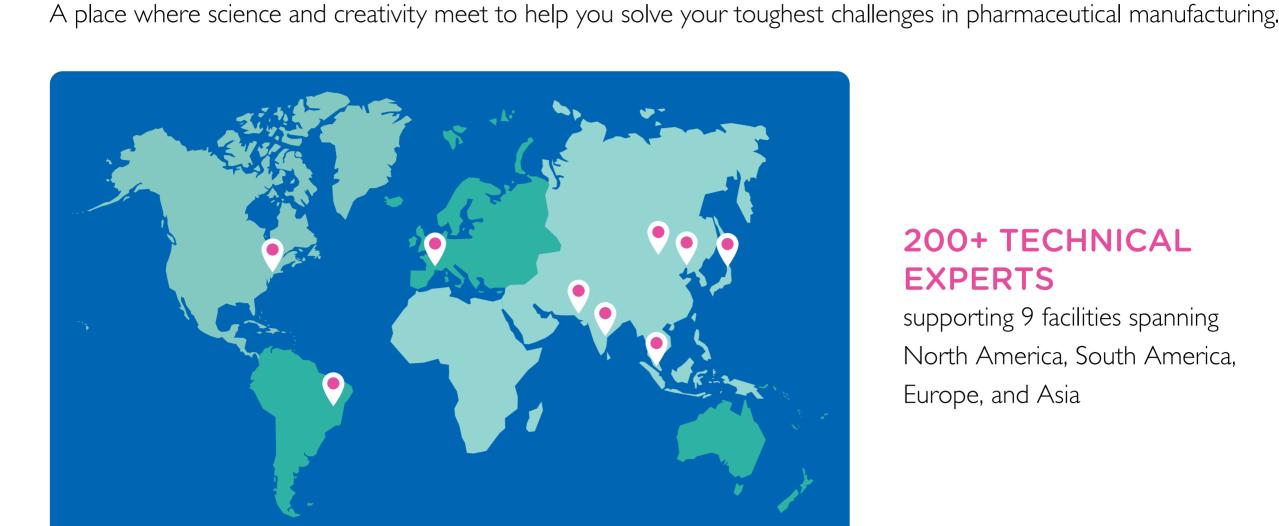


Collaborate for Success in Pharmaceutical Manufacturing

With the M Lab™ Collaboration Centers' flexible, non-GMP environment and global network of technical expertise, you can solve your toughest problems, from adoption of single-use technologies to virus detection and removal, and expansion in emerging markets.

The M Lab™ Collaboration Centers



200+ TECHNICAL **EXPERTS**

supporting 9 facilities spanning North America, South America, Europe, and Asia



20,000+ SQUARE FEET

of non-GMP workspace where you have the freedom to experiment



13,000+

process troubleshooting and deviation investigation hours saved annually for you



10,000+ HOURS

of operator and optimization training courses delivered annually

COLLABORATE

to Solve Your Toughest Single-Use Challenges

SINGLE-USE BIOPROCESSING MARKET TO REACH \$5.9 BILLION BY 2024

Single-Use Implementation Success Story



Customer Challenge The customer needed a single-use

automated skid for their TFF process, but all standard systems in the industry were unable to give them the performance they needed for their application.



the local M Lab™ Collaboration

The team invited the customer to

Center, simulated how the single-use tubing and assemblies could manage the high process flowrate that the customer required, and demonstrated how the Mobius® mixer could be customized for their unique TFF process.



Outcome The live process simulation gave

the customer complete confidence that the Mobius® mixer was the right solution for their TFF process, and they were able to pair the mixer with their existing skid.

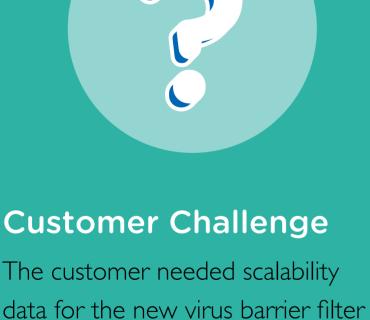
Challenge Is Too Great

No Virus Safety

\$1 BILLION:



POTENTIAL COST OF CONTAMINATION





of the customer's plant in the M

Lab™ Collaboration Center and

conducted a scalability study using

the customer's media.

With minimal risk, the customer designed and performed pilot-scale

Outcome

studies in the USA and ultimately transferred these to large-scale operations in Singapore.

sufficient resources or facilities to conduct the testing themselves.

with their media, but did not have

Bringing Efficiency to **Emerging Markets**

TOP BARRIER

TO ENTERING EMERGING MARKETS IN 5 YEARS IS ACCESSING AND RETAINING SKILLED LABOR

Emerging Markets Success Story



horizon, the Singapore government

identified the need to attract, develop, and sustain a highly skilled workforce for the biomanufacturing industry.



Solution The M Lab™ Collaboration Center's team of experts worked with the local government and the Workforce Development Agency (WDA) to create a training

program aimed at enhancing the

skills set of the local workforce.



Approximately 70% of the Singapore pharmaceutical workforce was trained by our experts and 80% of those people are employed in manufacturing operations today.

http://www.merckmillipore.com/mlabs

Plan your visit to an M LabTM Collaboration Center at

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#MLabCollaboration

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