UCLA College | Physical Sciences Chemistry & Biochemistry

2024 Bristol-Myers Squibb - UCLA Lectureship

Thursday, November 14, 2024 | 3:00 PM | Dongwon Yoo Seminar & Conference Hall | YH 4222

Dr. David George

Bristol-Myers Squibb
Principal Scientist

A Concise Approach to Chiral Cyclohexyl-Based Drug Candidate BMS-986278

Abstract: A synthesis to LPA1 receptor antagonist BMS-986278 is described. The route relies on an *ene*-reductase-*keto*-reductase reaction sequence to access a key chiral cyclohexyl fragment and a convergent Negishi coupling to assemble the biaryl core. BMS-986278 is synthesized in 6 steps over the longest linear sequence from commercially available material and is prepared on >250 kg scale.

Thursday, November 30, 2023 | 4:00 PM | Dongwon Yoo Seminar & Conference Hall | YH 4222

Professor Bryan Dickinson

Department of Chemistry
University of Chicago

Accelerating protein engineering with viral-based in vivo screening and evolution technologies

Abstract: Proteins that selectively bind to a target protein of interest are foundational components of research pipelines, diagnostics, and therapeutics. However, current immunization-based, display-based, and computational approaches for discovering binders are laborious and time-consuming, suffer from high false positives, and have a high failure rate. In this presentation, I will showcase Protein-Protein Interaction Phage-Assisted Non-Continuous Selection (PPI-PANCS), a system for comprehensive high-throughput screening of billion+ member protein variant libraries to isolate high affinity binders to a protein in a matter of days. We demonstrate the utility of PPI-PANCS by screening multiple protein libraries against a panel of 95 targets and generating dozens of novel binders, which can then be affinity matured and/or used in secondary assays, such as triggering degradation of endogenous mammalian proteins.