The future of 'bioprocessing' for medical therapies

March 17 2015

What's in store for the future of industrial bioprocessing for medical therapies, which involves the use of living organisms or cells to create drugs or other agents? Will the batch or continuous bioprocessing platform dominate biomanufacturing of human therapeutics down the road? Three pioneers in the field address these questions in an upcoming issue of *Biotechnology and Bioengineering*.

With batch bioprocessing, components are transferred as a batch from one holding vessel or processing equipment to the next, while with continuous bioprocessing, there is a continuous flow like an assembly line. Dr. Matthew Croughan notes that we will never require a biopharmaceutical plant that truly needs to be continuous on a capacity basis. "We will never need to process 50,000 barrels—8 M liters—or more per day, like a continuous oil refinery," he said.

Dr. Konstantin Konstantinov and Dr. Charles Cooney stress that while we shouldn't close existing batch operations, methods are likely to evolve around continuous bioprocessing. Therefore, the development of this new platform should be given serious consideration.

More information: Croughan, M. S., Konstantinov, K. B. and Cooney, C. (2015), The future of industrial bioprocessing: Batch or continuous?. Biotechnol. Bioeng., 112: 648-651. DOI: 10.1002/bit.25529

Provided by Wiley