



The 2020 Partnering Performance and Reputation Survey Report



LARGE PHARMACEUTICAL COMPANY RELIANCE ON EXTERNAL INNOVATION:

It has long been the case that large pharmaceutical companies rely on partnering to fill their pipelines. In a business that is built on translating cutting-edge science into commercial products, leading companies must incorporate a steady stream of external innovation. Chart 1 highlights this point, showing revenue data for 25 leading pharmaceutical companies. In 2019, the share of revenue drawn through licensed assets was 15.5% and products brought in through acquisition contributed 49.5%. For comparison, revenue from products that were developed entirely through internal programs made up approximately one-third of the total for these companies.

Arguably, the activities related to identifying, assessing, and financially valuing externally

developed technology are among the most strategic functions within large pharmaceutical companies. These groups establish much of the foundation on which a company's future is built. To do this job well requires blending world leading knowledge of cutting-edge scientific developments, appreciation for decades-long trends in healthcare delivery and reimbursement systems, and financial savvy that draws on ever changing investment tools.

Moreover, the effectiveness of a partnering organization depends as much on the interpersonal skills of the team as it does the group's specific content knowledge and expertise. At the beginning of the partnering process, team members must demonstrate behaviors that drive early-stage relationship building and inspire confidence that their company will be a desirable collaborator. In negotiations, deal makers must pursue the goals of their organizations while acting in a trust-building manner—and when the deal is done, the large pharma team must have in place an Alliance Management team that includes process and decision-making systems to address issues that are sure to arise in any high-stakes union.

Leadership teams across the industry have long sought feedback on their partnering operations. Responding to the need for unbiased perspectives, Triangle Insights, in cooperation with industry leaders and the Licensing Executive Society, has completed two cycles of the Partnering Performance and Reputation Survey (PPRS), one in 2018 and one in 2020. This paper covers key findings from the 2020 PPRS.

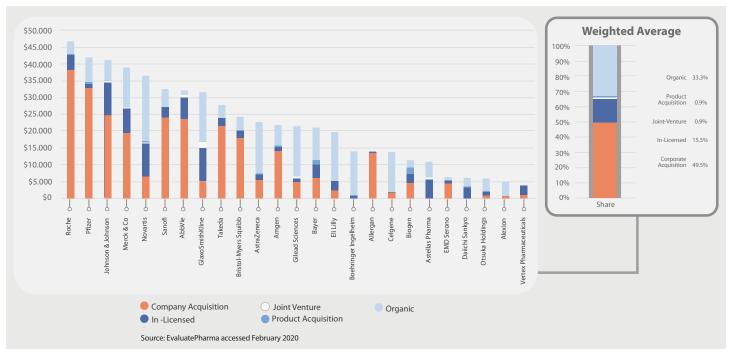


Chart 1: Source of 2019 Revenue for Leading Companies (\$M)

DESIGN OF 2020 PARTNERING PERFORMANCE AND REPUTATION SURVEY:



The 2020 Partnering Performance and Reputation Survey (PPRS) was conducted with the goal of identifying which large pharmaceutical companies are recognized as partnering leaders and highlighting the activities that influence that status.

Representatives from eighteen leading pharmaceutical companies participated on the PPRS Working Team.¹ That team conducted its work through a series of conference calls that began in March and extended through September. Notably, the program was initiated just as restrictions related to COVID-19 were being put in place. Discussions were held regarding whether to postpone the effort until 2021, but the team concluded it would be more valuable to complete the survey as scheduled, while also noting the context of the year's unusual circumstances.

As with the PPRS program in 2018, partnering activities were segmented as Initial Outreach, Diligence, Negotiation, and Alliance Management. The survey included a request for respondents to identify the companies with whom they had completed one or more steps of the partnering process. For each of these activities, the respondent was asked to rate on a scale of 1 to 7 the performance of those large companies with whom they had experience (Appendix Table 1). Respondents were permitted to

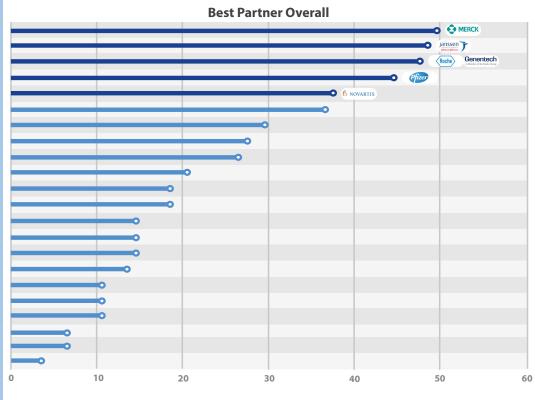
indicate that they had experience in some partnering steps without being asked to provide ratings in others—for example, allowing a respondent to rate companies only for Alliance Management, or only for Initial Outreach and Diligence if he or she had not progressed to Negotiation activities with a given company.

After completing the Performance parts of the survey, the respondent was then asked to provide feedback on the Partnering Reputation of all the companies. These questions were structured to allow the respondent to include up to five companies as among the leaders in each of several dimensions of partnering (Appendix Table 2).

¹Representatives from the following companies participated in 2018 and 2020 Working Teams: Roche/Genentech, Gilead, Pfizer, Novartis, Regeneron, Janssen, Bristol Myers Squibb, Bayer, GlaxoSmithKline, Eli Lilly, Merck, Sanofi, Biogen, AstraZeneca, Boehringer Ingelheim, Otsuka, EMD Serono, Takeda, Amgen, Astellas, and Novo Nordisk

TOP LINE RESULTS OF THE 2020 SURVEY:

Results are provided in Chart 2 showing the frequency of inclusion when respondents were permitted to include up to five companies as "regarded by industry leaders as the best partners overall." Merck was included most frequently, with Janssen and Roche/ Genentech being included just slightly less frequently. Pfizer and Novartis rounded out the top five companies in this Overall Reputation category. Chart 2: FREQUENCY OF INCLUSION: These companies are regarded by industry leaders as the best partners overall (each respondent could include up to five companies)

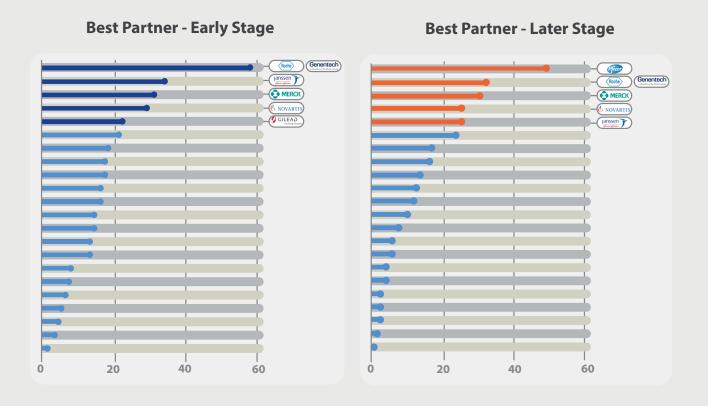


Number of Mentions as Being Considered Among Industry's Best Partners

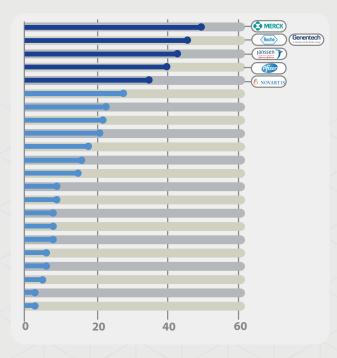
N=146 - Respondents were allowed to include up to five companies in each category. The average number of companies included was 3.6.

Notably, Roche/Genentech led all companies when respondents were asked to segment their Reputation scores toward early-stage companies, and Pfizer was included most frequently when respondents were asked to focus on partnering for later stage companies. The same five leading companies were included most frequently when the Reputation questions turned to the partnering process **(Chart 3)**.

Chart 3: FREQUENCY OF INCLUSION: Aspects of Partnering Reputation (each respondent could include up to five companies, please see Appendix Table 2 for specific wording included in survey)



Best Partnering Process



N=146 - Respondents were allowed to include up to five companies in each category. The average number of companies included was 3.6 for Best Partner Overall, 2.7 for Best Partner – Early Stage, 2.6 for Best Partner – Later Stage.



Key Performance Factors:

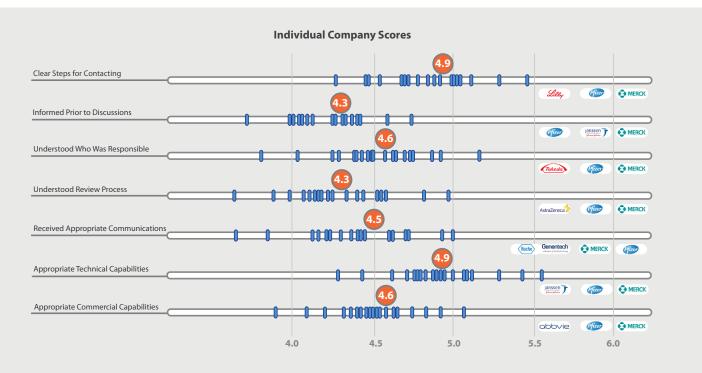
As noted above, the Reputation metrics were drawn from all respondents, and the Performance measures were collected only from those respondents who indicated that they had interacted with a given company in that phase of the partnering process. Observations are appropriately greatest in the early stages of the process as sellers/out-licensors proceed through funneling steps leading to a transaction with the final partner.

Charts 4 through 7 summarize the Performance ratings for key aspects of each step of the partnering process. In these charts, each blue dot represents the average Performance score for an individual company on those Performance characteristics. Typically, the range from lowest rating to highest was 1.5 to 2 points. The number in the orange circle is the average score across all companies. Logos for the three companies receiving the highest ratings are provided on the right.

Initial Outreach:

Very strong ratings for Merck and Pfizer in activities associated with initial outreach are observed in **Chart 4**. The sub-categories highlight the value respondents placed on the clarity of the partnering process and strong communications during the pre-diligence review. The leading performers in this first partnering step have invested in becoming part of the innovation community in the primary research hubs. In many cases, they have located partnering teams in Boston, San Diego, San Francisco and other academic and biotech centers. Other leaders have established early-stage development labs where the company coinvests in promising technologies. Whether by these tactics or others, these companies have found ways to actively track emerging opportunities and support the associated innovation infrastructure.

Chart 4: INITIAL OUTREACH



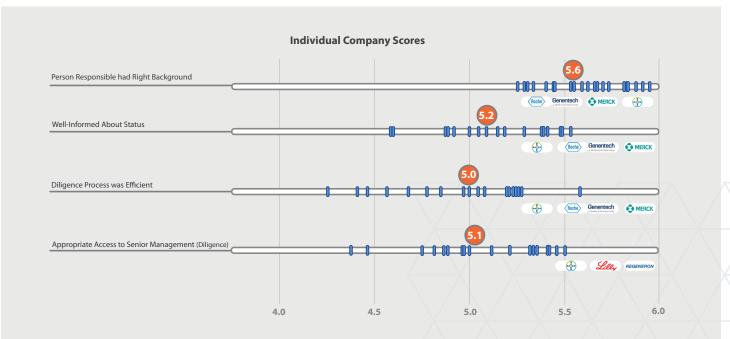
Average in Orange Circle. Logos for the three companies receiving the highest ratings are provided on the right. Average ratings on a scale of 1-7 provided for each company. The survey received a total of 1,528 respondent-company experiences.

Diligence:



Overall Reputation leaders Merck and Roche/Genentech are joined by Bayer as leaders in Performance scores related to Diligence (Chart 5). A further, more segmented review of the Diligence Performance for these companies has highlighted very strong ratings from early-stage partners. These companies are distinguished in providing personnel that are viewed by partners as having the appropriate backgrounds to review their asset. They also receive high marks for the efficiency of their diligence processes, but perhaps most important among the Performance ratings, the leaders in this area provide clear communications to their partners. Follow up qualitative discussions reinforce this point. For the seller/out-licenser, the partnering process may be receiving attention from the full leadership team and the board. In contrast, within large pharma, multiple programs are likely underway at the same time. In such a circumstance of prioritization imbalance, strong communication is recognized and appreciated. It may even set the stage for a successful alliance.

Chart 5: DUE DILIGENCE



Average in Orange Circle. Logos for the three companies receiving the highest ratings are provided on the right. Average ratings on a scale of 1-7 provided for each company. The survey received a total of 717 respondent-company experiences.

Negotiation:

Perhaps the most encouraging observation from the 2020 PPRS is the high level of trust described among negotiators in the life science industry **(Chart 6)**. With 434 pairings where the respondent described having direct experience negotiating with a particular pharma partner, the average Performance score for "I trusted the person responsible for the deal negotiation," was 5.5 on a seven-point scale. Similarly high scores were provided for "the person responsible for deal negotiation understood my priorities." Here again, we see Bayer joining the Reputation leaders in aspects of negotiation, and we see high marks assigned to Gilead.

Chart 6: NEGOTIATION



Alliance Management:

The Performance part of the survey concluded with requests for ratings of companies' performance in Alliance Management. While the five Performance leaders tended to receive positive reviews in this area, others emerged among the highest rated **(Chart 7)**. Here, Bayer, EMD-Serono, and Gilead received top marks. There is a notable consistency in Alliance Management ratings based on the clarity of who is responsible within the larger organization for the partnership, and the degree to which that individual has authority to address issues. Strong Performance in these areas was often paired with a perspective that the partnership was exceeding expectations.

Chart 7: ALLIANCE MANAGEMENT



Average in Orange Circle. Logos for the three companies receiving the highest ratings are provided on the right. Average ratings on a scale of 1-7 provided for each company. The survey received a total of 306 respondent-company experiences.

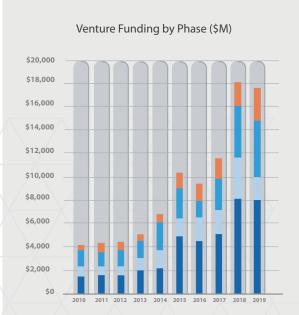
CHANGES TO THE PARTNERING LANDSCAPE:

The 2020 PPRS highlights the commitment and strong partnering activities of leading companies, but

no company can rest on previous practices. Going forward, the partnering landscape may face a period of unprecedented change. A set of on-going trends has the potential to fundamentally alter the tactics large pharmaceutical companies must apply to gain access to external innovations.

In earlier times, pharmaceutical companies sometimes offered the only realistic pathway for biotech innovators to finance and manage what were often very large clinical trials and commercialization that often required hundreds of sales representatives targeting tens of thousands of physicians. Facing such daunting investment and logistic challenges, the science focused biotech often opted toward early-stage partnering and the associated up-front payments and modest royalties.

Chart 8a:



In the past decade, there have been fundamental changes to that landscape. Today's leading innovations target far smaller numbers of patients and require communication with a targeted set of prescribers. Further, private investors can be tapped for venture funding that carries development through proof of concept or later. Often, this is followed by public funding through IPOs and follow-on rounds that may allow independent completion of pivotal trials **(Charts 8a-8c)**.



Chart 8c:

Chart 8b:



Source: Biotechnology Industry Organization, Emerging Therapeutic Company Trend Report 2019, David Thomas and Chad Wessel; www.bio.org/ETCtrends; Triangle Insights Analysis



With access to funds that allow biotechs to move products through later stages of development, large pharmaceutical companies have needed to shift the focus of their external innovation models. Instead of a reliance on multiple uncertain transactions where the up-front payment is measured in tens of millions of dollars, there is a need to take fewer larger bets. **Table 1** shows the substantial increase in acquisitions with values between \$1B and \$15B. Moving away from relying on handicapping aspects of technical and clinical development, the valuations for these transactions often centered on the potential for adoption of new technologies within a crowded therapeutic market where effective navigation across a web of decision makers will be required.

Table 1: GROWING NUMBER OF BILLION-DOLLAR DEALS

| Key Product Focused Acquisitions | | | |
|----------------------------------|-------------------------------|----------|--|
| 2017 | Gilead-Kite | \$11.9 B | |
| | Eli Lilly-CoLucid | \$ 1.0 B | |
| 2018 | Celgene-Juno | \$ 9.0 B | |
| | Celgene-Impact Biosciences* | \$ 7.0 B | |
| | Sanofi-Ablynx | \$ 4.8 B | |
| | Novartis-Advanced Accelerator | \$ 3.9 B | |
| | Novartis-Endocyte | \$ 2.1 B | |
| | Roche-Ignyta | \$ 1.7 B | |
| | Eli-Lilly-ARMO | \$ 1.6 B | |
| | Alexion-Syntimmune | \$ 1.2 B | |
| | J&J-BeneVir* | \$ 1.0 B | |
| 2019 | Pfizer-Array Biopharma | \$11.4 B | |
| | GSK-Tesaro | \$ 5.1 B | |
| | Roche-Spark | \$ 4.8 B | |
| | Merck-Peloton* | \$ 2.2 B | |
| | Lundbeck-Alder* | \$ 1.9 B | |
| | Novartis- IFM * | \$ 1.6 B | |
| | Ipsen-Clementia* | \$ 1.3 B | |
| | Vertex-Exonics* | \$ 1.0 B | |

Key Product Focused Acquisitions

| 2020 | BMS-MyoKardia | \$13.1 B |
|------|--------------------------------|----------|
| | Novartis-The Medicines Company | \$ 9.7 B |
| | J&J-Momenta | \$ 6.5 B |
| | Gilead-Forty Seven | \$ 4.9 B |
| | Bayer-AskBio* | \$ 4.0 B |
| | Sanofi-Principia | \$ 3.7 B |
| | Astellas-Audentes | \$ 3.0 B |
| | Merck-VelosBio | \$ 2.8 B |
| | Merck-ArQule | \$ 2.7 B |
| | Sanofi-Synthorx | \$ 2.5 B |
| | UCB-Ra | \$ 2.3 B |
| | Novo Nordisk-Corvidia* | \$ 2.1 B |
| | Alexion-Portola | \$ 1.4 B |
| | Roche-Promedior* | \$ 1.4 B |
| | Asahi-Veloxis | \$ 1.3 B |
| | Alexion-Achillion* | \$ 1.2 B |
| | Eli-Lilly-Demira | \$ 1.1 B |
| | Bayer-KaNDY Tx* | \$ 1.0 B |

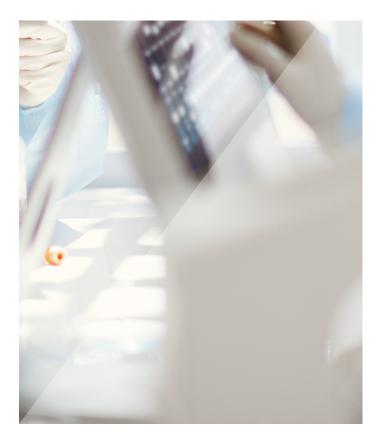
* Note: The value of the acquisitions included in these tables reflects the inclusion of contingent payments.

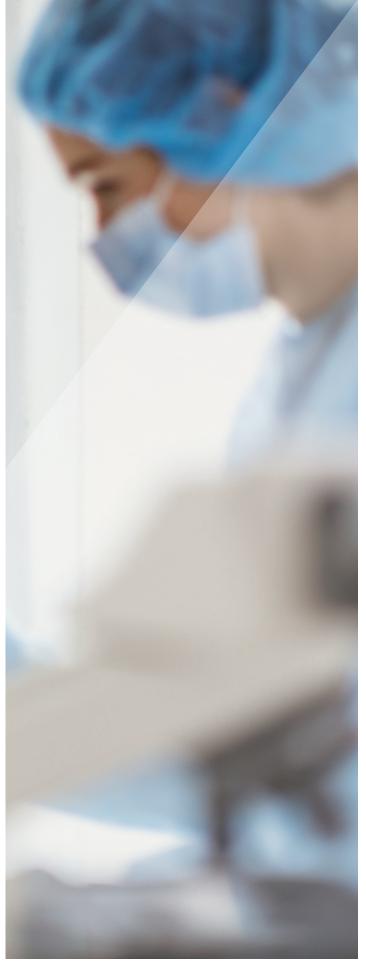
CLOSING:

Leading pharmaceutical companies must regularly refresh and at times reinvent themselves. Doing so depends on the ability to support programs internally while continually accessing external innovation. Observations from the 2020 PPRS confirm that this can be a challenging target, but that leading companies are continuously honing processes and practices to identify, acquire, and nurture programs from outside the company. Whether by establishing a physical presence near innovation hubs or through careful tracking of prioritized areas of R&D, large pharma leaders are positioning themselves as key members of the innovation community. On-going communication, most importantly when involved in diligence or negotiation, then drives differentiation in the reputations of partnering leaders.

Going forward, even the leaders will face an additional competitor for promising opportunities. With increasing access to capital and because they are targeting areas that are structurally less costly to pursue, biotechs are more critically comparing go-it-alone options to partnering strategies. Successful large pharma partners must continue to work to ensure alignment in priorities with biotech leadership teams that have resolved a greater share of clinical risk and expect greater economic rewards, but who continue to face uncertain and highly competitive commercial markets.

The structure and timing of deals will evolve, but the underlying need to match required capabilities, financial resources, and risk tolerance to changing demands during a product's progression through development will continue to motivate partnerships. The demonstrated commitment to continual process improvement by the 2020 PPRS participants assures effective partnering will remain a key aspect of the industry's ability to efficiently advance scientific breakthroughs into clinical development and, ultimately, to provide therapeutic benefit to patients.





APPENDIX

Appendix Table 1: AREAS OF INQUIRY IN PERFORMANCE RATINGS

Initial Outreach Diligence • The steps for contacting the company were clear • The person responsible for the early review of my product had the right background to conduct the evaluation • The company seemed informed of my technology, program, or product prior to our initial discussions • I felt well informed about the status of the review • I understood who was responsible for the review of my The due diligence process was efficient technology, program, or product • There was appropriate access to senior management during the • I understood the company's process for reviewing my diligence process opportunity • I received appropriate communication regarding the status of the company's review • I felt that individuals with appropriate technical capabilities were involved in the decision of whether to move forward • I felt that individuals with appropriate commercial capabilities were involved in the decision of whether to move forward

Negotiation

- I trusted the person responsible for the deal negotiation
- The person responsible for deal negotiation understood my priorities
- The terms offered by the company met (or exceeded) my company's internal view of the value of our asset
- I felt well informed about the company's negotiation process and the status of my product
- There was appropriate access to senior management during the negotiation process

Alliance Management

- I have a clear understanding of who has responsibility for the Alliance Management of my program
- The person responsible for the Alliance Management of my program is accessible
- The person responsible for Alliance Management of my program has the influence necessary to address issues that come up with the program
- The company is effective in resolving disputes that have emerged in our relationship
- The performance of the company post-closing has met or exceeded expectations

Appendix Table 2: AREAS OF INQUIRY IN REPUTATION EVALUATION

Aspects of Partnering Reputation

- These companies are regarded by industry leaders as the best partners overall
- These companies are regarded by industry leaders as having the best partnering process
- These companies are regarded by industry leaders as providing the best financial deal terms to their partners
- These companies are regarded by industry leaders as providing the most flexibility in non-financial deal terms to their partners
- These companies are regarded by industry leaders as the most attractive for early stage (pre-POC) technologies
- These companies are regarded by industry leaders as the most attractive for later stage (post-POC) technologies



EAST COAST

512 S. Mangum Street, #404

Durham, NC 27701

(919) 813 6100

WEST COAST

505 Montgomery St. 11th Floor

San Francisco, CA 94111

(628) 222 5288

TRIANGLEINSIGHTSGROUP.COM