

## ***Discovery to Manufacturing: The Use of Simulated Moving Bed Chromatography***

Simulated Moving Bed Chromatography(SMB) has been practiced in the chemical industry since the late 1950s and has been widely applied to separation and purification of hydrocarbons and industrial chemicals. SMB's use in the Pharmaceutical and Biotech Industry has been relatively recent. SMB does offer an efficient means to separate chiral isomers from their racemic mixtures as well as separation of macro molecules such as proteins and antibodies.

Orochem Technologies Inc. has developed technologies to allow identification, preparation and purification of molecules from microgram scale to large scale. Selective Chiral Phases bonded to silica particles from 1.7um to 300um facilitate seamless process of discovery to manufacturing. Use of bench scale SMB technologies such as from Semba Bioscience allows purification from few grams to few kilograms scale. And the use of larger particle size 300um in a SMB operation allows efficient production of pharmaceutical intermediates on a commercial scale.

This workshop will present these unique technologies and their important features which facilitate seamless process of discovery to manufacturing. A case study will be presented which illustrates the effectiveness of SMB in a typical commercialization process.