Partnering challenges for startups

In today's highly competitive arena, choosing the right partner at the outset is more important than worrying over the finer points of the final deal, says J. Michael French.

Today, hundreds of technology companies[1] are vying for a piece of the $20 billion[2] pie spent by pharmaceutical and biotechnology companies on drug discovery and preclinical development. To succeed in this environment and get a piece of that research dollar, business development professionals at technology companies must be patient, inventive, tenacious, and, above all, detailed planners.

Moreover, they must use all these qualities long before they begin negotiating a deal. Indeed, negotiating the deal is no longer the key hurdle to forming partnerships—the challenge today lies in getting a seat at the negotiating table in the first place.

The "deal" discovery and development pipeline

If you think pharmaceutical companies have a problem translating drug targets into leads, try being a business development professional at one of the innumerable companies providing discovery and preclinical technologies to the drug discovery industry. From the pharmaceutical company's perspective, it must seem as if there are thousands of technologies promising to help them deliver more effective drugs to market faster. So, how can a technology company distinguish itself as a "validated" technology partner from among the crowd? This is almost as large a task as identifying and validating targets from the glut of genomic data derived from the human genome project.

And poor choices can be costly: analysts at Lehman Brothers (New York) have observed that, "Genomics threatens to increase not only the overall associated research and development (R&D) costs but also the average cost per new chemical entity (NCE) or drug"[3]. With so many new technologies on offer, pharmaceutical companies must be selective in their collaborations, alliances, and partnerships to ensure that they do not exacerbate this already precarious situation. Technology companies find that they not only have to stand out in a sea of other companies but also have to do so in a financially attractive manner.

In other words, it is no longer a "buyer's" market but more a buyer's "bazaar"—one long drug-development alley lined with vendors selling their technological wares, with the pharmaceutical industry making its way down the middle, assailed by vendor after vendor.

> "Hey Mister, want to buy a proteomics database?"
> "I'm just browsing . . . "
> "Step a little closer, have I got a deal for you. Buy one—get one free!!"

Analogous to the drug discovery and development process, business development teams in a technology company must go through a discovery and development phase. The development phase consists primarily of negotiating the finer details of the deal, and is probably the least of a business development manager's worries. The foremost challenge and priority is simply to survive the "discovery" phase and get to the negotiating table. The discovery phase includes (i) finding the right partner; (ii) determining what to bring to the negotiating table; and (iii) getting to the negotiating table. To get through this phase, business development managers need to become detailed planners, keeping in mind that "plans are useless, but planning is indispensable"[4].

Finding the right partner

Sometimes, business development teams naively believe that it is relatively straightforward to identify a suitable partner—surely their company should form a part-

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nership with one of the top 10 or 20 pharmaceutical goliaths? From the business developer's perspective, every one of those pharmaceutical companies must surely stand in need of the "revolutionary" technology that the developer can deliver. However, not all companies are on the same technology growth curve, nor will they necessarily believe that they "need" the technology. A business development team therefore has to identify those pharmaceutical partners that are most prepared for the technology. Suitable candidates include companies that have a need for the technology, an infrastructure capable of supporting the technology, an employee who will support the technology and has credibility within the organization (a technology "champion"), and, ultimately, the budget to purchase the technology.

None of these elements is trivial, and the business development team is often not in a position to wait for the perfect combination of them to arise. The team must know what elements the potential partner lacks, and then form a detailed plan on how to fill the gaps. For example, it is critical to have a technology champion, and often—particularly with new technologies—one does not exist at the time of first contact with the partner company. In this instance, the team should identify a person who is scientifically and technically credible within the company and then turn them into a "champion". Recruiting a champion can be a delicate process, however, because it is important that they not appear to become your sales representative and thus lose their credibility. This process may take considerable time, but it must be an integral part of the business development professional's overall strategy.

Furthermore, the choice of the "right" partner might have more to do with what the technology company needs to further its internal scientific and technical capabilities, and so demonstrate market value, than with the needs of the partner company. In general, technology companies have a specific set of needs that must be met by their business partnerships, including revenue, scientific credibility, technology validation, and the building of expertise in house.

The most obvious and important need is revenue—for cash flow to support the company's growth. However, the technology company must also attain an acceptance of its business model (how much will a partner pay for access?), a certain amount of scientific credibility for its approach (does the technology work?), and validation of its technology within the context of the overall drug discovery and development process (does it make a difference?). Fundamentally, the technology must not only work but also significantly reduce the drug development costs and/or time to market—the partnership must be cost effective. Finally, business development managers must also look at how they can leverage their technology to attain other capabilities that can be transferred to them from the pharmaceutical partner. Further complicating this whole process is the issue of timing: the deal that you do today with one partner is not necessarily the same deal you would do tomorrow with another. Moreover, the deal you do today with one partner probably will not be the same deal you would do with them in the future. Certainly, technology and business models evolve and new deals emerge.

In light of all these factors, the business development professional must be patient and take the time to find the right pharmaceutical partner(s) with whom to make a deal that, optimally, meets the needs of both the technology company and the partner. As described above, this does not necessarily involve starting with the leading pharmaceutical company and working down the list. For example, a deal with any one of the top five pharmaceutical companies may generate a certain amount of scientific credibility—because you have done a deal with a "blue-chip" company—but they may not serve as the best stage on which to showcase the value of your technology. Such companies already set gold standards for the industry, and should they reduce the time and cost they require to get a new drug to the market, it may be difficult to convince others that your technology made the difference. Frequently, a second-tier pharmaceutical company might be a better partner for demonstrating the impact of your technology on the drug discovery and development process.

Today's business development teams must inject new thinking into the old ways. The old mantra "you've got to throw a lot of spaghetti against the wall to see if any sticks"—in other words, you need to be in discussions with four to six companies to get just one to sign a contract—no longer applies. The new professional is smarter in choosing a company to partner with, and has a new mantra: "Nail your pasta to the wall so you *know* it will stick."

Table 1. Partial list of public technology companies

Technology	No. of companies
ADMET	3
Bioinformatics	13
Chemistry	13
Combinatorial Biology	3
Functional Genomics	13
Genomics	24
HTS	12
Microarrays	8
Pharmacogenetics	12
Proteomics	15
Total	116

What to bring to the table

It is a chicken-or-egg debate: which should come first, the partner or the technology? The answer has to be the partner, because the pharmaceutical perspective is critical to the positioning and adoption of the technology. However, it is vitally important to determine what exactly you want to deliver to that partner and then to tailor the technology to the partner's need. Furthermore, the technology must be delivered through an attractively structured deal.

The most successful technology companies are those with the ability to deliver a tailored solution to the pharmaceutical partner. Each customized solution must address, to some degree, key needs of the pharmaceutical company, including reduced costs for drug discovery and development, decreased time to market for approved drugs, creation of intellectual property, extended product life cycle through additional indications or increased drug efficacy, and the building of in-house proficiency with the new technology. The business development team must position its technology so that it addresses more than one of these needs: at one time, a pharmaceutical company might have been pleased if a technology addressed just one, but in today's climate, the industry looks for the most gain possible from each dollar spent on outsourcing.

Additionally, the team must package the technology in a deal that is attractive to the partner. Deals and deal structures have, to a large degree, become as high-throughput as drug-screening technologies. You need only subscribe to one of several databases to be privy to the general structure and fees of hundreds of deals. A sampling of these databases includes Cambridge Healthtech Institute's Drug Discovery & Development Deals Database[5], PharmaVentures' PharmaDeals[6], Recombinant Capital's Biotech Alliance Database[7], and Windhover Information's Strategic Intelligence Systems Database[8]. This does not imply that every innovative deal has been already constructed and that it is trivially simple to construct a deal, but most deals done today are a mix of ones already signed and sealed. In 2001,

Table 2. Selected bioinformatics companies

Company	Technology summary
deCode Genetics *http://www.decode.com*	Uses population-based genomics to conduct research into the inherited causes of common diseases. Operates one of the most technologically advanced high-throughput genotyping laboratories in the world.
Gene Logic *http://www.genelogic.com*	Provides scientists with the most functional and comprehensive survey of human gene expression information as well as focused solution sets. All data are derived from exceptionally high-quality, pathologist-reviewed tissue samples, analyzed using state-of-the-art microarray technology.
LION biosciences *http://www.lionbioscience.com*	Provides proven information and knowledge management solutions to significantly improve life science R&D performance and productivity. These solutions integrate all R&D disciplines, ranging from genetics to early and late discovery through clinical trials, through software solutions that access divergent biological databases, fully analyze gene and protein sequences, analyze expression data, and conduct comparative genomics.
Tripos *http://www.tripos.com*	Combines information technology and science to simplify and speed discovery of new chemicals that are important to the life sciences industry, including pharmaceutical, biotechnology, and agrochemical companies. Accelerates molecular research through an integrated platform of discovery services, including discovery software, software consulting services, chemical compound libraries, and discovery research services.

the industry newsletter *BioCentury* reported over 1,700 deals ranging from small-outsourced research programs to Abbott's $250 million metabolism deal with Millennium Pharmaceuticals and Bristol-Myers Squibb's $8 billion DuPont acquisition[9]. Business development teams must be clever in constructing deals that are consistent with market trends, succinctly presenting the value proposition of the technology to the partner.

Getting to the table

Knowing who the right partner is, and having a story with which to articulate both the technology and its value to that partner, will not necessarily be sufficient to catch the eye of the buyer at the technology bazaar. Several additional factors pose obstacles for a technology company trying to get to the negotiating table: the glut of available technologies, restrictive labels and categories, and the inability of real technology companies to differentiate themselves from copycats.

The technology glut is one of the most significant obstacles to successful deal making in today's market. Today, there are several categories of technology and numerous publicly traded companies in each (Table 1)[10]. The technology glut comes not only from the formation of new companies built on truly novel technologies, but also from startups attempting to offer slight improvements and modifications on existing technologies. In addition, there are probably four to six privately held companies for every one of the publicly traded companies referenced in Table 1.

In an industry where labels and categories are prominent, technology companies are lumped into categories by market analysts. Public companies are usually used as the basis in creating the labels, and privately held companies are simply tossed into convenient categories. It is much easier to use an existing category—one already defined and commonly understood—than to create a new category for a one-off technology, especially for small private startups. For example, the category "bioinformatics" is used to label a range of companies offering different technologies[11] (Table 2). If a company is privately held, and a bioinformatics label fits with its strategic and corporate goals, then being tossed into the "bioinformatics" bucket is an advantage. If the label is a poor fit, however, this convenient categorization could become detrimental to future deal making. Pharmaceutical companies look at categories first and technologies second: "But we already have a bioinformatics partnership!" will be their cry.

Many startups are being formed around an existing technology, offering some "added value" in technology or approach. Their value message to the pharmaceutical industry mimics that of the existing technology. These companies can look and "feel" like the real thing using only modest information technology and communications, yet they are "me toos" or worse, "me wannabes", and only cause more confusion. In such a congested and rapidly evolving marketplace it can be easy to lose your focus, and a business development team must tenaciously pursue the ideal pharmaceutical partner and offer it the best deal. A good business development professional is responsible for monitoring the activities of existing technology companies so as to be able to see through the eyes of the pharmaceutical industry—to understand the landscape, competition, and challenges involved in getting to the table. No plan survives contact with the enemy[12], but business developers must keep their sights on the objective. Be conscious of, but not distracted by, all the technologies out there, and you may stay the course.

Conclusions

Business development professionals represent the future of any company. To overcome the challenges arising from today's technology cornucopia, business development teams must use a detailed planning process rather than just throwing resources at the situation (the "spaghetti-against-the-wall" approach). Further, teams must wait patiently for the right partner and the right deal, be inventive and creative in preparing the deal and, finally, be tenacious in the pursuit of that partner—rising above the crowd and delivering the deal to the negotiating table.

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1. In the broadest sense, these are companies providing or performing research in the following types of technologies and disciplines: absorption, distribution, metabolism, elimination, and toxicology (ADMET) testing; bioinformatics; chemistry; computational chemistry and biology; functional genomics; genomics; high-throughput screening (HTS); microarrays; modeling and simulation; pharmacogenetics; and proteomics.
2. Marondel, I. E. and McDonald, P. J. *Drug Discovery's New Toolbox—Leading a Paradigm Shift* (Gerard Klauer Mattison Report, November 2001) p. 6.
3. *Fruits of Genomics* (Lehman Brothers Report, January 30, 2001) p. 34.
4. "In preparing for battle I have always found that plans are useless, but planning is indispensable."—Dwight D. Eisenhower.
5. http://www.discoverydeals.com
6. http://www.pharmaventures.com
7. http://www.recap.com
8. http://windhoverinfo.com
9. *BioCentury* vol. 9 nos. 1–55 (2001).
10. *Bernstein Rep. BioBusiness* vol. 10 no. 1 (January 4, 2001) pp. 10–20.
11. *Bernstein Rep. BioBusiness* vol. 10 no. 1 (January 4, 2001) p.11.
12. "No plan survives first contact with the enemy."—Helmuth von Moltke, German Army Chief of Staff 1906–1914.