



## Adam Mickiewicz University in Poznań

Doctoral School of Exact Sciences AMU

### *Construction of Challenging Molecules – The Deep Impact of Synthetic Chemistry from Route Design to Manufacturing on Industrial Scale*

Hans-Jürgen Federsel, PhD, Assoc Professor  
RISE Research Institutes of Sweden, Department Chemical Process and  
Pharmaceutical Development, Stockholm and Södertälje, Sweden  
Hans-jurgen.federsel@ri.se

Scientific lectures

<b>Field of science</b>	Chemistry
<b>Teaching method</b>	Face-to-face lectures
<b>Language</b>	English
<b>Numbers of hours</b>	15
<b>Aims of the course</b>	Provide the participants with a broad and in-depth knowledge about Chemical Process Research and Development in the pharmaceutical industry
<b>Course contents</b>	Starting with an overview of the elements of process R&D in the context of the discovery and development of novel medicines. This is followed by a detailed account of case stories describing details of how specific molecules have been addressed and how manufacturing on pilot plant and commercial scale has been performed. Several synthetic methodologies including transition metal and enzyme catalysis will be presented and discussed.
<b>Prerequisites and co-requisites</b>	Good command of spoken English and a basic understanding of chemistry, especially of organic synthesis, will facilitate comprehension and learning.
<b>Learning outcomes</b>	
<b>On completion of the course PhD candidates will be able to:</b>	<b>Assessment mode</b>
E_W01; E_W02; E_02; E_K05 (Doctoral School)	The students will be facing a few relevant questions – 6 to 10 – and they will be expected to hand in their responses in writing (preferably by email) for evaluation by the lecturer.
<b>Literature</b>	
<b>Additional information</b>	Start date is foreseen as 23 <sup>rd</sup> May 2022 at 12.00 Throughout the following week (up to and including 27 <sup>th</sup> May 2022) lectures of 2-4 h will be offered daily.