

Bond Case Briefs

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As Simple as It Can Be but Not Simpler: Science, Taxes, and Bonds.

by Peter H. Serreze

Peter H. Serreze discusses the tax issues that tax-exempt research organizations face as they increasingly engage in quasi-commercial activities or activities sponsored by industry.

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With the recent and potential future decline in governmental funding, many nonprofit research organizations are increasingly venturing into the world of commerce. This report examines the issues raised by this trend under the tax law restrictions applicable to the use of facilities financed with tax-exempt debt.

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Table of Contents

I. Private Business Use — Overview

A. Types of PBU

B. Calculating PBU — Overview

C. Calculating PBU — Example

D. Calculating PBU — Equity Allocations

E. IRS Enforcement

II. Private Business Use From UTB Activities

A. Introduction

B. 'Scientific' Purposes

C. Scientific Research in the Public Interest

D. Promotion of Health as a Tax-Exempt Purpose

E. Example — Genetic Testing Laboratory

III. Commercially Sponsored Research

A. Introduction

B. Rev. Proc. 2007-47

C. Interpretive Questions

D. Strategies for Compliance

IV. Conclusion

Someone once wisely observed the following: “Everything should be as simple as it can be, but not simpler.” These are words to live by. Situations in which these words provide good counsel come easily to mind: writing an e-mail to a client, decorating an office, selecting an Internet banking password, picking out a gift for an important wedding anniversary, etc. Someone should post the quote in the hallway of the factory where tax laws are made and have the workers high-five it on the way by, like college football players.

So who was the wise observer? Yogi Berra? Good guess, but no. It was Albert Einstein.¹

It’s always a bit ironic to invoke Einstein as inspiration for anything tax related. He once had to call in a tax adviser to help with an income tax form. When asked for his comment about the form, Einstein said, “This is a question too difficult for a mathematician. It should be asked of a philosopher.”² He also once complained to his tax accountant, “The hardest thing in the world to understand is income taxes.” When the accountant responded, “There is one thing more difficult, and that is your theory of relativity,” Einstein replied, “Oh, no, that is easy.”³

Whatever Einstein’s feelings about taxes, the days when taxes could be safely dismissed by the nonprofit scientific community, if they ever existed, have surely passed. In recent decades, scientific research in the United States has become more of a commercial affair. Between 1977 and 2003, the proportion of funding for scientific research in the United States supplied by industry increased from 29 to 61 percent.⁴ Many nonprofit scientific research organizations — including research universities, academic medical centers, and independent research institutes — have developed important relationships with industry. Those relationships can take a variety of forms, including the funding by a company of a discrete research study, the sponsorship by a company of a research program or center, or a joint venture between a company and the research organization. According to a 2006 survey, 67 percent of medical schools and large independent teaching hospitals maintained relationships of one form or another with industry.⁵

Various factors have been cited as driving the growing connection between nonprofit research organizations and industry, including the development by universities of commercializable advances in life sciences technologies, the emphasis by the National Institutes of Health (NIH) on interdisciplinary and translational research, and the 1980 enactment of the Bayh-Dole Act. That legislation, which granted universities most proprietary rights over technologies developed through federally funded research, laid the groundwork for universities to license technologies to industry.⁶

This trend has been amplified recently by circumstances involving the federal budget, including sequestration, which required NIH to shave 5 percent or \$1.55 billion from its fiscal 2013 budget and to apply the cut evenly across all programs, projects, and activities.⁷ Further NIH budget cuts may be inevitable, given the country’s untenable long-range fiscal outlook. The recent and potential future loss of funding from NIH — the world’s largest source of funding for biomedical research⁸ — has caused many nonprofit research organizations to look elsewhere for revenue. In addition to

funding from nonprofit foundations, substitute sources of funding include collaborations with or sponsorships by industry, or entry into revenue-generating lines of business, like genetic testing.

As a nonprofit research organization seeks to develop or expand its industry connections and quasi-commercial activities, the organization should consider the federal income tax consequences. This is particularly important for organizations that have financed their research facilities with the proceeds of tax-exempt bonds. For the bonds to maintain tax-exempt status, any activities conducted within those facilities generally must comply with the limitations on private business use (PBU) under sections 141 and 145. The PBU analysis involves considering whether the activity itself is substantially related to the organization's tax-exempt purposes, as opposed to constituting an unrelated trade or business (UTB) under section 513. The analysis also involves considering whether the transfer of intellectual property rights to any commercial sponsor qualifies for the safe harbor provided by the IRS in Rev. Proc. 2007-47.9

While the core tax principles are straightforward enough, many industry or quasi-commercial arrangements present issues that have not been directly addressed by IRS or other guidance. The legal rules in the area are represented in general by long-standing Treasury regulations, judicial decisions, and IRS guidance, which have not kept pace with the evolving ways in which sponsorship, collaboration, and other arrangements involving nonprofit research organizations are structured. In my experience, the lack of guidance has caused confusion, and divergence of practice, among nonprofit research organizations as they seek to expand their connections with industry and involvement in quasi-commercial activities.

This report aims to provide guidance to nonprofit research organizations and their counsel on common PBU questions that are not clearly addressed by existing authorities. It proposes a framework for assessing whether a given activity of an arguably commercial nature may nonetheless fall within the categories of "scientific research" or "promotion of health," as those terms are used in section 501(c)(3) and the regulations thereunder, and thereby avoid classification as a UTB and PBU. This report also describes the issues that some technology-licensing provisions in commercially sponsored research agreements raise under Rev. Proc. 2007-47, and it suggests strategies for structuring those agreements to reduce the PBU risk.

One note on scope — the type of research addressed by this report is laboratory or "bench" research. The PBU issues raised by clinical research (a.k.a. "clinical trials") are not specifically addressed here.

I. Private Business Use — Overview

Nonprofit research organizations often finance their facilities with the proceeds of tax-exempt "qualified 501(c)(3) bonds" under section 145, a subset of the larger category of state or local governmental bonds the interest on which is exempt under section 103. Qualified 501(c)(3) bonds are issued by a state or local government issuer, and the proceeds are loaned to a section 501(c)(3) borrower, which agrees to pay the principal and interest on the bonds to bondholders. Because bondholders do not pay tax on the interest they receive, they are willing to accept a lower interest rate than if the interest were taxable. For nonprofit research organizations, the ability to borrow through the issuance of tax-exempt bonds significantly reduces the cost of financing capital improvements.

That cost reduction, of course, is the result of a subsidy from the federal government. As a condition of providing that subsidy, Congress created various rules to ensure that qualified 501(c)(3) bonds would be issued for predominantly public or charitable purposes, not to benefit private or commercial interests. Those rules limit the amount of PBU that a bond issue may have without

jeopardizing its tax-exempt status.¹⁰

PBU generally means the use of bond-financed property in a trade or business carried on by a private user.¹¹ A private user is any entity other than (1) a state or local governmental unit, or (2) a section 501(c)(3) organization acting in furtherance of its exempt purposes.¹² In other words, use by a state or local government or by a section 501(c)(3) institution in furtherance of its exempt purposes is not PBU. By contrast, a commercial business is a private user. And similarly, proposed regulations provide that a partnership (including a limited liability company treated as a partnership for tax purposes) is a private user unless, in general, all the partners are themselves state or local governmental units or section 501(c)(3) organizations acting in furtherance of their exempt purposes.¹³

A. Types of PBU

A use of bond-financed property is PBU only if it falls within one of several categories of uses. The categories that are typically relevant for research organizations include the following:

Leases. A lease of bond-financed property by a private user is PBU.¹⁴ So if the institution leases space in the ground floor of a bond-financed building to, say, a Starbucks, PBU arises. There is an exception for specified incidental uses like automatic teller machines, advertising displays, and kiosks.¹⁵

Management or service contracts. A contract under which a private user provides services with respect to bond-financed property may be PBU depending on the facts and circumstances.¹⁶ PBU does not arise, however, from contracts providing for incidental services — janitorial contracts, equipment repair contracts, and similar uses.¹⁷ Further, a management or service contract that satisfies the requirements of Rev. Proc. 97-13¹⁸ qualifies for a safe harbor from PBU. For a research organization, the most common circumstance that triggers an analysis under Rev. Proc. 97-13 is probably the hiring of an outside company to run the cafeteria. Rev. Proc. 97-13 is complex and will not be discussed in detail here, but as a broad generalization, the shorter the contract term and less variable the compensation paid to the service provider, the more likely the contract is to qualify for the safe harbor.

Ownership. The transfer of ownership of bond-financed property to a private user is PBU.¹⁹ Importantly, there is no 5 percent PBU allowance when it comes to ownership. If any property financed by qualified 501(c)(3) bonds is transferred to a private user, unless so-called remedial action is taken, the entire bond issue may fail to qualify for tax-exempt status.²⁰

UTB. Use of bond-financed property by the research organization or other section 501(c)(3) organizations in a UTB, within the meaning of the rules concerning unrelated business taxable income, constitutes PBU.²¹ The concept of a UTB, and issues that arise under this category of PBU, are discussed below.

Commercially sponsored research contracts. Use of bond-financed property in connection with a research contract sponsored by a private user may be PBU depending on the facts and circumstances. A safe harbor from PBU, however, is provided by Rev. Proc. 2007-47. The revenue procedure, and issues that commonly arise under it, are discussed below.

Joint ventures. According to proposed regulations, a joint venture (whether structured as a partnership, LLC, or contractual joint venture treated as a partnership for federal income tax purposes) with a private user is PBU when the activities conducted by the joint venture are located in bond-financed property.²²

Special legal entitlements. An arrangement that conveys a special legal entitlement to bond-financed property that is comparable to another recognized category of PBU, is PBU.²³

Costs of issuance. The use of bond proceeds to finance issuance costs of the bond issue, including underwriter’s discount, is PBU.²⁴

B. Calculating PBU — Overview

The limit on PBU is generally 5 percent of the proceeds of the bond issue.²⁵ There is no PBU limit for the research organization as a whole; rather, the limit is applied to each of the organization’s bond issues.²⁶

The first step of the calculation is to trace the bond proceeds to the projects they financed, because initially PBU will be calculated on a project-by-project basis. The next step is to determine how much of the proceeds used for a given project is tainted with PBU. If the project is entirely PBU, all the proceeds used for the project are considered tainted. But typically, a project will have a combination of uses, so it becomes necessary to allocate the spending on the project between PBU and tax-exempt use. Borrowers have some discretion in choosing an allocation method, as long as the chosen method is reasonable, and Einstein’s advice to keep things simple should be heeded here. Most commonly in practice, allocations are performed on a relative square footage basis. But in some cases, a relative square footage method wouldn’t make sense (for example, when the same physical space is used interchangeably for PBU and tax-exempt use, or the relative fair market value of the space used for PBU and tax-exempt use is not comparable), in which case the allocation may be based on another factor, such as relative revenues, relative fair market rental value, or relative time of use.²⁷

Next, once the amount of PBU proceeds has been determined for each project financed by the issue, those PBU amounts are combined to arrive at the amount of PBU for the issue for the year. That total amount of PBU is then divided by the total amount of bond proceeds, to produce a PBU percentage for the year.

This calculation is performed every year during the applicable measurement period for the issue.²⁸ The annual PBU percentages are averaged together, and the average PBU percentage over the measurement period is compared against the PBU limit.

In one sense, the fact that PBU compliance is measured on an average basis over the measurement period is helpful to borrowers, because exceeding the PBU limit in any particular year is not necessarily fatal. In another sense, however, it may be burdensome, because in order to be prepared for a possible future IRS audit of the bonds, borrowers need to maintain records establishing PBU compliance over a period that typically lasts decades.²⁹

C. Calculating PBU — Example

Here is a simple example illustrating how a PBU calculation is performed:

Total

Use	Proceeds	PBU %	PBU
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1. Renovation of administration building (lease to Starbucks) footage)	\$10 million	1% (based on rentable square	\$100,000
2. Upgrade/expansion of research lab (noncompliant research)	\$10 million	5% (based on revenues)	\$500,000
3. Cost of issuance	\$300,000	100%	\$300,000
Total	\$20.3 million		\$900,000

$$\text{PBU \%} = 0.9\text{m}/20.3\text{m} = 4.43\%$$

The example assumes there is a bond issue with an issue price of \$20.3 million that financed two projects: the renovation of an administration building and the upgrade and expansion of a research lab. The administrative building renovation cost \$10 million. The building is used solely for tax-exempt use, except for a lease to a Starbucks on the ground floor, which accounts for 1 percent of the building's rentable square footage. One percent of \$10 million is \$100,000, so the PBU of the administration building project contributes \$100,000 of PBU toward the issue as a whole.

The upgrade and expansion of the research lab cost \$10 million. Different kinds of research are performed in the building, funded by different sources. Some of it is PBU research (discussed below), and some of it is tax-exempt research. A research lab is an example of a project in which it often doesn't make sense to do an allocation based on square footage because a single lab may be simultaneously used for many different research studies, some of which give rise to PBU and some of which do not. A common way to measure PBU in a research lab context is based on relative funding for the research.³⁰ This example assumes that 5 percent of the total funding for research performed in the lab relates to PBU research contracts. Five percent of \$10 million is \$500,000, so the research lab project contributes \$500,000 of PBU toward the issue as a whole.

The issue also financed issuance costs of \$300,000. These are considered 100 percent PBU, so they contribute \$300,000 of PBU toward the issue.

Finally, to calculate the overall PBU percentage of the issue for the year, the PBU dollars for the issue are added together (\$900,000) and divided by the total proceeds of the issue (\$20.3 million) to produce an annual PBU percentage of 4.43 percent for the issue. As noted, this calculation would be done every year during the measurement period, and the average of the annual PBU percentages

over the measurement period would be compared against the 5 percent PBU limit.

D. Calculating PBU — Equity Allocations

Before leaving the subject of PBU calculations, the subject of equity allocations merits some attention. The idea is that if the institution has a project that is financed both by tax-exempt bond proceeds and other sources of funding (for example, gifts, reserves, or taxable debt), the other sources of funding — which are commonly called “equity” — in principle should be allocable to PBU in the project, thereby reducing or eliminating the PBU of the tax-exempt bond proceeds.

To illustrate, let’s say that the research lab project in the example was not financed with \$10 million of bond proceeds, but rather with \$9.5 million of bond proceeds and \$500,000 of equity. In that case, the equity financing percentage of the project would be 5 percent, and it should be possible to allocate the equity financing to the PBU in the project — which, as indicated above, is 5 percent. If so, the PBU in the project attributable to tax-exempt bond proceeds is reduced to zero, and in turn, the overall amount of PBU in the bond issue is reduced from \$900,000 to \$400,000, or from 4.43 to 1.97 percent.

There are no currently effective Treasury regulations on the subject of equity allocations, nor, to my knowledge, are there even any particularly helpful private letter rulings or other authorities. Proposed regulations issued in 2006 generally countenanced the practice of allocating equity to PBU,³¹ subject to many technical requirements that in several respects have been criticized for being overly complex and inflexible.³² Finalization of the regulations is not imminent. Given the lack of guidance, research organizations and their counsel commonly confront issues involving equity allocations that fall into a gray area. In my view, until the adoption of final regulations or other IRS guidance, it would be prudent for research organizations to comply at least with the following three principles, which generally align with the proposed regulations and common practice. First, equity may be allocated to PBU in a project only if it is contributed contemporaneously to the project along with bond proceeds.³³ For example, if the research lab in the example above was originally constructed in 1995 using \$5 million of donated funds, and then in 2010 the lab was upgraded and expanded with \$9.5 million of bond proceeds and \$500,000 of equity, the organization would not get credit for the 1995 equity contribution in calculating the PBU of the 2010 bond issue. Only the \$500,000 of equity contributed toward the 2010 upgrade and expansion could be allocated to PBU.

Second, for an equity allocation to PBU to be effective, a comparison of the tax-exempt use and PBU of the project must be apples-to-apples — or in the words of the proposed regulations, the uses must be on the “same basis.”³⁴ For example, in the research lab example above, the PBU of the research lab (research use under nonqualifying commercially sponsored research contracts) and the tax-exempt use of the research lab (research use under qualifying sponsored research contracts) are on the same basis, and an allocation of equity to PBU should be allowable. By contrast, if the research facility were managed by a for-profit company under a management contract not qualifying for the safe harbor of Rev. Proc. 97-13,³⁵ the PBU of the research lab and the tax-exempt use of the research lab would not be on the same basis, and an equity allocation may be ineffective.

Third, the borrower should document in writing, at the time the bonds are issued or at least before the start of the measurement period,³⁶ its intent to contribute equity to the project and to have the equity apply to any PBU that may arise in the project.³⁷

Let’s pause here and remember Einstein’s advice to keep things simple. A nonprofit research organization can promote simplicity by including, in addition to tax-exempt debt, some taxable debt or other equity in the plan of finance for any construction project. Typically, only a relatively small portion of the organization’s research funding is derived from commercially sponsored

arrangements. A relatively small equity financing component — say, 20 percent of the plan of finance — may be sufficient to enable all industry-sponsored and quasi-commercial activity to be allocable to equity. If so, the organization may entirely avoid the need to structure those activities in a manner that avoids PBU, which would reduce its compliance burden and potentially expand the range of business opportunities it could pursue.

E. IRS Enforcement

If the IRS determines on audit that PBU has exceeded the limit for a research organization's bond issue, the bond issue may become taxable both retroactively, back to the date of issuance, and prospectively. Technically, the party liable to the IRS for the unpaid tax would be the bondholders. Ultimately, however, the liability may be borne by the research organization, either through lawsuits filed by the bondholders (or a trustee acting as their representative) or, more commonly, through a settlement payment made to the IRS in exchange for leaving the tax-exempt status of the bonds intact.

The IRS has increased its enforcement efforts in recent years. The annual information return filed by section 501(c)(3) organizations, Form 990, now includes a separate attachment, Schedule K, that requires detailed disclosure regarding the organization's tax-exempt bonds and bond compliance, including PBU percentages for some issues. Also, the IRS has been conducting an audit initiative that focuses on Schedule K.³⁸ Apparently, the IRS is reviewing the answers on Schedule K, and if it sees anything that raises a red flag, it may start an audit.

In recent years, the IRS has been encouraging borrowers to adopt written bond compliance procedures — that is, internal guidelines describing the steps the borrower will take to maintain compliance with the tax-exempt bond rules, including the PBU rules. One form of encouragement for adopting written procedures has been through the IRS voluntary closing agreement program (VCAP).³⁹ Under VCAP, borrowers that come forward and disclose violations voluntarily receive more favorable treatment than if the violations were discovered on audit. While VCAP is available to borrowers regardless of whether they have adopted written procedures, some advantageous settlement terms under VCAP are applicable only to borrowers that have adopted written procedures containing specified elements.⁴⁰ Further, the IRS has indicated that both under VCAP and in an audit, it may treat the adoption of written procedures as a favorable factor in determining resolution terms.⁴¹

Given these IRS incentives, any nonprofit research organization that has not already adopted written bond compliance procedures should do so. Examples of other organizations' written procedures, which an organization might find useful as models, can be easily found by doing an Internet search for "university bond compliance procedures."

II. Private Business Use From UTB Activities

A. Introduction

As indicated above, for a nonprofit research organization, one category of PBU is a UTB conducted by the organization in bond-financed facilities. Under section 513, a UTB generally means any trade or business whose conduct is not substantially related to the advancement of the organization's tax-exempt purposes.⁴² Income derived from a UTB regularly carried on is treated as UBTI and subject to federal income tax, unless an exception to UBTI is applicable.⁴³ However, the PBU characterization of a given activity depends on whether the activity is a UTB, not whether UBTI results from the activity.

An initiative that involves industry collaborators or otherwise has a quasi-commercial nature may raise the question whether the initiative constitutes a UTB for the nonprofit research organization. This issue is arising more frequently as research organizations seek to replace declining NIH support with industry funding or other revenue-generating activities.

B. 'Scientific' Purposes

To treat an activity as tax-exempt and not a UTB, it is necessary to identify a close connection between the activity and the advancement of a recognized category of tax-exempt purpose. One category of tax-exempt purpose recognized by the code — and typically the basis on which the section 501(c)(3) status of independent nonprofit research organizations rests — is scientific purposes, with the regulations adding the requirement that the scientific purposes must be carried on “in the public interest.”⁴⁴

The term “science” has been defined for this purpose as “the process by which knowledge is systematized or classified through the use of observation, experimentation, or reasoning.”⁴⁵ An activity is generally scientific research “if professional skill is involved in the design and supervision of a project intended to solve a problem through a search for a demonstrable truth.”⁴⁶ However, the Tax Court has said that research is not the only activity that can be scientific.⁴⁷ For example, the development of prototypes and models can qualify as a scientific activity.⁴⁸

That an individual study may be performed by a tax-exempt organization for a commercial enterprise on a research-for-hire basis does not prevent the study from being considered scientific.⁴⁹ Nor does the fact that a study is categorized as applied or practical research (as opposed to basic or fundamental research) prevent the study from being considered scientific.⁵⁰

However, scientific research does not include “activities of a type ordinarily carried on as an incident to commercial or industrial operations, as, for example, the ordinary testing or inspection of materials or products or the designing or construction of equipment, buildings, etc.”⁵¹ For example, an organization that performed tests on products submitted by its member fire insurance companies and conducted experiments into the causes of losses suffered by its members was held to be acting essentially as a commercial testing laboratory, not as a scientific organization.⁵²

In practice, however, these principles are not particularly instructive for many activities of nonprofit research organizations, which may fall on various points on the spectrum between pure scientific research and pure commercial activity. While the issue is inherently fact-specific and not amenable to clear line drawing, a review of authorities reveals some characteristics that may support treating an activity as scientific:

1. **Sophistication.** The degree of sophistication of the work is a key factor distinguishing scientific activity from ordinary testing. If research activity is highly technical and capable of being performed only by trained professionals, the research may qualify as scientific.⁵³ By contrast, scientific research does not include ordinary testing or inspection of materials or products — that is, “generally repetitive work done by scientifically unsophisticated employees for purposes of determining whether the item tested met certain specifications.”⁵⁴ For example, in *IIT Research v. United States*, one of the organization’s activities considered by the court was a NASA-sponsored contract to develop and manufacture a special exterior spacecraft paint that would reflect solar rays and enable the craft to maintain temperature control. The IRS argued that the activity was “simply a contract to sell paint for spacecraft.” The court disagreed, holding that the activity constituted scientific research. It observed that the research and development of the paint could be performed only by polymer chemists or other research staff, not paint technicians, and that the process for making it was very expensive.⁵⁵

2. Building blocks of knowledge. Although an individual activity on its own may not hold the prospect of a significant discovery, the activity may well be considered scientific if it adds to the organization's accumulation of knowledge or capabilities in a field of science. As noted in IIT Research, individual contracts may be "'building blocks' in an evolving structure of knowledge." In that case, one of the organization's activities was to collect gases released by the sponsor's manufacturing plant and report to the sponsor — a defense contractor — on the concentration of specified chemicals found. On its own, that activity may appear closer to ordinary testing than scientific research.⁵⁶ However, the court held that the activity qualified as scientific, noting that the research organization was selected for the work based on its expertise in toxic emissions and previous experience working with munitions plants and that the contract was "part of the overall air pollution research" done by the organization.⁵⁷

By contrast, in *Midwest Research Institute v. United States*, an organization developed a specialized lubricating product for components used in the national space program and performed lubricating services using the product. The court held that although the development of the product qualified as scientific research, the lubricating services did not. It said, "no evidence was offered to indicate that the lubrication service here in issue led to additional developments in the improvement of the lubrication material or produced benefits to other research conducted by plaintiff."⁵⁸

3. Essential product or service used in science. Some activities may qualify as scientific if they provide a product or service that is unique and essential to a field of science. For example, in *Edward Orton Jr., Ceramic Foundation v. Commissioner (Orton)*,⁵⁹ the court considered an organization, formed to advance the science of ceramics, that manufactured pyrometric cones used in the ceramics industry. The function of the cones was to provide a convenient way to measure the combined effect of temperature, time, and atmosphere during the firing of ceramic ware. An industry standards organization specified that these particular cones were the ones to use in the test for refractoriness. The court noted that in addition to being a production control, the cones were "tools for basic research, and fundamental aids in ceramic education." Although other companies produced cones, no equivalent products existed. The court held that the production of the cones was in furtherance of the organization's scientific purposes. It explained that the cones were "essential to the ceramic industry" and an "invaluable and irreplaceable standard of measurement, tool for research, and means of communication concerning the firing of ceramic ware."⁶⁰

4. Organization of scientific information. An activity may be considered scientific even if it is merely collecting and organizing information that already exists. For example, in *IIT Research*, one of the nonprofit organization's activities was to organize a symposium in a particular area of metallurgy and publish the proceedings. The court rejected the IRS's argument that this activity was nonexempt because it was merely a "routine survey" and "compilation of existing information." The court held that the activity was exempt, noting that within the definition of science are activities that "classify or organize a body of scientific knowledge," and that the organization provided a current source of information in the scientific field of metallurgy.⁶¹

5. Byproduct of scientific research. In some cases, an activity that involves the sale of items may avoid characterization as a UTB if the items are considered a byproduct of scientific research. The Treasury regulations provide the example of a research organization that sells milk and cream derived from its "experimental dairy herd maintained for scientific purposes." The regulation says that income from the sale does not derive from a UTB because the products result from the performance of exempt functions and they are sold in "substantially the same state" as exist "on completion of the exempt functions." However, the regulation indicates that if the organization used the milk and cream to manufacture and sell ice cream, the activity would constitute a UTB unless the manufacturing activities contributed importantly to the organization's exempt purposes.⁶²

6. Noncommerciality. Under the commerciality doctrine, an activity in which a tax-exempt organization is engaged is generally nonexempt if it is commercial in nature. An activity is commercial in nature if it has a “direct counterpart in, or is conducted in the same manner as is the case in the realm of for-profit organizations.”⁶³ Conversely, the minimization of commercial characteristics can increase the likelihood of an activity being treated as tax-exempt scientific research. For example, in *Orton*, one of the factors leading the court to treat the sale of pyrometric cones as a tax-exempt activity was the fact that “unlike the normal commercial operation,” the terms of the organization’s organizational documents limited the amount of profit at which the cones could be sold.⁶⁴ Similarly, in *IIT Research*, in support for its holding that the development and manufacturing of exterior spacecraft paint constituted a scientific activity, the court observed that the reason the organization manufactured the paint was that “commercial paint companies declined to produce this paint because it was needed only in small amounts, the process for making it was very expensive, and the paint would have to be made by a research staff and not by paint technicians.”⁶⁵

C. Scientific Research in the Public Interest

As noted above, for scientific research to qualify as a tax-exempt activity, the regulations require that it be conducted in the public interest.⁶⁶ The requirement that scientific research be carried on in the public interest is commonly satisfied by publishing the research findings. The publication must timely disclose “substantially all of the information concerning the results of the research which would be useful or beneficial to the interested public.”⁶⁷ The research may be published in a treatise, thesis, trade publication, or any other form “available to the interested public.”⁶⁸

Besides publishing, the public interest standard is generally satisfied in each of the following circumstances⁶⁹:

if the research is performed for the federal government or a state or local government; or

if the research is “directed toward benefiting the public,” including when the research is carried on for the purpose of “aiding in the scientific education of college or university students,” “discovering a cure for a disease,” or “aiding a community or geographical area by attracting new industry to the community or area or by encouraging the development of, or retention of, an industry in the community or area.”⁷⁰

Further, to meet the public interest standard, the research organization generally cannot keep the resulting intellectual property to itself; it must make it available to the public.⁷¹ The intellectual property may be regarded as available to the public even if granted to only a single person if, in general, the exclusive grant is the only practicable way the intellectual property can be used to benefit the public.⁷²

D. Promotion of Health as a Tax-Exempt Purpose

An activity conducted by a nonprofit research organization that does not meet the standard of scientific research in the public interest can still avoid characterization as a UTB if it qualifies as the promotion of health, which is a subset of charitable purpose under section 501(c)(3).⁷³ This is the basis on which the tax-exempt status of hospitals and other healthcare providers generally rests.

However, not every health-related activity qualifies as the promotion of health. In *Rev. Rul. 69-545*, for example, the IRS ruled that a nonprofit hospital organization controlled by a group of physicians did not meet the standard for promotion of health under section 501(c)(3). The controlling physicians restricted the number of physicians admitted to the medical staff, entered into favorable

rental agreements with the hospital, and limited emergency room care and hospital admission substantially to their own patients. The ruling helped establish the principle that for a healthcare provider to be recognized by the IRS as meeting the promotion of health standard for section 501(c)(3) status, the organization must operate to benefit the community as a whole rather than private interests (the community benefit standard). Although there is no prescribed formula, the standard may be satisfied when, for example, the organization has a governing board controlled by community representatives; maintains an open medical staff; operates an emergency room open to all; and provides charity care, community health screenings, research, or other benefits that a taxable provider of care may not normally provide.⁷⁴

The community benefit standard has been an obstacle for organizations seeking to provide tax-exempt laboratory testing services. While laboratory testing services provided by a hospital for its own patients should generally qualify for tax-exempt treatment (under the convenience doctrine⁷⁵), the general rule is that income from testing services provided for non-patients is taxable.⁷⁶ However, the IRS has indicated that testing for non-patients may further an organization's promotion of health purposes if the services provided are unique,⁷⁷ not otherwise available in the geographic region,⁷⁸ or are provided on an emergency basis when referral to other laboratories would be detrimental to patient health.⁷⁹ The IRS has also treated the provision of laboratory testing services to non-patients as not constituting a UTB when the services furthered the organization's educational purposes.⁸⁰

E. Example — Genetic Testing Laboratory

To illustrate these principles, consider the example of a nonprofit research organization that would like to operate a genetic testing laboratory in tax-exempt, bond-financed facilities. Recent years have witnessed remarkable advances in the understanding of how genomic factors contribute to disease. Scientists have identified the genomic basis for almost 5,000 rare genetic diseases and have made progress in identifying genomic variants that are associated with risk for more complex genetic diseases like hypertension, diabetes, asthma, and cardiovascular disease. The discoveries are just beginning.⁸¹

Genetic testing is a step in the process by which advances in genomic science may be brought from "bench to bedside" to benefit individual patients. Identifying an individual's genomic characteristics can help diagnose disease or measure the risk of developing a disease. Genetic testing can also enable medical treatments to be targeted more effectively to the individual, an approach to treatment known as personalized medicine. For example, an oncologist weighing different treatment options for a patient may be able to predict which course of treatment will likely be most successful based on the patient's genomic profile. Pharmaceutical companies are also consumers of genetic testing, because the tests can help in the selection of individuals who are the most appropriate subjects for clinical testing of a candidate drug. Prenatal genetic testing can predict whether a child will be born with a genetic condition, and newborn genetic testing can identify disorders that may have health effects over time.⁸²

Genetic testing laboratories come in many forms, including Internet-based enterprises that market inexpensive tests directly to consumers; academic medical centers that perform genetic testing and counseling for the center's patients and testing for the center's researchers; and independent laboratories providing testing services to hospitals, medical practices, and pharmaceutical companies.

On the one hand, it should be easy to conclude that the performance of diagnostic or therapeutic genetic testing and counseling by a hospital for its patients is a tax-exempt activity under the convenience doctrine.⁸³ Likewise, genetic testing performed for an organization's own researchers

can be a tax-exempt activity, either under the convenience doctrine or because the testing may be an inextricable part of the research activity itself. On the other hand, routine direct-to-consumer genetic testing in which the laboratory does not purport to be engaged in the provision of patient care or research should not qualify for tax-exempt treatment.

In other cases, however, genetic testing by nonprofit research organizations may need to be evaluated on a case-by-case basis to determine the tax treatment. An organization may be able to support a position that genetic testing is substantially related to its scientific research mission through some or all of the following factors discussed previously:

Sophistication. Focus on tests or techniques with a high degree of sophistication that require the attention of scientists rather than just technicians and that are not widely performed by direct-to-consumer enterprises.

Building blocks of knowledge. Apply the knowledge gained through testing to refine and develop new tests and techniques. Be prepared to demonstrate, if challenged by the IRS, that the testing activity indeed furthers the development of new tests and techniques (for example, by maintaining a database or log).

Essential service used in science; organization of scientific information. Act as a resource to the field of genomic research by publishing (to the extent permitted under applicable privacy laws) discoveries made during the course of the testing, posting information on the website, sponsoring conferences, etc.

Noncommerciality. Limit the commercial feel of the activity. For example, keep the website page fairly restrained, with a focus on science and health rather than marketing gimmicks (for example, no “limited time offers”).

Further, for genetic testing to avoid UTB treatment by reason of being substantially related to the organization’s scientific research mission, it will need to meet the standard of being performed in the public interest, perhaps by qualifying as “scientific research carried on for the purpose of discovering a cure for a disease” or as scientific research performed for the purpose of obtaining publishable scientific information.⁸⁴

If the laboratory cannot characterize the genetic testing as scientific research, it could try to characterize it as the promotion of health if the particular circumstances are analogous to those in which the IRS has ruled that laboratory testing met that standard.⁸⁵ To maintain this position, the laboratory’s statement of purposes in its organizational documents would need to include a reference to promoting health, or at least to charitable purposes.

III. Commercially Sponsored Research

A. Introduction

As indicated above, for a nonprofit research organization, one category of PBU consists of the use of bond-financed property for research sponsored by a private user in some cases. The regulations provide that a private user’s sponsorship of research may result in PBU of the property used for the research, based on all the facts and circumstances.⁸⁶

Little authority exists on the types of facts and circumstances indicative of PBU in the area of commercially sponsored research. In the absence of guidance on the facts and circumstances test, borrowers’ compliance efforts are generally geared toward qualifying for the PBU safe harbor in Rev. Proc. 2007-47.

The revenue procedure provides a safe harbor for commercially sponsored research agreements that meet the following requirements. First, the activity sponsored under the agreement must consist of basic research. The revenue procedure defines basic research to mean “any original investigation for the advancement of scientific knowledge not having a specific commercial objective. For example, product testing supporting the trade or business of a specific nongovernmental person is not treated as basic research.” Distinguishing between basic and nonbasic research may not be clear cut. The revenue procedure’s definition of basic research might be read to exclude almost any commercially sponsored research, because any company will have (almost by definition) a specific commercial objective in sponsoring the research — namely, the ability to acquire rights in any resulting technologies. However, that interpretation would make the safe harbor basically unattainable. A better interpretation of basic research would look to the nonprofit research organization’s motive in conducting the research. If that organization has a specific commercial objective, the research would fail to qualify as basic research for this purpose. As a practical matter, in my experience, few research agreements are treated by nonprofit research organizations as failing to meet the safe harbor on account of being nonbasic research.

The second requirement to qualify for the safe harbor provided by Rev. Proc. 2007-47 focuses on the terms of any technology transfer provision. If the contract provides for a transfer of technology to the commercial sponsor, any “license or other use of resulting technology” (1) must be priced at FMV, and (2) the FMV price must be determined at the time “available for use,” not specified in the contract (the subsequent pricing requirement).⁸⁷

Compliance with the subsequent pricing requirement is commonly a real issue in negotiating commercially sponsored research agreements. The aim of the commercial sponsor in sponsoring the research is usually to acquire rights to any resulting technology. A typical contract would give the sponsor an option to acquire an exclusive license to any invention, exercisable within a specified period after the technology has been disclosed to the sponsor. Often, the parties wish to specify the pricing for the license in the contract itself. For example, the agreement may provide that in exchange for the option to acquire an exclusive license, the sponsor agrees to pay the nonprofit research organization a royalty equal to 2 percent of the revenues ultimately received from commercializing the technology. That practice is a clear violation of the subsequent pricing requirement and would prevent the arrangement from qualifying for the safe harbor. By contrast, an agreement that the fair market pricing of the technology will be determined at the time the option is exercised would generally meet the subsequent pricing requirement.

C. Interpretive Questions

As discussed above, a contract that specifies a royalty rate of, say, 2 percent in exchange for an option to acquire an exclusive license to any resulting technologies will violate the subsequent pricing requirement, while a contract that provides that the royalty rate will be determined through subsequent negotiation and, if necessary, a fair market appraisal, should meet this requirement. But often, contractual provisions do not neatly fit within these boxes. Consider the following common examples:

“The royalty rate will be determined through negotiation of the parties once the option is exercised, but will fall within a range of 2 percent to 3 percent per year.” Because this formulation ultimately has a negotiation, one might be tempted to conclude that it complies with the subsequent pricing requirement. However, in my view, these terms are likely noncompliant because the specification of the royalty range in the contract prevents the fair market price from truly being “determined at the time the license or other resulting technology is available for use.”

"The royalty rate will be determined through negotiation once the option is exercised, and will take into account the sponsor's contribution to the research." This formulation seems to create an inference that, because the negotiation will take into account the sponsor's contribution, the nonprofit research organization will receive a smaller royalty than it could obtain through the open market. That would be considered a violation of the subsequent pricing requirement.

"The royalty rate will be 2 percent per year, provided that if either party believes that such rate does not represent a fair market royalty at the time the option is exercised, the parties will negotiate a fair market royalty rate." The inclusion of the fair market savings clause should protect the nonprofit research organization from ceding a windfall to the sponsor if the stated royalty rate winds up being lower than FMV. While there is no IRS guidance blessing this approach, I believe this formulation should be treated as compliant with the subsequent pricing requirement.

D. Strategies for Compliance

The lack of IRS guidance and relative inflexibility of the subsequent pricing requirement can hamstring nonprofit research organizations in structuring arrangements with commercial sponsors. Some strategies may be considered, however, to mitigate this problem.

First, a fairly simple approach is for the organization to consider whether an FMV savings clause, like the one described in the preceding bullet point, can be used.

Alternatively, in appropriate circumstances the organization might maintain that the subsequent pricing requirement is inapplicable because the contract does not provide the sponsor a license or other use of resulting technology within the meaning of the revenue procedure. Consider, for example, a research agreement sponsored by a pharmaceutical company that provides that the company will receive 50 percent of any revenues derived by the nonprofit research organization from commercializing technology developed through the sponsorship. Arguably, the company's right to a percentage of revenues is not a "license or other use of resulting technology," read literally. If so, the fact that the 50 percent share is specified in the agreement would not prevent the agreement from complying with the subsequent pricing requirement.⁸⁸

In other situations, the nonprofit research organization might assert that compliance with the subsequent pricing requirement is unnecessary because the contract is not a research agreement within the meaning of the revenue procedure. Consider the example of a material transfer agreement (MTA) — an agreement under which the nonprofit research organization acquires the use of materials owned by another entity for use in the nonprofit's own research. For example, to conduct a research study addressing Type 1 diabetes, a nonprofit research organization may need to acquire the right to use a specific reagent owned by a commercial entity. The parties would typically enter into an MTA authorizing the nonprofit research organization to use the reagent in the diabetes research study under specified conditions. Ordinarily, an MTA would address intellectual property rights regarding the material and any modifications that are discovered in the course of the research. Although a provision stating that the commercial entity retains ownership of the material itself should not be problematic, a concern is raised if the agreement provides that the commercial entity is entitled to ownership of any modifications of the material. That ownership right arguably constitutes a license or other use of resulting technology, which would violate the subsequent pricing requirement, if applicable.

That would seem to be a harsh result if the discoveries subject to the potentially problematic ownership provision were not the focus of the sponsored research in the first place. That is, the purpose of an MTA is to secure a material to be used in an organization's research, not to make discoveries regarding the material itself. This distinguishes an MTA from a garden-variety

commercially sponsored research agreement and suggests that ordinarily, an MTA may not be regarded as a research agreement subject to analysis under the revenue procedure.⁸⁹

IV. Conclusion

Once a nonprofit research organization decides to finance research facilities with tax-exempt debt, Einstein's advice to keep things "as simple as they can be, and no simpler" becomes more challenging to heed, because the PBU rules must be considered in any arrangement involving the use of those facilities. As discussed above, one approach that can significantly reduce complexity is to include a component of equity or taxable debt in the plan of finance for the facility. To the extent an arrangement cannot be allocated to an equity or taxable debt component of a financing, however, the organization either must ensure that the arrangement as structured does not give rise to PBU, or if it does, that the resulting PBU does not cause the overall PBU limit for the tax-exempt debt issue to be exceeded. This report has attempted to provide guidance to administrators at nonprofit research organizations and their counsel who are confronted with these issues.

FOOTNOTES

1 See <http://quoteinvestigator.com/tag/albert-einstein/page/2/>.

2 Id.

3 See <http://quoteinvestigator.com/2011/03/07/einstein-income-taxes/>.

4 See studies referenced in Bernard Lo and Marilyn J. Field, eds., *Conflict of Interest in Medical Research, Education, and Practice* 101 (2009), available at <http://www.ncbi.nlm.nih.gov/books/NBK22942/pdf/TOC.pdf>.

5 Id. The same survey found that 60 percent of department chairs at those institutions had individual industry relationships, including as a service consultant, a member of a scientific advisory board, a paid speaker, an officer, a founder, or a board member for a company.

6 See Government-University-Industry Research Roundtable, "Overcoming Barriers to Collaborative Research," at 6 (1999), available at http://www.nap.edu/openbook.php?record_id=9722&page=6;

Lo and Field, *supra* note 4, at 100.

7 See NIH, "Fact Sheet: Impact of Sequestration on the National Institutes of Health" (June 3, 2013), available at <http://www.nih.gov/news/health/jun2013/nih-03.htm>.

8 See <http://www.nih.gov>.

9 2007-2 C.B. 108 .

10 Technically, a bond issue that has excessive PBU does not fail to qualify for tax-exempt status unless it also has excessive "private security or payment." See section 141(a)(1)(B) and (b)(2). Excessive private security or payment exists for a bond issue if, in general, more than 5 percent of the debt service on the bond issue is derived from payments in respect of property subject to PBU, or is secured by property subject to PBU. The private security or payment test can be very difficult to measure and apply and is typically ignored if compliance with the PBU limitations can be established.

11 See section 141(b)(6); reg. section 1.141-3(a)(1).

12 See reg. sections 1.141-3(a)(1), 1.145-2(b)(1).

13 See prop. reg. sections 1.141-1(e)(2), 1.145-2(c)(3). Accordingly, research joint ventures or collaborations solely among section 501(c)(3) participants may not give rise to PBU, although see *infra* note 19.

14 See reg. section 1.141-3(b)(3).

15 See reg. section 1.141-3(d)(5).

16 See reg. section 1.141-3(b)(4).

17 See reg. section 1.141-3(b)(4)(iii)(A).

18 1997-1 C.B. 632 .

19 See reg. section 1.141-3(b)(2). Under proposed regulations, for this limited purpose, all partnerships are considered private users, even if the partners are limited to state or local governmental units and section 501(c)(3) organizations. See prop. reg. section 1.145-2(c)(3).

20 See section 145(a)(1); reg. sections 1.141-12 and 1.145-2. Remedial action is generally taken by redeeming or defeasing the allocable portion of bonds or, in limited circumstances, applying the disposition proceeds to alternative qualifying uses. The remedial action rules are also available to cure excess PBU in other categories (i.e., leases, management contracts, etc.).

21 See sections 513 and 145(a)(2)(A).

22 See prop. reg. section 1.141-1(e)(2). Note that this rule is distinct from (and in a sense, more restrictive than) the rule governing whether income received by a tax-exempt organization through an ancillary joint venture with a for-profit member is UBTI. That income is generally tax exempt and not UBTI as long as (1) the activities of the ancillary joint venture are substantially related to the organization's tax-exempt purposes, and (2) the tax-exempt organization maintains sufficient control over the venture to ensure that the venture will continue to advance the organization's tax-exempt purposes. See, e.g., Rev. Rul. 2004-51, 2004-1 C.B. 974 . However, even if that standard is met and no UBTI is produced by the joint venture, any use by the joint venture of bond-financed property, in and of itself, constitutes PBU.

23 See reg. section 1.141-3(b)(7)(i); LTR 200347009 (ruling that a special legal entitlement comparable to an ownership interest in a bond-financed facility was created by an agreement under which a research organization provided an exclusive license to the results of all research to be done at the facility to a private user).

24 See reg. section 1.145-2(c)(2). Up to 2 percent of the proceeds of a qualified 501(c)(3) bond issue are permitted to be used for costs of issuance. See section 147(g)(1).

25 See section 145(a)(2)(B).

26 Also, there is typically a \$15 million total cap on the amount of PBU in any bond issue (unless the state issuer applies a portion of its volume cap allotment to the issue, which seldom occurs for qualified 501(c)(3) bonds). See section 141(b)(5). So as a mathematical matter, if the size of a bond issue is more than \$300 million, the effective PBU limit for the issue actually will be less than 5 percent. Because few bond issues for research organizations exceed \$300 million, the limit is usually 5 percent.

27 See reg. section 1.141-3(g)(4).

28 Subject to some exceptions, the measurement period begins on the later of the issue date of the issue or the date the property is placed in service, and ends on the earlier of the last date of the reasonably expected economic life of the property or the latest maturity date of any bond of the issue financing the property (determined without regard to any optional redemption dates). See reg. section 1.141-3(g)(2)(i). In some cases, if the bond issue refunded a prior bond issue, the measurement period for the refunding issue includes the measurement period for the refunded issue. See reg. section 1.141-13(b)(2). In practice, to avoid the difficulty of identifying the measurement period, many borrowers simply do a PBU calculation every year during the term of the bond issue and make sure that each annual percentage falls below the PBU limit.

29 See

<http://www.irs.gov/Tax-Exempt-Bonds/Tax-Exempt-Bond-FAQs-Regarding-Record-Retention-Requirements>.

30 See, e.g., LTR 200132017 ; LTR 9125050.

31 See prop. reg. section 1.141-6 (REG-140379-02 ; REG-142599-02).

32 See National Association of Bond Lawyers, “Comments on Proposed Allocation and Accounting Regulations Under Section 141 of the Internal Revenue Code” (Dec. 22, 2006) .

33 Cf. prop. reg. section 1.141-6(b)(2)(ii).

34 Cf. reg. section 1.141-3(g)(4)(iii); prop. reg. section 1.141-6(d)(1)(A).

35 See supra text accompanying note 18.

36 See supra note 28.

37 Cf. prop. reg. section 1.141-6(a)(4).

38 See Lynn Hume, “IRS: New Forms Will Bring Audits for Non-Profits,” The Bond Buyer, Oct. 19, 2011.

39 See Internal Revenue Manual section 7.2.3.

40 See IRM section 7.2.3.4.4.

41 See IRM sections 4.81.6.5(2), 4.81.6.5.3(4), and 7.2.3.2.1(3).

42 See section 513(a).

43 See section 512.

44 See section 501(c)(3); reg. section 1.501(c)(3)-1(d)(5).

45 IIT Research Inst. v. United States, 9 Cl. Ct. 13 (1985).

46 Midwest Research Inst. v. United States, 554 F. Supp. 1379 (W.D. Mo. 1983), aff’d, 744 F.2d 635 (8th Cir. 1984).

47 Washington Research Found. v. Commissioner, T.C. Memo. 1985-570.

48 Midwest Research, 554 F. Supp. 1379.

49 See reg. section 1.501(c)(3)-1(d)(5)(iii)(c)(4); Rev. Rul. 76-296, 1976-2 C.B. 141.

50 Reg. section 1.501(c)(3)-1(d)(5)(i).

51 Reg. section 1.501(c)(3)-1(d)(5)(ii); cf. reg. section 1.512(b)-1(f)(4).

52 See *Underwriters' Laboratories Inc. v. Commissioner*, 135 F.2d 371 (7th Cir. 1943).

53 IIT Research, 9 Cl. Ct. 13.

54 Midwest Research, 554 F. Supp. 1379.

55 IIT Research, 9 Cl. Ct. 13.

56 See, e.g., GCM 39196 (Mar. 20, 1984) (treating testing performed for commercial entities to determine compliance with environmental laws to be a UTB); LTR 7852007 (treating the testing of devices submitted by commercial entities designed to protect the public water supply to be a UTB).

57 IIT Research, 9 Cl. Ct. 13.

58 Midwest Research, 554 F. Supp. 1379.

59 56 T.C. 147 (1971).

60 *Id.*

61 IIT Research, 9 Cl. Ct. 13.

62 See reg. section 1.513-1(d)(4)(ii).

63 See Bruce R. Hopkins, *The Law of Tax-Exempt Organizations* 100 (10th ed. 2011).

64 *Edward Orton Jr., Ceramic Found. v. Commissioner*, 56 T.C. 147 (1971).

65 IIT Research, 9 Cl. Ct. 13. See also *Dumaine Farms v. Commissioner*, 73 T.C. 650 (1980) (holding that experimental farm was operated for scientific purposes under section 501(c)(3) because, among other reasons, the farm was unlike the "ordinary farm in petitioner's community . . . devoted to repetitive cash crops such as tobacco").

66 Reg. section 1.501(c)(3)-1(d)(5). For colleges, universities, and hospitals, there is an exception to UBTI for income derived from "research performed for any person." Reg. section 1.512(b)-1(f)(2). Thus, for those institutions, for UBTI purposes at least, whether the research is carried on in the public interest is irrelevant. A comparable UBTI exception is available to an independent research institute, but only if it qualifies as "an organization operated primarily for the purpose of carrying on fundamental research (as distinguished from applied research) the results of which are freely available to the general public." Reg. section 1.512(b)-1(f)(3).

67 Rev. Rul. 76-296, 1976-2 C.B. 141.

68 Reg. section 1.501(c)(3)-1(d)(5)(iii)(c)(2).

69 For a more detailed discussion of the public interest standard, see Frances R. Hill and Douglas M.

Mancino, Taxation of Exempt Organizations, para. 3.04[2], [3].

70 Reg. section 1.501(c)(3)-1(d)(5)(iii)(b), (c).

71 Reg. section 1.501(c)(3)-1(d)(5)(iv)(b).

72 Id.; see LTR 200326035 (finding that intellectual property was made available to the public when a section 501(c)(3) organization entered into an exclusive license of technology to a taxable entity it controlled). Further, to be considered conducted in the public interest, the research cannot be performed only for the organization's creators unless they are section 501(c)(3) organizations. See reg. section 1.501(c)(3)-1(d)(5)(iv)(a).

73 See Rev. Rul. 69-545, 1969-2 C.B. 117.

74 Id.; Rev. Rul. 83-157, 1983-2 C.B. 94.

75 See section 513(a)(2) (providing that the term "unrelated trade or business" does not include any trade or business that is carried on by the organization "primarily for the convenience of its members, students, patients, officers, or employees").

76 See Rev. Rul. 85-110, 1985-2 C.B. 166.

77 Id.; LTR 8417002 (finding that various unique testing services performed by one hospital for patients of another hospital, including neurochemistry, chromosome studies, muscle histochemistry, and metabolic bone disease procedures, did not give rise to UBTI).

78 See LTR 9023041 (finding that revenue generated from provision of diagnostic laboratory testing services to non-patients, when the organization was the only laboratory within 100 miles capable of performing many of the tests and was the only laboratory in the region that provided testing 24 hours a day, did not give rise to UBTI); LTR 9739043 .

79 See Rev. Rul. 85-110, 1985-2 C.B. 166.

80 See Rev. Rul. 85-109, 1985-2 C.B. 165; LTR 9739043.

81 See Elizabeth Quill, "The Work Is Only Beginning on Understanding the Human Genome," Smithsonian.com (June 3, 2013) (interview with Dr. Eric D. Green), available at <http://www.smithsonianmag.com/science-nature/The-Work-Is-Only-Beginning-on-Understanding-the-Human-Genome-209951001.html>.

82 See "Frequently Asked Questions About Genetic Testing" on the website of the National Human Genome Research Institute, available at <http://www.genome.gov/19516567>.

83 See supra note 75.

84 Reg. section 1.501(c)(3)-1(d)(5)(iii)(c)(2), (3).

85 See supra text accompanying notes 77-80.

86 Reg. section 1.141-3(b)(6).

87 The revenue procedure also provides a safe harbor for some federally or commercially sponsored research agreements in which only a nonexclusive, royalty-free license is provided to the sponsor.

88 However, a right to a share of revenues is arguably tantamount to a “use,” thereby triggering the subsequent pricing requirement (which this hypothetical agreement would violate, because the 50 percent figure is set in advance). Or, even if the subsequent pricing requirement is not triggered, consideration should be given to whether PBU arises based on a “special legal entitlement” to bond-financed property. See *supra* note 23. Those issues are debatable.

89 Note, however, that even though a given arrangement may not be considered a research agreement (or, if a research agreement, may qualify for the safe harbor), PBU would still arise if the arrangement falls within another category of PBU. That may be the case if, for example, the arrangement includes a right of occupancy of bond-financed space by the industry sponsor. For another example, see *supra* note 23.