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Division of Math and Science, North Lake College
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Education and Honors

Ph. D., Biomedical Sciences, 1996

Division of Biochemistry and Molecular Biology,
University of North Texas Health Science Center, Fort Worth, Texas

M.Sc., Life Sciences, 1988

Division of Biotechnical Sciences, University of Mumbai, India

B.Sc., Life Sciences, 1986

Division of Biotechnical Sciences, University of Mumbai, India

R. A. Welch Fellowship, 1994-1996

For the Ph. D. program at the Department of Biochemistry and Molecular Biology, University of North Texas Health Science Center, Fort Worth, Texas

Young Student Scholar Award, 1994

The 9th International Meeting on Vitamin B6 and Carbonyl Catalysis, Capri, Italy

Visiting Scholar Spring 2010

North Lake College, DCCCD

Professional Background

Fall 2005-present *Adjunct Instructor, Biology, North Lake College, Dallas County Community College.*

- Have taught complete courses of General Biology for Science major as well as non-Science major students (BIOL1407, 1408 and 1409).
- Have taught complete courses of Microbiology for non-Science major and Nursing students.
- Improvise lectures and laboratories according to interests of students.
- Use Microsoft power point to present lectures along with discussions, related educational films and news articles. Maintain accurate attendance and grades in Microsoft Excel.
- Make active use of *Blackboard* for effective communication with students.
- Provide necessary extra help and guidance on the subject to the students
- Put all efforts in connecting students with the subject as well as with their goal in life.

Fall 2003-Sp 2005 *Adjunct Instructor, Biology, Southeast Campus, Tarrant County Community College.*

- Have taught the following courses BIOL 1406, BIOL 1407, BIOL 1409.
- Planned and taught complete courses including lectures and laboratory.
- Improvised lectures and laboratories whenever required.
- Used Microsoft programs to present lectures and maintain accurate attendance and grades.
- Provided necessary extra help and guidance to students.

Spring 1999-2001 *Post-doctoral Research Associate, Division of Biochemistry and Molecular Biology, University of North Texas Health Science Center, Fort Worth, Texas*

- Worked on two research projects: Cloning of phosphofructokinase gene from *Ascaris suum* and
- Production of recombinant malic enzyme from *Ascaris suum* with incorporated selenomethionine as an alternative to a heavy metal derivative for crystallography

- Both projects required various techniques in Biochemistry, Microbiology and Molecular Biology including protein estimation and purification, enzyme activity experiments, culturing bacteria and bacteriophages, cloning.
- Guided Graduate students by helping with their research projects
- Mentored students in the Summer Multicultural Advanced Research Training Program by assigning a research project followed by guiding them throughout the summer until completion of the project.

1990-Summer1996 *Research Assistant, Division of Biochemistry and Molecular Biology, University of North Texas Health Science Center, Fort Worth, Texas*

- Worked on Ph. D. dissertation: Mechanistic studies of O-acetylserine sulfhydrylase A from *Salmonella typhimurium* by site directed mutagenesis
- Project involved proper culture and maintenance of bacterial strains, cloning of genes, PCR, DNA sequencing, protein purification, enzyme assays. Planned and performed experiments
- Taught basic Microbiology and Molecular Biology techniques to fellow students

Publications and Poster Presentations

1. Cysteine-42 Is Important for Maintaining an Integral Active Site for O-Acetylserine Sulfhydrylase Resulting in the Stabilization of the α -Aminoacrylate Intermediate. C.-H. Tai, M.-Y. Yoon, **V. D. Rege**, N. M. Kredich, K. D. Schnackerz and P. F. Cook. **Biochemistry** 37, 10597-10604 (1998).
2. A change in the internal aldimine lysine (K42) in O-acetylserine sulfhydrylase A to Alanine indicates its role as general base catalyst in the elimination of acetate. **V. D. Rege**, N. M. Kredich, C.-H. Tai, W. E. Karsten, K. D. Schnackerz and P. F. Cook. **Biochemistry**, 35, 13485-13493 (1996).
3. Role of lysine 42 in the elimination reaction catalyzed by O-acetylserine sulfhydrylase A from *Salmonella typhimurium*. **V. D. Rege**, N. M. Kredich, W. E. Karsten, K. D. Schnackerz and P. F. Cook, American Society of Biochemistry and Molecular Biology National Meeting, San Francisco, CA, May1995
4. Implications of site-directed mutagenesis of O-acetylserine sulfhydrylase A from *Salmonella typhimurium*. **V. D. Rege**, N. M. Kredich and P. F. Cook. International Union of Biochemistry and Molecular Biology, New Delhi, India, October 1994.
5. Involvement of an active site lysine in the catalysis by O-acetylserine sulfhydrylase A from *Salmonella typhimurium*. **V. D. Rege**, N. M. Kredich, K. D. Schnackerz and P. F. Cook. Ninth International Meeting, Vitamin B6 and Carbonyl Catalysis, Capri, Italy, May 1994.

Community Activities:

- 2005-present** Co-Leader, SCHEMES (Sensational Club of Hilarious Engineering, Math, Economics and Science Activities) for Cottonwood Creek Elementary, Coppell, Texas
- 2008-present** Co-Leader, Girl Scouts, Troop 3544
- 2007-present** Volunteer, Boy Scouts, Troop 842
- 2003-2004** Secretary, Indian Classical Music Circle of DFW metroplex.
- 2003** Served on the Strategic Planning committee (Curriculum development) of Coppell IS