Department of Biochemistry and Molecular Biophysics Seminar

Wednesday, September 30 at 4:00 p.m. in Ackert 120

Coffee and cookies at 3:45 p.m. in Chalmers 168

Dr. Ved Srivastava, Chief Scientific Officer at Perpetual Medicines, and President of Global Peptide Science Institute

From GLP-1 Development to AI/ML Driven Innovation: Shaping the Next Generation of Peptide Drug Discovery

Peptide therapeutics represent a groundbreaking approach in the biopharmaceutical industry, providing an innovative strategy for the treatment of various medical conditions, including metabolic diseases and oncology. The global peptide therapeutics market is projected to reach $117.4 billion by 2034, with a compound annual growth rate (CAGR) of 10.8%. Recent advancements in technologies such as computational AI/ML and robust prediction of protein structure for developing clinical candidates are showing promising progress, but we are still in the early stages. This presentation will cover (a) traditional drug discovery overview for first-in-class GLP-1 drugs for treating metabolic Diabetes and Obesity; and (b) how ML/AI techniques are transforming the quality, speed, and cost of drug discovery for novel peptide drug discovery for diabetes and cancer.

Dr. Ved Srivastava is an internationally recognized industry expert in peptide therapeutics and has over 30 years of experience in developing peptide therapeutics. Dr. Srivastava's most notable achievements include the development of several clinical drug candidates, including the commercialization of three peptide-based drugs: first-in-class GLP-1, Byetta™, Bydureon™, and Symlin™ for the treatment of Type 1 and Type 2 Diabetes. The impact of his work is further evidenced by the advancements in third-generation GLP-1 drugs, such as Wegovy™ and Mounjaro™, for the treatment of obesity. Recently, Dr. Srivastava received the American Chemical Society-North Carolina's Distinguished Lectureship Award for his 'significant and recognized research contributions to the chemical sciences.