Srinivas Ramachandran — Curriculum Vitae

Contact Information

Department of Biochemistry and Biophysics
University of North Carolina at Chapel Hill
Genetic Medicine Building, CB#7260
Chapel Hill, NC 27599, USA

Email: ramachan@email.unc.edu
Tel: (919)260-7407
Fax: (919)966-2852

Education

Institution/Location	Degree	Year(s)	Field of Study
University of North Carolina, Chapel Hill	Ph.D.	2006-present	Biochemistry, Specialization in Molecular and Cellular Biophysics
Anna University, Chennai, India.	Bachelor of Technology	2002-2006	Industrial Biotechnology

Awards and Scholarships

2009-2011	American Heart Association Predoctoral Fellowship
2009	Travel Award from Graduate and Professional Student Federation, UNC
2008	Graduate Student and Postdoctoral Fellow Mentor Award, UNC
2006-2007	Molecular & Cellular Biophysics Graduate Research Fellowship
2005	99.37 percentile in Graduate Aptitude Test in Engineering (GATE; GATE score is the basis for selection to post graduate engineering fellowships in India)

Professional Experience

August 2006-present: Graduate Research Assistant, University of North Carolina School of Medicine, NC

- Modeling drug-DNA-protein complexes (Cisplatin, Oxaliplatin)
- Elucidating structure-function relationships in ion-channels (Ryanodine Receptors)

May-July 2005; December 2005-June 2006: Research Associate, National Center for Biological Sciences, Bangalore, India

- Resonance Raman spectroscopy of photo-sensitizer-DNA complexes (riboflavin-DNA) and DNA damage products (8-oxo-guanine)
- Quantum mechanical calculations of DNA damage products (8-oxo-guanine)

Publications

1. **Ramachandran**, **S.,** Serohijos, A. W. R., Xu, L., Meissner, G., and Dokholyan, N. V. "A structural model of the pore-forming region of the skeletal muscle Ryanodine receptor (RyR1)", Public Library of Science Computational Biology 5: e1000367 (2009)
2. **Ramachandran, S.**, Temple, B., Chaney, S. G. and Dokholyan, N. V. "Structural basis for the sequence dependent effects of Platinum-DNA adducts", Nucleic Acids Research 37: 2434-2448 (2009)

3. Jayanth, N., **Ramachandran, S.**, and Puranik, M., "Solution structure of the DNA damage lesion, 8-oxoguanosine from ultraviolet resonance Raman spectroscopy", Journal of Physical Chemistry 113 (8), 1459–1471 (2009)
4. Meissner, G., Pasek, D. A., Yamaguchi, N., **Ramachandran, S.**, Dokholyan, N. V., and Tripathy, A., "Thermodynamics of calmodulin binding to cardiac and skeletal muscle ryanodine receptor ion channels", Proteins: Structure, Function, and Bioinformatics, 74: 207-211 (2009)

Presentations/Posters

1. **Ramachandran, S.,** Temple, B., Dokholyan, N.V., and Chaney, S.G. "The effect of conformational dynamics of cisplatin- and oxaliplatin-DNA Adducts on binding of DNA damage recognition proteins such as HMGB1", 100th AACR Annual Meeting, Apr 18-22, 2009; Denver, CO
2. **Ramachandran**, **S.,** Serohijos, A. W. R., Xu, L., Meissner, G. and Dokholyan, N. V. "Ryanodine receptor pore structure and function", 53rd Biophysical Society Meeting, Feb 28-Mar 4, 2009; Boston, MA
3. **Ramachandran, S.,** Bhattacharyya, D., Dokholyan, N. V., Temple, B., and Chaney, S. G. "Effect of sequence context on cisplatin and oxaliplatin's interactions with DNA", 99th AACR Annual Meeting, Apr 12-16, 2008; San Diego, CA
4. **Ramachandran**, **S**., Bhattacharyya, D., Dokholyan, N. V., and Chaney, S. G. "Effect of sequence context on conformational dynamics of DNA adducts of platinum anticancer drugs: MD simulations of cisplatin- and oxaliplatin-DNA adducts", **Oral presentation**, X International Symposium on Platinum Coordination Compounds in Cancer Chemotherapy, Nov 30-Dec 3, 2007; Verona, Italy

Book Chapters

1. Chaney, S. G., **Ramachandran, S.**, Sharma, S., Dokholyan, N. V., Temple, B., Bhattacharyya, D., Wu, Y., and Campbell, S., "Differences in Conformation and Conformational Dynamics Between Cisplatin and Oxaliplatin DNA Adducts" in "Platinum and Other Heavy Metal Compounds in Cancer Chemotherapy", 157-169, Cancer Drug Discovery and Development, Editors: Bonetti, A., Leone, R., Muggia, F. M., and Howell, S. B., Humana Press, (2009)

Professional Service

To Discipline

2006	Reviewer for Journal of Theoretical Biology

Within UNC-Chapel Hill

2007-present	Mentoring an undergraduate student towards a research internship in developing a novel simulation technique for ion channel modeling
2008	Member, Executive Board, Molecular and Cellular Biophysics Training Program
2007	Student Co-Representative, Molecular and Cellular Biophysics Students forum