

# ADVANCED EDITION ISPROCHEM 2024

International School of Process Chemistry, 26<sup>th</sup>–29<sup>th</sup> May 2024  
Centro Civico Multifunzionale "A. Castellani"  
Via Del Teatro, 14, 25084, Gargnano (BS) – IT

Sunday 26<sup>th</sup> May

## OPENING CEREMONY

- 16:00 Registration at Centro "A. Castellani"  
17:00 Opening remarks on behalf of "Divisione di Chimica Organica" of Società Chimica Italiana

## Session #1: MACHINE LEARNING

- 17:15 Applying Machine Learning to Predict the Yield and Conditions for Buchwald-Hartwig Couplings in a Substrate-Adaptive Workflow  
*Prof. Scott Denmark*  
(University of Illinois)

## Session #2: AUTOMATION

- 18:15 Robotic Automation Technologies to accelerate Process Development and enhance Process Knowledge  
*Dr. Jacopo Roletto*  
(Procos)

## Special seminar session #1: HYSTORICAL LECTURE

- 19:15 The lab is a strange place. 101 Things you would not believe could have happened there  
*Prof. Giovanni Appendino*  
(Università del Piemonte Orientale)  
20:00 *Welcome Cocktail - Ex Palazzo Municipale*

Monday 27<sup>th</sup> May

## Session #3: CATALYSIS

- 09:00 Enzymatic Approaches to API  
*Dr. Ana Toplak*  
(Fresenius Kabi)  
10:00 Scale-up of homogeneous catalysis. How hard can it be?  
*Prof. Johannes De Vries*  
(Leibniz Institut für Katalyse, Germany)  
11:00 *Coffee Break - Ex Palazzo Municipale*

## Session #4: SOLID STATE

- 11:30 Flash oral by young researchers  
12:30 *Lunch break - Ex Palazzo Municipale*  
14:00 CASE STUDY: The Crystallization of APIs: Croce e Delizia in Process Chemistry  
*Dr. Emanuale Attolino*  
(Newchem)  
14:30 CASE STUDY by Olon  
*Olon Researcher*  
(Olon)

## WORKSHOP

- 15:00 Introduction to working principles; lab vs plant  
*Dr. John Knight*  
(Jkonsult Ltd)  
16:00 *Coffee Break - Ex Palazzo Municipale*  
16:30 Problem sessions around topics of work-up, crystallization, designing a safe process (part A)  
*Dr. John Knight*  
(Jkonsult Ltd)  
17:30 *End of lectures*

Tuesday 28<sup>th</sup> May

## Session #5: FLOW CHEMISTRY

- 09:00 Continuous flow chemistry - from improving known reactions to the discovery of new reactivity  
*Prof. Marcus Baumann*  
(University of Dublin)  
10:00 Technology for continuous liquid-liquid extraction and its applications to flow chemistry, multistage extraction, continuous partition chromatography  
*Dr. Andrea Adamo*  
(Zaiput)  
11:00 *Coffee Break - Ex Palazzo Municipale*

## Session #6: PROCESS

- 11:30 Developments in process chemistry  
*Dr. Gabriele Razzetti - Dr. Marcello Rasparini*  
(Dipharma - J&J Innovative Medicine)  
12:15 Parallel reaction monitoring at HTE-scale with NIR spectroscopy and multivariate semi-NMF analysis  
*Dr. Robbert Van Putten*  
(J&J Innovative Medicine)  
12:45 *Lunch Break - Ex Palazzo Municipale*

## Session #7: PROCESS AND SOLID STATE

- 14:15 LSZ102 - From MedChem route to manufacture  
*Dr. Michael Parmentier*  
(Novartis)  
15:15 CASE STUDY: Importance of solid form and crystallization in the removal of impurities  
*Dr. Jyoti Yadav*  
(Technobis)  
15:45 *Coffee Break - Ex Palazzo Municipale*

## PROBLEM SESSION

- 16:15 Problem sessions around topics of work-up, crystallization, designing a safe process (part B)  
*Dr. John Knight*  
(Jkonsult Ltd)  
17:45 *End of lectures*

Wednesday 29<sup>th</sup> May

## Session #8: API: SYNTHESIS AND TECHNOLOGY TRANSFER

- 09:00 Development of the manufacturing process of NCEs: from MedChem synthesis to the plant  
*Dr. Edoardo Mariani*  
(Chiesi)  
10:00 Introduction to technology transfer  
*Dr. Katharine Powles*  
(J&J Innovative Medicine)  
10:30 API source selection in a Pharmaceutical Company: how to ensure a robust supply chain  
*Dr. Elisa Battistini*  
(Fresenius Kabi)  
11:00 *Coffee Break - Ex Palazzo Municipale*  
11:30 CASE STUDY: Flow synthesis of Filgotinib  
*Dr. Giustino Di Antonio*  
(Evotec)

## Special seminar session #2: CHEMICAL TECHNOLOGIES

- 12:00 Sustainability, Digitalization, Affordability & Speed - how is Chemical Development in Pharma adopting to the demands of society?  
*Dr. Ulrich Scholz*  
(Boehringer Ingelheim)

## CLOSING CEREMONY

- 13:00 Final remarks and conclusion