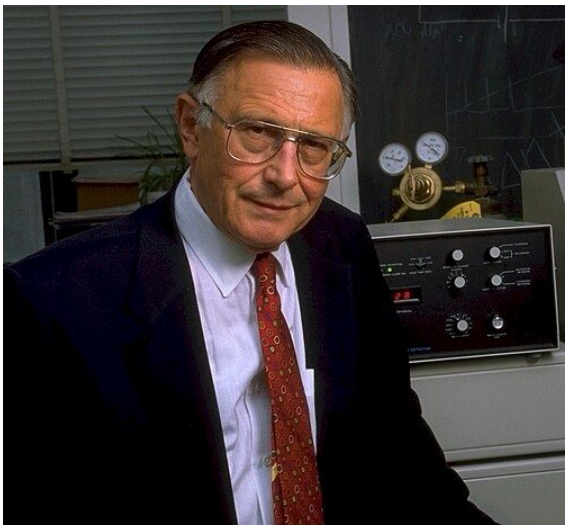
Celebrating the 60 Years of HPLC and The Legacy of Csaba Horváth.



Professor Csaba Horváth (25 January 1930 – 13 April 2004)

Invited Speakers: Isabelle Gusev, Barry Karger, Jared Auclair

When: November 19th 3 PM – 6 PM

Where: Northeastern University Innovation Campus in Burlington, MA

Address: 147 South Bedford St. Burlington, MA 01803

Free ample parking is available.

This will be a hybrid MASSEP.org event. Please register as a virtual attendee and we will share a ZOOM link so you can participate remotely if you cannot attend in person.

More information on https://MASSEP.org/events

Registration link: https://forms.gle/wZunBSk7UfrLdWS48

Please note, we do not let Google collect and store your contact information, therefore, we are unable to send confirmation email back to you. Rest assured, you are registered as soon as you answer the required questions on the registration form and clicked “Submit”. If unsure, you can always follow the same registration link to verify that your information has been captured.

Event Agenda:

3:00-4:00 pm – Meet-and Greet Social, Food and Refreshments, Poster Session

4:00-4:40 pm – Isabelle Gusev - “Six Decades of Separation, Zero Degrees of Distance”

4:40-5:10 pm – Barry Karger – "The 60 years of HPLC has been a golden age. The impact of the field in many areas is well beyond what the pioneers dreamed."

5:10-5:20 pm – Jared Auclair - “Introduction to the Center of Bioinnovation”

5:20-6:00 pm – Open discussion, closing remarks, departure. Remote participants will be able to chime in and say a few words.

Speakers:

Isabelle Gusev, Ph.D. is a separation scientist with more than 20 years in biotech and pharma, characterizing complex mixtures of biopolymers and nanoparticles by LC–MS, chromatography, capillary electrophoresis and capillary electrochromatography, and holding a patent on peptide purification for the GLP-1 agonist taspoglutide. She earned her Ph.D. at Yale University under the mentorship of Csaba Horváth. A Principal Scientist at Prime Medicine, she focuses on characterizing lipid nanoparticle (LNP) for Prime Editing, the company’s “search-and-replace” gene-rewriting technology. In the lab, Csaba used to ask every day, “Anything new?!” – meaning “Do you have new data?” – and she still likes to have an answer.

Abstract:

This talk, “Six Decades of Separation, Zero Degrees of Distance”, marks 60 years since Yale’s Csaba Horváth and Sandy Lipsky made the public debut of HPLC in 1966, turning an unproven idea into a platform that remains a workhorse of modern analytical science. The talk follows HPLC decade by decade: from the 1964–67 invention window, through reversed-phase and peptide separations in the 1970s, gradient elution guided by solvophobic theory and electrospray LC–MS in the 1980s, micro-scale columns, monoliths and electro-driven separations in the 1990s, and UHPLC in the 2000s, to today’s lab-on-a-chip, miniaturized and green separation technologies. Along the way it highlights Cs. Horváth’s collaboration with Barry Karger, the Yale connection with John Fenn, and the Csabaites among the many who have carried the field forward. The title expresses a paradox: chromatography exists to push things apart, yet after six decades a web of mentors, students, scholars, coauthors and friends has drawn separation scientists

together. We close by asking how that connection and MASSEP's discussion-group tradition can inspire the next generation of separation science.

Professor Barry Karger is one of the earliest HPLC, capillary electrophoresis, and mass spectrometry pioneers, the founding director of the Barnett Institute of Chemical and Biological Analysis, James L. Waters Chair and Distinguished Professor Emeritus of the Northeastern University. During his six-decade+ career of advancing separation science and its applications in biological and pharmaceutical analysis he mentored numerous students and postdoctoral fellows who now hold key positions in industry and academia. Professor Karger made foundational contributions to HPLC, CE, and MS, including pivotal work on the Human Genome Project. He will bring memories of his long-term association with Csaba Horváth that laid the foundation of the HPLC field we know today and thoughts of future directions.

Professor Jared Auclair is a Dean of the College of Professional Studies at Northeastern University. He also heads the Northeastern University Biopharmaceutical Analysis Training Laboratory (BATL) that will be hosting our event. HPLC separations are a major part of the training at their facility and one of the most significant analytical techniques in regulated laboratory workflows. Professor Auclair will be joining us remotely via Zoom.