

USP Open Forum | Solid-state NMR for Pharmaceutical Analysis

Thursday, June 24, 2021 | 10:00 a.m. – 12:00 p.m.

Speaker Biographies

(Listed by order of appearance)

Updated as of June 1, 2021



Eric J. Munson, Ph.D.

USP Simple Ingredients Expert Committee Chair

Eric Munson is currently the Dane O. Kildsig Chair and Head of the Department of Industrial and Physical Pharmacy at Purdue University. He received his B.A. degree from Augustana College in Sioux Falls, South Dakota, in 1987. After studying one year in Munich, Germany, on a Fulbright Fellowship, he received his Ph.D. in 1993 from Texas A&M University, and was a postdoctoral fellow at the University of California, Berkeley in 1994. He was in the Chemistry Department at the University of Minnesota before moving in 2001 to the Pharmaceutical Chemistry Department at the University of Kansas, to the Pharmaceutical Sciences Department at the University of Kentucky in 2010, where he was the Patrick DeLuca Endowed Professor in Pharmaceutical Technology. In 2018 he moved to Purdue University to become the Dane O. Kildsig Chair and Head of the Industrial and Physical Pharmacy Department. His research program is focused on the characterization of pharmaceutical solids using a variety of analytical techniques, with an emphasis on solid-state NMR spectroscopy. Dr. Munson is a coinventor on three patents and has published more than 100 research, review, and book chapters.

Presentation: Opening Remarks and Introduction; Goals and Objectives Introduction to Solid-state NMR for Pharmaceutical Analysis; Next Steps and Closing Remarks



Yongchao Su, Ph.D.

Member, General Chapters – Physical Analysis Expert Committee

Dr. Su is a Principal Scientist in the department of Analytical Research and Development at Merck & Co, Inc. and an analytical lead of material and biophysical characterization. His solid-state NMR work focuses on investigating molecular basis of drug delivery and stability for drug product development. He teaches as an adjunct faculty member at the University of Texas at Austin and Purdue University. Yongchao has received postdoctoral training at Massachusetts Institute of Technology with Prof. Robert G. Griffin after his Ph.D. at Iowa State University with Prof. Mei Hong. He is a member in Physical Analysis Expert Committee in United States Pharmacopeia (USP), a Board member of Eastern Analytical Symposium, and Co-vice Chair of Gordon Research Conference on molecular structure elucidation. He currently serves in the Editorial Advisory Board for Magnetic Resonance in Chemistry, Pharmaceutical Research, Molecular Pharmaceuticals, and Journal of Pharmaceutical Sciences, and as an Editor of the section of protein conformation for *Amino Acids*. He has contributed over 90 peer-reviewed journal articles and is a coinventor of patents on drug developments of therapeutic chemicals and proteins.

Presentation: Solid-state NMR Spectroscopy General Chapter development in the USP-NF; Facilitator for Live Discussion: Insights from Industry

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Lucy L. Botros, M.Sc.

Senior Scientist II, General Chapters, USP

As a Senior Scientist II with the General Chapters group of The United States Pharmacopeial Convention, Ms. Botros is responsible for supporting USP Expert Committees and associated Expert Panels in the development and revision of USP-NF general chapters related to chemical and physical analysis of pharmaceutical drug substances and drug products, including the suite of spectroscopy general chapters. She is also responsible for the development of new standards in Pharmaceutical Continuous Manufacturing

and Process Analytical Technology.

Before joining the General Chapters group of USP, Ms. Botros was responsible for the development and validation of analytical procedures published in the USP-NF, Dietary Supplements Compendium, and Food Chemicals Codex, ensuring the quality, safety, and benefit of medicines and foods. Analytical procedures she and her team developed included identification and quantitation by spectroscopic (Mid-IR, Raman, NIR) and chromatographic (LC) methods. In addition, she provided chemometrics support for the analysis of spectral data.

Ms. Botros holds an M.Sc. and B.Sc. in Chemistry from McGill University, Montreal, Canada.

Facilitator for Live Survey