

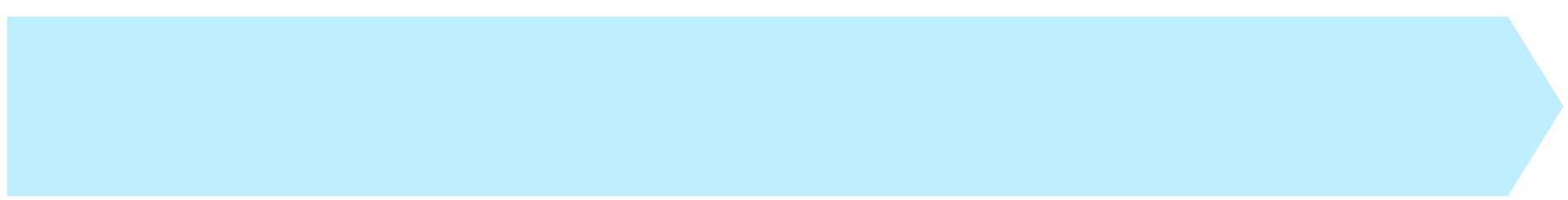
Optimizing Pharmaceutical Laboratory Efficiency and Productivity



Within the pharmaceutical industry, an immense pressure exists to progress potential therapeutic candidates through the pipeline quicker than ever before. With pharmaceutical laboratories being on the front-line of drug development, the pressure for lab leaders to optimize the speed and efficiency of their operation is one crucial element of this bigger picture.

When medicines have the potential to address critical unmet medical needs, the pharmaceutical laboratory's need for speed becomes vital.

Drug discovery, development and delivery: a timeline



Dr. Richard Ladd is an independent pharmaceutical technology consultant with more than 30 years of experience in the industry. He shares his perspective on why speed is so important in an industry, which is ever-evolving.

7000+ medicines currently in global development¹

On average, the drug discovery, development and delivery process takes **12 years**²

Drugs tend to have **20 years** on patent³

What drives productivity pressures in pharmaceutical laboratories?



Promoting efficiency to improve lab productivity and economics

The more time spent at each stage within the drug discovery process, the higher the cost for the laboratory. When working with pharmaceuticals, the need for speed and overall laboratory efficiency, must be carefully balanced with the demand for unwavering quality.

Key facts:

<p>Cost</p> <p>Between 3 billion USD to bring a medicine to market⁶</p>	<p>Failure rate</p> <p>Only 1 out of 10,000 medicines studied, will end up being brought to market⁷</p>
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The Pharma Lab Leaders Survey tells us that.*

- Speed**

Achieving quicker results is the **#1 concern** for pharmaceutical laboratories
- Laboratory workflows**

83% of Lab Leaders find their current workflow requires optimization
- The sample chain of custody**

70% of Lab Leaders say one of the most common strategies they are employing to progress medicines through the pipeline quicker, is improving documentation of the sample chain of custody
- Innovations**

65% of Lab Leaders would welcome new innovations to increase laboratory efficiency

The Pharma Laboratory Leaders Survey

Agilent Technologies partnered with market research company Frost & Sullivan in 2019 to run an independent, blinded survey to better understand the challenges, pain points and goals for the future of pharmaceutical laboratory leaders:

- Who was surveyed?** Laboratory leaders working in big pharma, bio-tech and CRO laboratories
- From which countries?** 7 countries: Germany, Switzerland, Austria, India, China, South Korea and USA
- How many leaders were surveyed?** 650 lab leaders, globally

By finding ways to improve efficiencies, streamline workflows and boost productivity, laboratories can reduce their costs, process more samples and continue to ensure quality standards are at their highest.

Laboratories are already employing strategies to be successful in this time-driven landscape, with many now turning to instrument providers to help them take this to the next level.

Agilent Technologies is committed to supporting pharmaceutical laboratories in their mission to become more efficient by providing cutting-edge instruments, services and software that can help streamline laboratory workflows and aid laboratory leaders in meeting their organizational and personal goals... quickly!

* Data from Pharmaceutical Laboratory Leaders Survey (global data cut), commissioned by Agilent and conducted by Frost & Sullivan, in 2019. 1. The Pharmaceutical Research and Manufacturers of America, 2019. <https://www.phrma.org/about> 2. ScienceDirect, 2016. <https://www.sciencedirect.com/science/article/pii/S2452302X1600036X> 3. U.S. Food and Drug Administration, <https://www.fda.gov/drugs/development-approval-process-drugs/frequently-asked-questions-patents-and-exclusivity> 4. U.S. Food & Drug Administration, <https://www.fda.gov/patients/fast-track-breakthrough-therapy-accelerated-approval-priority-review/fast-track> 5. U.S. Food & Drug Administration, <https://www.fda.gov/drugs/types-applications/abbreviated-new-drug-application-anda> 6. Innovation in the pharmaceutical industry: New estimates of R&D costs, Journal of Health Economics, (May, 2016) 7. Innovation.org, http://www.astp4kt.eu/downloads/BPL/Drug_Discovery_and_Development.pdf, 2007

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