PERSONAL DATA

Birthplace: San Antonio, Texas Birthdate: November 30, 1964

Citizenship: U. S.

Personal: Married, 5 sons (1 'adopted')

EDUCATION AND TRAINING

Post-doctorate Chemistry, Harvard University

Cambridge, MA, March 1991-August 1993 Sponsor: Professor Stuart L. Schreiber

Project: "Total Synthesis of Rapamycin and Designed Variants with

Higher Affinity to FKBP (Binding Protein of Rapamycin)"

Ph.D. Chemistry, Colorado State University

Fort Collins, Colorado, January 1991

Research Advisor: Professor Albert I. Meyers

Dissertation Title: "Diastereoselective Cyclopropanations of Chiral Unsaturated Bicyclic

Lactams"

B.A. Chemistry/Biology, Cum Laude, Texas A&M University

College Station, Texas, May 1986

Undergraduate Research Advisors: Professor Kenn E. Harding and Professor Jeffrey C.

Pommerville

Senior Thesis: "Synthesis and Biological Testing of Various Analogs of the Female

Pheromone of *Allomyces macrogynus*"

APPOINTMENTS

2015-Present Schotts Professor of Chemistry, Baylor University

2014-2015 Gradipore Professor of Chemistry, Texas A&M University

2011-Present Director, TAMU Undergraduate MiniPharma

2010-Present Director, Natural Products LINCHPIN Laboratory at Texas A&M University

2003-Present Professor, Texas A&M University

1999-2003 Associate Professor, Texas A&M University 1993-1999 Assistant Professor, Texas A&M University

1991-1993 American Cancer Society Post-doctoral Fellow, Harvard University

1987-1991 National Science Foundation Minority Pre-Doctoral Fellow, Colorado State Univ.

HONORS AND AWARDS

Schotts Professor of Chemistry, Baylor University (2015-present)

Gradipore Professor of Chemistry, Texas A&M University (2014-2015)

NCI Board of Scientific Counselors-Basic Sciences (2014-17)

Fellow, Royal Society of Chemistry (2013-present)

Association of Former Students, Univ. Level Distinguished Achievement Award for Research (2010)

NIH "Method to Extend Research in Time" (MERIT) Award (2009-2019)

Association of Former Students, College Level Distinguished Achievement Award for Teaching (2009)

Excellence in Innovation Award, TAMU, Office of Technology Commercialization (2008)

NIH Med Chem A/SBC A Student Section Regular Member (2002-2006)

Pfizer Award for Creativity in Organic Chemistry (2001-2003)

Novartis Lecturer (2001-2002)

Camille and Henry Drevfus Teacher-Scholar (1999-2004)

Zeneca Pharmaceuticals Excellence in Chemistry Award (1998)

Alfred P. Sloan Research Fellow (1998-2000)

TAMU, College of Science: Montague Center for Teaching Excellence Scholar (1997-1998)

National Science Foundation CAREER Award (1996-2000)

American Cancer Society Postdoctoral Fellowship (1991-1993)

Syntex Graduate Fellowship (1990)

National Science Foundation Minority Pre-Graduate Fellowship (1987-1990)

Shell Foundation Fellowship (1986-1987)

Member of the College of Science Dean's Forum, TAMU (1985-1986)

Chemistry Achievement Award, TAMU (1986)

Outstanding Presentation Award, 5th Annual Texas A&M Undergraduate Chemical Research Conference (April 1986)

Dow Chemical Company Scholarship (1982-1983)

Baumberger Endowment (1982-1986)

Edmonds Scholarship (1982-1986)

University Undergraduate Fellow, TAMU (1985-1986)

Editorial Appointments

2013-pres. Commissioning Editor for *Natural Products Reports*, Royal Society of Chemistry

2012-pres. Editorial Board for Journal Translation, Landes Biosciences Journal

CURRENT RESEARCH INTERESTS

At the heart of our research interests is the chemistry and biology of natural products, which is an exciting and enduring interdisciplinary area for discoveries in basic cell biology and human health. Natural products are unique and often structurally complex molecules that are designed to interact in highly specific ways with various cellular receptors and, due to protein homology, those found in humans. Our particular synthetic targets are chosen based on an interest of structural novelty and complexity in addition to interesting biological activity and unknown mechanism of action. Some targets are chosen based on the presence of β -lactones or functionality derivable from β -lactones. Thus, our group is engaged in developing novel synthetic strategies towards these naturally occurring compounds or derivatives that in turn serve are useful drug leads and invaluable probes for inquiries into cell biology via a forward chemical genetics approach. Recently, we have started to develop a toolbox of a reagents/methods that will more rapidly couple a natural product to its putative cellular receptor. In a recent venture, advanced biosynthetic intermediates are being synthesized and utilized to establish biosynthetic pathways in marine sponges.

- Structural, Synthetic, and Biomechanistic Investigations of Bioactive Marine Agents
- Asymmetric Organocascade Catalysis Including Synthesis and Novel Transformations of β-Lactones
- Development of Novel Strategies for Simultaneous Arming/SAR Studies of Bioactive Natural Products
- Biosynthetic Studies of the Pyrrole-2-aminoimidazole, Marine Alkaloid Family

COLLABORATORS

Jun O. Liu (*John Hopkins*); Ben Cravatt (Scripps Res. Inst.); Dean Tantillo (UC Davis); Abimael D. Rodriguez (*University of Puerto Rico*); Stephan Sieber (U. of Munich, Germany); Tadeusz Molinski (*UC San Diego*.); Lisa Perez/Michael Hall (TAMU, Chemistry); Alex Kornienko (Texas State University); Rodolfo Aramayo (TAMU, Biology); Luc Bergman (TAMU, Poultry Science); Mike Manson (TAMU, Biology); Robert Schneider (NYU Medical School); Joe Taube (Baylor, Biology Dept); William Plunkett and Rong Chen (MD Anderson); Changchun Deng (Columbia University Medical Center); Earl Albone (Morphotek).