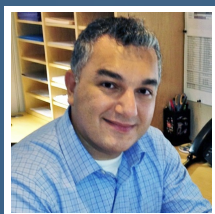


Natural Molecules that Can Improve Health



Mo Movassaghi
Professor, Chemistry

CURRENT RESEARCH

Efficient chemical synthesis of new and potent bioactive molecules

Nature has created unique molecules that help organisms survive. The properties these molecules possess also have an array of applications for scientists. However, often these precious molecules are difficult to access from natural sources because they are found in very small quantities and the producing organisms are rare and located in remote parts of the biosphere. Dr. Mo Movassaghi, of the Massachusetts Institute of Technology, develops the means to access these structurally complex and potentially bioactive molecules. His research allows unique access to rare and potentially bioactive small molecules, including natural products, that enables novel chemical and biological investigations aimed at development of new treatments for human ailments such as cancers and autoimmune diseases.

Dr. Movassaghi's research team focuses on the development of concise and unified synthetic strategies, inspired by biogenetic considerations, to readily access these complex molecules, thus enabling their detailed chemical, biochemical, and biological study. Using his organic chemical synthesis approach to access complex alkaloids, an important class of molecules that contain basic nitrogen atoms, his research program provides an unlimited and reliable source for these molecules. Furthermore, Dr. Movassaghi's research enables access to many designed derivatives that cannot be obtained from any natural source, thus enabling logical refinement and improvement of these molecules' desired properties. The Movassaghi Group's ability to conduct precise atomic level molecular editing of these important molecular architectures requires the highest level of precision in chemical manipulation of complex molecules and is made possible by deep...

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AFFILIATION



Massachusetts Institute of Technology

EDUCATION

- Damon Runyon Postdoctoral Research Fellow, in Chemistry, 2003, Harvard University
- Ph.D., in Organic Chemistry, 2001, Harvard University
- B.S., with Honors in Chemistry, 1995, University of California, Berkeley

AWARDS

- Yoshimasa Hirata Memorial Foundation Gold Medal, Japan, 2011
- American Chemical Society Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator, 2010
- American Chemical Society Arthur C. Cope Scholar Award, 2009
- Recipient of the Alfred P. Sloan Research Fellowship (2008), Camille and Dreyfus Teacher-Scholar Award (2008), NSF-CAREER (2006), Beckman Young Investigator (2006), and Damon Runyon Cancer Research Foundation Scholar (2004)
- Awards from industry including Amgen, AstraZeneca, Bristol-Myers Squibb, GlaxoSmithKline, Lilly, Merck, Novartis, and Roche

RESEARCH AREAS

Life Science, Infectious, Oncology / Cancer, Chemistry

FUNDING REQUEST

Your contributions will support Dr. Movassaghi's research allowing unprecedented access to novel molecules with highly sought after properties. Importantly, donations will support the research costs of this cutting-edge scientific endeavor, including the \$70k per year necessary for each researcher in the group. Your contributions will be critical in enabling the group to make new discoveries and to pursue their exciting collaborative efforts aimed at the development of new treatments for human ailments.