

CURRICULUM VITAE

DR. NEERJA KHANEJA

Block – 2, H.No. 231, Near Arya Samaj Mandir, Subhash Nagar, New Delhi – 110027

Mobile No: 9891800421/8920072716 **e-mail:** neerjakhaneja17@gmail.com

WORK EXPERIENCE

A: Teaching Experience (Higher Education)

Teaching various domains of Organic Chemistry, Inorganic Chemistry and Physical Chemistry in Higher Education Colleges, University of Delhi including fundamentals of organic chemistry, stereochemistry etc. from the last 4 years.

S. No.	Name of College, University of Delhi (more than 10 years)
1	Bhagini Nivedita college (presently working)
2	Shyan Lal College
3	Kalindi College
4	Dyal Singh College
5	Acharya Narendra Dev College
6	Institute of Home Economics

B: Research Scientist

Worked as a Research Scientist with **Jubliant Life Sciences** having 6 years of experience in IPR (Patents).

C: Research Associate

Positioned as a Research Associate with **Nucleic Acid Center, University of Southern Denmark, Odense, Denmark**.

RESEARCH EXPERIENCE

Worked as a **Junior and Senior Research Fellows** of Council of Scientific and Industrial Research (CSIR) at **Department of Chemistry, University of Delhi** in Bioorganic and Organic Chemistry laboratory under supervision of Professor V. S. Parmar. Also worked as a visiting Ph.D. scholar at Nucleic Acid Center, Department of Chemistry, University of Southern Denmark, Odense, Denmark under supervision of Professor Jesper Wengel from August 2003 till June 2004.

Thesis Title: *“Selective Deacylation Studies on Sugar Derivatives and Synthesis and Incorporation of 2'-Aminonucleosides into Oligonucleotides”*.

Recent years have seen the emergence of sugar modified nucleoside analogues as promising chemotherapeutic agents. The importance of antisense and anti-gene

oligonucleotides as potential and selective inhibitors of gene expression have proved to be significant developments in this field. Also modified nucleosides have attracted much attention as potential antiviral and anticancer agents. Several chemically and biocatalytically modified sugar derivatives have been synthesized which are of great importance in the antisense strategy. Various N-2'-functionalised derivatives of 2'-amino-2'-deoxyuridine are synthesized and these building blocks are incorporated in DNA strands and DNA-LNA mixer strands and their duplex stability is investigated.

EDUCATIONAL BACKGROUND

- **Doctor of Philosophy (Ph.D.):** Awarded with specialization in **Organic Chemistry** from University of Delhi (2006).
- **Master of Science (M.Sc.):** Completed M. Sc. with specialization in Organic Chemistry from Hindu College, University of Delhi. Secured 63.5%, First Division.
- **Bachelor of Science (B.Sc.):** Completed B.Sc. (Hons) in Chemistry from Gargi College, University of Delhi. Secured 70.6%, First Division.
- **Senior Secondary (XIIth):** CBSE Board in class XII exams (Science Stream). Secured 76.6%, First Division.
- **Higher Secondary (Xth):** CBSE Board in class X exams. Secured 74.4%, First Division.

COMPUTER PROFICIENCY

Proficient in computer applications comprising MS Office (MS Word, Excel, PPT etc.), e-mail softwares i.e. Outlook, gmail etc. and browsing internet search engines.

AWARDS/ACCOLADES

- **Junior Research Fellowship (JRF)** from Council of Scientific and Industrial Research (CSIR)/ NET, New Delhi, India.
- **Senior Research Fellowship (SRF)** from Council of Scientific and Industrial Research (CSIR), New Delhi, India.
- Awarded **National Scholarship** from **University of Delhi** for two years for Master's Degree.

CONFERENCE/ SYMPOSIA PARTICIPATION

- Participated in Summer School symposium, organized by Nucleic Acid Center, University of Southern Denmark, Odense, Denmark.
- Awarded for the best poster presentation in Green/ Sustainable Chemistry, organized by University of Delhi, Delhi in the year 2006.

PERSONAL DOSSIER

Maiden Name: Dr Neerja Kalra

Marital Status: Married

Married Name: Dr Neerja Khaneja

LIST OF PUBLICATIONS (10 Publications)

1. Synthesis of bicyclic sugar modified locked nucleic acids : a review
A. Goswami, A.K. Prasad, J. Maity, Neerja Khaneja
***Nucleosides Nucleotides Nucleic acids*, Vol 41, 503-529, 2022**
2. Amino acids attached to 2'-amino-LNA: Synthesis of DNA mixmer oligonucleotides with increased duplex stability.
M. Johannsen, L. Crispino, M. Wamberg, Neerja Kalra, Jesper Wengel.
***Org. Biomol. Chem.* 2011, 9, 243-52**
3. Aptamers as a model for functional evaluation of LNA and 2'-amino LNA.
F. Hernandez, Neerja Kalra, Jesper Wengel, B. Vester
***Bioorg. Med. Chem. Lett.* 2009 19, 6585-87**
4. Selective biocatalytic deacylation studies on furanose triesters: a novel and efficient approach towards bicyclonucleosides.
Ashok K. Prasad, Neerja Kalra, Y. Yadav, S. K. Singh, S. K. Sharma, S. Patkar, L. Lange, C. E. Olsen, Jesper Wengel, Virinder S. Parmar
***Org. Biomol. Chem.*, 2007, 5, 3524-3530.**
5. Deacylation studies on furanose trimesters using an immobilized lipase: Synthesis of a key precursor for bicyclonucleosides.
Ashok K. Prasad, Neerja Kalra, Y. Yadav, R. Kumar, S. K. Sharma, S. Patkar, L. Lange, Jesper Wengel, Virinder S. Parmar
***Chem. Commun.*, 2007, 25, 2616-2617.**
6. Novel selective biocatalytic deacylation studies on key precursors for bicyclonucleosides
Ashok K. Prasad, S. K. Singh, Neerja Kalra, N. Singhal, Jesper Wengel, Virinder S. Parmar
***Nucleosides Nucleotides Nucleic acids*, 2007, 26, 1517-1521.**
7. DNA and LNA Oligonucleotides containing N2'-functionalized derivatives of 2'-amino-2'-deoxyuridine.
Neerja Kalra, M. C. Parlato, V. S. Parmar and J. Wengel.
***Bioorg. Med. Chem. Lett*, 2006, 14, 3166-3169.**
8. Novel thiocoumarins as inhibitors of TNF- induced ICAM-1 expression on human umbilical vein endothelial cells (HUVECs) and microsomal lipid peroxidation.

S. Kumar, B. K. Singh, **Neerja Kalra**, V. Kumar, A. Kumar, A. K. Prasad, H. G. Raj, V. S.

Parmar and B. Ghosh.

***Bioorg. Med. Chem.*, 2005, 13, 1605-1613.**

9. Conformationally controlled high-affinity targeting of RNA or DNA by novel 2'-amino-DNA/LNA mixmers and pyrenyl-functionalised 2'-amino-DNA.

Neerja Kalra, B. R. Babu, V. S. Parmar and J. Wengel.

***Org. Biomol. Chem.*, 2004, 2, 2885-2887.**

10. Highly efficient diastereoselective biocatalytic acylation of a diastereotopic furanose diol and synthesis of key intermediates for amino derivatized biocyclonucleosides.

A. K. Prasad, S. Roy, R. Kumar, **Neerja Kalra**, J. Wengel, C. E. Olsen, A. L. Cholli, L. A. Samuelson, J. Kumar, A. C. Watterson, R. A. Gross and V. S. Parmar.

***Tetrahedron*, 2003, 59, 1333-1338.**

Declaration

I declare that the information given above is true to the best of my knowledge and belief and nothing has been hidden

Neerja Khaneja

(NEERJA KHANEJA)