

## Curriculum Vitae

### Michael J. Sofia, Ph.D.

Michael J. Sofia, Ph.D. received his BA in chemistry with honors from Cornell University in 1980. He went onto receive his Ph.D. in organic chemistry at the University of Illinois Urbana-Champaign in 1984 working for Prof. John Katzenellenbogen where he was an NIH Trainee. His thesis work focused on the design, synthesis and study of mechanism based inhibitors of serine proteases. At the University of Illinois, he received the R.C. Fuson Memorial Award for Superior Performance in Graduate Research. In 1984 he joined the laboratory of Prof. Gilbert Stork at Columbia University as an NIH Postdoctoral Fellow and worked on radical cyclization chemistry and vitamin D total synthesis.

Dr. Sofia began his industrial career in 1986 at E.R. Squibb & Sons where he developed inhibitors of squalene synthetase and HMG-CoA reductase for the treatment of atherosclerosis. His work led to the identification of the first potent substrate-based inhibitor of squalene synthetase.

In 1989 Dr. Sofia joined Eli Lilly & Company as a Research Scientist. He spearheaded work in the area of leukotriene B<sub>4</sub> receptor antagonists for the treatment of inflammation associated with asthma and delivered the clinical candidate LY293111 which progressed to phase II clinical trials. For this effort he was awarded the Lilly Discovery Team Award in 1991. Dr. Sofia also led the PLA<sub>2</sub> discovery project team during his tenure at Lilly.

In 1993 Dr. Sofia took his first leap into biotech when he joined Transcell Technologies as the founding Director of Chemistry. He eventually was promoted to Vice President of Research. At Transcell Dr. Sofia pioneered the development of carbohydrate-based technologies for combinatorial chemistry and anti-infective drug discovery. This work led to the development of the first library of a complex anti-infective oligosaccharide and the use of monosaccharides as chemical diversity templates.

Subsequently in 1999, Dr. Sofia joined Bristol-Myers Squibb where he became Group Director of New Leads Chemistry. At BMS, Dr. Sofia built a lead discovery chemistry organization and global

research capability that supported all research programs and that led to a dramatic improvement in the identification of new chemical matter to initiate lead optimization programs.

Dr. Sofia left BMS in 2005 to join Pharmasset, Inc. as Vice President of Chemistry and was later promoted to Senior Vice President of Chemistry. There he built the companies capability and programs around novel antiviral agents. His work led to multiple clinical candidates including a number of agents targeting the hepatitis C virus (HCV). His work on HCV resulted in the development of the HCV NS5B polymerase inhibitor, sofosbuvir that utilized a novel liver-targeted prodrug strategy. In 2013 sofosbuvir became the first interferon-free HCV cure therapy approved by both the US FDA and the European EMEA and was marketed as Sovaldi®. It quickly became the most successful drug launched in history and was designated by the World Health Organization as an essential medicine. It soon became the backbone of HCV-cure combination therapies and is part of the fixed-dose combination regimens Harvoni®, and Epclusa® and is used in combination with many other HCV targeted agents. Today over 1.2 million individuals have been cured of HCV using sofosbuvir-based therapeutic regimens.

With the acquisition of Pharmasset by Gilead Sciences in 2012, Dr. Sofia remained with Gilead for a period of time as Sr. V.P. of Chemistry but soon founded OnCore Biopharma to search for a cure for hepatitis B (HBV). OnCore Biopharma became Arbutus Biopharma, Inc. where Dr. Sofia is currently the Chief Scientific Officer and leads the discovery research and preclinical development efforts in search of an HBV cure.

Dr. Sofia has authored over 100 publications, 12 book chapters and numerous abstracts and is an inventor on more than 53 US patents and numerous patent applications. He has been an invited speaker at over 75 national and international conferences and universities. Dr. Sofia sits on several non-profit and for profit advisory boards and is a member of the Board of Trustees for the University of the Sciences, Philadelphia PA. He is also on the advisory boards of Chemical & Engineering News, ACS Medicinal Chemistry Letters, and ChemMedChem

For his work in drug discovery, Dr. Sofia is the recipient of numerous awards. These include the 2014 Pennsylvania Bio Scientific Achievement Award, the 2015 Heroes of Chemistry Award of the American Chemical Society, Foreign Policy Magazine's 2014 Global Thinkers Award, the Economist

Magazine's 2015 Innovation Award in Biosciences, the 2016 IUPAC-Richter Prize in Medicinal Chemistry, the 2016 Lasker-Debakey Award in Clinical Medical Research, the Gertrude Elion Award from the International Society for Antiviral Research and the 2017 University of Illinois LAS Alumni Achievement Award. He was inducted into the ACS Medicinal Chemistry Hall of Fame in 2017.