Name	Moneesha Fernandes
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Subjects: Chemistry (Organic Chemistry)

Education
- M. Sc. (Chemistry), Pune University
- Ph. D. (Chemistry), Pune University for work done at NCL, Pune.
- Post-doc (Bio-organic Chemistry), Albert-Ludwigs Universität, Freiburg, Germany

Achievements
- Designed and synthesized a series of novel molecular transporters for cellular delivery
- Synthesized pyrrolidine-based nucleic acids, including incorporation unnatural nucleobases into Peptide Nucleic Acid oligomers
- Designed a novel assay to follow the phenomenon of strand invasion of DNA duplexes by PNA
- Synthesized several nucleic acid analogues (DNA/RNA) and also developed a procedure for efficient aminoacylation of pdCpA dimers for introduction of non-natural aminoacids into proteins

Research Area
- Nucleic acid analogues and modifications
- Molecular transporters for efficient cell delivery

Recent publications
- Namrata Erande, Anita D. Gunjal, Moneesha Fernandes, Vaijayanti A. Kumar (**2011**): Probing the furanose conformation in the 2'-5'-strand of isoDNA:RNA duplexes by freezing the nucleoside conformations. *Chem. Commun*. *47*, 4007 - 4009
- Vaijayanti Anil Kumar, Anita Dinkar Gunjal, Moneesha D'Costa, Namrata Diliprao Erande, Venubabu Kotikam (**2011**): Locked and unlocked 2'-*O*-phosphoramidite nucleosides, process of preparation thereof and oligomers comprising the nucleosides. *US Patent application* 20110196141 A1.Seema
- Bagmare, Moneesha D'Costa, Vaijayanti A. Kumar (**2009**): Effect of chirality of L/D-proline and prochiral glycine as the linker amino acid in five-atom linked thymidinyl-(α-amino acid)-thymidine dimers. *Chem. Commun.* 6646 - 6648
- Vaijayanti Anil Kumar, Moneesha D'Costa and Krishnarajnagar Nagappa Ganesh (**2009**): Chiral Charged Peptide Nucleic Acid Oligomers from Cyclic Monomers-I. *US Patent No.* US 7479536 B1.
- Anita D. Gunjal, Namrata D. Erande, Moneesha D'Costa, Vaijayanti A. Kumar (**2008**): Synthesis of locked S-type and locked N-type uridine monomer units for incorporation in 2'-5' RNA:3'-5' RNA duplexes. *Nucleic Acids Symposium Series No. 52*, 191 – 192.