## Dr. Narendra Chirmule

CEO of SymphonyTech Biologics

Narendra Chirmule is the co-founder and CEO of SymphonyTech Biologics, a data analytics company focused on engineering solutions to biology. As former Head of R&D at Biocon (Bangalore), and leadership positions in Amgen (Thousand Oaks, CA) and Merck Vaccines (West Point, PA), has contributed to clinical development of vaccines and biopharmaceuticals. The drug development experiences include landmark *vaccines* for cervical cancer [HPV], shingles



[Varicella zoster], childhood diarrhea [Rotavirus]), and biologics for osteoporosis (Prolia), rheumatoid arthritis (Enbrel), platelet loss (NPlate), breast cancer (Ogrivi) and gene therapy using viral vectors. He also worked on the development of the Adenovirus-vector based HIV vaccine, which was tested in the seminal STEP trial. The results of the trial were instrumental in informing the field of HIV vaccine on the importance of both cell as well as humoral immune protective immune responses. He has published extensively and presented seminars on subjects of basic immunology and development of biologics and vaccines. The topics of his publications include white-papers and regulatory guidance's on novel methodologies of measuring immune responses to biologics and vaccines, utilization of quality by design approaches of molecule design, and statistical methods for analyses of pharmacokinetic and pharmacodynamics. The subject of his PhD was on development of a leprosy vaccine, from Cancer Research Institute, Mumbai; postdoctoral studies on pathogenesis of AIDS from Cornell University Medical College-North Shore Hospital, New York; teaching and research as assistant professor in gene therapy at University of Pennsylvania, Philadelphia. Dr. Chirmule is on the NIH advisory committee for HIV vaccines.