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Education

1982 B.Sc. in Chemistry, Hangzhou University, China
1984 M.S. in Chemistry, The Chinese Academy of Sciences (CAS), China
1991 Ph.D. in Org. Chemistry/Biochemistry, Oregon State University, Corvallis, OR, USA
1991-95 Postdoc in Mol. Biology/Biochemistry, University of Wisconsin-Madison, Madison, WI, USA

Academic positions

1995-01 Assistant Professor, Dept of Chemistry, University of California Davis, Davis, CA
2001-02 Associate Professor, Dept of Chemistry, University of California Davis, Davis, CA
2001-03 Associate Professor, School of Pharmacy & Dept of Chemistry, UW-Madison, Madison, WI
2004-10 Professor, School of Pharmacy & Dept of Chemistry, UW-Madison, Madison, WI
2004-10 Charles M. Johnson Distinguished Chair, School of Pharmacy, UW-Madison, Madison, WI
2005-10 Principal Investigator, NCI UW National Cooperative Drug Discovery Group, Madison, WI
2011-22 Professor, Dept of Chemistry, The Scripps Research Institute (TSRI), Jupiter, FL
2014-16 Vice Chairman, Dept of Chemistry, TSRI, Jupiter, FL
2017-22 Chair, Dept of Chemistry, Florida Campus, TSRI, Jupiter, FL
2011-22 Professor, Dept of Mol Medicine, TSRI, Jupiter, FL
2011-22 Director, Natural Product Discovery Center, TSRI, Jupiter, FL
2011- Professor, Skaggs Graduate School of Chemical & Biological Sciences, Scripps Research, Jupiter, FL
2022- Professor, Dept of Chemistry, The Wertheim UF Scripps Institute, Jupiter, FL
2022- Professor, Dept of Molecular Medicine, The Wertheim UF Scripps Institute, Jupiter, FL
2022- Director, Natural Products Discovery Center, The Wertheim UF Scripps Institute, Jupiter, FL

Honors

1996 FIRST Award, NIH
1997 Searle Scholar, Searle Scholars Program
1998 CAREER Award, NSF
2000 Matt Suffness Award, American Society of Pharmacognosy
2001 Independent Scientist Award, NIH
2002 Jack L. Beal Award, American Society of Pharmacognosy
2011 Fellow, American Academy of Microbiology
2011 Fellow, American Association for the Advancement of Science
2015 Promega Biotechnology Research Award, American Society for Microbiology
2018 Charles Thom Award, Society for Industrial Microbiology and Biotechnology
2020 Outstanding Mentor Award, TSRI, Jupiter, FL
2021 Fellow, American Society of Pharmacognosy

Research interests

Microorganisms produce a large variety of biologically active natural products (NPs) representing a vast diversity of fascinating molecular architecture not available in any other systems. Our research centers on the chemistry, biochemistry, and genetics of NP biosynthesis in Actinobacteria. The long-term goal of our research is to understand at a molecular level how microorganisms synthesize complex NPs and to exploit this knowledge to discover novel NPs to impact chemistry, enzymology, biology, and medicine. The Shen lab has been recognized as one of the world leaders in: (i) genome mining of Actinobacteria to identify privileged NP scaffolds and predict NP structural novelty, (ii) genetic manipulation of the most promising biosynthetic gene clusters (BGCs) in native producers or expression of the BGCs in designer hosts to produce and isolate the new NPs for structural and functional characterizations, and (iii) investigation of the biosynthetic machinery of the new NPs to discover novel chemistry and enzymology, (iv) translation of the most promising NPs from our fundamental research as leads for drug discovery and development, focusing mainly on cancers and infectious diseases, and (v) establishment of the Actinobacterial Strain Collection and Genome Database as a community resource to promote NPs training, research, and associated applications.

Publications

305 publications, 13 issued patents, and >335 invited lectures at national and international institutions/conferences (<http://www.ncbi.nlm.nih.gov/sites/myncbi/ben.shen.1/bibliography/42110543/public/?sort=date&direction=ascending>)