CURRICULUM VITAE

NAME: Santanu Maitra, Assistant Professor

CURRENT POSITION: Department of Chemistry SB 70
California State University at Fresno, Fresno, CA 93740

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EDUCATION:

Jan. 1998 – Dec. 2000	**Postdoctoral Research Associate** University of California, Irvine
Dec. 1997	**Ph.D. in Organic Chemistry** University of Nevada-Reno
Dec. 1987	**B.Sc. in Chemistry** St. Xavier's College, University of Calcutta, India

PROFESSIONAL EXPERIENCE & EMPLOYMENT:

8/14 – *[Note: Future appointment]*	**Adjunct Associate Professor** California Health Sciences University, Clovis, CA 93612.
8/08 – present	**Assistant Professor** California State University at Fresno, Fresno, CA 93740
7/03 – 7/08	**Senior Research Investigator / Director** Dr. Reddy's Laboratories, Ltd., Hyderabad 500 049, India
1/01- 7/03	**Senior Research Chemist I** Albany Molecular Research, Inc., Albany, NY
1/98 - 12/00	**Postdoctoral Research Associate** University of California, Irvine Research Advisor: Prof. James S. Nowick
1/93 - 12/97	**Ph.D. Graduate Research Assistant in Organic Chemistry** University of Nevada-Reno Dissertation Advisor: Prof. David A. Lightner
8/83 - 6/87 *[graduated in 12/87]*	**B.Sc. in Chemistry** St. Xavier's College, University of Calcutta, India

TECHNICAL SKILLS

- Synthesis of single and focused small molecule libraries for in house cell line and enzyme assays to ascertain activities in oncology, cardiovascular and metabolic disorder areas.
- Regular online database and library search to keep updated with the latest in the Field.
- High-throughput generation of libraries of various organic compounds using state-of-the-art technologies for their syntheses as well as for analyses

TECHNICAL SKILLS (cont'd)

- Multistep synthesis of organic compounds including heterocycles, alkaloidlike compounds, diastereomerically pure compounds, peptidomimetic and peptidic compounds, etc.
- Inert atmosphere techniques: Schlenk line, high vacuum, etc.
- Solid-phase peptide synthesis (SPPS)
- Hands on experience with a variety of instruments for spectroscopy (300, 400 and 500 MHz FT-NMR, IR, UV-VIS, CD, GC-MS, and LC-MS) and interpretation of spectroscopic data.
- Skilled in many separation techniques, e. g., TLC, prep-TLC, column chromatography, HPLC, GC and radial chromatography (cyclograph), automated parallel purification systems (ISCO).
- Extensively used peptide synthesizer (PerSeptive Pioneer), parallel synthesizer (Argonaut Quest and Buchi Synchore), Teecan (TLC spotter and solvent transferring system for plates), Genevac (solvent removal apparatus for plates), Imaging station for large TLC plates, Bodan (automated weighing systems), Parallel purification systems (Biotag Quad-3, Flex by Biotag, Horizon by Biotag), and additionally various manually invented and altered systems to aide fast syntheses, work up and purification.
- Worked with IBM-PC/compatible, Macintosh, Silicon Graphics (SGI) computers and softwares such as PC Model, Chemdraw, Microsoft Word, Word Perfect, Chem Windows, Beilstein, Macromodel, Rasmol, ISISdraw, etc.
- Extensively used on line search machines such as Beilstein, Isis Base, Iddb, Ensemble, Chem Abstracts, Medline, Scifinder, etc.
- Attended and certified in a two-day leadership program, LEAD at California Polytechnique Institute, Pomona.
- Attended and certified in a 40 hour leadership training course at Albany Molecular Research, Inc., Albany, NY, USA.
- Attended and certified in a safety training course at Albany Molecular Research, Inc., Albany, NY, USA.
- Member of the safety committee and helped develop larger and safer hydrogenation laboratory.
- Successfully launched a shared, updated and upgradable in-house chemical inventory system (CIS) that has significantly reduces time and continuously saves money on obtaining chemicals and reagents.
- Successfully initiated and coordinated a "Young Scientists' Forum" for the first year that meets once a month to promote scientific discussion and knowledge sharing through a video conference set up.

TEACHING EXPERIENCE

California State University Fresno

BIOCHEM 150: Biochemistry Lecture
CHEM 240T: Medicinal Chemistry (graduate level) Lecture
CHEM 128A, 128B: Organic Chemistry Lecture Series
CHEM 129A, 129B: Organic Chemistry Laboratory Series
CHEM 230 : Advance Organic Chemistry (graduate level) Lecture
CHEM 8: Elementary Organic Chemistry Lecture

STUDENT TRAINING & PLACEMENT

California State University Fresno

Mandeep Singh (Master of Science in Chemistry) – 2012;
Lecturer at Madera Community College

Martin Leon (Master of Science in Chemistry) – 2013;
Graduate Student (Ph.D.) in the Department of Chemistry, University of Kansas

Jeff Jackson (Undergraduate with Chemistry major);
Graduate Student (Ph.D.) in the Chemistry Department at University of California Santa Barbara

Harkiran Dhah (Undergraduate with Chemistry major);
Graduate Student (Ph.D.) in the Chemistry Department at the University of Tennessee

STUDENT TRAINING & PLACEMENT (cont'd)

William Thompson (Undergraduate with Chemistry major);
Graduate Student (Ph.D.) in the Chemistry Department at the University of Nevada Reno

Robert Granata (Undergraduate with Chemistry major);
MD program at the University of California San Diego Medical School

Max Stephensen (Undergraduate Research Student);
MD program at the University of Calfifornia Davis Medical School

Jason Welles (Undergraduate with Chemistry major);
MD program at the Albany Medical Center

Hafeez Oseni-Olaneni (Undergraduate with Nursing degree);
MD application in progress

PUBLICATIONS

1. Patel, N. V. *et. al* "Identification and Characterization of MT-038, a triarylmethyamine, as a novel type of Liver-X-Receptor modulator" manuscript in preparation.
2. Maitra, K. *et. al* "Spectral Characterization and X-ray Crystallographic Study of Analogues of DEET", manuscript in preparation for submition in *J. Chem. Ed.*
3. Schott, J. T.; Mordaunt, C. E.; Vargas, A. J.; Leon, M. L.; Chen, K. H.; Singh, M.; Satoh, M.; Cardenas, E. L.; Maitra, S.; Patel, N. V.; de Lijser, P. H. J. "Effects of structural and electronic characteristics of chalcones on the activation of peroxisome proliferator-activated receptor gamma (PPARγ)" *Chem. Pharm. Bull.* **2013**, *61,* 229-236.
4. Singh, M.; Schott, J. T.; Leon, M. L.; Granata, R. T.; Dhah, H. K.; Welles, J. A.; Boyce, M. A.; Oseni-Olalemi, H. S.; Mordaunt, C. E.; Vargas, A. J.; Patel, N. V., Maitra, S. "Design, synthesis and identification of a new class of triarymethyl amine compounds as inhibitors of apolipoprotein E production" *Bioorg. & Med. Chem. Lett.* **2012**, *22,* 6252-6255.
5. Krishnan, V. V.; Thompson, W. B.; Goto, J. J.; Maitra, K.; Maitra, S. "Modulations in restricted amide rotation by steric induced conformational trapping" *Chem. Phys. Lett.* **2012**, *523,* 124-127.
6. Chintakunta, V. K.; Bhonde, V. R.; Anumandla, D..; Maitra, S.; Mukkanti, K.; Iqbal, J. "A cross metathesis strategy for the synthesis of highlyconjugated cyanodienes: Synthesis of C3-C17 fragment of (-)-borrelidin" *Tetrahedron Lett.* **2008**, *49,* 2013-2017.
7. Kang, S-K.; Gothard, C. M.; Maitra, S.; Wahab, A-T.; and Nowick, J. S. "A New Class of Macrocyclic Receptors from *iota*-Peptides" *J. Am. Chem. Soc.***2007**, *129,* 1486-1487.
8. Chintakunta, V. K.; Maitra, V. K.; Bhonde, V. R.; Mukkanti, K.; Iqbal, J. "Studies toward the total synthesis of (-) borrelidin: strategy for the construction of theC11-C15 cyanodiene fragment and the utility of RCM reaction for macrocyclizationusing model systems" *Tetrahedron Lett.* **2006**, *43,* 6103-6106.
9. Maitra, S.; Nowick, J. S. "Molecular Recognition of Amides in β-sheets" In: *Biochemical Significance of The Amide Linkage*; Arthur Greenberg, Curt Brenemanand Joel F. Liebman, Eds.; Chapman and Hall: London, Wiley, New York, 2000; Chapter 15.
10. Nowick, J. S.; Lam, K. S.; Khasanova, T. V.; Kemnitzer, W. E.; Maitra, S.; Nowick, J. S.; Mee, H. T. and Liu, R. "An Unnatural AminoAcid that Induces β-Sheet Folding and Interaction in Peptides" *J. Am. Chem. Soc.* **2002**, *124,* 4972-4973.
11. Nowick, J. S.; Chung, D. M.; Maitra, K.; Maitra, S.; Stigers, K. D. and Sun, Y. "An Unnatural Amino Acid That Mimics a Tripeptide β-Strand and Forms β-Sheetlike Hydrogen bonded dimers" *J. Am. Chem. Soc.* **2000**, *122,* 7654-7661. [*C&En News* **2000**, *78,* 39.]
12. Nowick, J. S.; Tsai, J. H.; Bui, Q-C. D. and Maitra, S. "A Chemical Model of a Protein β-Sheet Dimer" *J. Am. Chem. Soc.* **1999**, *121,* 8409-8410.
13. Zindel, J.; Maitra, S. and Lightner, D. A. "Synthesis and Properties of 2,6- substituted Push-Pull Azulenes" *Synthesis* 1996, 1217-1222.

PATENTS

1. "Protein β-Sheet Dimers and Related Methods for Controlling Protein Actions and Interactions", **EP 1210360 WO 0114412.**
2. "Novel pyridine compounds, process for preparation and compositions containing them", **US 2006/0084644 WO 2006/034474.**
3. "Novel bicyclic heterocyclic compounds, process for the preparation and compositions containing them", **WO 2006/073973.**
4. "Novel benzylamine derivatives as CETP inhibitors", Patent pending (US20060178514)
5. "Novel benzylamine derivatives and their utility as cholesterol ester-transfer protein inhibitors", Patent pending (US20070015758).
6. Maitra, S. and Patel, N. V. "Methods of inhibiting apoE expression by administering triarylmethyl amine compounds" invention filed June 2, 2012 (13/536,738).
7. Patel, N. V., Maitra, S. and Schott, J. T. "Methods on inhibiting Liver X receptor (LXR) protein binding with co-factors" in preparation.

PRESENTATIONS

1. Maitra, S.; Lightner, D. A. "Synthesis of New Chromophores and their Applications in Conformational Analysis using Exciton Chirality Rule" presented on 14th of dec, 1994 at the 10th International Conference on Organic Synthesis held at the Indian Institute of Science, Bangalore, India.
2. Nowick, J. S.; Maitra, S.; Chung, D. M.; Maitra, K.; Stigers, K. D. and Sun, Y. "An Unsymmetrical Amino Acid that Mimics a Tripeptide β-strand. and forms β-sheetlike hydrogen-bonded dimers" presented at the 219th National Meeting of the American Chemical Society, San Francisco, CA, March 26-30, 2000.
3. Nowick, J. S.; Gothard, C.; Kang, S.-W.; Maitra, S. "iota-Amino Acids For The Creation of Nanometer-Scale Molecular Architectures" presented at the 226th National Meeting of the American Chemical Society, New York, NY, September 7, 2003; paper ORG 65.
4. Nowick, J. S.; Gothard, C.; Kang, S.-W.; Maitra, S. "A Family of iota-Amino Acids For The Creation of Nanometer-Scale Molecular Architectures" presented at the 38th National Organic Symposium, Bloomington, IN, June 8, 2003; paper A31.
5. Nowick, J. S.; Gothard, C.; Kang, S.-W.; Maitra, S. "Nanometer-Scale Amino Acids for Biomolecular Nanotechnology" presented at the 19th American Peptide Symposium, San Diego, CA, USA, June 2005.
6. Chintakunta, V. K.; Maitra, S.; Mukkanti, K.; Iqbal, J. "Total Synthesis of Borrelidin: Synthesis of the C1 – C9 Fragment" presented at the 230th American Chemical Society National Conference, August 28-September 1, 2005 in Washington, D.C., USA.
7. Chintakunta, V. K.; Maitra, S.; Mukkanti, K.; Iqbal, J. "Studies towards the total synthesis of (-) Borrelidin: Strategies for the C11-C15 cyanodiene fragment construction and the utility of RCM reaction for macrolide cyclization using model systems" presented at the 231st American Chemical Society National Conference, March 26-30, 2006 in Atlanta, GA, USA.
8. Nowick, J. S.; Maitra, S.; Kang, S.-W.; Gothard, C.; Chiou, W.-A.; McIntire, T. M.; Wahab, A.-t. "Nanometer-Scale Amino Acids for Biomolecular Nanotechnology" presented at the Bioorganic Chemistry Gordon Research Conference, Oxford, UK, July 30-August 4, 2006.
9. Nowick, J. S.; Gothard, C.; Kang, S.-W.; Maitra, S. "Organic Approaches to Nanotechnology Through Nanometer-Scale Amino Acids" presented at the 232nd American Chemical Society National Conference, September 11-14, 2006 in San Fransisco, CA, USA.
10. Chintakunta, V. K.; Maitra, S.; Mukkanti, K.; Iqbal, J. "Total synthesis of the macrolide core of (-Borrelidin" presented at the 232nd American Chemical Society National Conference, September 10-14, 2006 in San Francisco, CA, USA.
11. Dhah, H.; Singh, M.; Oseni-Olalemi, H. S.; Welles, J. A.; Boyce, M. A.; Granata, R. T.; Moghis, B.; Schott, J. T.; Wohlt, D. M.; Surman, A. M.; Stoddart, J. M.; Patel, A.; Maitra, S. "Synthesis, Characterization and Biological Screening of Apolipoprotein-E (apoE) Modulators based upon a Triaryl-substituted Pharmacophore" presented at the 241st American Chemical Society National Conference, March 27-31, 2011 in Anaheim, CA, USA.
12. Jackson, J. J.; Stephenson, M. P.; Thompson, W. B.; Cole, J. T. T.; Sosa, A.; Addala, R. L.; Nana, L.; Vu, K. K.-T.; Marhenke, R. L.; Hasson, A. S.; Maitra, S. "Synthesis, Purification, and Characterization of Isoprene Nitrates for Gas Phase Atmospheric Chemistry Study" presented at the 241st American Society National Conference, March 27-31, 2011 in Anaheim, CA, USA.

PRESENTATIONS (cont'd)

13. Thompson, W. B.; Maitra, K.; Olmsted, M.; Krishnan, V. V.; Maitra, S. "Conformational Analysis of DEET Analogs Using VT-NMR, Modeling and X-Ray Crystallography" presented at the 241st American Chemical Society National Conference, March 27-31, 2011 in Anaheim, CA, USA.
14. Singh, M.; Schott, J. T.; Leon, M. A.; Granata,R. T.; Mordaunt, C. E.; Vargas, A. J.; Patel, N. V.; Maitra, S. "Design, synthesis and screening of apolipoprotein-E (apoE) inhibitors based on triarylmethyl amine scaffold" presented at the 243rd American Chemical Society National Meeting, San Diego, March 25-29, 2012 in San Diego, USA.
15. Leon, M. A.; Mordaunt, C. E.; Singh, M.; Welles, J. A.; Schott, J. T.; Vargas, A. J.; Patel, N. V.; Maitra, S. "Development of chalcone-based apolipoprotein-E (apoE) modulators" presented at the 243rd American Chemical Society National Meeting, San Diego, March 25-29, 2012 in San Diego, USA.
16. Hasson, A. S.; Tyndall, G. S.; Orlando, J. J.; Maitra, S.; Vu, K. K.-T.; Scruggs, A.; Addala, R. L.; Nana, L.; Olea, C.; Jackson, J. J. "Laboratory Studies of the Atmospheric Chemistry of Isoprene hydroxynitrate" presented at the 243rd American Chemical Society National Meeting, San Diego, March 25-29, 2012 in San Diego, USA.
17. Leon, M. A.; Cardenas, E. L.; Brawley, J.; Patel, P. P.; Nguyen, T.; de Jesus, J.; Patel, N. V.; Maitra, S. "Development of small chalcone and chalcone-like organic molecules for apolipoprotein E (apoE) modulation through structure-activity relationship (SAR) study" presented at the 245th American Chemical Society National Meeting, New Orleans, April 7-11, 2013, LA, USA.
18. Le, T. D.; Cardenas, E. L.; Vizenor, N. M.; Scruggs, A. K.; Hasson, A. S.; Maitra, S. "Synthesis, purification, characterization, and gas phase studies of atmospherically relevant and model hydroxy nitrate esters" presented at the 245th American Chemical Society National Meeting, New Orleans, April 7-11, 2013, LA, USA.
19. Vazquez, S.; Grossman, E.; Nguyen, Q.; Maitra, K.; Krishnan, V. K.; Maitra, S. "Steric hindrance and restricted amide rotation: NMR studies of substituent effects in ortho- DEET analogs as a model system" presented at the 245th American Chemical Society National Meeting, New Orleans, April 7-11, 2013, LA, USA.
20. Singh, M.; Leon, M. A.; Granata, R. T.; Brawley, J.; Patel, P. P.; Schott, J. T.; Mordaunt, C. E.; Vargas, A. J.; Patel, N. V.; Maitra, S. "Search, identification, and SAR toward the development of small molecule-based apolipoprotein E modulators" presented at the 4th ApoE, ApoE Receptors & Neurodegeneration, June 3-4th, 2013 - Georgetown University in Washington, DC.
21. Maitra, S. "Chemistry of Bioproducts" presented at the Bioenergy and Bioproducts Education Program, July 18, 2013, University of Maryland, Eastern Shore, MD (Invited Talk).
22. Maitra, S. "Green Chemistry in Classrooms" presented at the Bioenergy and Bioproducts Education Program, July 19, 2013, University of Maryland, Eastern Shore, MD (Invited Talk).
23. Maitra, S. "Apolipoprotein E Modulators in Alzheimer's Disease" presented on July 23, 2013, Emphascience, Pittsford, NY (Invited Talk).

GRANTS

1. Claude Laval Grant - $5000.00 Role: PI.
2. RUI: Mechanistic and Kinetic Studies of the Atmospheric Chemistry of Isoprene and its First-Generation Products. (2010-13) Funded by: National Science Foundation ($251,000) Role: Co-PI.