USE OF AMBR15 AS A HIGH THROUGHPUT MODEL TO SPEED UP PERFUSION BIOPROCESS DEVELOPMENT

Xiaoxia Jin, Upstream MSAT-DS, Sanofi, Framingham, MA
Xiaoxia.Jin@Sanofi.com
Matthew Stauffer, Upstream MSAT-DS, Sanofi, Framingham, MA
Zhenya Hu, Upstream MSAT-DS, Sanofi, Framingham, MA
Lia Tescione, Upstream MSAT-DS, Sanofi, Framingham, MA
Canghai Lu, Upstream MSAT-DS, Global MSAT, Sanofi, Framingham, MA

Key Words: Ambr15; high throughput; perfusion; process development

Integrated continuous bioprocess is a promising solution in regards of achieving greater cost and time efficiencies and increasing process robustness and product quality. Comparing to the batch/fed batch processes, fewer options are available in terms of the high throughput method for developing the perfusion process. Different approaches of using Ambr15 were explored as a way to speed up the perfusion process development timeline, which includes the semi-continuous model and batch refeed model. The improved version of batch refeed model showed a predictive trend to bench top bioreactors. Applications of the Ambr15 model in clone selection, media screening/evaluation, and perfusion process development will be presented.