



## XX Congreso Nacional de Biotecnología y Bioingeniería

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### A SINGLE-USE, SCALE-DOWN, PREDICTIVE SOLUTION FOR INTENSIFIED PERFUSION DEVELOPMENT

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*Palabras clave: microbioreactor, upstream, perfusion bioreactor*

**Resumen.** Perfusion is becoming a typical approach to achieving upstream process intensification. The ability to scale down these processes, however, has been limited due to lack of appropriate technologies. Labs cannot run enough bench scale 2L bioreactors with cell retention devices due to resource constraints (skilled labor and facilities) and high throughput systems lack the required perfusion or control capabilities. This talk describes a new microbioreactor system that fulfills this throughput-performance gap providing single-use, perfusion bioreactors with 2mL working volume that can replicate bench scale perfusion processes at industrially relevant cell densities.

**Empresa:**

**MERCK**

**Semblanza del ponente:** Dr. Evan Gates.

Evan Gates is a Biomedical Engineer and member of the Manufacturing Sciences and Technology (MSAT) team at Merck, KGaA, Darmstadt, Germany. He joined the company following the acquisition of Erbi Biosystems and previously worked as a Field Application Scientist for a company specializing in high-end biophysical instrumentation. Evan holds BS degrees in Mechanical Engineering and Biomedical Engineering from Carnegie Mellon University and a PhD in Biomedical Engineering from Duke University.