

Jeff (Jeffrey R.) Sachs, PhD is a Distinguished Scientist in the Quantitative Pharmacology and Pharmacometrics Department (“QP2”) in Merck* Research Laboratories, where he is responsible for modeling and simulation supporting vaccine program decisions from early discovery through late-stage clinical development. His publication areas include methods for and applications of pharmacometrics, biotechnology, and AI/ML.

Dr. Sachs received his BS and MS in Applied Math from Brown University and his PhD in Math at MIT where he worked with Alan Grodzinsky on the electromechanochemistry of articular cartilage, supporting design of a minimally-invasive arthroscopic diagnostic device. After postdoctoral appointments in Applied Physics (Tokyo Univ.), Biomedical Engineering (Northwestern Univ.), and Biotechnology (N.I.S.T.), he developed two successful biotechnology consulting businesses. He came to Merck in 1999 and initially worked on developing gene expression analysis, data mining, and SAR integration platforms. He was lead inventor of Merck's proteomics and metabolomics technology platforms. He was then in charge of the therapeutic area-aligned modeling and simulation group, and led the design, implementation, and global deployment of a web-based tool providing a user-friendly, non-technical, modeling interface for internal and external decision makers. That tool, used across many programs and therapeutic areas, helped Merck gain recommendations for compounds in over 40 countries. He was the department's first lead for efforts in infectious diseases, oncology, and digital health/adherence strategy. He is currently the QP2 Therapeutic Area Lead for vaccines, and the QP2 Program Lead for the dengue vaccine program. He is active in editorial boards and committees for the Society for Industrial and Applied Mathematics (SIAM), and is a mentor for the Association for Women in Mathematics (AWM) and for the International Society of Pharmacometrics (ISoP).