

# Highlights from 2022 AAPS 360–In Vitro Release and Dissolution Testing Community Annual Meeting

Andre Hermans<sup>1\*</sup> and Jie Shen<sup>2</sup>

<sup>1</sup>Merck & Co., Inc., Rahway, NJ, USA.

<sup>2</sup>Northeastern University, Boston, MA, USA.

e-mail: andre\_hermans@merck.com

The AAPS In-vitro Release and Dissolution Testing (IVRDT) Community met for their annual in-person meeting at 2022 PharmSci 360 conference in Boston. The meeting was attended by more than 50 active members of the community who participated in an engaged and lively meeting. At the beginning, the community chair Dr. Andre Hermans summarized the work and accomplishments of the IVRDT community in 2022.

Preceding the PharmSci 360 meeting, the IVRDT community held a successful virtual workshop in collaboration with the AAPS Stability community on “Dissolution Best Practices and International Harmonization.” The workshop focused on dissolution testing requirements between different pharmacopoeias such as the Chinese Pharmacopoeia (ChP), United States Pharmacopoeia (USP), European Pharmacopoeia (EP), and Japanese Pharmacopoeia (JP). In the second part of this workshop, subject matter experts shared dissolution best practices with respect to method development and hydrodynamic considerations in apex vessels and USP dissolution apparatus 1 (basket).

To continue the collaboration between the Society for Pharmaceutical Dissolution Science (SPDS) and the AAPS IVRDT community, a 2.5-day in-person conference on “Dissolution Science: Principles and Applications” was held in September 2022, with over 130 attendees. A vast array of dissolution-related topics were discussed to highlight complexities and recent trends in dissolution science. Topics included biorelevant dissolution, physiologically based biopharmaceutics modelling (PBBM), regulatory aspects, fully automated testing methods, and long-acting injectable formulations.

The community announced two outreach workshops at the meeting, which were successfully held since then in November 2022 with the Jagiellonian University in Poland and in February 2023 in collaboration with the University of Philippines Manila. These workshops continue the long-standing efforts of the community and enable deep scientific discussions around the globe to increase awareness and knowledge of dissolution science.

Following the presentation at 2022 PharmSci 360, the IVRDT community brainstormed themes and activities for 2023. Of high interest were the topics of dissolution and data integrity, in-vivo predictive dissolution systems, challenges for amorphous solid dispersions, novel routes of drug delivery, pediatric dosage forms (administered with food), virtual bioequivalence measurements, and upcoming updates to USP General Chapter <711> Dissolution.

Meeting attendees included: Andre Hermans, Vivian Gray, Nicholas DeWeerd, Penny Peterson, Maria Cruanes, Agnes Zhao, Sherwin Xie, Karl Box, Scott Stephenson, Jeff Kiplinger, Keith Hamman, Martin Brandl, Raafat Fahmy, Ahmed Ibrahim, Yuly Chiang, Juan Song, Yogesh Chandhari, Kailas Thakker, Roshni Patel, Sanjani Ray, Akira Hattori, Ming Li, Karl Wagner, Mark Liddell, Amit Bansal, Michael Zaleski, Dan Spisak, Ken Boda, Lee Dowden, Rishabh Bahl, Susann Bellmann, Jonas Eriksen, Marina Navas Bachiller, Ana Coutinho, Alexandra Taseva, Marilyn Martinez, Anthony DeStefano, George Wang, Dave Kwajewski, Chris Rego, Vivek Shaw, Deidre D’Arcy, Zhao Lui, Alger Salt, Ishai Nir, Tahseen Mirza, Rachel Guo, Himanshu Gandhi, Michel Magnier, and Patrick Ballmer.

\*Corresponding author