

Jyoti Gupta, Ph.D.

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To build a long-term career as a Chemistry Lecturer, who utilizes capabilities in planning and implementing high quality chemistry fundamentals, analyzing and using data, and building strong relationships with students using the cutting edge of the teaching technique.

Education:

A Doctor of Philosophy (Ph.D.) in Organic Chemistry, 2008 Uttar Pradesh, India
Central Drug Research Institute, Dr. Bhim Rao Ambedkar University
Thesis: Synthesis and structure studies of Potential Euglycemic and Antidyslipemic Agents
(Thesis submitted in 2008 and Awarded in 2010)

Master of Science in Organic Chemistry, 2002 Uttar Pradesh, India
Lucknow Christian Degree College, University of Lucknow * GPA – 3.94

Bachelor of Science, 2000 Uttar Pradesh, India
Navyug Degree College, University of Lucknow * GPA – 3.83
Subject: Zoology, Botany, Chemistry

Professional Experience:

Richland College Texas, USA
Adjunct Professor, Chemistry (2017 - Present)

- Taught a class entitled interpersonal communications, which covered conversational skills, public speaking, and non-verbal and written communication. Instructor for Introductory Chemistry and General Chemistry. Assessed student progress and provided guidance and assistance in comprehension of course material.

University of Texas at Arlington (UTA), Arlington Texas, USA
Post Doctorate Research Fellow (2009- 2011)

- Development of an exciting and pioneering nano-pore technique for applications in biotechnology at the single molecule level. The engineered nano-pores have a variety of new functional properties that could be used as a basis for making sensors.
- Extraction of Plasmid using stab culture.
- Electroporation technique for plasmid extraction.
- IVTT (In Vitro Transcription/Translation) reaction for protein making & Running SDS Page.
- Axon Patch Clamp Amplifier.
- Single channel insertion using α -Hemolysin Protein.
- Clampfit Software 10.2 & QUB Software for data analysis.
- My project involves stochastic nanopore sensing method for the discrimination of organophosphorus nerve agent hydrolysis products, cyclohexyl methyl phosphonic acid and pinacolyl methyl phosphonic acid. By employing an engineered α -hemolysin single pore embedded in a planar lipid bilayer as the stochastic sensing element and β -cyclodextrin as a host molecule, trace amounts of soman and cyclosarin hydrolytes had been detected, with detection limits of 53 nM and 102 nM, respectively.

Texas Christian University (TCU), Fort Worth
Visiting Scientist (2008- 2009)

Texas, USA

Chemistry Private Classes
Chemistry Teacher (2000- 2001)

Lucknow, India

Awards / Honors / Achievements:

- 2002 Awarded **National Level Eligibility Status for lectureship in Higher Education** / Junior Research Fellowship (JRF) by CSIR, New Delhi, India
- 2002 Awarded **State Level Eligibility Status for lectureship in Higher Education** by Uttar Pradesh- SLET, India
- 2002 **Silver Medalist** in Master of Science (M. Sc.)
- 2000 **Bronze Medalist** in Bachelor of Science (B. Sc.)
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International Patents and Publications:

1. Pregnan-oximino-aminoalkylethers and process for preparation thereof, useful as antidiabetic and antidyslipidemic agents. PC Verma, **Jyoti Gupta**, DP Singh, V Gupta, HN Kushwaha, A Misra (*Publication date - 2014/1/24, US Patent, Application number 14/763,480*)
 2. Simultaneous detection of CMPA and PMPA, hydrolytes of soman and cyclosarin nerve agents, by nanopore analysis. **Gupta, Jyoti**; Zhao, Qitao; Wang, Guihua; Kang, Xiaofeng; Guan, Xiyun. (*Sensors and Actuators B: Chemical Volume 176, January 2013, Pages 625–631*)
 3. Translocation of single-stranded DNA through the α -hemolysin protein nanopore in acidic solutions. Ranulu S. S. de Zoysa, D. M. Milan Krishantha, Qitao Zhao, **Jyoti Gupta** and Xiyun Guan. (*ELECTROPHORESIS Volume 32, Issue 21, pages 3034–3041, November 2011*)
 4. A chemical-induced pH-mediated molecular switch. Dilani A. Jayawardhana, Mrinal K. Sengupta, D.M. Milan Krishantha, **Jyoti Gupta**, Daniel W. Armstrong, and Xiyun Guan. (*Anal Chem. 15; 83(20): 7692–7697, October 2011*)
 5. Bio-transformation of FXR antagonist CDRI 80/574. Alok K. Verma, Priti Khemaria, **Jyoti Gupta**, Dharmendra P. Singh, Bhawani S. Joshi, Raja Roy, Anjani K. Mishra, and Ram Pratap. (*ARKIVOC 2010 (ix) 1-11*)
 6. Nanopore detection of nerve agent degradation products. X Guan, **Jyoti Gupta**, Q Zhao, RS de Zoysa, DA Jayawardhana (*2010, DNA*)
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Poster / Work Presentation in Scientific Symposia:

1. A Facile Synthesis of Homo-flavones – **Jyoti Gupta** and Ram Pratap presented in International conference “Indo-US-CCNP-2006” held from Nov. 13th -14th 2006 at IICT Hyderabad (*Abstract published in souvenir 2006, P-40, Pg. 71*).

2. Nanopore Detection of Nerve Agent Degradation Products – **Jyoti Gupta** and Xiyun Guan.
Presented in Southern Methodist University (SMU), Dallas, Texas, USA
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References:

Dr. Richard (Xiyun) Guan

Associate Professor of Chemistry, Illinois Institute of Technology, Chicago, IL
Email Id: xguan5@iit.edu

Dr. Manfred G. Reinecke

Professor Emeritus and Cecil and Ida Green Distinguished Emeritus Tutor Organic and Natural Products
Chemistry, Texas Christian University, Fort Worth, TX 76109 * Email Id: m.reinecke@tcu.edu

Dr. Shyam Singh

Ex-Scientist F, Central Drug Research Institute, Lucknow, 226001
Email Id: shyambiop@gmail.com, shyambiop@rediffmail.com