SPECIAL SEMINAR

Embracing High Throughput Technology to Accelerate Agrochemical R&D & Your Careers

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Corteva Agriscience

High-throughput experimentation (HTE) allows for execution of many hypotheses in parallel and reduction of the overall labor per experiment compared to traditional experimental methods. Over the last half century, biology has pioneered and evolved this technique for *in-vitro* and *in-vivo* assays. Chemists have leveraged similar tools, automation, and learnings for applications in chemical synthesis, reaction optimization, materials discovery, and much more. More recently, this methodology has been effective for generating standardized chemical data required to feed the rise of data science tools and generative AI.

In this presentation, we will discuss our serendipitous journeys towards HTE for agrochemical discovery and development in addition to utility in the areas of discovery chemistry, process chemistry, and product development. Specifically, how HTE is transforming how we conduct research in I) analog synthesis for Discovery Chemistry, II) route exploration and optimization for process chemistry, and III) formulation variable optimization and characterization for product development. With a focus on sustainable practices at Corteva Agriscience, the high throughput automation teams seek to deliver environmentally friendly and innovative solutions to the field by maximizing experimental data and minimizing research waste.

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