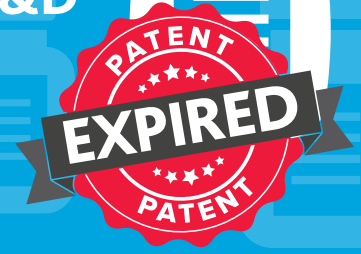


# 2018 BDO BIOTECH BRIEFING

## Race Against Patent Expirations Fuels Biotech R&D

For biotech, the time for innovation has never been better.

With more than 25 patent expirations on the horizon from 2018-19, an FDA focused on encouraging competition, and a charge to break down silos across counterparts in healthcare to drive more precise, improved outcomes and shared value, research and development (R&D) in the industry is booming.



2017 underscored the importance of innovation, optimization and transformation in the biotech industry.



R&D  
**+12%**



Average revenues  
**+7%**

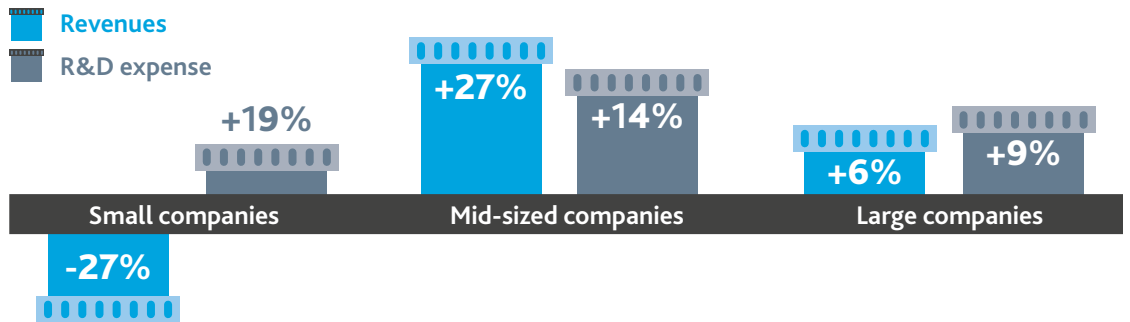


Average liquid investments  
**+15%**

Across all biotechs, R&D increased alongside revenues, but trends varied among small, mid-size and large companies who have unique challenges when it comes to their respective pipelines.

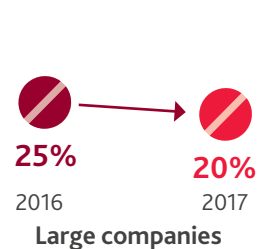
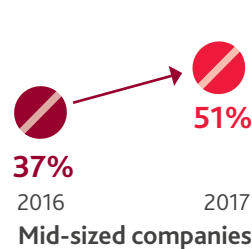
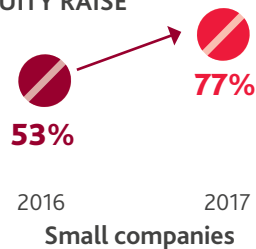


Due in part to fluctuation in the small and mid-size categories, small companies showed a decline in revenue, though R&D spending as a percentage of revenue continued to soar in 2017.

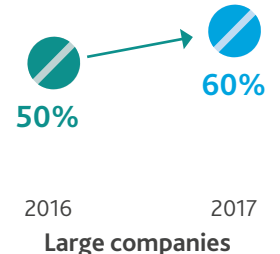
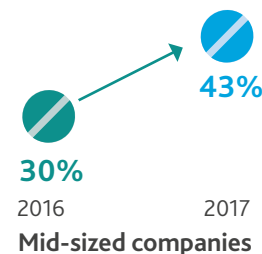
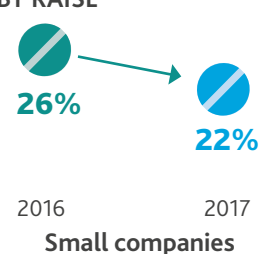


Ample opportunity for research investment to meet growing patient needs led to increased investor appetite in 2017, with strong equity raises setting the stage for a booming market in 2018.

### EQUITY RAISE



### DEBT RAISE



## WHAT'S NEXT

With continued focus on innovation and R&D, the outlook for the biotech industry is promising.

- ▶ The entrance of pioneering biotechnologies should drive growth and further motivate deal-making.
- ▶ Biotechs should continue to invest and capitalize on consumer-driven data to support outcomes-based pricing.
- ▶ A sound strategy and business case for acquisition, combined with a thorough integration plan will be essential to making the deal a long-term success—whether with a traditional player or a new entrant.
- ▶ A continued rise in M&A activity should boost investors' outlook on the industry and support a willingness to finance new product developments and future growth.
- ▶ As the focus on fee-for-value permeates throughout the industry, biotechs must embrace digital disruption from tech firms and other non-traditional competitors that have a wealth of access to patient and consumer data.

## The end game? Better incorporation of...



Data analytics



Security and collaboration  
into R&D



Target drug selection

## If any industry is up to the challenge of innovating to drive growth, it's biotech.

Read the full [Biotech Briefing](#). Learn more about how BDO can help your organization compete and transform in today's ecosystem with maximized R&D opportunities [here](#).

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### METHODOLOGY

BDO's Biotech Briefing examines the most recent 10-K SEC filings of companies listed on the NASDAQ Biotechnology Index ("NBI"), which includes companies classified according to the Industry Classification Benchmark (ICB) as Biotechnology or Pharmaceutical companies. The companies have been separated into four categories for analysis: "large" companies with revenue greater than \$1 billion, "mid-sized" companies with revenue greater than \$50 million (but less than \$1 billion), "small" companies with revenue less than \$50 million, and "developmental" pre-revenue companies. Because of NBI eligibility requirements, the makeup of companies listed on the index varies annually, so the companies included in our analysis change accordingly. In our debt and equity analysis, debt and equity raises have been adjusted to reflect the issuance of debt and equity for financing operations, asset purchase, or merger/acquisition activity. Equity raised does not include, for instance, issuances for common stock options exercised.

*\*Average revenue among smaller companies fluctuated materially over the period due to dynamic movement of companies between the small and mid-size categories in the study. In 2016, there were larger collaboration deals that drove up revenue and moved some companies into the next tier. Looking ahead, we expect deals will continue to impact revenue trends and the categorization of companies on the index.*

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