

# Daring the Challenge and Thinking Big: The Value of Early Process R&D

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In this article (*CHIMIA* 2016, 70, 502–511), the biographies of the prizewinners Stefan Abele, Jacques-Alexis Funel, Gunther Schmidt, Christian Moessner, Mischa Schwaninger, and Roger Marti were incomplete and are presented here.



**Stefan Abele** studied chemistry in Germany, France, and Switzerland. He did his diploma work with Prof. Dr. R. R. Schmidt on C-ketosides in Konstanz and obtained his PhD under the guidance of Prof. Dr. D. Seebach at the ETH Zurich in 1999. For 7 years, he was working at Carbogen-Amcis, where he had the pleasure to perform or supervise the production of more than 80 Active Pharmaceutical Ingredients (API), in the roles of Project Chemist, Group Leader R&D, and Head GMP production. In addition, he was deputy Head ESH releasing production protocols at the Neuland site. In 2006, Stefan Abele set up a fully integrated Process R&D group at Actelion Pharmaceuticals Ltd with responsibility for all scientific, technical, organizational, and budgetary aspects. His teams' tasks encompass route finding and production of multi-kilogram amounts of APIs, and the development of 2<sup>nd</sup> generation routes, thereby combining scientific understanding and flexibility with commercial perspectives. Outsourcing parts of the work is driven by tactical or technological considerations and is deemed crucial for a lean and efficient drug development. He has authored around 60 scientific papers and patent applications, and he is frequently giving invited lectures in industry, international conferences, and at universities.

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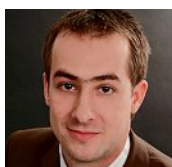
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**Jacques-Alexis Funel** is Technical Project Leader within Technical Operations at Actelion (Allschwil, Switzerland). For each project in his portfolio, he is responsible for the development of the API manufacturing process coordinating technical and business relations with external partners (CMO/CRO). For each assigned project, as leader of the CMC team (Chemistry Manufacturing Control), he acts as supply chain responsible, accountable for quality and regulatory aspects dealing with small molecules candidates for clinical phase I onwards to and including commercialization. Trained as an Engineer (ENSTA, Paris, France), he holds a PhD in organic chemistry (from Ecole Polytechnique, Paris) with post-doctoral training at the Max-Planck-Institute für Kohlenforschung in Mühlheim, Germany. He started his professional carrier at Actelion in 2006 as laboratory head within the Process R&D group. Appointed Associate Director, Senior Lab Head in 2012, he moved to his current position within Technical Operations in 2014.



**Gunther Schmidt** studied chemistry at the Johannes Gutenberg Universität in Mainz (Germany) and obtained his diploma with Prof. Waldmann in 1991. He finished his PhD thesis on asymmetric Pictet-Spengler reactions at the University in Bonn again under the supervision of Prof. Waldmann in 1996. From 1998 to 2006 he worked as a Project Chemist at Carbogen-Amcis producing Active Pharmaceutical Ingredients (APIs) under GMP on 10–50 kg scale. In 2006, he joined Actelion Pharmaceuticals (Allschwil, Switzerland) as a Process R&D Chemist, where he is currently a Principal Scientist.



**Christian Moessner** (born in 1977) studied chemistry at the Albert-Ludwigs-University Freiburg and obtained his PhD in chemistry from the RWTH Aachen University in

2005. He moved then to the Cambridge University (UK) to work with Ian Paterson on the marine macrolide Spirastrellolide A as a DAAD postdoctoral fellow. In 2007, he joined Solvias AG (CH) as laboratory head in the department for chemical development & catalysis where he contributed to this project. Since 2011, he works as a process chemist for late-phase development with F. Hoffmann-La Roche AG.



**Mischa Schwaninger** was born in Switzerland (1973). He received his degree in chemistry from the University of Applied Sciences, Basel, in 2002. Since then, he has been with Roche (vitamins division), later DSM Nutritional Products, initially in process development and later leading the safety laboratory. For this he passed a postgraduate education as Safety Engineer. Since 2011 he is with TÜV SÜD Process Safety, formerly Swiss Process Safety, where he currently manages the lab activities as study director.



**Roger Marti** studied chemistry at the Technikum Winterthur (Switzerland) and the ETH Zurich (Switzerland). He completed his PhD with Prof. Dr. D. Seebach at the ETH Zurich. After postdoctoral studies (1996) at Sandoz Pharmaceuticals USA working on solid phase and peptide synthesis, he spent seven years at Carbogen (Switzerland) doing process research & development of pharmaceuticals. In 2004, he joined the Zürcher Hochschule für Angewandte Wissenschaften in Winterthur/Wädenswil as Professor of Organic Chemistry. Since 2009, he is Professor of Organic Chemistry and Process Chemistry at the Haute école d'ingénierie et d'architecture de Fribourg (Switzerland) working on flow chemistry, process chemistry, and the synthesis of molecules for applications in life sciences.