



Materials Science and
Engineering

MSE COLLOQUIUM SPEAKER

DR. SHRIRANG RANADE

GENENTECH INC., A MEMBER OF THE ROCHE GROUP

DESIGNING PLASMONIC NANOSTRUCTURE PORT DELIVERY SYSTEM WITH RANIBIZUMAB: A NEW PARADIGM FOR LONG-ACTING RETINAL DRUG DELIVERY TURES FOR SMART MATERIALS

DATE & TIME: SEPTEMBER 28, 2022 at 1:00 PM - 1:50PM

LOCATION: WINSTON CHUNG HALL 205/206

The Port Delivery System with ranibizumab (PDS) is a combination product, comprising an ocular implant, a customized formulation of ranibizumab, and 4 ancillary devices (insertion tool assembly, initial fill needle, refill needle, and explant tool). The surgically placed implant enables continuous delivery over several months and showed equivalent and noninferior performance to monthly intravitreal ranibizumab injections in the treatment of nAMD. The implant is permanent and can be refilled in situ.

We will discuss the disease state and technical development in the context of novel drug delivery systems for successful delivery to the back of the eye. Also, the clinical studies and data obtained, including the underlying pharmacokinetic considerations for ocular delivery that led to successful FDA approval in 2021.



**DR. SHRIRANG
RANADE**

Director, Pharma Technical
Development, Genentech
Inc., Roche Group

Shrirang (Shri) Ranade, Ph.D. is a Director in Project & Portfolio Management in Pharma Technical Development at Genentech/Roche and serves as the Sr. Technical Development Team Leader for the Port Delivery System with ranibizumab. Prior to GNE, Shri held R&D positions in Boston Scientific and Johnson & Johnson, focused on the development of medical devices and drug-device combination products in Cardiovascular, Orthopedics and ENT areas incorporating small & large molecule therapeutics. He is listed as an inventor on issued patents, an author on numerous book chapters and articles published in refereed journals. Dr. Ranade holds a B.Eng. from the University of Poona, an M.Sc. from the University of Manchester and a Ph.D. in Polymer Science from the University of Connecticut.