



ON-SITE BIOLOGY COLLOQUIUM

Friday, 17 Mar 2023 | 4 pm | LT31

Hosted by Assoc. Prof Liou Yih-Cherng

Fish Biology to Medical Biotechnology

Findings, Advances & Insights of a Career Biotechnologist

By Sampath Kumar

*Senior Director and Head of Cell Line Development
Biotherapeutics Process Development
Takeda Pharmaceuticals International Co., Cambridge, USA*



About the Speaker

Sampath Kumar heads the function of Cell Line Development in the Biotherapeutics Process Development division of Takeda. The function develops production cell lines for protein therapeutics, and is developing similar technologies to stably produce viral vectors for cell and gene therapy. His 21-year biopharmaceutical industry career spans CuraGen, Pfizer, Biogen, and Takeda Pharmaceuticals co.

Sampath Kumar is an alumnus of the DBS, NUS, where he conducted doctoral research in comparative developmental endocrinology using fish model (1990-95). He pursued post-doctoral research in reproductive endocrinology at the Western University (Lawson Health Research Institute, London, Ontario, Canada) and the University of Maryland Biotechnology Institute (Baltimore, Maryland, USA). His career has been in the 'D' part of 'R&D' in developing biotechnology therapeutics.

In the long history of medicine, biological molecules just served as target for the small-molecule medicines (pills). 'Biologic' medicines are of relatively recent development. Advances in biotechnology has provided a major uplift to the biotech medicine especially with gene and cell therapy receiving extraordinary research input and investment.

Developing clinical/manufacturing-grade production cell lines and cell culture process has been the focus of my medical biotechnology career. My master's research was at organismal level, PhD research at tissue/cellular level and post-doctoral research at molecular level. The seminar will portray a picture of how my research interest and experience provided me an entry into the emerging medical biotechnology. My own findings and learnings, and parallel advances in the relevant science, during the academic and industry career will be presented.