Bringing Chemistry to Life podcast series

Season 3: **The 2021 C&EN's Talented 12**
Episode 5: **On the COVID pill and other process chemistry tales**

Bringing Chemistry to Life

Episode abstract

Process chemists are the silent heroes of modern pharmaceutical sciences. They take a drug molecule coming out of medicinal chemistry research and make sense of its chemical synthesis. With tight deadlines they often must completely reinvent chemical syntheses to meet strict efficiency and cost requirements necessary to move drugs to commercial production. It's a challenging job that requires discipline and pragmatism, but a certain dose of chemical creativity at the same time.

Patrick Fier, from Merck, represents the perfect profile of a great process chemist. He makes the most of the incredible resources and the culture of innovation available at Merck. His chemistry is creative and intriguing, he shows that unique mix of disruptive thinking and disciplined determination that is needed to design state-of-the-art chemical syntheses. And his talent gave him the opportunity to lead the development of Molnupiravir, the so-called COVID pill, one of the most promising antivirals used in severe Coronavirus cases.

In this unique episode we have the rare opportunity to get to know a chemist who really played a key role in helping address the COVID pandemic.

About our guest

Patrick S. Fier, PhD

Principal Scientist at Merck & Co.

Patrick's company site: https://www.merck.com/

C&EN Talented 12 profile of Patrick: https://cen.acs.org/synthesis/process-chemistry/Patrick-Fier/99/i30

Recent Publications from Patrick:

- A Multifunctional Reagent Designed for the Site-Selective Amination of Pyridines
- NHC-Catalyzed Deamination of Primary Sulfonamides: A Platform for Late-Stage Functionalization
- Direct Conversion of Haloarenes to Phenols under Mild, Transition-Metal-Free Conditions
- Development of a Robust Manufacturing Route for Molnupiravir, an Antiviral for the Treatment of COVID-19
- A Bifunctional Reagent Designed for the Mild, Nucleophilic Functionalization of Pyridines

Patrick's Content Recommendations:

- STAT News (A news site for biotech and pharma)
- Strategic Applications of Named Reactions in Organic Synthesis (A resource for organic chemists)
- Pharm to Table (A podcast about the people behind the science at Merck)
- Chemistry Reference Resolver (A reference finder for chemistry)
- Frankly Organic Vodka (A source for vodka cocktail recipes)

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