

Continuous Process Applications in the Pharmaceutical Industry

A free one-day symposium from the world leaders
in Continuous Flow Processing

Tuesday May 21st, 2024

Boston Marriott Hotel Cambridge, MA
50 Broadway, Cambridge, Massachusetts, USA, 02142

Guest speakers from:
Professor from Princeton University,
Amgen, Merck, Pfizer, Sanofi, Takada, Vertex,
&
SK pharmteco



- 8:00 - 8:45 **Registration Open**
- 8:45 - 9:00 **Opening Remarks** Bill DuBay, SK pharmteco
- 9:00 - 10:00 **Keynote Speaker** Paul Chirik, Princeton University
Catalysis with Earth-Abundant Metals as an Enabling Tool in Drug Synthesis
- 10:00 - 10:40 Michael St. Pierre, Pfizer
Implementation of Continuous Manufacturing Processes for Early Stage API Candidates
- 10:40 - 11:20 Ryan Oh, SK pharmteco
Recent Updates in Catalyst Development for Fixed Bed Reactors in Pharmaceutical Manufacturing
- 11:20 - 12:00 Stephen Laws, Vertex
From Vials to Valves: Flow Chemistry Examples from Vertex Pharmaceuticals
- 12:00 - 1:30 **Lunch Break**
- 1:30 - 2:10 Hsiao-Wu Hsieh, Amgen
More Than the Sum of Parts: Combining Process Chemistry and Engineering to Develop an Intensified Continuous Manufacturing Drug Substance Process of Apremilast
- 2:10 - 2:50 Dr. Reed Larson, Merck
Manufacturing Process for a Key Intermediate to Nemtabrutinib (MK-1026): Sequential Deprotonation-Lithiation as a Batch-Flow Process
- 2:50 - 3:20 **Afternoon Break**
- 3:20 - 4:00 Reza Amirmoshiri, Sanofi
A Digital Development Approach for Continuous Manufacturing
- 4:00 - 4:40 Guanghi Zhu, Takeda
Accelerating Continuous Manufacturing Development with Modular Equipment and Modular Process Development
- 4:40 - 5:00 **Closing Remarks** Bill DuBay, SK pharmteco

SK pharmteco employs continuous flow reactors for various chemical transformations, such as hydrogenation, oxidation, or nitration reactions. Continuous flow systems offer advantages like improved safety, better control of reaction parameters, and higher productivity compared to batch processes. Additionally, we design and build our own reactor skids at lab and production scales and can support continuous process from multiple sites in Korea and the US.

Examples of Large-Scale Semi-Continuous and Continuous Processing at SK pharmteco:

- Chromatography (SMB)
- Liquid/Liquid Extractions (Continuous Centrifuges)
- Distillation (Falling Film Evaporation)
- Elutriation (Continuous Solid Decanting)
- Diazomethane
- Nitrations
- Grignards
- Azide Chemistry
- Aziridine Formations
- Phosphorylation Reactions
- Hydrogenation (Customer-made Fixed Bed Catalysts)
- Ozonolysis
- Diels –Alder
- Aldol Reactions
- Cryogenics
- Pyrophoric Reagents
- Cyclopropanations



Movable-type Low Temp.
Continuous Reaction System



Movable-type High Temp.
Continuous Reaction System

Services include process development, engineering, and production of kilogram to multi-ton quantities of fine chemicals under continuous processing conditions. Our continuous processing expertise can be applied to help customers in reducing costs and improving control of chemical processes.

Your Complete
CDMO Solution

Your partner in...

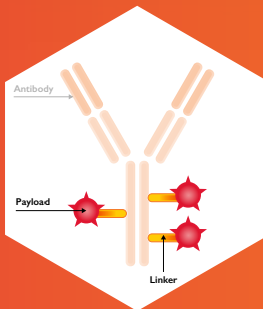
**Continuous
Processing**



HPAPI



**Linkers &
Payloads**



**Analytical
Services**



**Cell & Gene
Therapy**



**Chromatography
Batch & SMB**



**Particle
Engineering**



**Spray Drying &
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