There can be no more noble undertaking than the invention of medicines. Chemists that make up the engine of drug discovery are facing incredible pressure to do more with less in a highly restrictive and regulated process that is destined for failure more than 95% of the time. How can academic chemists working on natural products help these heroes of drug discovery — those in the pharmaceutical industry?

With selected examples from our lab and others, this talk will focus on that question highlighting innovation in fundamental chemistry and new approaches to scalable chemical synthesis. The advantages of harnessing innate reactivity and embracing the logic of C–H functionalization will be demonstrated in this context as well as in the invention of reactions with broad utility in industrial settings.
Bio:
Phil S. Baran is currently a Professor in the Department of Chemistry at The Scripps Research Institute and Member of the Skaggs Institute for Chemical Biology. Phil received his B.S. in chemistry from NYU in 1997, his Ph.D. at The Scripps Research Institute in 2001 (NSF fellow with KC Nicolaou), and from 2001-2003 he was an NIH postdoctoral fellow at Harvard in the laboratory of Nobel Laureate E. J. Corey. His independent career began in the summer of 2003 and in 2006 he was promoted to Associate Professor with Tenure. In 2008 he was promoted to Full Professor and in 2009 he was appointed to the Skaggs Institute. He has published over 130 scientific articles and has been the recipient of several ACS awards such as the PureChemistry (2010), Fresenius (2006), and Nobel Laureate Signature (2003), and several international distinctions such as the Hirata Gold Medal (Japan), the RSC award in Synthesis (UK), and the Sackler Prize (Israel). He is the recipient of numerous young investigator awards such as the Beckman and Searles scholarships and from industrial sponsors, including: Amgen, AstraZeneca, Bristol-Myers Squibb, DuPont, Eli Lilly, GlaxoSmithKline, Pfizer, and Roche. He has delivered hundreds of lectures around the world and consults for numerous companies such as Bristol-Myers Squibb, DuPont and TEVA, and is currently a member of the Eisai scientific advisory board. He is also the co-founder of Sirenas Marine Discovery. His laboratory is focused on the invention of new reactions of broad utility and synthesizing complex natural products in a scalable, economic fashion.

Representative Publications:
8. Voica, A.F.; Mendoza, A.; Gutekunst, W.R; Fraga, J.O.; Baran, P.S. Guided Desaturation
