Collaborating with Academia: What You Need to Know

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Editor's Note: Pharma/biotech companies and universities, though previously somewhat insulated from each other, are developing close ties as industry seeks new technologies and universities attempt to capitalize on the commercial value of their research enterprises. Because the relationships developed can vary markedly, and expectations on each side may be quite divergent, attendant agreements need careful evaluation and negotiation up front. This paper provides for JBS readers an overview of various mechanisms for interactions and their key elements.

In today’s economy, the trend towards outsourcing and creating strategic alliances has never been greater. Increasingly, pharmaceutical and biotechnology companies are looking towards academic science as a source of new ideas and technologies. Although these collaborations can be very rewarding for all parties, an understanding of the interests of each party is essential for each party to realize such rewards.

Industry/academia partnerships were never wholly encouraged until 1980, when the Bayh-Dole Act was passed. This act allows universities to retain ownership of patents generated through federally funded research, and encourages universities to work with industry to commercialize the inventions resulting from such partnerships. Since the enactment of the Bayh-Dole Act, the amount of industry-funded research at universities has increased dramatically. For example, corporations spent nearly $2 billion in sponsored research at universities in 1998. The Association of University Technology Managers estimates that university licenses helped generate more than $40 billion in economic activity in 1999. In view of the amount of money that is now changing hands between companies and universities, it is extremely important that agreements between the parties be formalized before any research begins and that expectations are clearly spelled out so that all parties can benefit from the collaboration.

The Council on Government Relations has identified six vehicles that can be utilized to govern the relationships between universities and companies:

1. **Sponsored research**: This vehicle is utilized most frequently and involves the direct funding of university research projects by companies.

2. **Consortia**: This vehicle involves groups of companies and/or universities that are engaged in related research projects.

3. **Technology licensing**: Using this vehicle, companies license and commercialize technology that originally was developed at universities.

4. **Start-up companies**: These companies usually are founded by university personnel who, by virtue of legal agreements, either license or purchase university technologies.

5. **Exchange of research materials**: Companies obtain proprietary materials from universities and then use such
materials to advance their own research. Such transfers usually are effected by a Materials Transfer Agreement.

6. Research collaboration: This vehicle enables companies and universities to work together to advance the state of the art. These arrangements usually are supported and encouraged through partial federal funding.

Although all of these types of alliances are valuable and each offers specific benefits, this article focuses on research collaborations and the license agreements that result from them.

Research Collaborations and Licensing Agreements

In a 1995 report, the Industrial Research Institute examined the motives for universities and companies to enter into research collaborations and identified the following benefits provided by research collaborations:

Industry Benefits

- To access expertise not available in corporate laboratories
- To aid in the renewal and expansion of a company’s technology
- To gain access to students and postdoctoral fellows as potential employees
- To use the university as a means of facilitating the expansion of external contacts for the industrial laboratory
- To expand precompetitive research, both at universities and at other companies
- To leverage internal research capabilities

University Benefits

- To obtain financial support for the university's educational and research mission
- To fulfill the university's service mission
- To broaden the experience of students and faculty
- To identify significant, interesting, and relevant problems
- To enhance regional economic development
- To increase employment opportunities for students and post-doctoral fellows

Provisions dealing with ownership of inventions, discoveries, and improvements that result from the collaboration are a focal point of Research Collaboration Agreements. These types of provisions dictate whether one party will own the technology developed during the course of the Research Collaboration Agreement or whether the parties will hold the technology jointly. In most instances, the parties agree that the technology either will be solely owned by the university or jointly owned. In many instances, the ownership of the technology depends on whether an employee of the funding entity is a co-inventor of the patented technology. In many cases, because universities are subject to federal and/or state funding, they are required by law to retain sole ownership of the technology. It is important for the funding entity to determine what obligations, if any, the university has to any granting agencies from which it has received funding before entering into a collaboration. For purposes of the discussion that follows, the reader should assume that the university is the sole owner of the technology and that the funding entity cannot practice the patented technology without the university’s consent.

A License Agreement is the means by which the university grants the funding entity the ability to practice the patented technology. A License Agreement is merely a waiver of a right to sue or prosecute the licensee for conduct that, absent the license, would be actionable. Accordingly, a patent license is a waiver by the patent owner of its right to exclude the licensee from making, using, selling, offering for sale, or importing the claimed invention. Without such a license to the funding entity, the university, as the owner of the patented technology, may prohibit the funding entity from practicing the claimed invention even though the funding entity financially supported the research that resulted in the patented technology.

Most Research Collaboration Agreements adequately describe the means by which the agreement will operate, the goals of the underlying research, and the responsibilities of each party. Research Collaboration Agreements usually state that the funding entity will have the option to obtain a license to the technology developed during the course of the research collaboration on execution of a License Agreement covering the patented technology. If one assumes that the primary reason companies enter into research collaborations with universities is to expand the company’s technology base, then the most important provisions of the Research Collaboration
Agreement are the provisions that govern the terms of the License Agreement.

Accordingly, it usually is in the interest of both parties to finalize a written License Agreement when the Research Collaboration Agreement is negotiated and to include the License Agreement as an appendix to the Research Collaboration Agreement. Alternatively, the provisions of the License Agreement can be set forth in the Research Collaboration Agreement. The following discusses several important License Agreement terms that should be considered.

**Time frames** If the License Agreement is not included in the Research Collaboration Agreement, a time frame should be established during which the License Agreement must be executed. This is often described as an option period, in which the funding entity has an option to obtain a license for a certain period of time after disclosure of the technology by the university. Negotiating the main provisions of the License Agreement before the research collaboration begins reduces the likelihood that the licensor will delay the negotiations in order to obtain more favorable licensing terms. However, in any business arrangement, especially one that turns on technology that may have a limited window of utility, the interests of both parties usually are furthered by establishing and enforcing deadlines and obligations that are well understood by both parties.

**Exclusivity provisions** The License Agreement should state whether an exclusive or a non-exclusive license is being granted. In an exclusive license, the licensor gives all its rights to the licensed technology to the licensee. Accordingly, the licensor cannot license the licensed technology to any other party and the licensor promises not to practice the licensed technology itself. In contrast, a nonexclusive license conveys limited rights to the licensed technology to the licensee. Therefore, the licensor of a nonexclusive license retains the right to use the licensed technology itself and/or to grant additional licenses to third parties. The royalty fees and related payment obligations usually are higher for an exclusive license than for a nonexclusive license.

**Field of use** The “field-of-use” provision enables the licensor, presumably the university, to divide the licensing rights pertaining to one patent or group of patents among various applications, markets, or geographical areas. An example of a license that divides the licensing rights among various applications is a license to a computer chip that provides that one licensee may use the chip in the manufacture of printing devices, a second licensee may use the chip in the manufacture of hand-held devices, and a third manufacturer may use the chip in the manufacture of cellular telephones. An example of a license that divides the licensing rights among various markets is a license to an athletic shoe that provides that one licensee may sell the patented shoe to large retail stores and a second manufacturer may sell the patented shoe to specialty stores.

The university as a licensor often will seek to obtain a narrow field-of-use provision that allows the licensor to retain the right to license the patented technology to numerous third parties. Similarly, the university may grant a nonexclusive license to the funding entity. In contrast, the licensee is favored by a broad and exclusive field of use that allows the licensee to avoid competition. At a minimum, the licensee would want the field of use to cover the specific area of technology in which its business operates, the markets in which it anticipates doing business, and the geographical areas in which it conducts operations.

**Financial terms** The following payments typically are included in a License Agreement:

- **Up-front licensing fee.** This fee is paid by the licensee on the date that the License Agreement is executed (i.e., the effective date). Up-front licensing fees range from nominal fees such as $10,000.00 to several million dollars. Typically, when the research is sponsored by a small company or a start-up venture, the license agreements resulting from research collaborations do not include an up-front licensing fee. When the funding entity is a large corporation with an established market, it usually will have negotiated in advance the fees, if they are to be anything other than nominal. It is reasoned that the money the funding entity contributed during the research collaboration negates the need to pay an additional up-front fee, because the technology resulted from the sponsored research.

- **Licensing maintenance fees.** This fee usually is paid annually by the licensee on the anniversary date of the effective date. This is often used as a device to assure that the funding entity brings the technology to market. In many
instances, the licensing maintenance fee is waived provided the royalty revenue for the previous year has reached its minimum value. An alternative to maintenance fees is a provision in the License Agreement that requires the licensee to exert its best efforts to commercialize the technology. Typically, license agreements resulting from research collaborations do not include a licensing maintenance fee but do include a “best efforts” provision.

Royalties. A royalty is a payment made under a License Agreement to the owner of a patent. Rather than setting the royalty payment at a fixed dollar amount, royalty payments usually are calculated as a percentage of the net sales price of the patented item. One should review the terms of the Licensing Agreement carefully in order to understand the basis on which the royalty payment is calculated. For example, if the patented item is a computer chip, a royalty payment that is 6% of the price of the chip will be significantly lower than a royalty payment that is calculated as 6% of the price of the computer. As in the case of licensing fees, the funding entity that sponsored the research usually is charged a lower royalty rate than a third party that has no involvement in the development of the technology.

Sublicense. A license is granted by a licensor to a licensee. In contrast, a sublicense is a license granted by a licensee to a third party. The right to grant sublicenses must be specifically addressed in the License Agreement. In the absence of an express provision granting the licensee the ability to offer sublicenses, the courts will presume that the licensor did not intend to grant the licensee this right.

Sublicensing provisions in a License Agreement often are the subject of heated negotiation because the ability to grant sublicenses is quite valuable. For instance, a company that is authorized to grant sublicenses could charge a higher royalty to the sublicensees than the company is required to pay to the licensor, thereby generating a stream of revenue for itself. Conversely, sublicensing may increase licensing revenues for the licensor. When sublicensing rights are granted, they often are conditioned upon the licensor’s prior approval.

Conclusion
As detailed above, companies enter into Research Collaboration Agreements with universities for many reasons. However, the primary reason is that companies wish to utilize these arrangements to increase their technology base without needing to increase their investment in research and development infrastructure. The License Agreement is the medium through which this occurs.

If a company is unable to negotiate a license to the patented technology developed under the Research Collaboration Agreement, then its efforts and capital expenditures during the life of the Research Collaboration Agreement will have been in vain. By obtaining agreement on the main provisions of the License Agreement before the research begins, companies protect their ability to obtain licensing rights to any patentable inventions that result from a research collaboration. In turn, the university ensures that its professors, staff and students are involved in well-financed research projects, and if the research yields commercial applications, the university can realize additional financial benefits.

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