Anatomy of a Biotech Business Development Deal

by Jorge Conde and Becky Pferdehirt

Biotech founders face a variety of challenges in building a successful startup. Beyond confronting daunting scientific and technical hurdles, they must develop a strategy to ensure their technology has a compelling business model and is focused on the right problems. Also, they need a plan for how the tech will go the distance — i.e., when to go it alone or seek to partner.

Why partner? Biotech startups have limited resources and experience. Teaming up with a large biopharma company is often a great strategy for accelerating time to validation and having a real impact on patients. At a basic level, these partnerships marry the scientific innovation that thrives in startups with the deep drug development expertise of established companies, ultimately delivering innovative new drugs to patients faster.

But there's a wide chasm between *wanting* to partner and *signing* on the dotted line so you can get to the fun stuff: the science. Getting that first deal can be difficult, especially for first-time founders. The deal-making process can feel like a black box, and navigating the unknowns is particularly tough when a startup doesn't have a formal, dedicated business development (BD) lead. Many don't, in which case it's up to the founder/CEO to fill the role.

So how do you execute a BD deal when you don't know what you don't know? Well, unlike with laws and sausages (better not to see them being made, it's been said), it actually does help to dig into the behind-the-scenes policies, processes, and moving parts.

Our time working in the biotech BD trenches has given us a unique perspective on strategies for successful partnership execution. We think of every biotech BD deal as a play in three acts: pre-term sheet, term sheet, and post-term sheet. In this step-by-step guide, we break down each act — tasks to complete, terms to know, pitfalls to avoid, and advice from our own hard-earned battle experiences — for biotech startup founders and BD leads. While our advice specifically concerns collaboration deals that formalize partnerships between therapeutics technology platform startups and biopharma companies, it generally applies to all types of BD deals in biotech (of which there are many).

Think of it as a beginner recipe book for the sausage-making that is biotech business development.

Pre-term sheet

Draft your work plan

By the time you've gone through the BD speed-dating process and found a biopharma company to collaborate with, you've probably had many discussions with your soon-to-be partner and have a good idea of what your "win-win" is.

Discussions should involve 1) the "scientific champions," meaning the scientists from each company who will actively participate in the collaboration as program leads or R&D scientists, as well as 2) the BD leads who facilitate the process, negotiate the deal terms, and execute the full written agreement.

If you haven't actually translated these informal discussions into a written work plan yet, now's the time. It's best to start this process as early as possible because topics that come up in work-plan discussions might shape the deal structure or terms.

It's important that the scientific champions, *not* the BD team, take the lead on drafting the work plan since, in the end, they'll be doing the work. This work plan will ultimately be appended to the final contract as an exhibit. Because contracts are legally binding agreements that will be referred to throughout the partnership, the work plan should be as accurate and detailed as possible. The exact contents depend somewhat on the specific collaboration, but it should generally include:

- A brief summary of the overall collaboration goal.
- Who contributes which pieces of the therapeutic product (aka the asset), such as the drug molecule or target.
- Who's responsible for which steps of drug discovery.
- Who's responsible for which deliverables.
- The anticipated timelines for executing deliverables or achieving predetermined milestones.
- Any specific research budgets that need to be considered, and whether the biopharma company will reimburse the startup for research costs.

Discuss your must-haves and no-gos

Even if you've clearly communicated your partnership goals with the biopharma BD lead along the way, it's a good idea to have a verbal discussion about your term expectations before formalizing them in a term sheet. Here are some questions to ask up front — the biopharma BD lead should be able to give you specific answers:

- What does each party want or care about? Don't assume you know your partner's answer.
- What are the ballpark ranges for expected economic deal terms? If your partner expects $5M up front and you propose $100M in the first term-sheet draft, you risk damaging the relationship.
- Are there any limitations or terms that your partner knows in advance will be a no-go? For example, they might have a policy against splitting territories, or they may already know that co-promotion will be problematic. (We explain these terms later in the guide.)

Ask about governance

It's good practice to request a rundown of the biopharma company's governance process, in order to understand how they review and approve BD partnerships. Governance works a little differently at every company, but it usually involves the BD lead and scientific team presenting to both a scientific review committee and a finance review committee. These meetings are typically pre-scheduled at a regular cadence.

Coordinate your timelines for delivering term-sheet drafts, work plans, and any other agreed-upon documents with their meeting schedule, and actively help them obtain any materials they might need to pitch the partnership internally.

Also, the governance process sometimes differs based on the financial terms of the deal. For example, if it's a small pilot partnership and total potential payment is under $5M, the deal may not require full governance-committee approval. Ask if that's the case, so you can properly evaluate the tradeoffs of execution speed vs. deal value.

Having these discussions before moving to a term sheet helps ensure that proposed terms aren't wild, one-sided guesses. The term sheet should be a summary of existing discussions, with specific terms added in. Often (especially when the deal structure is complicated), it's worth putting together a rough proposal of the overall partnership structure and aligning on it before moving to an official term sheet full of legalese and financial terms. This proposal could be in the form of a slide, a one-page document, or an Excel spreadsheet.

Term sheet

Putting pen to paper

Okay, now it's term-sheet time. This document outlines the key conditions and financial terms of the partnership and serves as the basis for the final, binding contract, which is sometimes called the full definitive agreement document.

This is the stage where lawyers really get involved, so it's a good time to emphasize how important it is to hire legal counsel with extensive experience drafting and negotiating contracts for collaborative biotech BD deals. Good counsel can do more than help you draft and edit legal documents. They can also help you think through creative deal structures and understand what's an industry-standard ask from your partner and what's abnormal. Inexperienced counsel can eat up time and money, and even cause unnecessary friction that might imperil a deal. The working relationship between BD leads and legal counsel is important in successful dealmaking. Choose your lawyer wisely.

One often-debated strategic question is whether the startup or biopharma company should draft the first term sheet. There's no universally correct answer here. Conventional wisdom might suggest letting the more experienced partner go first. But, in our experience, drafting first can work to your advantage because it forces the biopharma company to react to your asks, and not the other way around.

Here's an example: Let's say you're hoping for a $50M upfront payment (the technology access fee paid at deal signing) and, during verbal discussions, you mentioned expecting "in the mid-to-high double-digit millions." That can be interpreted many ways. If you put out the first term-sheet draft and ask for $75M up front, you'll have some wiggle room. You can let your partner negotiate you down somewhat on the upfront fee and stay firm on other things. But if you let your partner submit the first draft, and they offer $30M up front, you'll have to negotiate them up — and probably give in on other requests in exchange.

Once you decide to draft the first term sheet, what goes into it? Ultimately, it should be as brief as possible while still covering all the essential terms that both companies need to agree on. A good term sheet doesn't replace the full, binding contract, but it does make the process of drafting and negotiating the contract much smoother. While there's no universal template for a term sheet, the same essential terms appear in most term sheets for a given type of deal. Having a solid grasp of them will help you determine which issues you care most about and where you're willing to compromise.

The essential components of a term sheet

(Here's an example term sheet, for reference.)

Intellectual property (IP): BD deals, especially collaborative partnerships, often generate intellectual property, such as the composition of a drug molecule or improvements to a technology platform. Ownership of IP must be determined before it's generated. Some options for ownership arrangements:

- The biopharma company (the licensee) owns any newly generated IP related to the collaboration, while the startup (the licensor) owns any improvements to their own platform technology.
- The biopharma company owns all IP generated during the collaboration.
- The IP is shared and both parties must obtain a license from the other in order to use it for commercial or research purposes.

License grant/option: As part of the agreement, at least one party will typically receive an outright license for either a specific set of IP or therapeutic assets, or an option to license that IP at a future date. The IP might already exist, or it might be created as part of the collaboration. For example, the startup might bring a new modality (existing IP) and the biopharma company might bring a drug target (existing IP) to the partnership, but then, during the course of the collaboration, a new drug molecule against the same target is developed (new IP). By structuring the license as an option, the biopharma company can lower their upfront payment and shift the financial burden to a later time when the science is de-risked, meaning once there's additional evidence that it works.

Exclusivity: This refers to the restrictions around whether and how your partner can work with additional parties on the collaboration area. Exclusivity requires careful consideration because it's a key point of leverage for a startup — biopharma companies will pay more for exclusivity. The level of exclusivity you give up can determine your future options for partnering and building your internal drug pipeline. Zones of exclusivity, which we've written about before, is the concept of carving out multiple, specific areas for exclusive partnerships. Prior to term-sheet drafting, you

should have had an honest conversation with the biopharma company to understand the level of exclusivity they want and why. There are two different areas of exclusivity that a term sheet might detail:

- ***Collaboration exclusivity***: During a defined collaboration period, the two companies might agree not to work with other partners on a specific subject area. This exclusivity could be restricted to: a defined disease area (e.g., oncology); a class of targets (e.g., all kinases); a defined list of targets that aren't in the same class; or a modality (e.g., CAR-T cells).
- ***License exclusivity:*** The biopharma company can receive a license allowing them to use IP either exclusively or non-exclusively, and they'll pay more for an exclusive license. Even with an exclusive license, additional use restrictions can be layered on top to let the startup retain value for themselves or a future partnership:
  Field: Which fields of application can the IP be used for? This could be a specific disease area (all of oncology) or indication (melanoma). The more narrowly you define a field of use, the better.
  Territory: Is the biopharma company only allowed to use their IP or sell a product in certain geographic regions or countries (e.g., just the US)?

Preclinical and clinical development: Throughout the life cycle of the collaboration, there will be decisions to make regarding roles and responsibilities. This relegation of duties can be described at a relatively high level in the term sheet, but the work plan should get more granular. Your breakdown should cover at least:

- Preclinical R&D up through development candidate nomination
- IND package preparation and filing
- Each phase of clinical development
- Manufacturing for clinical studies

Conventional advice says startups should focus only on the elements of drug discovery they're capable of doing. However, startup teams can learn a lot about clinical development by working under a biopharma company's lead. Be realistic about your resourcing and manpower needs for anything you take on — how many employees will you need to support the collaboration, and how will that complement or compete with internal priorities, such as your own drug pipeline or technology platform development?

Commercialization: A commercial product, such as an approved drug on the market, might seem far off, but you still need to plan out who will lead commercialization, sales, and marketing. Again, it's important to think carefully about what your startup wants to be when it grows up. Is your goal to become a full-stack therapeutics company that markets and distributes its own products? If so, consider negotiating option rights for co-commercialization, which allow both partners to promote the product under a single brand name. This is sometimes called "co-promotion," and it's different from co-marketing, where two companies promote the same product under different brand names.

Co-commercialization partnerships are different from simple royalty-based deals in that they often involve sharing profits and losses, as well as development costs, for the co-commercialized product. Splitting development and commercialization is sometimes called a "co/co" deal for "co-development/co-commercialization."

Co/co arrangements can be huge value-adds for startups that don't yet have the internal resources, sales force, or experience to commercialize products on their own. But it's important to think about the potential risks that come with the rewards. For example, you need to make sure you can cover your share of potentially hefty development costs. There are mechanisms to address this challenge, such as deferring payment until after the first commercial sale of a product, or allowing the biopharma company to cover them in exchange for reduced milestone payments or profit splits. Again, the name of the game is optionality: The more opportunities you have to participate in the development and commercialization of collaborative programs (if you choose to do so), the better.

Governance: Governance is fundamentally about two things: who decides and who controls. How will decisions about the collaboration be made while it's in progress, and how will they be implemented afterwards? It's easy to overlook or put off governance decisions when you're negotiating terms, but it's an issue that can make or break a partnership.

At the term-sheet stage, you'll want to indicate at a high level how governance will be structured. Most of the time, it's a good idea to have a Joint Steering Committee (JSC), a group providing guidance and oversight for the collaboration. But who will be on it? Which decisions fall to the JSC rather than to individual parties? How will disputes be resolved at the committee level? If you're considering a co/co deal structure, governance can become even more complicated as decisions such as regulatory strategy, commercialization plan, and product pricing come into play.

Economics: While the non-financial terms we just described are essential for a successful collaboration, the economics are often what face the most public scrutiny. You can pull all sorts of levers in assembling the total deal value, meaning the sum of all possible payments you might receive if everything goes well, and there's ultimately no one best way to combine them. As a company, you need to consider what you most need now and what you can delay in hopes of a bigger payoff. There are four main economic categories to consider:

- ***Up front:*** Upfront payments are technology access fees paid by the biopharma company at signing to recognize the state of development of IP and know-how that a startup has built. The more proven your platform is, the more money you can command in upfront fees. This money is yours to keep, regardless of downstream success. For better or worse, the upfront fee is also the number that garners the most press attention when a deal is evaluated publicly.But a bigger upfront fee isn't always better. Sometimes a biopharma company may be willing to pay a slightly higher upfront payment in exchange for dramatically reduced downstream payments, such as royalties. If you give up substantial total deal value for a nominally bigger upfront, you might be prioritizing short-term gains over long-term profit. Assuming you believe in your technology and the partnership, delaying some value for exponential future growth might be worthwhile unless you need cash immediately.
- ***Equity:*** It's becoming increasingly popular for biotech partnership deals to include equity in the startup as a portion of the upfront fee. This strategy can benefit the biopharma company's accounting — equity typically isn't included in profit and loss (P&L) reporting like a cash payment is, but it still gives the startup an infusion of cash and a big, splashy upfront number. It also creates aligned incentives, because the biopharma company has a financial stake in not only their own success, but also that of their startup partner. Finally, an equity stake in the startup can be an asset for the biopharma company when considering potential mergers and acquisitions down the road.But these types of equity arrangements aren't always desirable for the startup. Equity isn't non-dilutive cash; like venture

funding, it comes in exchange for a percentage of your company. Therefore, equity dollars and cash payments shouldn't be viewed as equivalent — a $50M all-cash upfront fee is different from $50M up front that includes $20M in equity.Carefully consider whether you're able to command the same level of upfront without equity, and whether you're willing to take more dilution now or be committed to giving the biopharma company a predetermined portion of your next fundraise. Regardless, reserve the equity card as a negotiation tactic to use later in the game, rather than an option to put on the table on day one.

- ***Operating capital:*** As we said before, the upfront fee recognizes the work and money you've put into developing your technology platform and gives the biopharma company access to that technology through your partnership. But it doesn't necessarily cover operating capital, meaning the cost required for the startup to run daily operations related to the partnership, such as research and development activities. Often, the biopharma company will reimburse operating costs during the collaboration, in addition to paying the upfront fee. It's important to decide in advance how ongoing costs will be tracked and reimbursed. For example, will your partner pay for a certain number of full-time employees (FTEs) working on the collaboration? Will they reimburse research costs? If so, how will costs be tracked and how frequently will reimbursements occur? Operating capital reimbursement is usually capped at a certain amount — what happens if costs go over? The nitty-gritty details will be spelled out in the full contract; your term sheet just needs to state whether or not operating costs will be reimbursed, or whether they're included in the upfront payment.

Milestones: Success-based milestones are another great way to align incentives and add value to the startup in a way that's de-risked for the biopharma company. There's no limit to the number of different milestones a term sheet can include; it depends on the specific collaboration program. But they tend to fall into four broad buckets:

- ***Research/technical achievements:*** These milestones include early R&D successes such as hit identification, development candidate nomination, and generation of an IND-enabling toxicology data package. Though typically smaller in magnitude (meaning less money), research milestones tend to arrive much sooner than other types.
- ***Clinical achievements:*** Common clinical milestones include the start of Phase 1, Phase 2 and Phase 3 clinical studies. Milestone magnitude usually increases with each clinical stage.
- ***Regulatory hurdles:*** Regulatory milestones include events such as investigational new drug (IND) application filings, FDA filings, first FDA approvals, and ex-US regulatory filings and approvals (i.e., outside US territories).
- ***Sales threshold milestones*:** Milestone payments for reaching specific sales goals, such as the first $500M or $1B in product sales.

Success-based milestone payments are often one of the easiest financial terms to negotiate. Many biopharma companies are very sensitive to high royalties or upfront payments, but one-time milestone payments that represent substantial de-risking of the program are easier to give in on. This makes milestones an important negotiating tool — startups can use them to "win back" value lost elsewhere in the negotiation.

Royalties: Every biotech startup dreams of one day getting a piece of the commercial success pie via product royalties. Royalties are a series of payments based on a percentage of product sales, paid by the commercializing company (usually the biopharma) to the BD partner where the program or technology originated (usually the startup).

Royalty rates are rarely disclosed publicly, making it difficult to analyze trends across recent deals. However, most biopharma BD partnerships include a tiered royalty structure. This means that the final royalty payment amount is a function of the total annual sales multiplied by the negotiated royalty rate for each tier of sales. For example, a biotech company might receive 8% royalties for any sales under $100M, 10% royalties for sales between $100M and $500M, and 12% royalties for any sales after they have reached $500M in one year. Tiered royalty rates typically range from low-single to low-double digits. The ultimate royalty percentage is influenced by factors such as the stage of technology or therapeutic program development at licensing, exclusivity terms, and the essential nature of the collaboration technology to the drug development program.

Royalties can be a sensitive negotiation area for many biopharma companies. They probably have internally set ranges for royalty rates that are difficult to budge on substantially. That doesn't mean you shouldn't negotiate hard for higher royalties — just know that pushback is likely.

Post-term sheet

Negotiate

You've drafted the term sheet and are ready to share it with the biopharma company. It's a good idea to schedule a call with their BD lead at the same time. This lets you explain nuances in your own words and answer initial questions before they take the document back to their team and legal counsel.

We recommend having this call 24 hours after you share the term sheet in order to give the biopharma enough time to review the document but not to ruminate. During this call, establish next steps and a timeline. For example, ask if there are scheduled governance meetings or other approval processes your partner needs to check off before they can negotiate and when they're being held. The more information you have, the better you can hold the biopharma BD lead accountable and keep the process moving along.

Negotiation style is personal; entire books have been written on the topic. It's important to figure out what style feels natural for you. Also, before going into any negotiation, make sure you have a clear sense of what you really care about and where you're willing to give in — it's good practice to write these items down in advance. In order to reach a point of mutual satisfaction, you'll need to compromise on some things. Be willing to walk away for the truly important issues and bend on the less critical ones. Your ultimate goal is to set up a long-lasting partnership where both parties walk away feeling heard and enthusiastic about the outcome. If one partner feels like they were screwed over during negotiations, the partnership is off to a rough start.

Also, resist the temptation to bloat the term sheet with nitpicky requirements and try your best to reach an agreement as quickly as possible. Some issues can be resolved later, during contracting, and don't need to be hashed out immediately.

Definitive contract drafting

With the term-sheet agreement behind you, it's time to flesh out the initial outline (the term sheet) into the full and final version — aka the definitive contract. If you have a clearly written term sheet that defines all the essential terms, drafting the full contract should be a fairly straightforward process.

As we noted earlier, we think there's a strategic advantage to the startup drafting the first copy of the initial term sheet. But that's typically not the case when it comes to the full contract. Often, biopharma transaction attorneys use standard language in all agreements, for large sections of the full contract. It might be faster (and cheaper) to start with their language unless the biopharma in-house counsel is backlogged. In that case, having your outside counsel draft the contract may save time, especially if they've worked with the biopharma company previously.

Remember that non-binding term sheets are just that: non-binding. People walk away from agreed-upon term sheets in biotech BD negotiations all the time. No deal is over until the full contract is signed.

Prepare for a successful collaboration kick-off

Signing a deal is only the first step of the partnership. Make sure you have a strategy in place for alliance management; the success of your partnership depends on the people, communication, and organization as much as on the science. Many startups fail to recognize or plan for the amount of project management required, even for smaller pilot projects. This can result in the biopharma company perceiving you as slow, inefficient, or disorganized (even if none of these are true). While JSCs may only meet quarterly, it's good practice to schedule data readouts between the project teams at least monthly. Depending on the collaboration complexity, consider hiring an alliance manager who will be responsible for all aspects of communication with the biopharma company and internal project management of the collaboration.

Even after the agreement is signed, your company needs to keep selling. In the best scenarios, initial partnerships are just the start of longer relationships. If the collaboration is successful and the biopharma company is impressed, small deals can grow into broad, strategic partnerships involving multiple collaborative programs across therapeutic areas, or even M&A. The science always needs to speak for itself, but it's not the whole equation. In the end, people do deals with people they like and want to work with.

January 25, 2022