

LIFE SCIENCES SNAPSHOT

A Quarterly Report on Financing Trends

THE MARKET MEETS COVID-19

Q1 2020


orrick

Data provided by

 PitchBook®

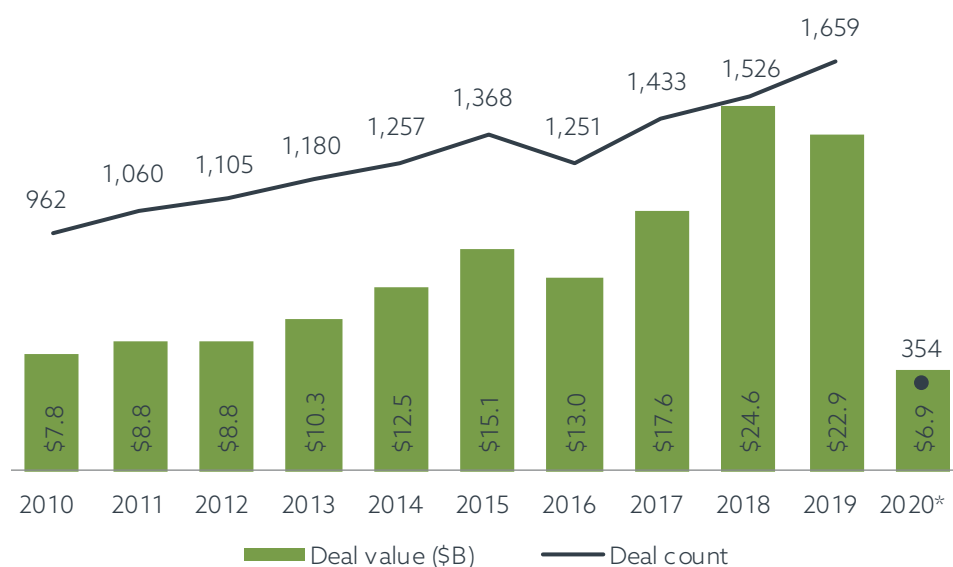
Key Takeaways

This first installment in a series of Orrick publications is dedicated to the exploration of trends in venture investment across life sciences. For this issue, we offer historical context to inform our trend analysis and delve into the impact of COVID-19.

Given the long lead time for development and shifting industry strategies, it's difficult to pick winners far in advance, and knowing the breadth of competing treatments is critical; however, the current **COVID-19 situation is likely to increase interest in anti-infectives and vaccines.**

1. Throughout the 2010s, life sciences saw a nearly uninterrupted boom in venture investment, with capital investing nearly tripling while deal volume more than doubled.
2. Large rounds of \$25 million+ grew steadily in frequency, from 9.8% of the total number of rounds in 2010 to 18.4% in 2019. Average valuations also increased, from \$43.2 million to \$81.1 million across the same timeframe. Median valuations remained constant, suggesting valuation increases in select areas rather than across the board.

VC deal activity



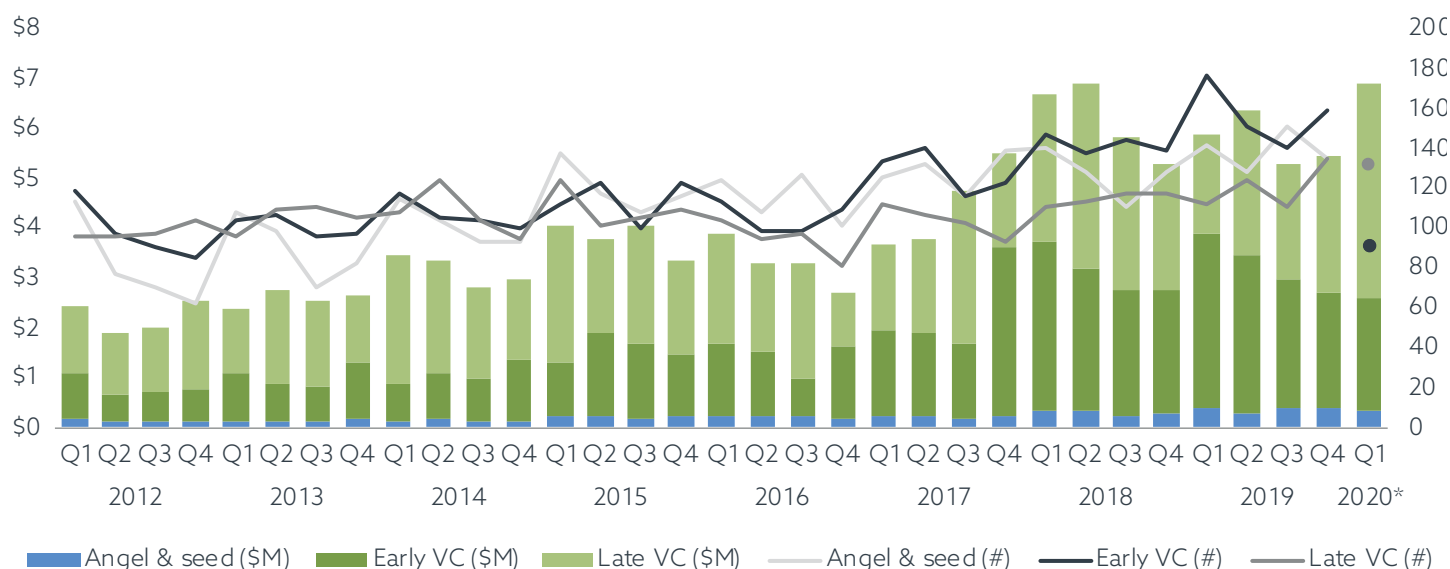
Source: PitchBook | Geography: US
*As of March 31, 2020

3. Comparing Q1 2020 to Q1 2019, PitchBook data illustrates an increasing percentage of dollars flowing into late-stage deals. This could reflect the beginning of the impact of COVID-19, but also extends a trend that existed over the prior three quarters. After the last recession, PitchBook data shows a steep decline in the amount of pre-clinical and Phase 1 company funding, and we will be watching to see if this trend repeats.
4. An in-depth Q&A with Orrick details the hurdles investors are encountering in the current environment, which life sciences' segments are likely to garner more interest in the time of a global pandemic, what VCs should prioritize now and more.

Over the last 10 years, a virtuous cycle has occurred: **Strong exits in life sciences** have generated strong returns, leading to even more capital flowing back into the space.

Market Analysis

VC deal activity by stage and quarter



Source: PitchBook | Geography: US
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With the world's first true pandemic in a century altering every aspect of life, few industries have positive headwinds, but among them are many segments of life sciences—although challenges remain. COVID-19 hit after more than a decade of nearly uninterrupted growth in life sciences venture investment. From 2006 to 2019, capital invested in life sciences nearly tripled while volume more than doubled. Q1 2020 saw multiple large rounds. Late-stage venture has not only accounted for an increasing proportion of deal volume but also value in the past three quarters. Comparing Q1 2020 to Q1 2019 shows what could be the beginning of a shift of deal activity and capital invested toward later stages.

Notably, in 2009 and 2010, following the global financial crisis, dollars invested in pre-clinical and Phase 1 companies dropped significantly. We

will be watching to see if this trend repeats following COVID-19.

Despite the increase in funding volume and number of deals over the past 10 years, average valuations started edging up only recently. Near-record averages in valuations—coupled with relatively consistent median sizes and a slight record for valuations in Q1 2020—all suggest that the increase in average valuations is the result of a cluster of heavily funded businesses.

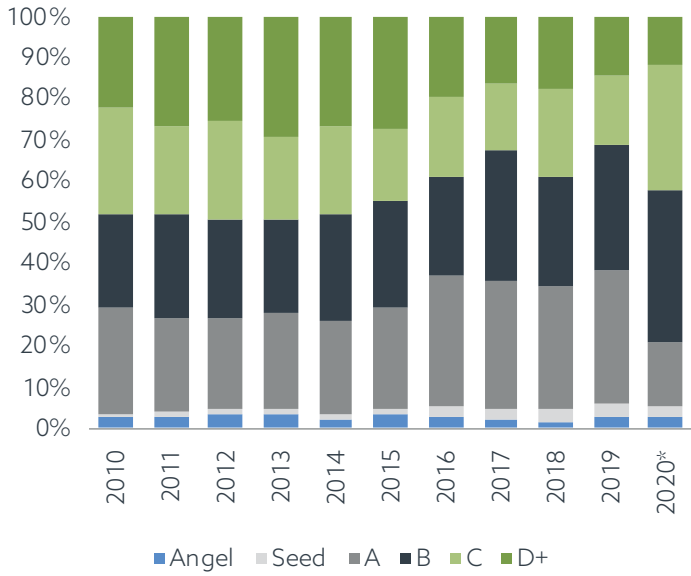
Additional PitchBook data confirms this, with over 80% of Q1 2020 VC investment concentrated in rounds of \$25 million or more. The same timeframe saw similarly sized rounds exceed 20% of volume for the first time ever.

However, that is likely to change given the impact of COVID-19. Clinical trials are being slowed, and

the industry faces new headwinds: logistics of supply chains, virtual coworking, availability of animal testing and more. Given increased volatility in public and private markets, investors will require more certainty, which may lead to a decline in financing sizes and valuations.

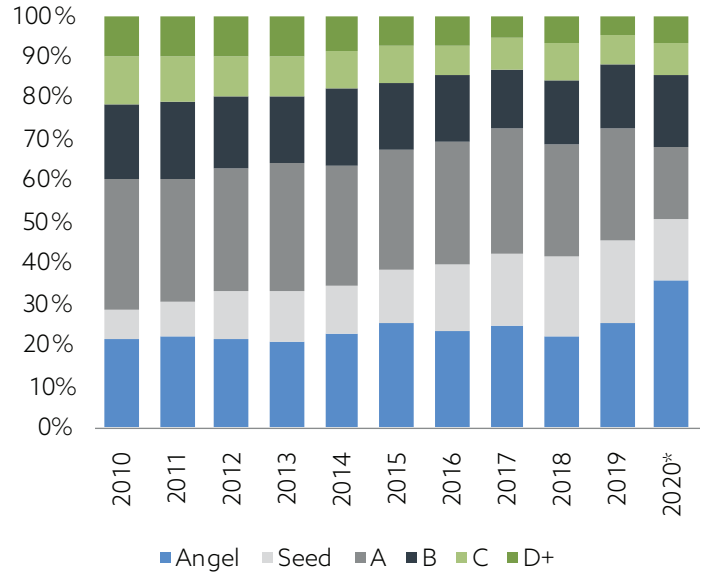
Investors and startups already had to deal with a more competitive, complex environment. The past 10 years saw a clear trend toward more financings and dollars flowing to pre-clinical companies. While this PitchBook dataset includes non-normative sample sizes and are not drug-specific, it highlights intensifying competition and sophistication. More investors are willing to fund startups earlier in the development cycle to secure access to better opportunities. Whether there will be a pullback toward the later stage, as happened after the last recession, remains to be seen.

VC deals (\$) by series



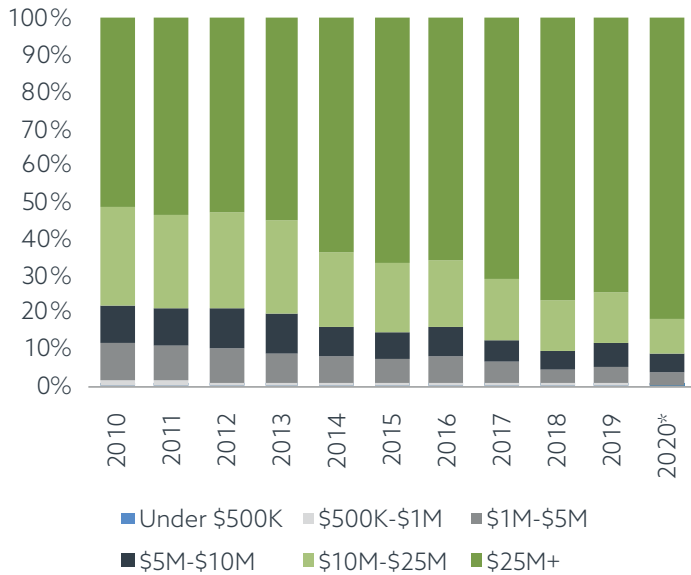
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VC deals (#) by series



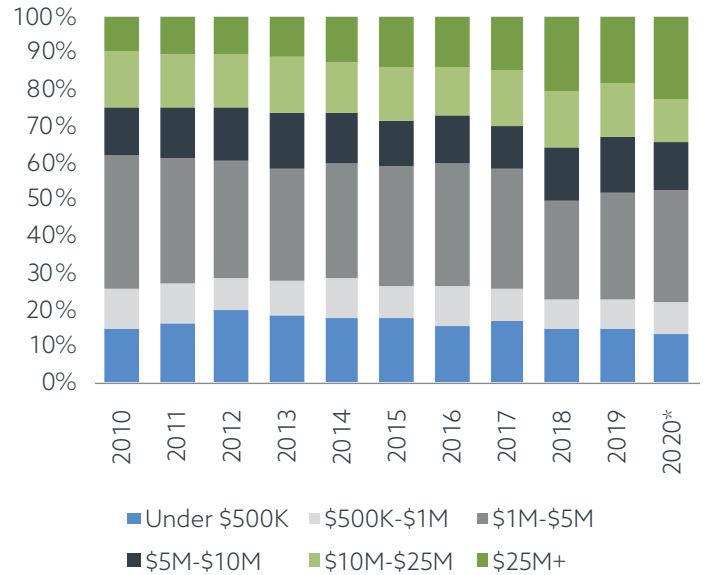
Source: PitchBook | Geography: US
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VC deals (\$) by size



Source: PitchBook | Geography: US
*As of March 31, 2020

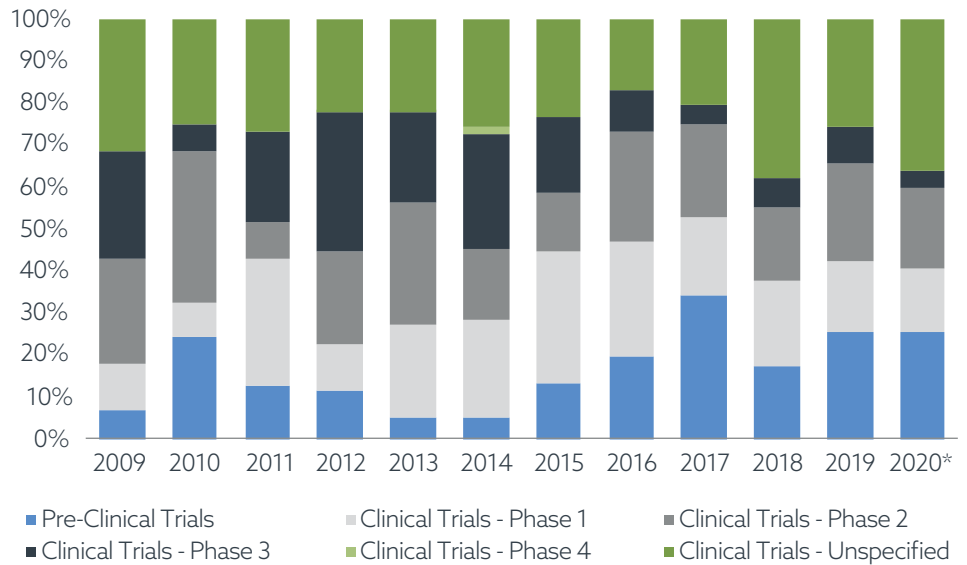
VC deals (#) by size



Source: PitchBook | Geography: US
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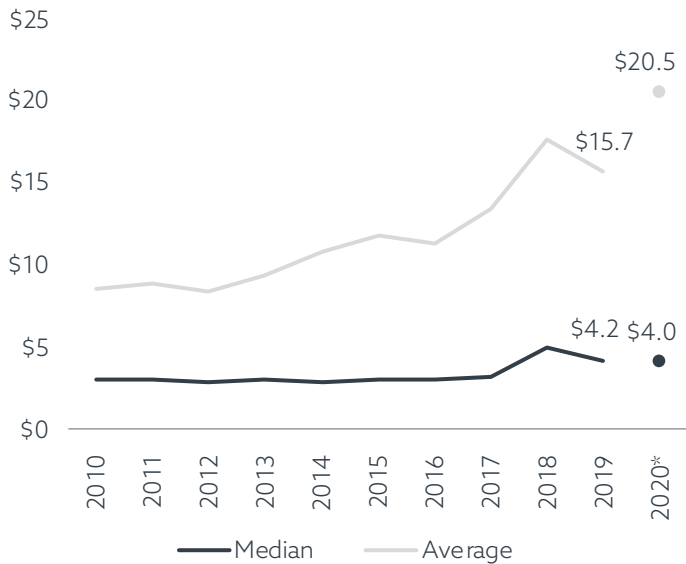
A new dynamic is likely to emerge in a balance between deep-pocketed competitive investors looking to back the most promising opportunities versus risk aversion and potential opportunity costs given challenges to operations for existing portfolio companies. Whether there will be a pullback toward the late stage, as happened after the global financial crisis, remains to be seen.

Pharma & biotech VC deals (\$) by business status at time of deal



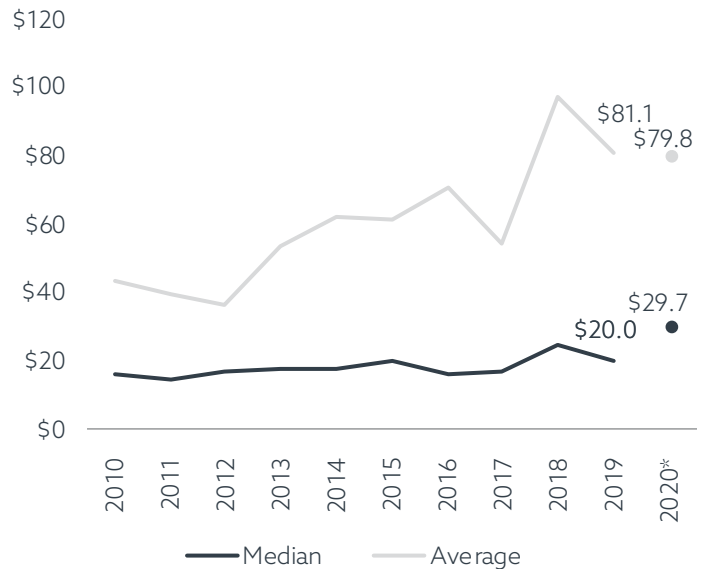
Source: PitchBook | Geography: US
 *As of March 31, 2020
 Note: Sample sizes for multiple years were non-normative, i.e. n < 30.

Median and average VC deal sizes (\$M)



Source: PitchBook | Geography: US
 *As of March 31, 2020

Median and average VC pre-money valuations (\$M)



Source: PitchBook | Geography: US
 *As of March 31, 2020

Roundtable

Taking into consideration the current situation, what are a) the primary drivers that have fueled such a rise in venture financing activity in life sciences over the past 15 years and b) how have those drivers changed for startups and investors as we head further into 2020?

Stephen Thau: Over the last 10 years, we've seen a virtuous cycle: strong exits lead to strong returns, which attracts more capital. For this to work, there must continue to be innovation in science, significant unmet needs, and a stable or favorable regulatory framework. Fortunately, we've had all three. The question going forward is whether market declines related to COVID-19 will put a pause on exits, and if so, how quickly that will feed back into funding decisions at earlier stages. The fundamental drivers—unmet needs and scientific innovation—are still there, continuing to drive the demand and creation of new therapies. The fact that a few life sciences companies have gone public in the last couple of weeks is an encouraging sign that the virtuous cycle may not be broken.

Albert Vanderlaan: Additionally, there continues to be strong fundraising activity on the investor side, with Flagship Pioneering raising a \$1.1 billion fund in April 2020, Deerfield Management raising \$840 million in April 2020, LSP (a leading life sciences fund in Europe) announcing a \$600 million fund closing in March 2020 and more.

Scott Iyama: In recent years we've also observed a more coordinated effort by universities to drive innovation from their labs to the clinic. The increase in the number of nascent life sciences companies with licensed rights to university-validated technology has created additional investment and acquisition opportunities. In addition,

we've noted an acceleration of clinical plans and funding due to the earlier engagement of VCs, principal investigators and university technology transfer offices.

What ripple effects from governmental action and policies do you anticipate affecting life sciences the most, given how many related industry and legislative initiatives have been undertaken?

Stephen Thau: It's not clear how the ongoing political discussions about drug and therapeutic pricing will affect the industry. Experimentation around incentives, such as the creation of ACOs and Medicare Advantage plans to encourage cost containment, will likely continue. The exigencies of COVID-19 may also lead to a more flexible regulatory posture, and possibly more opportunity for experimentation in areas such as healthcare delivery that create new opportunities.

Gregg Griner: Companies that can power and/or improve the delivery of telemedicine technologies and offerings will likely emerge as interesting investment opportunities as we head into a world where some form of social distancing remains commonplace.

How have investor strategies evolved over time? What are the hallmarks of the venture fund managers that have been successful in life sciences investing, with the understanding the environment has evolved considerably?

Stephen Thau: The most significant trend that I've seen in life sciences funding in the past several years has been the trend toward companies created or incubated by VCs themselves, rather than through founding teams that develop a business plan and pitch

to VCs. Related to this have been direct funding and collaboration agreements between VCs and universities to provide VCs direct access to cutting-edge science. With more funds taking this approach, the pool of investors who will look at entrepreneur-led new companies has shifted.

Blake Ilstrup: To increase their likelihood of success and access to capital, these entrepreneur-led companies should consider closely aligning themselves with key university thought leaders.

Albert Vanderlaan: VCs continue to hire and/or be advised by a strong group of MDs and PhDs that are able to dive as deep or deeper in a number of different life sciences verticals. As VCs continue to utilize this talent, they will be a more necessary component for many companies seeking to fully realize whether their product or platform will be able to provide patients with the desired outcome and will be commercially viable outside of big pharma.

What do you think venture fund managers should prioritize in this environment?

Albert Vanderlaan: VCs should consider increasing their collaboration/accelerator efforts as they are well-positioned with internal knowledge about a wide variety of pre-clinical products and how companies may be positioned within each segment.

Blake Ilstrup: Many will probably be focused on health care delivery technology (i.e., telemedicine and at-home care management platforms).

Which segments of life sciences are best positioned for increased corporate acquirer and investor interest in the current market?

What are the traits of the companies that stand out to you among those segments?

Stephen Thau: The landscape is ever evolving. I encourage entrepreneurs to focus on areas of medical need where they can offer an innovative and differentiated solution that will support a standalone business. Given the long lead time for development and the shifting strategies of pharma companies, it's hard to target where acquirer appetites will be several years down the road, and "build to sell" is a high-risk strategy. It's also important to know what else is on the horizon in your space, so that you're not blindsided by a competing product.

Albert Vanderlaan: Platform-based companies will remain attractive targets. In uncertain environments, the ability to bring in non-dilutive funding from licensing non-core portions of a platform technology can mean extended runway to get core potential product offerings, which can be done through either pivotal trials or another inflection point as proof-of-concept for larger companies with commercial-stage infrastructures. Additionally, stronger platform technologies that can be deployed across segments or multiple indications may be well-positioned for a go-alone strategy if they are able to monetize enough of the portfolio while keeping main commercial drivers.

With that said, the current COVID-19 situation is likely to increase interest in anti-infectives and vaccines. Multiple treatments are in research, many trials are being prepared and everyone is collaborating intensively to find some efficacious therapies. What are the strategic and tactical approaches that businesses should be taking in pursuit of this goal?

Scott Iyama: As companies are broadening and accelerating therapeutic strategies in this space, it is important to be particularly mindful of the limitations on the capital. For example, although COVID-19 is leading to an increased availability of non-dilutive sources of capital for virologic and infectious disease treatments, many of these funding sources restrict the use of capital to a particular indication or functional area of research. Traditional sources of institutional capital may not be aligned with the objectives or priorities of non-dilutive funding sources, such as government agencies and foundations. From a strategic perspective, we are encouraging companies to be mindful when reviewing financing opportunities available as a result of the situational interest in COVID-19 therapies against their long-term development milestones and alignment with future sources of capital.

Stephen Thau: For platform companies, it's all about collaboration, collaboration, collaboration, while figuring out what to hold and develop yourself. In this space, the trend has been more toward granting global rights, rather than single-territory deals, although there can still be a role for narrower collaborations. Finding ways to capitalize on the strength of each party to the collaboration is essential, while also finding ways to work together in what are likely to be very different corporate cultures. For companies focused on single therapeutics or a family of therapeutics, the challenge is always around focus versus diversification—how many projects can the team handle effectively and how closely related should they be to leverage resources rather than simply expand operations.

Gregg Griner: Now that we've seen how disruptive something like COVID-19 can be, companies need to take a bottoms-up approach to evaluating their organization, business and strategies. The companies that will be most successful, and the best positioned to survive the next crisis, are those that are nimble and can redeploy assets—whether tangible, intangible or human—quickly and efficiently. Companies must be prepared to pause current trials or development projects and shift their focus and resources to solve new and more immediate problems with little lead time.

Please feel free to expand on any of the topics above or address any that have not yet been broached.

Stephen Thau: One of the most striking aspects of the data on funding over the last 15 years has been the rise in funding for pre-clinical companies. Companies can go public while still in clinical trials, forcing early-stage investors to establish their ownership positions earlier in product development. Related to this is the increase in funding for Phase 1 companies. Ten years ago, we were all talking of the "valley of death" between early-stage discovery and Phase 2. That's filled in nicely. Following the 2007 correction, pre-clinical funding dried up almost completely, and Phase 1 funding also declined dramatically in 2009 and 2010. We'll need to watch the data to see if a similar decline follows the COVID-19 market correction.

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