OPERATIONAL ENHANCEMENTS TO IMPROVE APPLICABILITY FOR CHALLENGING CELL LINES IN THE SANOFI INTENSIFIED PERFUSION PLATFORM (IPEP)

William N. Napoli, Sanofi
william.napoli@sanofi.com
Brooke Coughlan, Sanofi
Jared Franklin, Sanofi
Shawn Barrett, Sanofi

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Increased competition and mounting cost pressures are driving the therapeutic protein industry to reduce development timelines for novel products entering the clinical and commercial spaces. To further the evolution of the integrated continuous bioprocessing (ICB) technology toolbox, the Medium & Bioprocess Technologies (MBT) group within Cell Culture Development (CCD) has established a perfusion platform for new molecules and cell lines called IPeP. IPeP is a high cell density, long duration, controlled perfusion process capable of delivering high levels of productivity. In this work, we will provide updated data demonstrating the applicability of IPeP to diverse mAb molecules and provide case studies highlighting select strategies to address suboptimal performance observed in challenging cell lines. The challenges that will be addressed are high lactic acid production, atypical or oscillatory growth and medium volume constraints. With IPeP, we will deliver a collection of tools and strategies to reduce development time and cost while supporting the continued delivery of high-quality medicines to patients in need.