O. SCIENTIFIC RESEARCH UNDER IRC 501(c)(3)

1. Introduction

Scientific purposes are among the exempt purposes specified in IRC 501(c)(3). This topic discusses scientific research organizations. In addition to organizations engaged primarily or exclusively in scientific research (SROs), familiar examples of the scientific activities of IRC 501(c)(3) organizations include medical research projects of hospitals and the ongoing research programs of major colleges and universities.

Many organizations exempt under IRC 501(c)(3) engage in some research activities which may or may not be related to the attainment of the organization's exempt purpose. Even if the research activities are not related to exempt purposes, the unrelated business income tax provisions provide certain statutory exceptions to the imposition of the unrelated tax.

The purpose of this article is to offer a framework for understanding and applying the type of analysis that is useful in resolving both exemption and unrelated business income tax problems. The basic issue is whether a particular activity furthers a scientific purpose within the scope of IRC 501(c)(3).

2. The Three Part Test of Reg. 1.501(c)(3)-1(d)(5)

Reg. 1.501(c)(3)-1(d)(5) is the principal authority for resolving exemption questions and "relatedness" questions under the unrelated business income tax provisions. Section 1.501(c)(3)-1(d)(5) states that the term "scientific" as used in IRC 501(c)(3) includes scientific research in the public interest. This formulation can be broken down into its constituent parts to form three questions: (1) Is the questioned activity scientific? (2) Is it research? and (3) Is it in the public interest? Affirmative answers are necessary to all three questions in order for a particular activity to qualify as scientific research in furtherance of the scientific purpose specified in IRC 501(c)(3).

a. The Meaning of the Term "Scientific" as Used in Section 1.501(c)(3)-1(d)(5)

By simply stating that the term scientific "includes" scientific research in the public interest, Reg. 1.501(c)(3)-1(d)(5) fails to fully define a term that is

admittedly difficult to define. While it might be argued that it is no more difficult to define a scientific purpose than it is to define an educational, charitable, or religious purpose, section 351(1) of IRM 7751, the Exempt Organizations Handbook, suggests that the term scientific is not one that can be defined with precision. However, this should not be taken to mean that each person is free to work out his or her own definition of the term and apply it to the particular problem at hand.

Reg. 1.501(c)(3)-1(d)(5)(i) states that the determination of whether research is "scientific" for purposes of IRC 501(c)(3) does not depend on whether such research is classified as "fundamental" or "basic" as contrasted with "applied" or "practical." Therefore, for purposes of IRC 501(c)(3), debates about "pure" science serve no useful purpose.

Another common distinction which is precluded is the one between the "hard" sciences, such as physics or chemistry, and the social sciences, such as sociology or economics. Rev. Rul. 65-50, 1965-1 C.B. 231, holds that an organization engaged in research in the social sciences was furthering educational and scientific purposes and was, therefore, entitled to exemption under IRC 501(c)(3).

Given these limitations, the scientific character of a particular activity cannot necessarily be determined solely by reference to an accepted dictionary definition of the term "scientific." However, courts often use such definitions as a starting place for their analysis of case problems. The following example is from IIT Research Institute v. U.S., No. 655-80T, a U.S. Claims Court case decided on October 15, 1985:

> "The terms 'science' and 'scientific' are not defined in the Internal Revenue Code, Congress apparently having chosen to rely on the commonly understood meaning of the term. The McGraw-Hill Dictionary of Science and Technical Terms, (Lapedes ed., 2d ed., 1978), p. 1414, defines 'science' as a branch of study in which facts are observed, classified, and verified; [or] involves the application of mathematical reasoning and data analysis to natural phenomenon.' The Random House Dictionary of The English Language, p. 1279 (Stein ed., 1967), defines 'science' as [k]nowledge, as of facts and principles, gained by systematic study.' Thus, in the context of this litigation, 'science' will be defined as the process by which knowledge is systematized or

> classified through the use of observation, experimentation, or reasoning. See also Midwest Research Institute v. United States, 554 F. Supp. 1379, 1385-86 (W.D. Mo. 1983), aff'd 744 F. 2d 635 (8th Cir. 1984); Oglesby v. Chandler, 288 P. 1034, 1038, 37 Ariz. 1 (1930)."

b. Meaning of the Term "Research" as Used in Section 1.501(c)(3)-1(d)(5)

Section 1.501(c)(3)-1(d)(5)(i) states that the term "[r]esearch when taken alone is a word with various meanings; it is not synonymous with 'scientific;' and the nature of particular research depends upon the purpose which it serves." In other words, the regulations do not draw any fine distinctions among the types of information gathering that might be regarded as research. If a questioned activity happens to be similar to an activity deemed to be "research" in a published authority, the problem can be resolved by comparing the situation at hand to the one described in the court case or revenue ruling. Absent such authority, specific definitional problems have to be resolved in the context of the particular situations in which they arise.

Given the range of acceptable definitions of the terms "scientific" and "research," their application to case problems depends primarily on Reg. 1.501(c)(3)-1(d)(5)(ii), which states as follows:

> "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."

Rev. Rul. 65-1, 1965-1 C.B. 226, describes the operations of an organization formed to foster the development and design of labor saving agricultural machinery, including the development of new labor saving methods and ideas. The organization conducted studies to determine the need for mechanization of planting, cultivation, and harvesting which were generally performed manually by agricultural laborers. If an opportunity for successful machine utilization appeared to be possible, the organization determined whether work on such a machine was being undertaken by any public or private institution. If not, the organization made a grant to an appropriate public or private agency to develop the necessary machinery. If the prototype of the machine performed well, the organization sought a patent in its name and licensed a manufacturer to build the device on an exclusive

or non-exclusive basis. Any royalties received by the organization were used to develop additional projects.

The revenue ruling reasoned that the development of machinery was equivalent to the "designing or construction of equipment" that is incident to a commercial operation and does not constitute scientific research within the meaning of Reg. 1.501(c)(3)-1(d)(5)(ii). The revenue ruling also concluded that the organization's activities benefited the private interests of the manufacturers of the equipment. Therefore, the organization was not exempt under IRC 501(c)(3).

The reader should be aware that some courts may not agree with this analysis. A case in point is Midwest Research Institute v. U.S., supra. Midwest was an SRO founded to develop agriculture, business, commerce, industry, and natural resources in the Midwest. Approximately 75 percent of Midwest's projects (over 1,000) during the years in issue were for various governmental entities. Because scientific research for such entities automatically qualifies, the issue before the court was not whether the Institute had lost its tax-exempt status because of its nonexempt activities, but whether certain of its projects, individually or in the aggregate, did not constitute scientific research carried on in the public interest and were, therefore, "unrelated trade or business." However, in determining "relatedness" the tests of IRC 501(c)(3) would apply.

The district court adopted a restricted interpretation of "ordinary testing or inspection of materials or products:"

> "The testing reference in section (d)(5)(ii) may be given workable application by ruling. . . that the section was adopted to satisfy in part the concerns of commercial testing laboratories, which feared the consequences of tax-exempt status for scientific research institutes such as [the Institute]. Accordingly, the section may be interpreted to apply to the type of 'ordinary or routine testing' performed by such laboratories. This work was described as generally repetitive work done by scientifically unsophisticated employees for the purpose of determining whether the item tested met certain specifications, as distinguished from testing done to validate a scientific hypothesis."

The court recognized that while projects may vary in terms of degree of sophistication, "if professional skill is involved in the design and supervision of a

project intended to solve a problem through the search for a demonstrable truth, the project would appear to be scientific research" and not ordinary testing.

The court also adopted a restricted interpretation of "designing or construction of equipment, buildings, etc.":

> "With respect to 'design,' we are guided by the reference in the legislative history to research as including 'experimental construction and production.' H.R. Rep. No. 2319, 81st Cong., 1st Sess. 37 (1950). Similarly, the regulations promulgated in a slightly different context (pursuant to. . .section 174 regarding the deductibility of research and development expenditures) distinguish between 'the development of an experimental pilot model' and nondeductible ordinary expenditures. . . .We interpret the 'designing or construction' language, in light of these provisions, to leave exempt the development of prototypes and models. . . .As with the interpretation of 'ordinary testing,' the relevant regulatory distinction between exempt and non-exempt activities is according to degree of sophistication."

It is doubtful that the court in Midwest Research would have found the development of prototypes in Rev. Rul. 65-1 to have been of a type ordinarily carried on as an incident to commercial or industrial operations. It appears that the organization's activities were limited to activities leading up to the development of a prototype or model, and were not the kind of unsophisticated activities considered by the court to be ordinary design or construction.

The claims court might have similar problems with Rev. Rul. 65-1. IIT Research Institute, supra, was an SRO that was multi-disciplinary in nature and served numerous clients. Many of the research programs produced products. Under the facts of the case, the court did not find this inconsistent with "scientific research."

> "The testimony further indicated that IITRI was not involved in the commercialization of the products or process developed as a result of its research. IITRI would only develop a project to the point where the research principles were established. At this point, the sponsors would make the principles available to different customers, usually in the form

> of newly developed products or equipment. Also, the evidence showed that IITRI did not conduct consumer or market research, social sciences research, or ordinary testing of the type which is carried on incident to commercial operations. IITRI's activities, therefore cannot be said to run afoul of the 'commercial operations' section of Treas. Reg. section 1.501(c)(3)-1(d)(5)(ii). The fact that research is directed towards solving a particular industrial problem does not necessarily indicate that the research is not scientific."

Rev. Rul. 68-373, 1968-2 C.B. 206, describes a nonprofit organization engaged in the clinical testing of drugs for commercial pharmaceutical companies. The tests were required in order for the companies to obtain approval of the Food and Drug Administration to market the products being tested. The companies selected the products to be tested. The results of the tests were available for publication in various scientific and medical journals. The revenue ruling holds that the testing was clinical testing incident to a pharmaceutical company's ordinary commercial operations and that the testing served the private interests of the drug manufacturers rather than the public interest. Therefore, the organization was not exempt under IRC 501(c)(3).

The standards set forth in Rev. Ruls. 65-1 and 68-373 are most useful in a manufacturing context. These authorities have more limited utility when applied to commercially sponsored research projects funded by private high technology enterprises such as, for example, firms engaged in producing advanced biomedical equipment. The "ordinary commercial activity" of such a firm may include scientific research projects and the design and testing of experimental prototypes of new equipment. Instead of conducting the research or experimental testing itself, the biomedical firm may contract for these tasks to be performed by an exempt scientific research organization. When the nonprofit research organization performs the research, is it engaged in activities of a type ordinarily carried on as an incident to the commercial operations of the sponsor?

Chief Counsel addressed a question of this kind in G.C.M. 39196, dated August 31, 1983. While the G.C.M. cannot be used or cited as precedent, it does offer some guidance concerning the type of analysis that is appropriate in deciding whether a particular activity is testing incident to ordinarily commercial or industrial operations.

"In differentiating between research and testing, it may be helpful to look at how the distinction is made in a slightly different context. Treas. Reg. section 1.174-2 defines 'research and experimental expenditures' as follows:

"'Expenditures incurred in connection with the taxpayer's trade or business which represent research and development costs in the experimental or laboratory sense. The term includes generally all such costs incident to the development of an experimental or pilot model, a plant process, a product, a formula, an invention, or similar property, and the improvement of already existing property of the type mentioned. The term does not include expenditures such as those for the ordinary testing or inspection of materials or products for quality control or those for efficiency surveys, management studies, consumer surveys, advertising, or promotion. [Emphasis added.]

"'Thus, for example, testing blood samples or other samples for trace elements lacks the uniqueness or originality which is inherent in the concept of research. Projects of this type have all the indicia of ordinary testing: a standard procedure is used, no intellectual questions are posed, the work is routine and repetitive and the procedure is merely a matter of quality control. As such these studies cannot be considered 'scientific research.'"

Chief Counsel's discussion indicates that it is the nature of the activities rather than the nature of the organization which determines whether its research activities are "scientific research" or "ordinary testing." Scientific research can be performed by a commercial enterprise or by an exempt organization. It is scientific research in either case. Therefore, the question posed earlier can be answered this way: A commercial enterprise engaged in scientific research can either do its own research or contract it out to an exempt scientific research organization. If the commercial firm contracts out scientific research to an exempt organization, such research will not become, by virtue of that fact alone, ordinary testing incident to commercial operations for the exempt organization performing the research.

c. Meaning of the Phrase "In the Public Interest" as Used in Section 1.501(c)(3)-1(d)(5)

As the regulations indicate, conducting scientific research is not sufficient to qualify an organization for IRC 501(c)(3) status. The scientific research must be "in the public interest."

There is a generally recognized distinction between the public interest and the private interests of individuals or business enterprises. However, as used in section 1.501(c)(3)-1(d)(5)(iii) the phrase has a specialized meaning. Section 1.501(c)(3)-1(d)(5)(iii), states that scientific research will be regarded as carried on in the public interest if --

> "(a) The results of the research (including any patents, copyrights, processes, or formulae resulting from such research) are made available to the public on a nondiscriminatory basis;
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> "(b) The research is performed for the United States, or any of its agencies or instrumentalities, or for a State or political subdivision thereof; or
>
> "(c) The research is directed toward benefiting the public." [Emphasis added.]

Most of the controversies have arisen under subdivision (iii)(c) of Reg. 1.501(c)(3)-1(d)(5) (sometimes referred to as (iii)(c)). The regulations define the term "directed toward benefiting the public" by giving examples of some types of research that satisfy the requirement and some that do not. Scientific research which will be considered as directed toward benefiting the public, and, therefore, will be regarded as carried on in the public interest, includes the following:

> "(1) Scientific research carried on for the purpose of aiding in the scientific education of college or university students;
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> "(2) Scientific research carried on for the purpose of obtaining scientific information which is published in a treatise, thesis, trade publication, or in any other form that is available to the interested public;
>
> "(3) Scientific research carried on for the purpose of discovering a cure for a disease; or

> "(4) Scientific research carried on for the purpose of 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."

The regulation further provides that research which is otherwise "directed toward benefiting the public" within the meaning of "(iii)(c)" will not be disqualified because the sponsor of the research has the right pursuant to a contract or other agreement to obtain ownership or control of any patents, copyrights, processes, or formulae resulting from the research.

The regulations do not expressly preclude an organization from showing that its activities are in the public interest even though the activities are not specifically described in any of the categories or examples set forth in "(iii)(c)." However, if an organization's scientific research activities are not described in that section, the public benefits from the activities will generally be too ill-defined, remote, or conjectural in nature to support the conclusion that they are in the public interest. For example, the organization described in Rev. Rul. 65-1 argued that its improved farm machinery would increase agricultural production and make more food available at lower prices. This would benefit the hungry and impoverished. The revenue ruling notes this argument, but nonetheless concludes that the organization's activities served the private interests of farm equipment manufacturers rather than the public interest.

The public benefit argument has been used by Service personnel as a basis for incorrectly challenging commercially sponsored scientific research projects in cases where the publication and other requirements of "(iii)(c)" were satisfied. Such challenges are made by pointing out the immediate benefits the commercial enterprise expects to receive and contrasting them to the more remote and/or conjectural benefits the public will derive as a result of publication of the research findings.

Rev. Rul. 76-296, 1976-2 C.B. 142, is the controlling authority on this subject. The revenue ruling deals with the publication requirement as well as the question of the commercial sponsor's right to exploit the results of the research findings. It was published to provide a clear example of how problems involving commercially sponsored scientific research projects should be treated.

The revenue ruling describes two situations. In Situation 1 an exempt scientific research organization engaged in commercially sponsored scientific research projects and informed the interested public of the results of the research by timely publication of its findings. The publication was timely even though the organization allowed the lapse of a reasonable time in order to afford the sponsor an opportunity to establish patent, copyright, or other ownership interests in the fruits of the study. In Situation 2 an exempt SRO engaged in commercially sponsored scientific research projects and kept secret or unreasonably delayed publishing the results of the project in order to serve some private interest of the project's commercial sponsor.

As the revenue ruling points out, the second example of "(iii)(c)" notes that scientific research will be regarded as carried on in the public interest if the research is carried on for the purpose of obtaining scientific information which is published in a treatise, thesis, trade publication, or in any other form that is available to the interested public. The regulation also provides that scientific research described in (iii)(c) will be regarded as carried on in the public interest even though such research is performed pursuant to a contract or agreement under which the sponsor or sponsors of the research have the right to obtain ownership or control of any patents, copyrights, processes, or formulae resulting from such research. Because the organization described in Situation 1 timely published the results of its commercially sponsored scientific research projects, the requirements of "(iii)(c)" were satisfied and the income received from performing the research was not subject to the unrelated business income tax. However, because the organization described in Situation 2 did not timely publish the results of its commercially sponsored scientific research project, income received from its project was subject to the unrelated business income tax.

Rev. Rul. 76-296 leaves little room for doubt that a commercial sponsor of scientific research may retain all rights associated with that research without destroying the exempt quality of the research so long as the publication requirement is met.

Although "(iii)(c)" somewhat simplifies the determination of whether certain activities are scientific research in the public interest, many issues must still be resolved. A case in point is Midwest Research Institute v. U.S., 554 F. Supp. 1379 (W.D. Mo. 1983), aff'd 744 F.2d 635 (8th Cir. 1984).

Midwest Research Institute, an exempt SRO, had engaged in a variety of challenged research activities. In deciding whether the projects had produced

unrelated business taxable income, the court found that most of the activities were scientific research as distinguished from ordinary testing. It then turned to the task of deciding whether the scientific research projects were scientific research "in the public interest."

The court rejected a painstaking analysis of the facts and circumstances in favor of an analysis based on "(iii)(c)." The Institute argued that the purpose of all of the projects, which spanned several states, was to develop or retain industry in a "geographic area" as approved by the fourth example in Reg. "(iii)(c)." The Service argued for a more restrictive definition of geographic area, which would have put many of the projects outside the scope of the example. The court was not persuaded that any such restriction was contained in the regulations or that it could reasonably be inferred from them. It accepted the Institute's argument that the projects had been conducted for the purpose of improving industry in a geographic area--the Midwest.

More troubling is that the court in Midwest suggested that any research carried on to aid industry within the Midwest aided that geographic area and was therefore in the public interest. (This could be true even if the sponsors themselves were outside the Midwest because projects performed outside this area may attract industry to the area.) The court failed to analyze whether there was a causal relationship between the performance of each contract and geographic benefit. We believe that each project should be evaluated separately to determine how it specifically and significantly benefits the region or otherwise accomplishes the exempt purposes of the organization.

One final note on the so-called "publication" requirement. The "(iii)(c)" regulation gives four examples of research directed toward benefiting the public and the publication requirement is mentioned only with respect to one example; i.e., research carried on for the purpose of obtaining scientific information. Thus, it would appear that such requirement does not apply to the other three examples. Consistent with this analysis, an organization could conduct research for the purpose of discovering a cure for a disease, for example, and it would not be required to publish the results of the research. Similarly, research carried on to attract industry to a community would not have to be published. The court in Midwest agreed with this analysis. It stated that the "separate publication provision in the regulation. . . rebuts the notion. . . behind [the] suggestion that the results of the research must be generally available to benefit the public."

d. Scientific Research Not Qualifying Under IRC 501(c)(3)

Reg. 1.501(c)(3)-1(d)(5)(iv) states that an organization will not be organized and operated for the purpose of carrying on scientific research in the public interest and consequently will not qualify under IRC 501(c)(3) as a scientific organization if --

> "(a) Such organization will perform research only for persons which are (directly or indirectly) its creators and which are not described in section 501(c)(3), or
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> "(b) Such organization retains (directly or indirectly) the ownership or control of more than an insubstantial portion of the patents, copyrights, processes, or formulae resulting from its research and does not make such patents, copyrights, processes, or formulae available to the public."

Reg. 1.501(c)(3)-1(d)(5)(iv)(b) further provides that a patent, copyright, process, or formula will be considered as "made available to the public" even though one person has been granted an exclusive right to the use of the patent, copyright, process, or formula if the granting of the exclusive right is the only practicable way in which the patent, copyright, process, or formula can be utilized to benefit the public. In such a case, however, the research from which the patent, process, copyright, or formula resulted will be regarded as carried on in the public interest only if one of the two other tests of Reg. 1.501(c)(3)-1(d)(5)(iii) are met. Thus, the research must be carried on for the United States, its agencies, etc., ((iii)(b)) or it must be research directed toward benefiting the public. (See the four examples of subsection "(iii)(c)" given earlier, starting with "research to aid the education of university students.")

G.C.M. 37378, dated January 13, 1978, applied Reg. 1.501(c)(3)-1(d)(iv)(a) to a particular set of facts. While the G.C.M. itself cannot be used or cited as precedent, the factual situation is an example of the type of problem this section of the regulations is designed to address.

Fifteen commercial enterprises engaged in oil, chemical, and metallurgical activities formed a non-profit organization to conduct research in the field of particulate solids. Particulate solids constitute part of the emissions produced by many industrial operations. Therefore, research findings in this field would be

useful in developing processes or devices to reduce the noxious emissions of industrial plants.

Membership in the nonprofit corporation carried with it the right to elect directors of the corporation and a person to fill a seat on the organization's technical advisory committee. Payment of a stipulated amount entitled the member to obtain an additional one or two seats on the technical advisory committee.

The organization argued that its research findings would be timely published in a form available to the interested public. The G.C.M. concluded that this representation was not persuasive in view of the fact that the organization's by-laws provided that member companies would "neither publish nor furnish otherwise to third parties" such technical information and data as might be developed by the research organization. Therefore, the G.C.M. concluded that the publication requirement of section 1.501(c)(3)-1(d)(5)(iii)(c) was not satisfied. The G.C.M. then discussed the application of section 1.501(c)(3)-1(d)(5)(iv)(a) to the facts described:

> "Furthermore, we conclude that the organization runs afoul of Treas. Reg. section,801.501(c)(3)-1(d)(5) (iv)(a), which provides that an organization will not be deemed to carry on scientific research in the public interest when such organization will perform research only for persons which are not described in section 501(c)(3). PSRI's structure, whereby members essentially pay for seats on the board of directors and technical advisory committee, strongly suggests that the research projects undertaken, and the priority which they will be given, are determined in accord with the private interests of the member companies. Thus, PSRI's administrative structure lends substantial support to a conclusion that it is an organization run in the manner described in Treas. Reg. section1.501(c)(3)-1(d)(5) (iv)(a) and that it is therefore not qualified for exemption."

Rev. Rul. 69-632,1969-2 C.B. 120, is a published example of a similar situation involving Reg. 1.501(c)(3)-1(d)(5)(iv), along with other sections of the regulations. In that case, a nonprofit association was formed by members of a particular industry to develop new and improved uses for existing products of the industry. The organization contracted out the necessary research, the results of

which were timely published in a form available to the interested public. The organization's members selected research projects in order to increase their sales by creating new uses and markets for their products. The revenue ruling holds that the organization served the private interests of its creators and, therefore, it was not entitled to exemption under IRC 501(c)(3). However, because no services were performed for individual members and the activities of the organization were directed to improving conditions in the industry as a whole, the organization was held to be entitled to exemption under IRC 501(c)(6).

There do not appear to be any cases that have been decided under that portion of section 1.501(c)(3)-1(d)(5)(iv)(b) that precludes exemption for an organization that retains the ownership or control of more than an insubstantial number of the patents, copyrights, processes, or formulae resulting from its research. This provision should be contrasted with subsection "(iii)(c)" which provides that in the case of commercially sponsored research projects, the sponsoring organization may obtain ownership or control of any patents, copyrights, processes, or formulae resulting from the research.

No decisions of precedential value appear to have been made interpreting that portion of section 1.501(c)(3)-1(d)(5)(iv)(b) dealing with an exclusive license as the only practicable means of making an invention available to the public. It appears that this provision might apply in the case of scientific research which had produced a drug or useful invention, but one for which the potential market was extremely small. In such a case, it could be uneconomical for any potential manufacturer of the drug or device to go to the expense of "tooling up" for production unless it could be assured that the potential market would not undergo shrinkage due to the manufacture of the same drug or device by its competitors. Therefore, the only practicable means of making the drug or invention available to the public would be an exclusive license. Under such circumstances, if the SRO retained the patent rights to the drug or device it would not run afoul of subsection "(iv)(b)" that in general precludes retaining substantial rights.

3. Unrelated Business Income Tax Issues

Unrelated business issues generally come into play when a scientific research organization has established its exempt status and is actively engaged in a variety of scientific research projects. Typically, several hundred projects may be undertaken during the course of a year. Because the SRO is exempt under IRC 501(c)(3), all but a relatively small number of the projects will generally be projects which clearly fall within one of the categories of "scientific research in the

public interest" specified in Reg. 1.501(c)(3)-1(d)(5)(iii). But some of the projects will not clearly be within any of the categories and some may appear to be ordinary testing incident to commercial or industrial operations. A second way in which unrelated business issues can occur is that an organization, such as a college or university, which is not exempt as a scientific research organization, may engage in some research activities that do not appear to advance the organization's exempt purpose. In either case, if the projects produce income, sections 511-513 must be considered.

Reg. 1.513-1(a) defines the term "unrelated business taxable income" as the gross income derived from any trade or business regularly carried on by an exempt organization which is not substantially related (aside from the need of the organization for funds) to the exercise of the organization's exempt function. Therefore, unrelated business issues involve a series of questions: (1) Is the activity related or unrelated to the attainment of the organization's exempt purpose? (2) Is it trade or business? and (3) Is it regularly carried on?

With respect to IRC 501(c)(3) organizations, the regulations under section 1.501(c)(3)-1(d)(5) are generally helpful in considering "relatedness" questions when the organization is a scientific research organization. If the exempt organization is not an SRO the "relatedness" question must be decided on the basis of the particular organization's exempt purpose and whether the particular research activity is substantially related to that exempt purpose. Similarly, questions as to whether a particular activity is trade or business and whether it is regularly carried on have to be resolved on the basis of authorities and precedents specifically applicable to those issues. However, because of the nature of research activities (ongoing, income producing activities), they almost always constitute trade or business regularly carried on.

Even when there is an unrelated trade or business activity regularly carried on, the income from such activity still may not be subject to tax because many kinds of income are excluded from tax by exceptions and exclusions contained in IRC 512(b). The exceptions for royalties, research for governmental entities, and research by universities, colleges, and hospitals are the provisions generally invoked to shield income from the UBIT.

IRC 512(b)(2) excludes from the calculation of unrelated business taxable income all royalties (including overriding royalties), whether measured by gross or taxable income from the property and all deductions directly connected with such income. To be a royalty, a payment must relate to the use made of a valuable right.

Payments for the use of patents, trademarks, etc., are ordinarily classified as royalties.

The exclusion of royalties on patents retained by an IRC 501(c)(3) organization assumes that the retention and licensing of the patents does not result in loss of exempt status under Reg. 1.501(c)(3)-1(d)(5)(iv). See the previous discussion of this issue in this article.

The statutory sections providing for the exclusion of income derived from research for governmental entities, etc., have corollary provisions in the regulations, which are grouped together under the heading "Research" in section 1.512(b)-1(f). Subparagraph (1) of the regulation deals with the exclusion for income from research performed for the United States or any of its agencies or instrumentalities or a State or political subdivision of a State. Subparagraph 2 excludes the income of a college, university, or hospital from research performed for any person. Subparagraph 3 excludes all income from research conducted by an organization operated primarily for the purpose of carrying on fundamental, as distinguished from applied, research. Subparagraph (4) reiterates that the income of an organization from ordinary testing incidental to commercial or industrial operations is not excludable as income derived from scientific research in the public interest.

A typical example of the way the royalty exception works in actual practice is contained in TAM 8028004.

The technical advice memorandum explained that M, the exempt SRO, had particular expertise in the field of advanced medical diagnostic equipment. Pursuant to a contractual understanding with S, a commercial enterprise, M developed an add-on device for use with S's already existing diagnostic machine which was then available on the commercial market. The results of the project were never published.

In exchange for doing the research and development work for S, M received the right to a five percent royalty on net sales of the add-on unit. The activity of developing the add-on unit was found not to be scientific research in the public interest because the results were never published and the work done was ordinary testing incident to the expansion of S's existing product line. The National Office concluded that the research project was unrelated trade or business. However, the five percent share of net sales of the add-on unit produced no tax consequences for

M because the income was excluded from the computation of unrelated business tax as a royalty by IRC 512(b)(2).

IRC 512(b)(7) provides that in computing the unrelated business income tax there shall be excluded all income derived from research for--

> "(A) the United States, or any of its agencies or instrumentalities, or
>
> "(B) any State or political subdivision thereof."

While the section itself is straightforward, the problem is determining whether the section applies to a particular research project.

For example, one of the projects challenged in TAM 8028004 was funded by a public utility which was a department of the city of Q. The aim of the project was to determine the commercial feasibility of solar hot water heaters. If the solar hot water heaters were commercially feasible, the public utility planned to eventually market them to its customers. The District Office sought to impose the UBIT on the income derived by the exempt organization from performing the feasibility study on the theory that the project was ordinary testing incidental to the commercial activity of marketing the solar hot water heaters. The National Office agreed that the activity was not scientific research in the public interest, but pointed out that the income from the project was not subject to the UBIT because the project was conducted for the city of Q and was, therefore, described in IRC 512(b)(7).

IRC 512(b)(8) of the Code provides an exclusion from the UBIT in the case of a college, university, or hospital for all income derived from research performed for any person. Issues arise with surprising frequency under IRC 512(b)(8) because organizations involved in research activities often have some relationship to or connection with a college, university, or hospital and they attempt to use that relationship to shield unrelated research income from taxation.

In G.C.M. 39196, supra, the research institute argued that it was merely an extension of a state university. In support of that contention the institute relied on the fact that the state legislature had authorized the university to establish, develop, and administer a research institute. The institute was the entity created pursuant to this grant of legislative authority. The institute also pointed out that its initial funding had been provided by the university, it was controlled by the same persons

who controlled the university, its facilities were used for joint research projects with the university, and faculty and graduate students of the university used the institute's facilities for various educational purposes.

The G.C.M. conceded that these facts established that there were significant ties between the institute and the university. However, the institute itself had acknowledged that it was a legally distinct and separate organization from the university. It had its own corporate charter and its own exemption from federal income tax. It sought its own funding from state and federal agencies and other sources. The G.C.M. stressed these facts, as well as the intended effect of the exclusion provided by IRC 512(b)(8) in determining whether the institute could avail itself of the exclusion provided by that section.

> "Congress, in excluding university research from taxation, anticipated that the purpose of such research, as reflected in the regulations, would be related to the primary exempt purpose of a university (i.e., teaching students). If such research led to private contracts, the university would not be required to separate these out for unrelated income tax purposes. To make the opposite assumption, that Congress was not concerned with whether the research was related to the university's exempt function would allow any commercial research organization to have all its income from research excluded merely through affiliation, however tangential, with a university. We do not believe Congress intended that result.
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> "After considering all the facts and circumstances, including the Institute's separate incorporation, separate purposes, separate facilities and separate operations, it is our view that the Institute is not merely or solely an extension of the University. It has, by its own assertion, requested federal agencies which sponsor its research to consider it an entity separate and apart from the University. It has stated in its Articles of Incorporation that its primary purpose is carrying on non-instructional applied contractual research, a purpose significantly

> different from that of a university. It presents no formal course of instruction, maintains no faculty and has no regular student body. As a consequence, we believe it is not a university and its income should not be excluded from unrelated business taxable income under section 512(b)(8)."

IRC 512(b)(9) provides that, in the case of an organization operated primarily for purposes of carrying on fundamental research the results of which are freely available to the general public, all income derived from research performed for any person, and all deductions directly connected with such income, shall be excluded in computing unrelated business taxable income. The term 'fundamental research,' as contrasted with 'applied research,' does not include research carried on for the primary purpose of commercial or industrial application. See Regs. 1.501(c)(3)-1(d)(5)(i) and 1.512(b)-1(f)(4).

4. Other Commentaries and Authorities

For the views of an outside practitioner on the scientific section of the regulations (and citations to additional authorities) see "Collaboration Between Tax-Exempt Research Organizations and Commercial Enterprises--Federal Income Tax Limitations" by Kendyl K. Monroe in the May, 1984 issue of TAXES-THE TAX MAGAZINE.

Although this topic addresses scientific research it is recognized that an organization could qualify for exemption under IRC 501(c)(3) as a scientific organization or as an organization "promoting" scientific research. In a recent case, Washington Research Foundation v. C.I.R., T.C. Memo 1985-570, decided on November 21, 1985, an organization sought a declaratory judgment that it was educational and promoted scientific research under IRC 501(c)(3). The organization argued that its activities furthered scientific purposes even though it was not itself engaged in scientific research. The organization had entered into an agreement with the University of Washington. Under the terms of the agreement, the Foundation would be assigned the University's rights to the results of the University's research projects. The Foundation would then see to securing patents and license agreements. Royalties received under the licensing agreements after recovering the Foundation's operating expenses would flow to the University to support further research projects. In addition, the organization intended to provide a clearinghouse of information to cause the exchange of available and needed technology. It proposed to publish a science newsletter, sponsor seminars, and

publish information for the general public at no cost. It had already co-sponsored a seminar and workshop to educate researchers on the practical applications of their research and to discover new areas to research. The court recognized that research is not the only activity that can be scientific citing Research Foundation, Inc. v. United States, 181 F. Supp. 526 (S.D. Ill. 1960) that involved the publication of scientific booklets. However, the court concluded that the organization's activities were not scientific nor were they advancing scientific research. While acknowledging that some activities advanced education, the court found an overriding commercial purpose in denying exemption under IRC 501(c)(3).