

IBM Global Business Services

IBM Institute for Business Value

Learning the biopartnering game

How to achieve more
from your biotech alliance

IBM

Life Sciences and
Pharmaceuticals



The IBM Institute for Business Value develops fact-based strategic insights for senior business executives around critical industry-specific and cross-industry issues. This executive brief is based on an in-depth study created by the IBM Institute for Business Value. This research is a part of an ongoing commitment by IBM Global Business Services to provide analysis and viewpoints that help companies realize business value. You may contact the authors or send an e-mail to iibv@us.ibm.com for more information.

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What constitutes a biotech company?

The boundaries of the biotech industry can be drawn in a number of ways based on size, age and maturity of drug companies. But the defining characteristic of a biotechnology company is that its business centers on developing biologically-based products such as soluble proteins, monoclonal antibodies and antibody fragments and antisense RNA.

Introduction

Recent advances in molecular science are expected to yield medical treatments targeted not just for individual ailments, but also for highly segmented patient groups. As they pursue this exciting vision, pharmaceutical and biotechnology (biotech) companies are actively engaging in alliances, according to BioPartnering 2004, a biotech industry survey from the IBM® Institute for Business Value.

While large pharmaceutical companies once called the shots in the biopartnering game, today's biotechs have achieved a level of deal-making sophistication in keeping with their growing influence on the pharmaceutical industry. Still, less than half of respondents reported that their biopartnering alliances were successful. While 15 percent of alliance failures were attributed to reasons considered beyond the control of senior management, better alliance management practices could salvage 85 percent of the value now lost to failed partnerships – a potential sum of US\$2.7 billion.

“Delivering the pharmaceutical product models of the future – including targeted treatment solutions – will require partnering and collaboration. But competition for alliance deals is getting fiercer as biotechs come of age and compete alongside the more mature pharma companies for a slice of the US\$6.5 billion per year ‘biopartnering pie.’ Implementing good competitive alliance management practices is crucial in helping recoup the salvageable portion of the value currently lost annually through failed alliances – approximately US\$2.7 billion.”

– Dr. Steve Arlington, Global Industry Leader Life Sciences/Pharma, IBM Global Business Services

Biotechs come of age

Advances in molecular science are driving a renaissance in drug innovation – and a wave of biotech and pharmaceutical alliances. As researchers develop ways to define and address diseases at the level of the body's molecular pathways, drug companies are racing to put these efforts to good use. But few will succeed on their own. With research and development (R&D) capabilities spread across myriad organizations – not only biotechs and pharmas, but also universities, clinical research units, hospitals and government research institutions – drug companies know they can ill afford to ignore partnering as a strategic option.

Over the past five years, as the importance of biopartnering has continued to rise, IBM has conducted a series of surveys to assess alliance-making trends and perceptions within the industry. The most recent survey, BioPartnering 2004, focused on strategic alliances and how the management of these alliances is perceived by biotech companies.

A fundamental finding was: biotechs have come of age. In recent years, biotechs have achieved new levels of experience and sophistication in seeking out, forming and managing alliances. While established pharma companies still make attractive alliance partners, the range of partnerships pursued by biotechs has grown significantly since the 1990s.

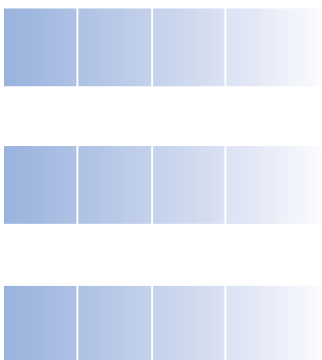
In 2003, the global pharmaceutical industry spent some US\$50.3 billion on R&D, an increase of 5.4 percent over the last five years.¹ R&D spending is expected to increase in excess of 30 percent, to US\$67 billion, by 2007.² But the number of new molecules developed has been declining over the past five years, with only 26 drugs launched in 2003 – the lowest number in 20 years.³ About a third of these were biologicals and biotech products.⁴ With the number of new molecules in short supply, R&D spending directed toward biotechs will become even more critical.

From the perspective of large pharmaceutical companies, outsourcing R&D projects to smaller, innovative biotechs continues to be an important strategy. The pharmaceutical industry faces an uncertain future as a host of blockbuster drugs loses patent protection. In 2002, some US\$30 billion worth of blockbuster drugs lost patent protection.⁵ By 2008, an additional US\$35.5 billion worth of products is expected to lose blockbuster status.⁶

At the same time, pharma companies are facing a shortage of new blockbuster drugs. Between 2003 and 2008, industry analysts predict pharma will produce only 14 potential billion-dollar drugs – none of which is expected to outperform today's top sellers.⁷ Only five products now in the global pipeline are anticipated to achieve blockbuster status by 2008.⁸ With fewer promising molecules in the pipeline, pharma companies built on the blockbuster model face critical R&D gaps. To fill them, pharma will continue to seek alliances with biotechs.

Biotech's need for pharma, meanwhile, is diminishing. As successful biotechs grow in size (and deal-making clout), "big pharma" no longer dominates the alliance prospects of biotechs. According to results of BioPartnering 2004, over half of the companies identified by biotechs as alliance partners were companies other than the top 10 pharma companies. In the years to come, biotechs will continue to flex their newfound alliance muscles, seeking out deals with each other in addition to their traditional pharmaceutical partners.

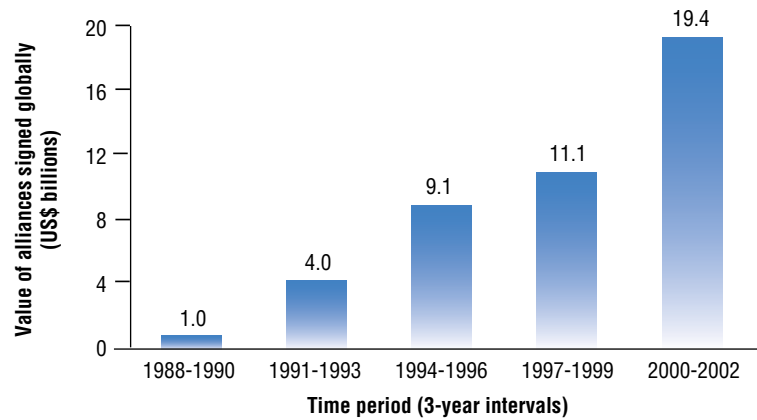
As pharma faces a shortage of new blockbusters, biopartnering will play a vital role in providing pharma with access to early-stage molecules for development.



Room for improvement: A US\$2.7 billion R&D annual opportunity

As Figure 1 illustrates, pharma industry alliances constitute a multibillion dollar market that continues to expand year over year. In the three-year period from 2000 to 2002 inclusive, the combined market value of global alliances was US\$19.4 billion, which is equivalent to US\$6.5 billion per year.⁹ This represents an increase of 75 percent over the previous three-year period.

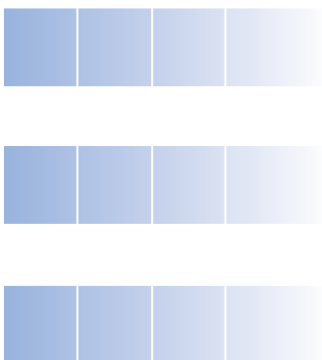
Figure 1. Alliances represent a large and growing market.



Source: Recombinant Capital (www.recap.com).

The economic implications of alliance success are growing just as rapidly. But while the volume, diversity and worth of alliances (both in terms of monetary value and marketplace reputation) are expanding, the same cannot be said of their success rate. According to IBM survey respondents, 52 percent of biotech alliances fail to meet expectations. Extrapolated industrywide, this means approximately half of the US\$6.5 billion being spent on alliances each year does not provide expected results.

At the same time, based on respondent comments, IBM has concluded that the vast majority (85 percent) of alliance failures should be avoidable. When applied to what the industry spends on failed alliances, the upside potential is substantial. Simply implementing good alliance management practices could salvage around US\$2.7 billion per year (85 percent of the funds invested in failed alliances).



BioPartnering 2004: Profile of respondents and methodology

The IBM BioPartnering 2004 survey was designed to gain insights into the rationale that biotechs employ when selecting alliance partners. The survey drew more than 300 respondents, primarily CEOs and business development executives, with a significant proportion of responses coming from chief scientific officers, VPs, CFOs and COOs.

BioPartnering 2004 tracked emerging trends and built on data gathered from surveys conducted in 1999 and 2000, both of which showed effective alliance management as a top concern for drug industry executives. While the 2004 survey provides an up-to-date snapshot of trends identified in prior surveys, several differences in the surveys themselves should be noted.

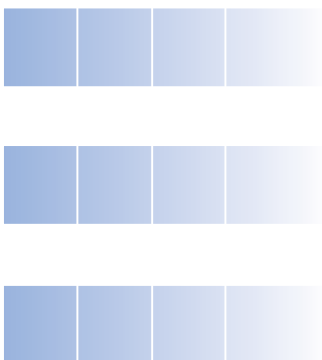
- The geographical reach of survey respondents changed from a U.S. focus to a global focus.
- A greater proportion of non-CEO respondents were represented in the 2004 survey.
- While the 1999 and 2000 surveys were not limited to biotech firms, all of the 342 respondents to the 2004 survey were from biotech companies.

The 1999 survey¹⁰ was primarily U.S.-based, with only 18 percent of respondents hailing from outside the country. Of 111 individual respondents, 43 percent were from biotech companies, 33 percent were from companies developing innovative ethical pharma products and 11 percent were from medical device companies. Over two-thirds of respondents were CEOs or business development executives. Some 44 percent of responding companies had fewer than 50 employees.

The 2000 survey¹¹ drew respondents from a wider geographical distribution, with nearly half of respondents hailing from outside the U.S. Of 184 individual respondents, 47 percent were from companies developing innovative ethical pharma products, 32 percent were from biotech companies and 21 percent were from medical device companies, academia or other organizations. Over two-thirds of respondents were presidents, CEOs or business development/planning executives.

By 2004, the response to the BioPartnering survey reflected the global distribution of biotechs, with two of every three respondents hailing from outside the U.S. The number of respondents from biotech companies had grown to 342 representing 29 countries. Over a third were CEOs or business development executives, and 60 percent of the companies represented in the survey had fewer than 50 employees.

In the 2004 survey, biotechs reported that 47 percent of biopartnering effort goes into the initial drug discovery and preclinical research phase, 33 percent goes into the clinical development phase and 14 percent goes into the launch phase of authorization processes and marketing campaigns. The therapeutic areas most frequently reported as areas of concentration were oncology and allergies, with more than 90 percent of respondents reporting that they were active in more than one therapeutic area.



Trends in strategic partnering reported by biotechs

Taken together, the surveys from 1999, 2000 and 2004 reveal several key trends that have emerged in the strategic biopartnering arena:

- *More deals are happening more quickly, but not quickly enough.* While the number of deals made is growing, analysis by IBM indicates that time-to-deal is not decreasing sufficiently.
- *The center of gravity is shifting from pharma to biotech.* As biotechs increasingly pursue alliances on their own terms, their reliance on big pharma is diminishing.
- *When it comes to alliance leadership, continuity is key.* Change in senior management was cited as the biggest cause of alliance failure. Overall, the failure rate of alliances has improved only slightly, from 59 percent in 2000 to 52 percent in 2004. Yet the survey results suggest the vast majority of alliance failures can be avoided with better alliance management.
- *For alliances, type matters.* While the success rate of alliances does not seem to correlate to therapeutic area, stage of initiation or the manner in which the partners were introduced, the type of partnership – strategic alliance, consortium, joint venture – does seem to matter.

The “halo effect”

A study of 1,572 alliances conducted in 2001 found that a company’s value increased by one percent – or an average of US\$54 million – with every alliance it announces.¹² While this study was conducted during a bull market, its conclusions suggest that alliances are, on balance, a very good way to boost investor confidence.

More deals, more quickly, but not quickly enough

The first major finding of the BioPartnering 2004 survey is that, while the number of alliance deals is growing, deals are not being signed as quickly as they could be. The survey found that average time-to-deal has improved by a third over the past five years, to 10.7 months (see Figure 2 on the next page). Analysis by IBM indicates, however, that even with recent strides, time-to-deal is still too lengthy.

From the perspective of biotechs, up-front payments are a critical component of alliance deals, with 63 percent of alliances including them, according to the 2004 survey. But having to wait months on end for an up-front payment can erode whatever time advantage a biotech may have enjoyed at the start. Especially for biotech startups, payments can provide a critical “halo effect” that reassures venture capitalists and other shareholders – and keeps the investment dollars flowing. In some cases, the timing of a payment can actually make or break the company.

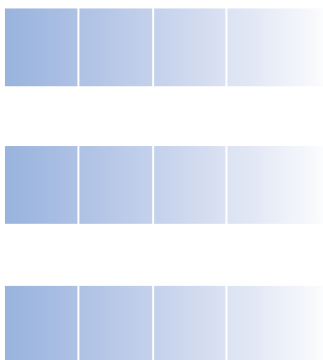
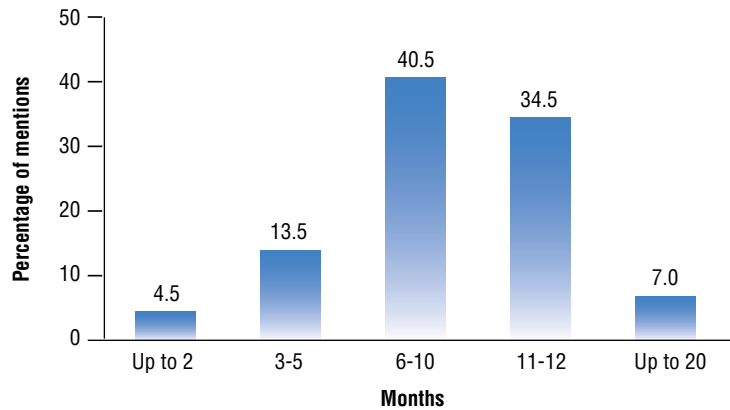


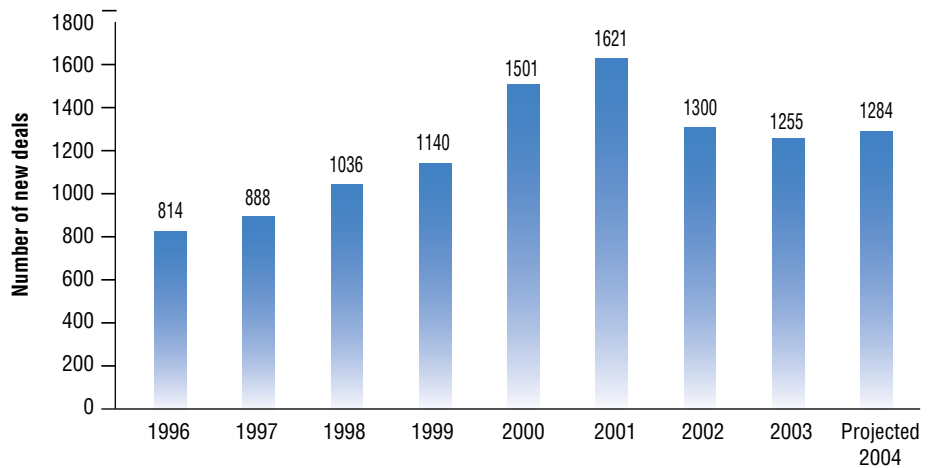
Figure 2. Time-to-deal is declining, but not quickly enough.



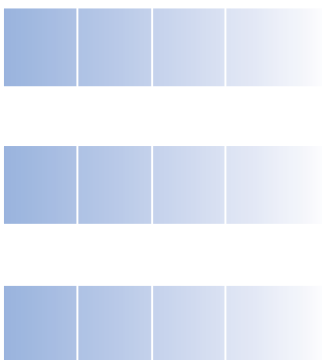
*Note: The 2004 survey defined "time-to-deal" as the time of first contact between prospective partners to when a contractual agreement is signed by both parties.
Source: IBM BioPartnering 2004 Survey.*

As Figure 3 shows, the number of new deals doubled between 1996 and 2001, from 814 to 1,621. Since then, the number of deals has stabilized to about 1,300 per year. This pattern in part reflects the challenges the global economy experienced in 2001.

Figure 3. The rate of new deals is higher now than in the 1990s.



*Note: These totals encompass all types of alliances, including mergers and acquisitions.
Source: Recombinant Capital (www.recap.com).*



While the alliance-making sophistication of biotechs has grown, some in the pharma industry might not yet realize it. Asked to describe why alliances fail, one BioPartnering 2004 respondent cited “the classic problem” between large pharma companies and small biotechs: “We, pharma, have been there, done it, know it all. Just go away, relax and leave it all in our superior experienced hands.”

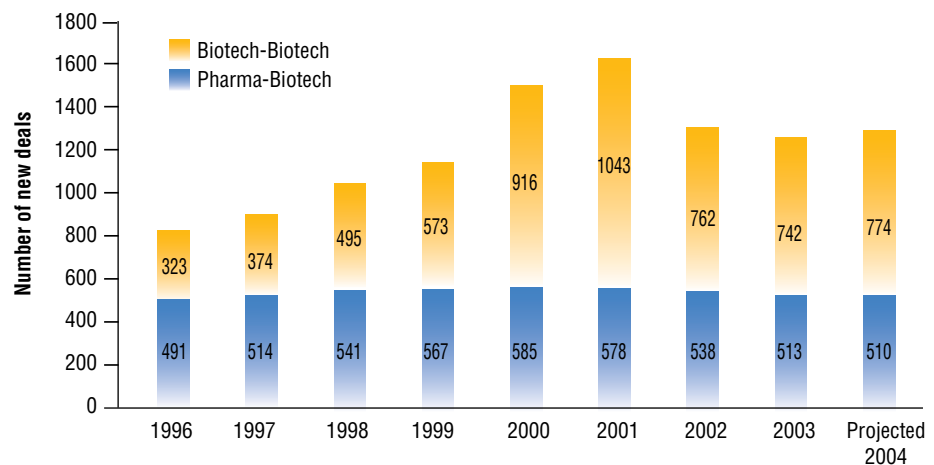
The center of gravity shifts from pharma to biotech

The second major finding of the BioPartnering 2004 survey was: biotechs that survived speculative excesses of the 1990s have matured into sophisticated deal-makers. While still key players, multinational pharma companies no longer dominate in the biotech alliance game. Since 1999, deals between biotech companies have outnumbered biotech-pharma deals, and the gap is set to widen.

As Figure 4 illustrates, the number of biotech-biotech deals more than tripled between 1996 and 2001, while the number of biotech-pharma deals grew less than 20 percent. Between 2001 and 2003, both types of deals declined as a result of marketplace setbacks. Even so, the number of biotech-biotech deals signed in 2003 was more than double the number signed in 1996. The same cannot be said of the number of biotech-pharma deals, which was only slightly higher in 2003 than in 1996. In 2004, the number of biotech-pharma deals is expected to continue to decline.

As this trend suggests, the biotech industry has matured to the point that larger biotechs are able to support smaller biotechs in alliance scenarios. Today, “big biotech” is beginning to acquire some of the characteristics of big pharma (while retaining many desirable operational habits of biotechs, such as agility, responsiveness and flexibility). In some cases, senior pharma executives take biotech positions late in their careers, further adding to the pool of experience biotechs can draw from when they form alliances.

Figure 4. Multinational pharma companies no longer dominate the partnering prospects of biotechs.



Note: For this analysis, a drug company was classified as “pharma” if they existed prior to the advent of the biotech industry.
Source: Recombinant Capital (www.recap.com).

While multinational pharmaceutical companies remain very attractive to biotechs as alliance partners, they no longer dominate their partnering prospects. Biotechs have achieved a level of experience and sophistication that allows them to pursue a diverse range of possible partnerships. In the 2004 survey, over half of the companies identified by biotechs as partners were enterprises other than the top 10 pharma companies.

Not surprisingly given these trends, the 2004 survey also found that biotechs are more proactive than large pharmaceutical companies at forming alliances. Biotech respondents reported that they took the initiative 60 percent of the time in approaching pharmaceutical companies to discuss potential partnerships. Pharmaceutical companies initiated deal-making 30 percent of the time, with other methods (including third-party introductions) representing the remaining 10 percent, according to the survey.

From a funding perspective, size definitely still matters. The majority of biotechs (85 percent) acknowledge that an alliance with a large partner – whether a pharmaceutical giant or a successful biotech – helps increase the odds of further funding (beyond the current alliance).

Indeed, in the 2004 survey, access to capital was cited as the most important reason for pursuing an alliance. Of all the reasons biotechs offered for entering into partnerships, some 47 percent were related to capital and market access. When respondents ranked the top contractual benefits of forming alliances, a similar concern for capital was evident: milestone payments was cited most often, followed by up-front payments, commercialization rights and royalty payments.

After access to capital, the position of the alliance partner in the market sector was the next most-cited reason for pursuing an alliance. One respondent sought partnering clout to “improve position versus direct competitors.” Another looked to alliances for “partnering credibility, revenues [and] gaining experience.”

Partnerships also represented an efficient way to enter new geographical markets. As one respondent indicated, “The alliance partner is located in Asia, where certain disease indications are more pronounced than in the home country. This allowed for broader access to our clinical development program in diseases where patient recruitment would otherwise have been difficult to achieve in the home country.” Another cited a “willingness to access the U.S. market given the politics of the license.” Access to sales and marketing channels and to scientific expertise were also cited as key reasons for seeking an alliance partner.



Three lines of alliance change

Today's biotechs display unprecedented agility in managing a range of opportunities, from simple one-off projects to complex multistage deals. As a result, the dynamics of alliance-making in the drug industry is changing along three potential lines:

One: Large pharma will leverage the experiences learned from managing R&D alliances to set up partnerships along other parts of the value chain, including marketing, distribution, public relations, customer relationship management and regulatory compliance.

Two: As biotechs grow larger and more confident in initiating and formulating partnerships, they will look to partner with organizations beyond the drug industry, including technology companies, academic institutes and contract research organizations.

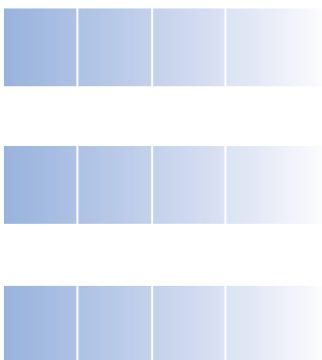
Three: Biotechs will look to companies outside the industry to handle logistics, packaging and other activities best handled by third-party providers. Like most industries, as biotech matures it will seek to partner with niche specialists.

When it comes to alliance leadership, continuity is key

Changes in senior management at the pharma company was the biggest contributor to alliance failures, climbing from the second most-cited reason in 2000 to first in 2004. The underlying cause: merger and acquisition activities continue to drive turnover among pharma executives. With biotech-pharma deals, the funding most often comes from the pharma side. This gives alliance managers from pharma more influence over the management of the partnership.

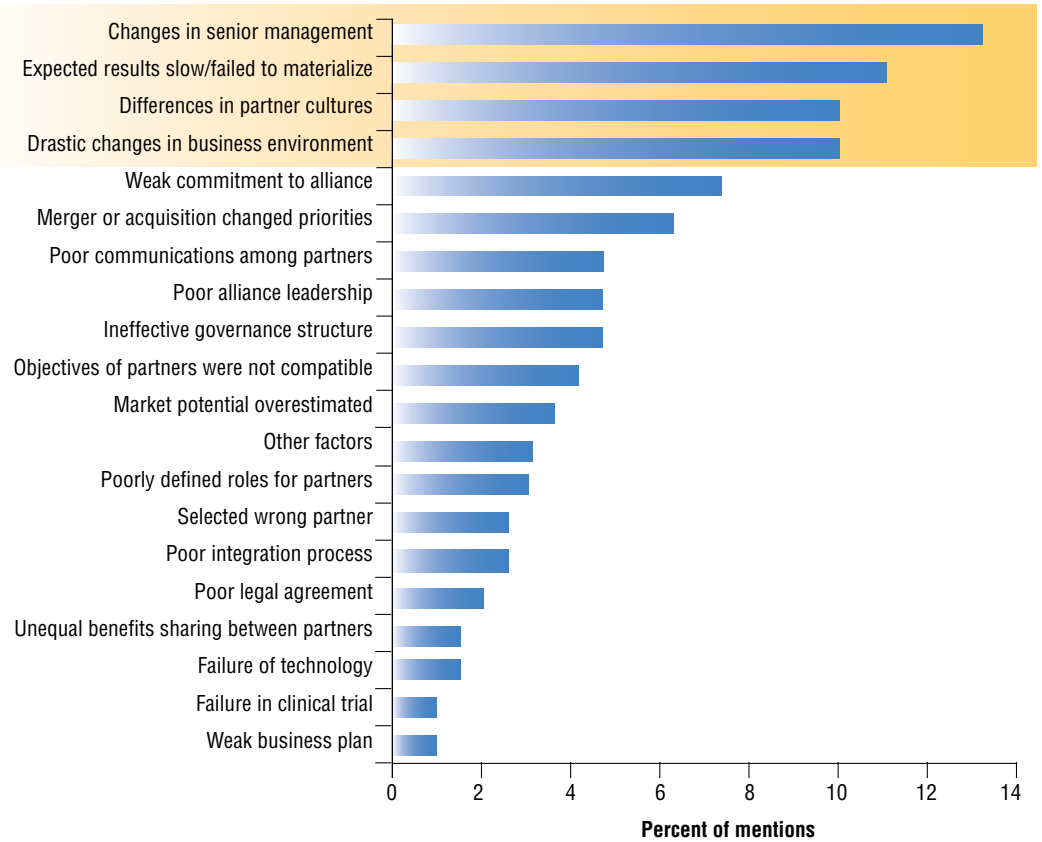
So for biotechs, the effects of executive turnover on the partnership can be immediate, direct and disruptive. Progress often slows as new leaders with little or no institutional memory struggle to learn the strategic, operational and interorganizational dynamics of the alliance. Moreover, the vision of the alliance can change as new executives bring new agendas to the table. Such breaks in continuity can leave the partner company unsure of priorities and strategic direction.

One respondent to the 2004 survey cited "reorganization/re-prioritization of objectives by partner" as a top reason for alliance failure. Another noted a "lack of commitment to strategic focus" on the pharma partner's behalf. Respondents also cited a lack of communication when pharma partners changed strategic priorities. One biotech respondent noted "no communication with us" when it came to the pharma partner's "mergers and reprioritization activities." While the 2004 survey did not study the effects of biotech management changes, one can surmise that they are equally disruptive, particularly in biotech-biotech deals.



After management changes, the three reasons most frequently cited for alliance failures were delays or failure in realizing results, differences in partner cultures and drastic changes in the business environment. Figure 5 shows the rankings in full.

Figure 5. Change in senior management was the most commonly cited reason for alliance failure.



Notes: n = 188 reasons offered by 60 respondents.
 Source: IBM BioPartnering 2004 Survey.

The BioPartnering 2004 survey also found that overall satisfaction with alliances remains low. As more players pursue more deals for higher stakes, pharma companies continue to have difficulty managing alliances successfully – at least in the eyes of biotechs. While the failure rate has fallen slightly – from 59 percent in the 2000 survey to 52 percent in the most recent survey – alliances continue to offer much opportunity for improvement, as shown in Figure 6.

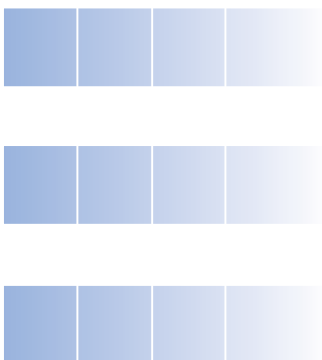
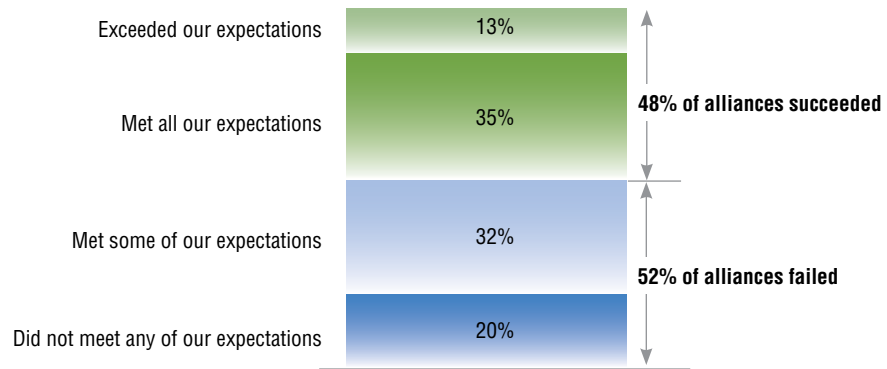


Figure 6. More than half of all alliances fail to meet the biotech partner's expectations.



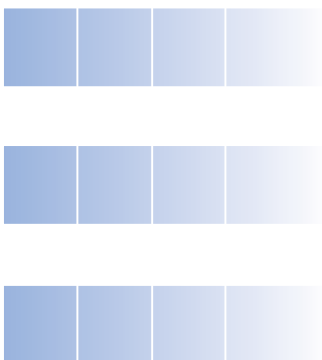
Notes: n = 126 respondents.
 Source: IBM BioPartnering 2004 Survey.

The period from 1999 to 2004 saw changes in the reasons cited for alliance failures. In the ranking of top reasons, differences in cultures fell from first in 1999 to third in 2004, a sign that biotechs are getting better at recognizing the importance of cultural differences.

While citing a wide variety of causes, respondents were far from fatalistic about alliance failure. Of all the reasons noted, only four were considered beyond the control of senior management. Of these four, only two were ranked in the top 10: drastic changes in the business environment (which first appeared in the surveys after the global downturn of 2001) and changes in priorities due to a merger or acquisition. While the remaining two – failure in technology and failure in clinical trials – are often perceived as important contributing factors, in the 2004 survey they ranked a low 18 and 19, respectively.

In all, some 85 percent of alliance failures were attributed to manageable causes. This suggests that alliance partners have more control over their destiny than they might realize.

Whatever the case, biotechs view themselves as much more optimistic about the outcome of alliances than large pharmaceutical companies. One reason is that biotechs are likely to be satisfied with the receipt of early financial payments and the “halo effect” of deal signings. Biotechs believe their pharma partners, on the other hand, are more prone to judge success solely on the development of new compounds.



For alliances, type matters

Finally, the BioPartnering 2004 survey found that the type of alliance seems to factor into its chances for success. Though representing less than 15 percent of all alliances, joint ventures were the most successful alliance type. The 2004 findings suggest that joint ventures are most likely to succeed because they define a distinct identity and establish separate operating facilities, both factors that enable collaborative product development.

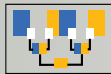
The BioPartnering 2004 survey divided alliances in the biotech and pharma industries into three categories: strategic alliances, joint ventures, and consortia. In keeping with recent trends, 85 percent of partnerships were strategic alliances in the 2004 survey. Joint ventures comprised 12 percent of deals. Consortia represented just 3 percent of deals.



Strategic alliances usually focus on developing individual licensed molecules or on co-marketing and co-promotion. Alliances typically operate as virtual organizations, and minority equity investment may be part of the arrangement.



Joint ventures usually establish their own distinct identity and operating facilities. Collaborative research and product development is a typical example.



Consortia involve three or more companies and take the form of a network based on the alliance or joint venture model.

Another reason behind the success of joint ventures may be that the joint venture model enables the participating organizations to focus on a single partner, making it less likely that either will invest much time, effort or money to identify opportunities elsewhere in the market. Because the most valuable opportunities are likely to come from the established partnership, the participating companies are more likely to maintain their commitment to the alliance rather than divert resources to other projects. (Due to the low incidence of joint ventures in the 2004 survey [n=14], caution should be used when interpreting these results.)

Success in biotech alliances does not, however, appear to be correlated to therapeutic area, stage of initiation or manner of partner introduction. Alliances focused on anti-infectives, central nervous system and oncology all hovered around a 50 percent success rate. Similarly, alliances seem no more or less prone to failure when initiated at any specific point in the drug development pipeline, from the discovery and preclinical trial phases through to product launch. The manner in which the partners meet seems, likewise, to have little influence on the success or failure of alliances. Whether the biotech approaches the partner, the partner approaches the biotech or a third party introduces the partners, success seems to be achieved only half the time, according to the 2004 survey results.



Becoming a “partner of choice”

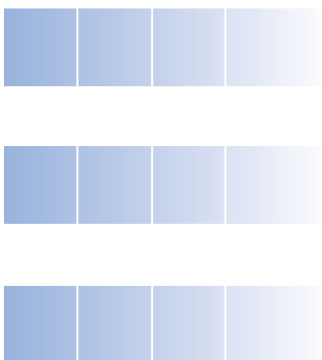
The BioPartnering surveys conducted by IBM over the past five years indicate continued formation of and reliance on strategic alliances. Because the technologies driving the next wave of innovation are too diverse for any one organization to develop and manage alone, partnerships will continue to play an important strategic role for biotech and pharma companies. The findings of the BioPartnering 2004 survey suggest that both biotech and pharma companies need to improve their partnership management skills to execute properly aligned, high-performing alliances.

Those that succeed can become “partners of choice” in their sphere. Whether biotech or pharma, a partner of choice does not follow a “one-size-fits-all” strategy, but rather identifies its role in the marketplace and develops its capabilities accordingly. A partner of choice knows what it is good at, is able to target the right alliance partners and can develop relationships quickly and effectively.

For biotechs, the challenge is to plan and execute deals more effectively. With an R&D pipeline that emphasizes drug discovery and clinical development, biotech companies naturally tend to focus on science and technology. But in the 2004 survey, technology and clinical trial issues were not commonly cited as reasons for alliance failures. This suggests a significant opportunity to realize value by focusing on alliance management issues. One way to move toward this goal is through a clear division of labor – letting scientists do the science, while business development managers or alliance managers drive the alliance itself.

With the number of biotech-biotech deals now greater than the number of biotech-pharma deals, pharma companies must take care to be as responsive as possible or risk losing out to biotech. Successful pharma companies identify the strategic focus they wish to adopt in a partnership and consider carefully the internal capabilities they wish to strengthen to excel in this position.

Once a pharma company has defined its operational capabilities, it will be able to achieve an advantage only by carrying out these activities more cheaply or more effectively than its competitors. Mastering core operating capabilities will increasingly be expected as a prerequisite by potential out-licensing parties. Organizations that are able to focus successfully on niche markets are less likely to require substantial investment to identify opportunities, as the most valuable opportunities are likely to come to them.¹³



Improving the biopartnering process

To realize the full potential of alliances, IBM Institute for Business Value analysis suggests that companies need to improve their practices at each stage in the biopartnering process: sourcing and finding deals, deal-making and post-deal alliance management.¹⁴

Sourcing and finding deals

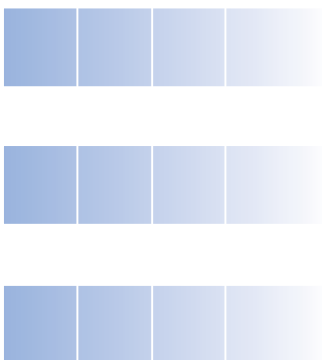
As the results of the 2004 survey indicate, mismatches between partners can lead to failed alliances. To cite one respondent's experience: "On the development front [the pharma company] was an excellent partner. On the commercial front, [the pharma company] has been a huge disappointment, and we felt we picked the wrong partner for this opportunity." With fierce competition for alliance deals, biotechs and pharma companies face a growing challenge in sourcing and selecting the best partner.

Partner segmentation is one strategy that can help alliance seekers avoid the disappointment of mismatches. Potential partners can be analyzed according to several criteria:

- *Resources and infrastructure.* What would the potential partner bring to the deal in terms of financial resources, scientific knowledge, other partners, facilities and supporting organization?
- *Track record.* What previous experiences and competencies does the potential partner bring? What alliances have they been involved with in the past? And what is their average time-to-deal?
- *Reputation.* What is the potential partner's reputation in the industry? Is it considered a "partner of choice" in the relevant therapeutic area, development phase, technology or geographical region?

It should be recognized that differentiation is becoming more difficult as big pharma companies converge on similar strategic goals. This trend, however, is opening new opportunities for biotechs and small pharma to differentiate from the big players by leveraging their relatively smaller complexities of scale.

Another strategy for sourcing and finding deals is to develop a structured approach to finding partners. The use of standard operating procedures and proven, reusable "sourcing templates" can increase the probability of choosing the right partner, not just once but across a portfolio of alliances. A structured approach speeds the formation of new deals by helping ensure a consistent and thorough decision-making process for assessing deals, and enables partners to scale up easily in the size and complexity of deals.



Deal-making

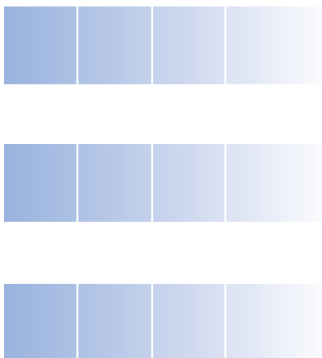
With less than half of biopartnering alliances currently delivering full value, prospective alliance partners should take particular care to structure deals that offer the greatest opportunity for success. Survey respondents identified several deal-making pitfalls to be avoided. Inadequate due diligence can leave partners overestimating the market potential of deals. Imbalanced negotiations can result in unequal benefits and poorly defined roles for partner companies. Lack of care in contract wording can establish poor legal agreements, which, in turn, can undermine the alliance.

Settling on the appropriate alliance type is a vital step to successful deal-making. While the survey found joint ventures to be the most successful alliance type overall, drug companies should not assume this option is always the right choice for structuring alliances. (Indeed, drug development alliances have historically eschewed the legal complexities and commitments of the joint venture in favor of straightforward licensing with exclusive rights.) Other considerations that influence the choice of alliance type include the following: the level of autonomy required by the alliance, the financial participation of the companies backing the alliance, the number of alliance partners with which the alliance party is already involved, the degree of collaboration and process integration and the level of commitment (transitional, long-term, permanent). Ownership and control issues (such as risk and resource sharing and intellectual property rights) should also factor into the choice of alliance type.

Another dimension of successful deal-making is scope. While alliances are traditionally built around products, today's drug companies may want to consider the potential of comprehensive, capability-based partnerships aligned with the move toward targeted treatment solutions.¹⁵ Adopting a "comprehensive alliance model" can open biopartnering to the broader possibilities of combining technologies or addressing entire therapeutic areas or portfolios within the scope of a strategic alliance.

Post-deal alliance management

Analysis by IBM indicates that 85 percent of the value currently lost to failed alliances is avoidable. This amounts to more than US\$2.7 billion in potential quantifiable performance improvements each year from adopting effective alliance management practices. Formalizing a set of post-deal alliance management processes can help companies handle a wide variety of partnership types, not just

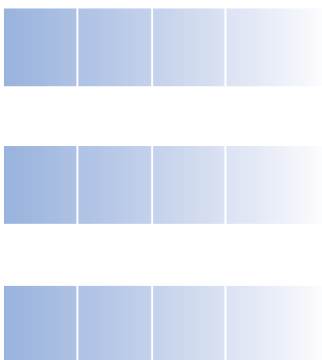


in R&D but across the value chain. Successful alliance management components address the following areas:

- *Mission and strategy.* For pharmas and biotechs alike, codifying the mission and strategy up-front can help clarify the objective of the alliance for all parties (one reason cited for alliance failure in the most recent survey was lack of compatibility of objectives). Laying out a clear mission and strategy for the alliance requires careful consideration in three areas: culture, management and organization. Thorough, up-front documentation in each of these areas will guide the partner companies in resolving conflicts, while helping ensure that the alliance enjoys all the advantages of strategic consistency and high-performing teams.
- *Culture.* In the 2004 survey, culture was one of the top three reasons cited for alliance failure. Cultural differences are a common feature of drug development partnerships, which are typically formed between smaller, more flexible biotechs and larger, established pharma companies. In cross-border alliances, differences in national and ethnic cultures are often added to the mix.

As a baseline, partners need to understand the differences between their corporate cultures. By establishing four pragmatic mechanisms at the outset, cultural conflicts can be resolved to mutual satisfaction or avoided altogether. The first of these mechanisms is encouraging openness and transparency among alliance members. A “no blame” culture that fosters discussion and information sharing encourages trust (poor communication was cited by survey respondents as one cause of alliance failure). The second mechanism is establishing a common purpose and goal. Alliances with a clearly articulated destination are more likely to earn the commitment of personnel (respondents cited lack of compatibility between partners’ objectives as another cause of alliance failure). The third is creating a distinct culture for the partnership. While alliance personnel invariably bring culture and values from the partner companies, establishing a distinct culture for the partnership can reduce clashes and boost compatibility. The fourth mechanism is implementing a set of clear performance metrics that apply equally to teams on both sides of the alliance. Measuring the alliance team’s performance against an agreed set of objectives, linked to rewards and recognition, is key to motivating the team throughout the lifetime of the alliance.

- *Management.* In the 2004 survey, change in senior management at the pharma company was the top reason cited for alliance failure. While management changes are an inevitable part of business, up-front documentation of how management and staff changes are to be handled can help smooth the transition and mitigate its impact on the alliance. Throughout the life of the alliance, even during management transitions, it is critical to maintain and see evidence of senior management sponsorship.



How to improve the chances of success for your alliance

- Implement formalized, shared alliance management policies and processes from the start
- Appoint senior business management to alliance; do not divert scientific resource to alliance management
- Develop a common culture that fosters open, two-way communication
- Define organizational models customized for the individual alliance
- Monitor performance of alliance and partners' satisfaction with the alliance on an ongoing basis
- Implement systematic learning and knowledge management across the alliance / portfolio of alliances
- Transfer alliance capabilities further across company's value chain – from R&D to manufacturing and the supply chain to marketing.

Another key to effective alliance management is to form a dedicated alliance management team. This step can help prevent one all-too-common mistake: diverting scientific resources from the goals of the project – instead, let the scientists deliver the molecules! The management team should cover three levels: The *alliance executive* is responsible for championing the partnership at the most senior level of the organization. The *alliance leader* is responsible for providing direction to teams, ensuring consistency with the portfolio and being accountable for the alliance. The *alliance manager* is the “on-the-ground” business and process resource responsible for the relationship. Key skills for the alliance manager role include listening, facilitation, influencing and conflict resolution. The alliance leadership team should work in tandem with an established governance mechanism that includes representation from both partners. This type of approach creates a forum for discussing issues as they arise and provides a managerial vehicle for resolving them in a manner consistent with the alliance's best interests.

- *Organization.* In addition to forming the alliance management team, key members from both sides should be involved up front in strategy development sessions. Having staff with the appropriate skills for the alliances of today and tomorrow (in a world of targeted treatment solutions) is essential for attracting and retaining good team members. Such skills include being candid, transparent and open to external projects with a strategic focus. Those that excel will be relationship builders, skilled at conflict resolution and willing to take responsibility. To complete their skill set, these individuals need good project and program leadership and management skills.

The partner companies should also define and agree on shared business processes at an early stage. Decision-support infrastructure should provide management and staff with critical, timely information. Ultimately, the key to a successful alliance is an empowered project team that is willing to take action and manage the risks on an ongoing basis and is effectively supported by an alliance management team.

- *Technology.* In any given alliance, it is unlikely that partner organizations use the same information technology systems. Sharing data across the alliance, then, is typically a major biopartnering concern. Emerging technologies such as grid computing, on demand computing and open architectures can facilitate the



exchange of data – often in massive quantities – between “virtual” partners.¹⁶ Successful partnerships develop consistent methods for storing, viewing and sharing data across the alliance, with the ultimate goal of adopting common industrywide standards.

- *Knowledge management and training.* As with any project, knowledge should be shared systematically throughout the alliance lifecycle and should be harvested at the conclusion of the project. Joint, up-front training on the molecule and other information associated with the future drug product is also imperative. Mining and using collected knowledge can help improve the alliance’s chance of success on an ongoing basis – indeed across a company’s entire portfolio of alliances.

By addressing six key management alliance issues, alliance partners can salvage 85 percent of the value lost from failed alliances, a potential savings of US\$2.7 billion per year in a nearly US\$500 billion industry that grew nine percent in 2003.¹⁷

- *Management turnover.* Changes in senior management at the pharmaceutical company should be handled carefully to avoid adverse impact on the biopartnering strategy.
- *Timing of results.* Partners should be aware that expected results may be slow or fail to appear at all.
- *Culture.* Companies should nurture a distinct culture for the alliance that complements the separate partner organizations. Large pharma companies can be more bureaucratic, for example, while biotechs can be run from a shareholder or scientist mindset.
- *Documentation.* Commitment to the alliance should be codified in documents that both parties consider to be equitable and workable.
- *Leadership.* Key partners from both sides should show their commitment by involving themselves in strategy development sessions.
- *Processes.* Alliance partners should clearly define and articulate joint business processes.

How effective are your biopartnering habits?

As your company seeks to discover and develop the next blockbuster molecule or standard-setting therapy, chances are you will need to partner with another organization to realize your goals. The following questions are designed to stimulate your thinking about issues that will likely arise as your organization pursues biopartnering relationships:

- How sophisticated are your company’s deal-making capabilities?
- How does your decision-making process help your company assess potential partnership deals?
- How effectively is your company able to find the right strategic partners?



- How effectively does your alliance plan for the impact of management turnover? To what degree is your alliance partner involved in your turnover mitigation plans?
- How effectively does your company handle post-deal alliance management?
- How strategic are your skill sets and training strategies? Do you have the appropriate education and experience for alliances of the future?
- How does your company handle cultural differences with the alliance partner?
- How does your company's internal success rate compare to that expected of alliance partnership success rates?
- How accurately is your company able to estimate the cost of forming and managing alliances? How long does it take for your company to sign a partnership deal?
- How does your company distinguish between the success of the alliance and success of the product?

In the years ahead, the importance of biopartnering will continue to grow, and alliance partners will need to improve their relationship management skills. As biotechs become ever more sophisticated at partnering, they will increasingly turn to each other for the resources and expertise they need to bring their innovations to the marketplace. To stay in the game amid these changes, pharma companies must identify the strategic focus they wish to adopt in a partnership and consider carefully the capabilities they must strengthen to support that focus.

Armed with insights from the IBM Institute for Business Value BioPartnering 2004 survey, you can begin to analyze your company's performance and identify the capabilities it will require to realize its full biopartnering potential. The companies that succeed – the industry's "partners of choice" – will help write the next chapter of medical history.

To discuss ideas you can use to become an alliance partner of choice, please contact us at iibv@us.ibm.com. To browse other resources for business executives, visit our Web site:

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