2020-2021 POCC Lecture Series

February 25, 2021, 7:30 PM

Virtual reception to follow the seminar

Dr. Tejas K. Shah

Corteva Agriscience

Innovations in Small Molecule Agrochemical Discovery

Virtual Seminar by Zoom (LINK)

The Philadelphia Organic Chemist's Club

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The need for increased food and feed supply to support future global demand with the added challenges of resistance pressure and an evolving regulatory environment necessitates the discovery of new crop protection solutions for growers of today and tomorrow. Discovery Chemistry is the critical 'engine' for building small molecules to solve these global issues. A wide variety of approaches exist for the generation of new leads, many of which have demonstrated success. This presentation will highlight Discovery projects that originated from two of these approaches. Lead optimization efforts to understand the structure-activity relationships (SAR) and improve potency, along with synthetic challenges encountered on these projects will also be discussed.

Abstract: Tejas K. Shah obtained his B.A. in Chemistry and Molecular Biology & Biochemistry from Rutgers University in 2011. At Rutgers, he performed undergraduate research with Professor Daniel Seidel in the area of hydrogen-bonding catalysis & kinetic resolution. He went on to complete his doctoral studies in Professor Neil K. Garg's laboratory at the University of California, Los Angeles. His dissertation focused on utilizing heterocyclic arynes as synthetic building blocks and exploration of nickel-catalyzed activation of amide C–N bonds. Alongside his research in the Garg laboratory, he developed online tutorials called BACON. These tutorials connect organic chemistry to topics in human health and pop culture. To date, they have been used by >60,000 students around the globe and at well over 100 universities. Since graduating in 2016, Tejas has been a part of the Discovery Chemistry group at Dow Agrosciences (now Corteva Agriscience) creating small molecule solutions to tackle global concerns such as pest resistance for our farmers and consumers.