



Michael M. Choi, Ph.D.

President PCTS, Inc.

- Expert in Wurster, fluid-bed, and pan coating process and operation
- General Manager at Janssen (Johnson & Johnson)
- Head of Technical Operations at Teva
- Executive Director of Operations at Hercon Pharmaceuticals
- Coating expert at Merck & Co., Inc.
- 25+ years of R&D and Supply Chain experience across pharmaceutical, chemical, nuclear, and agricultural industries

Expertise

- Wurster and film-coating technologies
- End-to-end supply chain operation
- Tech transfer and process engineering
- Product development
- Lifecycle product and asset qualification and management

Key Accomplishments and Certifications

- US Patent #10/981,812 on “Pan Coating Simulation for Determining Tablet Coating Uniformity”
- Process simplification by inventing thermodynamics analysis for coating processes
- Special Achievement Award at Merck & Co., Inc. for troubleshooting complex and recurring coating problem
- J&J Leadership Development Program

Key Focus Areas

- Coating and fluid-bed process characterization, troubleshooting, and scale up
- Process engineering, design, and Operations analysis
- Knowledge and risk management

Relevant Publications

- M. Choi, M. Mirian, P. Bruen, and G. Ruklic, “Implementation of QbD using MES”, *Pharmaceutical Engineering*, January, 2015.
- M. Choi, “Process Capability: Understanding the Science and the Statistics”, FDA-invited presentation at IFPAC, Jan 2014.
- M. Choi (Contributor), “ISPE Guide Series: PQLI from Concept to Continual Improvement Part 3 – Change Management System as a Key Element of Pharmaceutical Quality System”, 2012.
- M. Choi, D. Kim, M. Sarkari, R. Simko, D. Unger, and S. Tsinontides, “Evaluation of Process Capability and Robustness for a Lyophilized Product”, presented at the 2012 AIChE Conference, Pittsburg, PA.

- M. Choi, "Is tablet coating ready for QbD?", Tablets and Capsules, April, 2009.
- M. Choi, R. Schick, and K. Cronce, "Effect of Fan Air Flow Rate on the Spray Distribution", ILASS Conference, Chicago, IL, May, 2007.
- M. Choi, "Applications of Process Thermodynamics in Pharmaceutical Coating", lead article in Tablets and Capsules, April, 2007.
- M. Choi, "Manufacturability of Drug-Layered Tablets", Pharmaceutical Manufacturing, April, 2007.
- M. Choi, "Simulation of Tablet Coating Uniformity for a Pan-Coating Process", Presented at the 2004 AIChE conference, Austin, TX.
- M. Choi and S. Johnston, "Hydrodynamics of Wurster: A 2-D bed study", Presented at AIChE conference at the 2000 AIChE Conference, Los Angeles, CA.
- M. Choi, R. Olivero, G. Barr, "Precision Tablet Coating", Presented at the 2000 AIChE Conference, Los Angeles, CA.
- M. Choi, "Hydrodynamics of Commercial-scale Wurster Coaters", Presented at the 1998 AIChE Conference, Miami Beach, FL.
- M. Choi and A. Meisen, "Sulfur Coating of Urea in Shallow Spouted Beds", Chemical Engineering Science, v52, p1073 (1997).