-6474-9 **(IF: 3.778)**
- Lai X, Schmitz U, **Gupta SK**, Bhattacharya A, Kunz M, Wolkenhauer O, Vera J. Computational analysis of target hub gene repression regulated by multiple and cooperative miRNAs. *Nucleic Acid Research* (2012), doi: 10.1093/nar/gks657 **(IF: 8.026)**
- Prabha R, Singh DP, Gupta SK, Farooqi S, Rai A. Synonymous codon usage in *Thermosynechococcus elongatus* (cyanobacteria) identifies the factors shaping codon usage variation. *Bioinformation* 2012, 8(13): 622-628. **(IF: 1.15)**
- Smita S, **Gupta SK**, Bartonova A, Dusinska M, Gutleb AC, Rahman Q. Nanoparticles in the environment: assessment using the causal diagram approach. *Environmental Health* 2012, 11(Suppl 1): S13. **(IF: 2.65)**

- Gupta SK, Srivastava M, Akhoo BA, **Gupta SK**, Grabe N. *In silico* accelerated identification of structurally conserved CD8+ and CD4+ T-cell epitopes in high-risk HPV types. *Infection, Genetics and Evolution* 2012, 12(7): 1513-1518. (IF: 3.128)
- **Gupta SK**, Gupta SK, Smita S, Srivastava M, Lai X, Schmitz U, Rahman Q, Wolkenhauer O, Vera J. Computational analysis and modeling the effectiveness of 'Zanamivir' targeting neuraminidase protein in pandemic H1N1 strains. *Infection, Genetics and Evolution* 2011, 11: 1072-1082. (IF: 3.223)
- **Gupta SK**, Dhawan A, Shanker R. *In silico* approaches: Prediction of biological targets for fullerene derivatives. *Journal of Biomedical Nanotechnology* 2011, 7: 91-92. (IF: 4.216)
- Akhoo BA, **Gupta SK**, Verma V. Comparative analysis of mesothelial invasion by single- and multi-wall carbon nanotubes using computational approach. *Journal of Biomedical Nanotechnology* 2011, 7: 181-182. (IF: 4.216)
- Patel A, Smita S, Rahman Q, **Gupta SK**, Verma MK. Single wall carbon nanotubes block ion passage in mechano-sensitive ion channels by interacting with extracellular domain. *Journal of Biomedical Nanotechnology* 2011, 7: 183-185. (IF: 4.216)
- Gupta SK, Srivastava M, Akhoo BA, Smita S, Schmitz U, Wolkenhauer O, Vera J, **Gupta SK**. Identification of immunogenic consensus T-cell epitopes in globally distributed influenza-A H1N1 neuraminidase. *Infection, Genetics and Evolution* 2011, 11(2):308-319. doi:10.1016/j.meegid.2010.10.013 (IF: 3.223)
- Gupta SK, Smita S, Sarangi AN, Srivastava S, Akhoo BA, Rahman Q, **Gupta SK**. *In silico* CD4+ epitope prediction and HLA distribution analysis for the potential proteins of *Neisseria meningitidis* Serogroup B – a clue for vaccine development. *Vaccine* 2010, 28(43): 7092-7097. doi:10.1016/j.vaccine.2010.08.005 (IF: 3.616)
- Srivastava M, Akhoo BA, Gupta SK, **Gupta SK**. Development of resistance against Blackleg disease in *Brassica oleracea* var. *botrytis* through *in silico* methods. *Fungal genetics and Biology* 2010, 47(10): 800-808. doi:10.1016/j.fgb.2010.06.014 **Cover Page article** (IF: 2.961)
- Pandey R, Gupta S, Tandon S, Wolkenhauer O, Vera J, **Gupta SK**. Baccoside A suppresses epileptic like seizure / convulsion in *Caenorhabditis elegans*. *Seizure* 2010, 19: 439-442. doi:10.1016/j.seizure.2010.06.005 (IF: 2.233)
- Akhoo BA, Gupta SK, Gagan D, Srivastava M, **Gupta SK**. Virtual screening of specific chemical compounds by exploring *E. coli* NAD+-dependent DNA ligase as a target for antibacterial drug discovery. *Journal of molecular Modeling* 2010. doi:10.1007/s00894-010-0713-9. (IF: 2.336)
- Smita S, Sarangi AN, Patel A, Verma MK, Pandey R, Rahman Q, **Gupta SK**. Comparison of structural geometry of α -helices from transmembrane and globular proteins. *International Journal of Integrative Biology* 2010, 9(2): 80-83. (IC: 6.0)

- Gupta SK, Akhoun BA, Srivastava M, **Gupta SK**. A novel algorithm to design an efficient siRNA by combining the pre proposed rules of siRNA designing. Journal of computer science & system biology 2010, 3(1): 005-009. doi:10.4172/jcsb.1000048 (**IC: 5.68**)
- Akhoun BA, Gupta SK, Verma V, Dhaliwal G, Srivastava M, **Gupta SK**, Ahmad RF. In-silico designing and optimization of anti-Breast cancer antibody mimetic oligopeptide targeting HER-2 in women. Journal of molecular graphics and modeling 2010, 28: 664-669. doi:10.1016/j.jmgm.2010.01.002 (**IF: 2.169**)
- Sarangi AN, Gupta S, Trivedi N, Rathi B, **Gupta SK**. Mining the proteome of *Haemophilus ducreyi* for identification of potential drug targets. The Open Bioinformatics Journal 2010, 4: 1-4. doi:10.2174/1875036201004010001 **Peer Reviewed**
- Dixit S, Purshottam SK, **Gupta SK**, Khanna SK, Das M. Usage pattern and exposure assessment of food colours in different age groups of consumers in the State of Uttar Pradesh, India. Food Additives & Contaminants: Part A Chemistry, Analysis, Control, Exposure & Risk Assessment. 2010, 27(2): 181-189. doi:10.1080/19440040903268062 (**IF: 2.131**)
- Pattanayak M, Seth PK, Smita S, **Gupta SK**. Geraniol and limonene interaction with 3-hydroxy-3-methylglutaryl-CoA (*HMG-CoA*) reductase for their role as cancer chemopreventive agents. Journal of Proteomics & Bioinformatics 2009, 2(11): 466-474. doi:10.4172/jpb.1000107 (**IC: 6.55**)
- Choubey J, Patel A, Khatri S, Dewangan R, **Gupta SK**, Verma MK. Homology modeling of hypoxanthin-guanine phosphoribosyltransferase, enzyme involved in salvage pathway of purine metabolism. Journal of computer science and system biology 2009, 2(5): 260-263. doi:10.4172/jcsb.1000039 (**IC: 5.68**)
- Gupta SK, Singh A, Srivastava M, **Gupta SK**, Akhoun BA. *In silico* DNA vaccine designing against human papillomavirus (HPV) causing cervical cancer. Vaccine 2009, 28(1): 120-131. doi:10.1016/j.vaccine.2009.09.095 (**IF: 3.616**)
- Biswas D, **Gupta SK**, Sindhvani G, Patras A. TLR2 polymorphism, Arg753Gln and Arg677Trp, are not associated with increased burden of Tuberculosis in Indian patients. BMC Research Notes 2009, 2: 162. doi:10.1186/1756-0500-2-162 (**IC: 6.16**)
- Pandey R, Singh T, Bhakuni RS, **Gupta SK**, Gupta RR, Kalra A. Nematicidal activities in artemisinin analogues. Nematologia Mediterranea 2004, 32(2): 213-216. **Peer Reviewed**

Book Chapter:

- Marin-Sanguino A, **Gupta SK**, Voit EO, Vera J. Biochemical pathway modeling tools for drug target detection in Cancer and other complex diseases. In Michael Johnson editor: Methods in Enzymology, Vol. 487, Burlington: Academic Press, 2010, pp 319-370. (**IF: 1.904**)

- Gupta SK, Schmitz U. Bioinformatics approaches for analyzing high-throughput data. In: Recent trends in Biotechnology Vol-2, Nova Science Publishers Inc., USA, 2010, pp 129-156.
- **Gupta SK**, Smita S, Rahman Q. Enriching biotechnology with recent bioinformatics tools and protocols. In: Recent trends in Biotechnology, 2009, Vol-1, Nova Science Publishers Inc., USA.
- Smita S, Singh KP, Akhoon BA, Gupta S, **Gupta SK**. Bioinformatics tools for interpretation of data used in molecular identification. In "Analyzing Microbes", Manual of molecular Biology Techniques. Page 209 - 243. Published by Springer Protocols, Springer. ISBN: 978-3-642-34410-7.
- Smita S, Singh KP, Akhoon BA, **Gupta SK**. Biological sequence analysis: algorithms and statistical methods. In "Analyzing Microbes", Manual of molecular Biology Techniques. Page 303 - 333. Published by Springer Protocols, Springer. ISBN: 978-3-642-34410-7.
- Schmitz U, Gupta SK. Essay on "Target site". Encyclopedia of System Biology 2012.

Technical Report:

- HENVINET – Evaluation questionnaire – causal chain for nanoparticles. Rahman Q, Smita S, **Gupta SK** Ed. by Yang A, Bartonova, A. [TR 13/2010].

Copy-rights:

- Data Management System for Quality Assurance of Medicinal Plants (DMS-QAMP) (Copyright number: 012CR2010)
- Database on Treatment and antidotes for chemical poisoning (copyright number: 014CR2008)
- Software on “Epidemiological Data mining and management system” (Copyright number: 003CR2009)
- Database on “Traditional antidotes against snake and scorpion poisoning - I”

Paper/Poster Presented/co-authored in Conference / Symposia:

- 1) **Computational Prediction of Molecular Targets responsible for Antioxidant Activity of D-pinitol in Caenorhabditis elegans.** *IJCA Proceedings on National Seminar on Application of Artificial Intelligence in Life Sciences 2013* NSAAILS(1):19-23, February 2013. Published by Foundation of Computer Science, New York, USA.
- 2) **Development of Computational Method to Calculate Organic Pollutant Load on Nano-Material's Surface.** *IJCA Proceedings on National Seminar on Application of Artificial Intelligence in Life Sciences 2013* NSAAILS(1):24-28, February 2013. Published by Foundation of Computer Science, New York, USA.

- 3) **Decision Support System for the diagnosis of Asthma severity using Fuzzy logic.** International multiconference of Engineers and Computer Scientists 2012 IMESC(1): 142-147. Published by International Association of Engineers
- 4) **“*In silico* Approaches: Prediction of Biological Targets for Fullerene Derivatives”**, International symposium on The Safe Use of Nanomaterials (SUN)- 2011, Lucknow, India, February 1-3, 2011.
- 5) **“Comparative Docking Study of nitrogen containing biphosphonate with Human *fernasyl pyrophosphate synthase* for treatment of osteoporosis”**, International conference of Bioinformatics (INCOB) – 2010, Tokyo, Japan, September 26-28, 2010.
- 6) **“The role of miRNAs in malignant melanoma progression”**, German conference on Bioinformatics 2010, Braunschweig, Germany, September 20-22, 2010.
- 7) **“Bioinformatics tools based approach in identification and in silico structure prediction of PRDX-2 protein involved in anti-oxidant activity in *C. elegans*”**, International conference Health Expo- 2008, Chandigarh, India, 12-15 Dec 2008.
- 8) **“Parkinson disease pathway: Design a computational model for comparative study of *C. elegans* with *Homo sapiens*, *Mus musculus* and *Cannis familiaris*”**, International conference Health Expo- 2008, Chandigarh, India, 12-15 Dec 2008.
- 9) **“*In silico* designing of inhibitor against Tin2 for aging”**. HGM2008 Human Genome Meeting Hyderabad. September 27-30, 2008.
- 10) **“Structure determination of cysteine conjugate-beta lyase 1 (CCBL1) a key enzyme for nephro/neurotoxicity through computational approaches”**. HGM2008 Human Genome Meeting Hyderabad. September 27-30, 2008.
- 11) **“Predicting the activity and druggability of compounds from medicinal plants through *in silico* approach”**. HGM2008 Human Genome Meeting Hyderabad. September 27-30, 2008.
- 12) **“An artificial neural network approach for prediction of proteasomal cleavage sites for large delta antigen (HDAg-L) containing small delta antigen (HDAg-S) of Hepatitis D virus”**. International Symposium on Newer Frontiers in Biomedical Research organized by Regional Medical Research Centre, N.E. region (ICMR), Dibrugar, Assam (India). June 28 – 29, 2008.
- 13) **“*In silico* vaccine prediction against Herpes Simplex Virus1 (HSV1)”**. International Symposium on Newer Frontiers in Biomedical Research organized by Regional Medical Research Centre, N.E. region (ICMR), Dibrugarh, Assam (India). June 28 – 29, 2008.
- 14) **“A comparative study of Geraniol & Limonene interaction with HMG-CoA reductase: An *in silico* approach”**. Bio Convene, 2007 organised by University of Hyderabad. December 16-22, 2007.

- 15) **“Evolutionary analysis of Thiamine Biosynthesis Pathway through missing gene identification”**. International Conference on ‘Recent Trends in Biotechnology’, ORIGENE, 2007. Kalasalingam University, Krishnankoil, TN. January 5 -6, 2007.
- 16) **“Database on Indian medicinal plants for Epilepsy”**. BIOCON – 2007, 3rd Annual conference on “Shaping the nature with artificial hand: An Amalgamation of Information technology and Biosciences” organised by Saaii College of medical science and technology, Kanpur. January 27 – 28, 2007.
- 17) **“*Stevia Rebutiana (Bartoni): A magical plant and boon of health freaks and Diabetes*”**. BIOCON – 2007, 3rd Annual conference on “Shaping the nature with artificial hand: An Amalgamation of Information technology and Biosciences” organised by Saaii College of medical science and technology, Kanpur. January 27 – 28, 2007.
- 18) **“*In silico 3D Structure Prediction of E-Protein [Envelop Protein] of Japanese Encephalitis Virus and Peptide de Formylase of Mycobacterium Tuberculosis through Homology Modeling.*”** BioHorizon - 2006, 8th National Symposium on Biochemical Engineering and Biotechnology organized by Indian Institute of Technology (IIT), Delhi.
- 19) **“Development of Non Protein Amino Acid (NPA) Database”**. International Conference on Bioinformatics, INCOB 2006. December 18 – 20, 2006.
- 20) **“Human Integrins Database”**. International Conference on Bioinformatics, INCOB 2006. December 18 – 20, 2006.
- 21) **“Antioxidant Database with a Search Tool”**. International Conference on Bioinformatics, INCOB 2006. December 18 – 20, 2006.
- 22) **“*In silico 3D structure prediction of protein associated with bladder cancer through Homology Modelling*”**. International Conference on Bioinformatics, INCOB 2006. December 18 – 20, 2006.

Lectures delivered:

- 1) Invited lecture in National Training Program on **“Bioinformatics in Multi-omics Era: A Microbial Genomics perspective”** organized by National Bureau of Agriculturally Important Microorganism (NBAIM), Mau on February 27, 2012.
- 2) Invited lecture in the National seminar on **“Metagenomics: A practical approach to molecular taxonomic profiling”** organised by National Bureau of Agriculturally Important Microorganism (NBAIM), Mau on November 28, 2011.

- 3) Invited lecture in subject matter training on "**Computational tools for genome resource data analysis in Fisheries domain**" organized by National Bureau of Fish Genetic Resource (NBFGR), Lucknow on October 19, 2011.
- 4) Invited lecture in DBT, Govt. of India sponsored training program on "**Protein sequence analysis and structure prediction**" on June 10, 2011 at Lucknow University, Lucknow.
- 5) Invited lecture in "**TIFAC's Technology Vision - 2035**" brainstorming meet organized by IT-BHU, Varanasi on May 20, 2011.
- 6) Invited lecture in State ENVIS Workshop organized by MoEF, Govt. of India on May 04, 2011.
- 7) "**In silico approaches: Prediction of biological targets for fullerene derivatives**". International symposium on Safe Use of Nanomaterials (SUN-2011), IITR, Lucknow February 1-3, 2011.
- 8) "**Finding similarity and inferring homology using web based/ offline BLAST**". National training program on "Metagenomics: Methods and Application in Microbiology". National Bureau of Agriculturally Important Microorganism, Mau, UP. January 11, 2011.
- 9) "**Development of Resistance against blackleg disease in *Brassica oleracea* var. botrytis through in silico methods**". National training program on "Microbial Identification and Gene Mining: A Bioinformatics Approach". National Bureau of Agriculturally Important Microorganism (NBAIM), Mau. September 06, 2010.
- 10) "**Mining the Proteome of *Haemophilus ducreyi* for identification of potential drug targets**". National training program on "Microbial Identification and Gene Mining: A Bioinformatics Approach". National Bureau of Agriculturally Important Microorganism (NBAIM), Mau. September 06, 2010.
- 11) "**Biological Databases and searching information through pubmed, sequecnce retrival system and protein structure visualization tools**". Training program on "Introduction to Bioinformatics with Hands on Internet Browsing and Data Searching". BIF centre Bioinformatics, Narendra Dev University of Agriculture and Technology, Kumarganj, Faizabad. January 10, 2009.
- 12) "**Protein structure, modelling and macromolecular structure visualization**". Workshop on 'Bioinformatics for clinicians' at Biomedical Informatics Centre, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow. November 02, 2008.

- 13) **“Restrained based protein homology modelling with modeller9v3”**. Workshop on ‘Application of Bioinformatics tools in Biotechnology’ organised by BIF at Lucknow University sponsored by DBT India. October 23, 2008.
- 14) **“Introduction to bioinformatics and knowledge processing through BLAST”**. Workshop on “*in silico* drug / vaccine designing” organized by subDIC Bioinformatics centre, National Institute of Technology Raipur, Raipur (CG). August 4 – 8, 2008.
- 15) **“Protein secondary structure prediction techniques”**. Workshop on “*in silico* drug / vaccine designing” organized by subDIC Bioinformatics centre, National Institute of Technology Raipur, Raipur (CG). August 4 – 8, 2008.
- 16) **“GENCHECK: Installation and configuration of associated tools”**. Workshop on “*in silico* drug / vaccine designing” organized by subDIC Bioinformatics centre, National Institute of Technology Raipur, Raipur (CG). August 4 – 8, 2008.
- 17) **“Installation and preparation files for docking experiment using Autodock with ADT”**. Workshop on “*in silico* drug / vaccine designing” organized by subDIC Bioinformatics centre, National Institute of Technology Raipur, Raipur (CG). August 4 – 8, 2008.
- 18) **“Biological Database development and architecture”**. ‘First course in Bioinformatics: Introduction, Principles & Applications’, organised by Biomedical Information Centre, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow. December 01, 2007.
- 19) **“Specialized databases hosted at ENVIS ITRC website”**. Performance evaluation workshop of ENVIS Centre of Northern region at Forest Research Institute, Dehradun. November 20, 2007.
- 20) **“Introduction to Biological Databases”**. ‘Bioinformatics: Tools & Techniques’, organised by sub-DIC Bioinformatics Centre, NIT, Raipur. July 23-26, 2007.
- 21) **“Sequence alignment algorithms & methodology”**. ‘Bioinformatics: Tools & Techniques’, organised by sub-DIC Bioinformatics Centre, NIT, Raipur. July 23-26, 2007.
- 22) **“Homology modelling: approach for protein 3-D structure prediction”**. ‘Bioinformatics: Tools & Techniques’, organised by sub-DIC Bioinformatics Centre, NIT, Raipur. July 23-26, 2007.
- 23) **“Building three dimensional structure of thioredoxin reductase from *Homo sapiens* through modeller9v1”**. ‘Bioinformatics: Tools & Techniques’, organised by sub-DIC Bioinformatics Centre, NIT, Raipur. July 23-26, 2007.
- 24) **“Introduction to Active Server Page and its Application in Biological Database”**. National Workshop cum Training on “Development of Database and its Application in Biodiversity”, Sub DIC (Bioinformatics), CARI, Port Blair. February 20-21, 2007.

- 25) **“Introduction to RDBMS Concept, Database Security and Database Normalization”**. National Workshop cum Training on “Development of Database and its Application in Biodiversity”, Sub DIC (Bioinformatics), CARI, Port Blair. February 20-21, 2007
- 26) **“Database Designing with respect to Biodiversity by using MS-Access and ASP”**. National Workshop cum Training on “Development of Database and its Application in Biodiversity”, Sub DIC (Bioinformatics), CARI, Port Blair. February 20-21, 2007
- 27) **“Biological Databases: Introduction and Their Retrieval”**, “One Day workshop on Bioinformatics” at AMITY University, Lucknow Campus on 1st March, 2006.

Training & Seminar attended:

- 1) “Technical workshop for nodal officers on National Knowledge Network project”. Organised by NIC, New Delhi, Govt. of India at Delhi University, Delhi. March 25, 2011.
- 2) “Design and Development of Digital Library using DSpace”, NISCAIR, New Delhi. August 16 – 20, 2010.
- 3) “Biomedical Information Retrieval”. ICMR-NIC Centre for Biomedical Information at National Informatics Centre, New Delhi. January 15-17, 2008.
- 4) “Principles and Applications of Bioinformatics in Biotechnology”. Sub-DIC, Bioinformatics Centre, Biotech Park, Lucknow. December 10-11, 2007.
- 5) “Performance evaluation workshop-cum-training programme for ENVIS Centres in northern region”. Forest Research Institute, Dehradun. November 19-23, 2007.
- 6) “Evaluation workshop-cum-training programme for the ENVIS Centres on status of environment in states / UTs”. Directorate of environment, UP Govt., Lucknow. September 19-23, 2007.
- 7) “Managed IT Infrastructure and Managed IT Security Services”. Central Drug Research Institute, Lucknow. July 02, 2007.
- 8) “Introduction to Accelrys GCG with SeqLab and SeqWeb Interface”. Accelrys Software Inc. at All Indian Institute of Medical Sciences, New Delhi, January 19 – 21, 2007.
- 9) “Workshop on Discovery Studio”. Accelrys Software Inc. at All Indian Institute of Medical Sciences, New Delhi, January 15 – 18, 2007.
- 10) International Conference on Bioinformatics, InCOB 2006. New Delhi. December 18 – 20, 2006.
- 11) Training programs organized at Society for Biological Research and Rural Development, Gomti Nagar, Lucknow:
 - a. “Sequence Comparison: Importance & Algorithms”. October 18-19, 2005.
 - b. “Protein Databases & Protein Structure Confirmation Techniques”. November 26-27, 2005.

- c. "One Day workshop on Bioinformatics" at AMITY University, Lucknow Campus. March 01, 2006
 - d. "*Insilico* Drug Designing". March 8-10, 2006.
- 12) Worked as a faculty member in the following training programs sponsored by Department of Biotechnology at Biotech Park, Lucknow :-
- a. "Database management system and internet resources in biological sciences". February 3-5, 2004
 - b. "Introduction to Bioinformatics: Principles & Applications". March 26-27, 2004.
 - c. "Bioinformatics: Tools & Resources". May 18-20, 2004.
 - d. "Proteomics: Bioinformatics approaches". July 13-15, 2004.
 - e. "Bioinformatics in Drug Development". December 6-11, 2004
 - f. "Applied Techniques in Bioinformatics". January 11-12, 2005.
 - g. "Building of Biological Databases". February 8-10, 2005.
 - h. "Bioinformatics Tools and Applications". May 18-20, 2005.
- 13) "Bioinformatics Tools in Genomics & Proteomics". Institute of Life Sciences, Bhubaneswar. March 16-19, 2004.

M.Sc. theses supervised:

- 1) "Computational approaches to calculate Nanoparticles mediated organic pollutants load in biological matrices". Madhumita Karmarkar, M.Sc. (IVth semester), Orissa University of Agriculture and Technology, Bhubaneswar (March 01 – June 30, 2011)
- 2) "Implementation of fuzzy logic system to assess the severity of Chronic Obstructive Pulmonary Disease (COPD)". Pooja Sharma, M.Sc. (IVth semester), Integral University, Lucknow (January 01 – March 31, 2009)
- 3) "Computational Analysis of Interaction Sites of Dichlorvos with Acetylcholinesterase". Neelu Singh, M.Sc. (IVth semester), Integral University, Lucknow (January 1 – March 31, 2009)
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I hereby declare that the information given above is true to the best of knowledge.



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