HOW TO SELECT THE RIGHT CDMO

FOR YOUR TECH TRANSFER

By Tamas Szabo, Research & Development Director, SONEAS and,
Bernat Busquets, Head of Industrial Support, UQUIFA Spain

Drug companies seeking an advantage in today's market must find ways to increase efficiency in R&D to retain profit margins while still pursuing the objective of bringing innovative novel drugs to the market.

A common strategy for doing so is to turn to outsourcing, where they can work with a CDMO for the early-phase development and manufacture of small molecule active pharmaceutical ingredients (APIs), which can help tremendously with reduced time and costs. Yet, while these CDMOs have attributes and qualities that make them exceptional for early phase work, they are not always equipped to support a drug program past Phase 2 when there is a considerable increase in scale to accommodate larger clinical trials. This requires a new partnership with a CDMO that can accommodate late-stage development, beginning with a tech transfer of the body of knowledge for a pharmaceutical product and process.

With time being of the essence, though, it is critical this transfer is executed properly to ensure optimal process reproducibility that preserves the intended quality, efficacy, and safety of a drug product. Any mistakes or setbacks could create costly delays in your path to market. So, how can you be sure the CDMO you select is prepared to successfully execute your tech transfer?

WHAT YOU CAN LEARN ABOUT YOUR CDMO DURING THE RFP PROCESS

Vetting potential CDMOs can be an arduous task, especially when you know how damaging it can be to your program if you pick the wrong one, and there are many factors that must be evaluated to determine their competency. After all, a successful tech transfer requires not just an exchange of knowledge but also an assurance that the CDMO can adapt to the process' thermochemistry, toxicology, and safety requirements, as it is not always possible to maintain the exact parameters (e.g., temperature ranges, heating/cooling ramp timings, yields, safety, etc.) from lab to commercial scale.

For a CDMO to properly evaluate whether it has the capabilities to adapt to your product's needs, it is important you provide them with all the essential details about your product and process, such as its critical quality attributes, process details, analytical strategies, and manufacturing and technology needs, during the request for proposal (RFP) process.

This is when the tech transfer process truly begins, and the more data you provide in your RFP, the better, especially when it comes to the knowledge about your chemical process. A thorough understanding early by the CDMO helps them prepare for any potential challenges later during scale up, which requires an evaluation of its R&D, engineering, analytics, safety and environmental, and quality capabilities.

Oftentimes, early development teams do not consider commercialization and what may be required for production at that phase, which causes problems later during scale up. For example, a proper safety risk analysis from the raw material to the final product should have been done by this point, which includes documentation to justify how the material will be used and how it should be handled. Some oncology drugs require containment to avoid the release of any uncontrolled product into the environment, not only where it is manufactured but also in other areas throughout the entire facility, such as R&D or QC labs. The CDMO can then determine if any certifications or investments are necessary to accommodate those needs. This willingness to adapt a manufacturing facility and its resources for your product should give you confidence that the CDMO has the flexibility to support you throughout the life cycle of your product, which is a valuable characteristic for any partner in today's rapidly changing industry.

Flexibility is especially important should they need to pivot, whether for the purpose of improving efficiency/productivity or due to the need to meet new regulatory requirements. Find out how swiftly they can make changes and ask for examples where they have had to adjust quickly for a client in the past. You should also make sure they have a technical team that has worked with a variety of product types. This gives them the insight to identify potential issues before they could occur based on the chemistry of the product. Flexibility in the R&D team to adapt its processes to the most cost-effective materials from early stages is also important, as this can help increase long-term efficiency.

As a dedicated small-molecule CDMO, we are focused on communication, understanding client's program and objectives, and ensuring the alignment of expectations from the very beginning. In response to an RFP, our teams will dig deep to ensure there is proper site selection and equipment mapping and that they have the key capabilities, capacity, and experience needed for the project. They will then produce a comprehensive work proposal that outlines key information the customer will need to know moving forward.

YOUR CDMO MUST-HAVES

As a new drug makes its way to market, its manufacturing requirements change at each phase of development. In the early stages, discovery chemists are tasked with developing a process to produce only a small amount of materials. However, what works at a small scale is rarely what should be used for commercial scale manufacturing. That is why the CDMO you choose must have R&D and manufacturing expertise that can apply effective process optimization techniques, as they can not only strengthen your process but also save time by eliminating possible delays related to issues during API scale up, allowing you the supply you need for late-phase clinical trials and commercial launch.

The chemical route/reaction scheme your CDMO ultimately uses to manufacture your compound at a commercial scale should maximize yield as well as prevent manufacturing barriers, such as expensive and hard-to-get reagents and unsafe reactions. If optimization is not properly performed in the early stages of the transfer, changes will likely need to be made later to improve efficiency. This can lead to additional registration costs, time, and complexity, as you will need to update your Drug Master File with the FDA and other regulatory bodies.

It is also important you are evaluating the potential CDMO for the appropriate levels of regulatory compliance even during the evaluation process. Ask about governance of materials and processes, including reporting protocols, change management procedures, raw materials procurement plans, analytical methods, and transfer protocols. They must have a robust quality management system and policies that are in alignment with ICH Q10 guidelines, as this ensures quality is built into every process and effective risk management techniques are used to enable effective decision-making and risk mitigation. How intensive a CDMO's preparation is for their "execution phase" can help avoid potential problems and make the program run smoother.

Also, ask how they prepare documentation, including reports and other materials for the FDA.

A successful tech transfer also requires collaboration between your team and theirs that facilitates a continuous flow of information and shared insights. This is not possible, though, without a focus on communication and integration. The CDMO's project management team should do their due diligence to ensure your expectations are defined clearly and accurately from the very beginning. It is also important to maintain contact with you throughout the project to make sure they can appropriately react to unexpected changes.

For example, our project management team informs its customers any time R&D has advanced through a step in the transfer process. This includes reports with data they have collected, any conclusions they have come to, and what, if any, risks they have identified along the way. We understand that transparency is essential in any partnership. Across our sites, we display a commitment to our values of Customer Centricity & Compliance. We realize these are important to move your candidate from the bench to the market.

Our team also appreciates the importance of agility in the early RSM /API development projects. Our integrated service offering spanning discovery through early phase technology development, process optimization and finally, scale-up under one umbrella offers your project flexibility with agility. We work with our customers´ larger objectives in mind, right from the beginning.

A CDMO YOU CAN TRUST

Partnering with a CDMO that has the skills and capabilities to execute a successful tech transfer is critical, as this complex, multi-step process helps lay the foundation for your product's journey through to commercialization. Therefore, you must ensure the one you select meets your checklist of must-haves as well as provides the open communication and transparency needed to establish the most important component of your relationship — trust.

With over 85 years of experience developing and manufacturing small molecules, we have not only the knowledge and tools to successfully execute transfer activities but also the track record of success to prove it.