Peter J. Yao

Curriculum vitae

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Switzerland

Work experience

November 2020 – Present

Lonza AG (Switzerland)
Drug Product Services
Lead Scientist

Focus areas and responsibilities:

Pharmaceutical development studies for liquid and lyophilized biologic drug products.

Key accomplishments:

Established laboratory study workflow for ambient light photostability evaluations.

Supported risk assessments for Biologics License Applications (BLA) by Cause and Effect Matrix and Failure Mode and Effects Analysis (FMEA).

Collaborated with multiple teams to support implementation of early phase programs in clinical supply manufacturing.

January 2018 – October 2020

Janssen Pharmaceuticals (Switzerland)
Large Molecule Drug Product Development
Senior Associate Scientist

Focus areas and responsibilities:

Process development of aseptic fill/finish processes for new product introductions and technical transfers at Schaffhausen facility.

Key accomplishments:

Implemented laboratory study workflow to evaluate filtration performance and ensure smooth operation of the critical unit operation in aseptic manufacturing.

Worked with internal laboratory team and external vendors to achieve filter validation for multiple programs.

Led development laboratory efforts to identify solutions to technical problems in manufacture of a commercial product and create estimated 1M CHF/year in savings when implemented.

Collaborated with multifunctional team to identify and implement new process analytical technologies to verify process models and gain new insights during manufacturing.

November 2015 – December 2017

Janssen Pharmaceuticals (Switzerland)
Small Molecule API Process Development
Senior Associate Scientist

Focus areas and responsibilities:

Support for late-stage chemical development of small molecule APIs and intermediates. Crystallisation process development and process analytical technologies.

Key accomplishments:

Responsible for development, evaluation of polymorph control, and definition of proven acceptable ranges of key crystallisation step in synthetic route for a commercial product.

Identified crystallisation conditions to deliver a streamlined process without an intermediate isolation step of a highly potent API.

Investigated reaction mechanism of a critical alkylation reaction using process analytical technologies and automatic sampling to aid in process design and documentation for health authorities.

Led the study of an enantiomeric resolution by crystallisation to establish fundamental system properties and identify key crystal forms.

January 2008 – August 2013

Bristol-Myers Squibb (USA)
Chemical Development
***Research Scientist I* (2010-2013)**
***Associate Research Scientist II* (2009-2010)**
***Associate Research Scientist I* (2008-2009)**

Focus areas and responsibilities:

Support for early-stage chemical development

of small molecule APIs and intermediates. Synthetic route evaluation. Enabling syntheses to deliver clinical material.

Key accomplishments:

Responsible for development of a process to deliver API for a commercial product with highly specific powder properties suitable for roller compaction and acted as liaison between laboratory development team and pilot plant operations team.

Worked with a rapidly organised team to deliver clinical material of a highly potent intermediate for an antibody drug conjugate under aggressive timelines.

Collaborated on diverse multi-functional teams to achieve multiple end-to-end objectives across a variety of projects for six development programs.

Qualifications

Technical: process modeling, process scale-up, statistical analysis, process analytical technologies (PAT), aseptic fill/finish, sterile filtration, data visualisation, chemical process optimisation

Organizational: planning and workflows, collaboration with multifunctional teams, documentation, data management

Programming: R, python, MATLAB

Education

2007 **University of Illinois**
MS Chemistry
Main-group asymmetric catalysis
Advisor: Prof. Scott E. Denmark

2004 **Case Western Reserve University**
BS Chemical Engineering
BS Polymer Science & Engineering
Advisor: Prof. Christoph Weder

Languages

English	Native
French	B2
German	B1

Publications

Denmark, S. E.*; Eklov, B. M.; Yao, P. J.; Eastgate, M. D. *J. Am. Chem. Soc.* **2009**, *131*, 11770–11787.

Kokil, A.; Yao, P.; Weder, C*. *Macromolecules* **2005**, *38*, 3800–3807.