

YALE UNIVERSITY
NEW HAVEN CONNECTICUT

OFFICE OF THE PRESIDENT

November 28, 1983

To the Members of the University Faculty and Research Scientists:

As you may know, the faculty Committee on Cooperative Research, Patents, and Licensing, chaired by Professor Clement L. Markert, has been working for over a year to consider issues of policy and practice regarding the University's and individual faculty members' relationships with commercial enterprises. The purpose of this letter is to solicit your views concerning the enclosed draft report of the Committee. As I receive comments, I will share them with the members of the Committee. Sometime early in the next semester, having taken into account the advice of the faculty, I will take, with the Provost, the report to the Corporation. My intention is to ask the Corporation to approve as University policy those relevant portions of the report. I hope you will send me your comments as soon as possible.

Thank you.

Sincerely yours,



A. Bartlett Giamatti

ABG:rcm

Enclosure

Yale University

DEPARTMENT OF BIOLOGY
Osborn Memorial Laboratory
P.O. Box 6666
New Haven, Connecticut 06511

November 18, 1983

President A. Bartlett Giamatti
Woodbridge Hall

Dear President Giamatti:

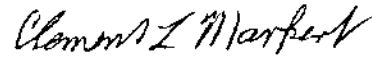
Attached for your review and further disposition is a draft report prepared by the Committee on Cooperative Research, Patents, and Licensing. Although the committee is a "standing committee," we believe that our recommendations address issues of current importance to all in the University community. We suggest that you circulate copies of this draft report to the faculty for review and comment.

In part of your charge to the committee you asked us to examine the present policy on patents and licensing, to draw up guidelines for faculty consulting and for other forms of faculty involvement with private enterprise, and finally to suggest changes in the faculty handbook to reflect our recommendations. We have done so. This wide ranging charge to the committee has produced many stimulating exchanges among the faculty, both on and off the committee. The committee has met at least monthly and frequently at weekly intervals over the past two years to consider the many issues which result from the increasing involvement of Yale with private industry in the support and commercialization of research at Yale. The scope of your charge to the committee has been appropriately reflected in the breadth of experience and attitude represented by the faculty chosen to serve on the committee. We have representatives from the humanities, law, social sciences, medicine, and the biological and physical sciences. Such breadth has necessarily brought to the forefront the wide diversity of views held by members of the Yale community. The report which we now present represents a consensus of diverse views held by members of the committee initially as well as the views presented to our committee by other members of the faculty.

Each member of the committee has contributed significantly but we wish to acknowledge particularly the contributions of Dr. Richard Gershon who died last year before our present report was prepared. Though we shall surely miss his views in our committee deliberations, we shall miss him most as a colleague.

The work of the committee is not finished. In our report we point out that deliberations on several issues are ongoing and we believe that as these are resolved, others will surely arise. I trust that after examining this report you will agree that the committee has discharged its initial responsibilities. As you select new committee members for the future I hope that they will continue the judicious and forthright participation that has characterized the present members of the committee with whom I have been privileged to work.

Respectfully submitted,



Clement L. Markert, Chairman

REPORT OF THE COMMITTEE ON
COOPERATIVE RESEARCH, PATENTS, AND LICENSING

Ira B. Bernstein
D. Allan Bromley
Ralph S. Brown
John B. Fenn
Richard K. Gershon (deceased)
Robert E. Handschumacher
Richard C. Levin
Clement L. Markert, Chairman
J. Hillis Miller
Robert G. Shulman
Brian J. Skinner

REPORT OF THE COMMITTEE ON COOPERATIVE RESEARCH,
PATENTS, AND LICENSING

Recent developments in molecular biology, genetics, computer science, and other disciplines promise a significant shortening of the time between the creation of new scientific ideas and their widespread commercial application. A closer link between university research and applied industrial technology creates, for the university and its faculty, intellectually exciting and financially attractive opportunities for the practical application of ideas with potentially enormous social benefit. Yet along with these new opportunities comes concern that close involvement in commercial activities may threaten the principles of free and objective inquiry to which the University and its faculty are fundamentally committed.

Mindful of both the potential benefits and problems created by greater involvement with private industry, the Committee on Cooperative Research, Patents, and Licensing has met regularly for two years to reexamine and, where necessary, to recommend clarification or revision of the University's policies regarding research sponsored by outside organizations, outside activities of the faculty, and patent and licensing practices. Our committee has consulted with several faculty members engaged in university research sponsored by commercial enterprises and with other faculty members engaged in outside commercial activities related to their university research. We have monitored the

University's negotiations with industrial firms seeking to sponsor research; we have advised the Provost and the Office of Cooperative Research on the appropriate disposition of patents owned by the University, and we have assisted in the resolution of disputes concerning the distribution of patent royalties. In light of our study of the issues involved and our accumulated experience, we are now prepared to recommend a number of revisions of the University's patent policy and of its regulations concerning sponsored research and the outside activities of the faculty. Our specific recommendations are embodied in a revised draft of the Faculty Handbook sections dealing with these subjects and in a revised Patent Policy. These documents are available from the Provost's Office upon request.

Our recommendations derive from a reaffirmation of the essential purpose of the University: "to preserve and enlarge humanity's store of knowledge and to impart it." Pursuit of this goal requires that the University preserve an environment conducive to free inquiry and free exchange of ideas. Such an environment depends crucially upon mutual trust and openness among colleagues. Free and open discussion and generous collaboration are essential in supporting the University's mission.

Relationships with outside organizations must be governed in a manner consistent with these central principles of free inquiry, open communication, and collegiality. Collaborative research with industry offers opportunities to bring the products of the laboratory into rapid commercial use, but such

undertakings cannot be permitted to subordinate the principles of free inquiry, openness, and collegiality to the pursuit of commercial gain. Similarly, though it may on occasion be appropriate for a faculty member to pursue the commercial application of his or her university research through ownership or management of an outside company, vigilant care must be taken to assure that such outside involvement does not distort the direction of university research, color the supervision of graduate students, or convert an environment of openness and trust into one of secrecy and striving for personal financial advantage.

In the paragraphs that follow, we discuss our proposed revisions of the University's policies under three headings: sponsored research, outside activities of the faculty, and patent policy.

Sponsored Research

To keep matters in perspective, it is important to observe that the Federal government now provides, and it is likely to provide in the foreseeable future, the overwhelming majority of outside funds for support of research at Yale. Nonetheless, private industry has for many years assisted in the support of university research, and the scale of this activity has increased significantly in recent years. To the extent that companies sponsor university research with an eye to the eventual commercial possibilities of work undertaken, such arrangements help to make the benefits of University research widely available to the public. At the same time, the sponsor's interest in

commercial success may come into conflict with the University's norms of free inquiry and open communication.

In reviewing the University's present policies concerning sponsored research, we find the principles enunciated in the Faculty Handbook (Section XIII. B.1) to be a satisfactory guide. The University's prohibition of secret or classified research projects derives directly from its essential purpose: to enlarge humanity's store of knowledge and to impart it. We reaffirm this commitment to free discussion and open communication.

To make this commitment clear to the faculty, as well as to potential private sponsors of research, we propose to add a brief additional section to the Faculty Handbook. In the proposed new section, we reaffirm that Yale shall not enter into any agreement that prohibits free and open discussion of ongoing research. Similarly, faculty and students must be free to publish their research results. As a practical consideration, companies will sometimes request the right to review research results prior to publication, to consider whether a patent should be sought. The Committee sees no problem in permitting company sponsors to review pre-publication drafts of research papers, but such reviews shall not delay publication beyond a brief, pre-agreed and specified time period. In several recent research agreements reached with outside organizations, Yale has agreed to pre-publication review periods of 30 to 45 days. Since in most cases such a period is shorter than the period from submission of an

article to publication, we believe that restrictions of this sort do not constitute a significant abridgment of the right to publish research results.

In negotiating research agreements, several companies have sought provisions to restrict unduly the right of faculty members to withdraw from sponsored research programs, and they have also sought to constrain the subsequent research activities of those who withdraw. Yale has not agreed to such restrictions of freedom of inquiry, and we recommend that this policy be stated explicitly in the Faculty Handbook.

Outside Activities of the Faculty

It is the policy of the University to encourage faculty participation in outside activities of benefit to society and the University. We reaffirm the principle that involvement in outside professional activities should be guided by a faculty member's overriding obligation to the University and to its mission of research, teaching, and the dissemination of knowledge.

To be consistent with this principle, faculty members should conduct relationships with outside organizations so as to avoid conflicts of interest and conflicts of commitment. A conflict of interest exists when a faculty member's activities within the University could be biased so as to provide direct or indirect financial benefit to the individual from an outside organization. A conflict of commitment exists when a faculty member engages in outside activity to an extent that precludes meeting his or her obligations to the University. We reaffirm that these

obligations are not discharged solely by meeting classes; the faculty member is also obliged to be available to students outside of the classroom, to carry his or her share of committee work, and to keep his or her research in constant progress.

Certain outside activities are an integral part of a faculty member's responsibilities. Within reasonable bounds, for example, site visits or peer review evaluations of research programs at the request of the government or non-profit organizations, committee work for professional associations, and editorial work for professional journals are encouraged, as are voluntary contributions of a faculty member's expertise to foundations and community organizations.

In addition to such activities of clear public benefit, faculty members frequently provide paid consulting services to business concerns and other organizations. Such services often benefit the individual, the University, the organization requiring the services, and the larger public. Consulting activities are encouraged to the extent that they enhance a faculty member's professional competence and thus better equip that individual to serve the University as a researcher, teacher, and colleague. Time spent in these activities, however, must be limited in order to assure that faculty members are able to discharge fully their obligations to the University. We reaffirm the University's policy that on average no more than one day per seven day week should be spent on outside gainful professional activities during a semester or during months for which a faculty member receives off-term compensation administered by the University. Circumstances believed to merit exceptional

treatment should be referred in writing to the Provost.

Occasionally, consulting relationships may bring a faculty member into conflict with the University's guiding norms of free inquiry, open communication, and collegiality. For example, consulting activities, with the government as well as with business organizations, sometimes require that faculty members sign agreements of confidentiality. Where the nature of the information kept in confidence does not intrude on the faculty member's research program or teaching, confidentiality may be warranted. It should be recognized, however, that confidentiality agreements conflict in principle with a faculty member's commitment to free and open exchange of ideas. Under no circumstances should the communication of results of University research be suppressed in consideration of an outside organization's proprietary interest.

We do not believe that the University is well served by a system of prior approval of consulting relationships, or any formal mechanism of policing such activities. It is the responsibility of the individual faculty member to see that outside activities do not diminish the time and energy devoted to fulfilling his or her overriding obligations to the University. Similarly, it is the individual's responsibility to insure that involvement with outside organizations, especially where such involvement is prolonged or involves confidentiality, does not attenuate his or her commitment to full freedom of inquiry, open communication, and collegiality in the conduct of research and teaching.

To preserve an atmosphere of openness and collegial trust,

we have recommended to the Provost that faculty members disclose the nature and extent of their outside professional and consulting activities in writing to their chairman for inclusion in the chairman's annual report to the President. This policy was adopted by the University last spring, and we have proposed a revision to the Faculty Handbook to reflect this new policy.

Additional special considerations arise when a member of the faculty seeks to commercialize the results of his or her university research through an ownership or management position in a private enterprise. Such an outside involvement may require great concentration and effort, rendering it difficult for the faculty member to avoid a conflict of commitment. It is doubtful, though not impossible, that even our most energetic faculty members can do adequate justice to teaching, research, and University citizenship, and also manage or direct a commercial enterprise. Moreover, significant involvement in a commercial enterprise risks distorting the direction of the faculty member's university research, as well as that of his or her students and junior colleagues. Students, postdoctoral fellows, and junior faculty must be free to choose research problems within an environment of free inquiry, independent of the personal or financial consequences for their supervisors or mentors. Faculty ownership or management of commercial enterprises also presents a heightened potential for suppression of open communication among colleagues. This problem becomes especially acute when the faculty member/entrepreneur conceives a new idea that has both general scientific importance and

potential for rapid commercial application.

We recognize that the maintenance of an environment of free inquiry, openness, and collegiality depends above all upon the good faith and voluntary commitment of the faculty. Nonetheless, faculty ownership or management of a private enterprise presents a sufficiently serious potential for distortion of the University's aims and for disruption of its collegial environment that we believe some monitoring of these activities is appropriate. Thus, we recommend that a faculty member be required to disclose to the President or the Provost any management or significant ownership position in an enterprise that makes commercial use of the results of his or her academic or professional endeavors. We recommend that activities so disclosed, and their relationship to the faculty member's activities in the University, be reviewed for conformance with University policies and the principles underlying them by a committee designated by the Provost. Ordinarily, a subcommittee of the Committee on Cooperative Research, Patents, and Licensing should be so designated, augmented when necessary by persons with relevant expertise. The committee should review the status of any continuing ownership or managerial relationship with a private enterprise on a periodic basis.

We expect that in most cases a review of this type will find that the faculty member is faithfully discharging his obligations to the University. But were the committee to determine that a faculty member's involvement in the commercial enterprise entailed a significant conflict of commitment, we believe that the faculty member should either modify or terminate his outside

activity or reduce his or her obligation to the University. If the latter course is chosen, the individual may request a half time appointment or a leave without pay for a period of one year. At the end of the period, the faculty member may return to full time status if obligations to the outside enterprise have been discharged or sufficiently reduced. If the faculty member wishes to maintain commitment to the private enterprise, he may resign from the faculty or he may seek conversion of his appointment to adjunct status. In either case, reappointment to full time status would require approval through the University's ordinary appointment practices. These recommendations are embodied in a proposed new section of the Faculty Handbook.

Patent Policy

Yale's current patent policy was adopted by the Corporation in 1974. In the years following, changes in patent law and the opportunities for enhanced cooperation with private industry have made necessary a reexamination of existing policy. Until recently, ownership of patents resulting from federally sponsored research vested in the government in the absence of a specific waiver of the government's claim. The "Patent and Trademarks Amendments Act of 1980", as implemented by Office of Management and Budgets Circular A-124 in March 1982, granted ownership of patents resulting from federally-sponsored research to the University, although the government retained the right to hold non-exclusive licenses for certain purposes. To assert its rights under the new patent law, the University must meet certain obligations, including prompt disclosure of any invention to the

funding agency, and assurance by a written agreement that investigators will promptly disclose any inventions to the University. We have proposed revisions to the patent policy of the University to make the requirements of the new law explicit.

Opportunities for cooperative research with industrial enterprises have also motivated some changes in the University's patent policy. In the past, disclosures of inventions made under University auspices were turned over to a non-profit organization, Research Corporation, for evaluation. If a decision was made to apply for a patent, Research Corporation prepared the application on the University's behalf and sought appropriate licensees. In return, Research Corporation received a share (47%) of gross royalties from any licenses issued. The University split the remaining share of royalty income, after expenses, with the inventor(s) on a 50-50 basis. At present, with the establishment of the Office of Cooperative Research and the widespread interest of corporate sponsors of research in obtaining licenses to University patents, the University has a greater capability to evaluate patents and seek licensees on its own behalf. Generally, therefore, the University will hereafter handle its own patent and license affairs.

The new institutional arrangements make necessary a re-evaluation of the procedures for division of royalty income. Since the University will now retain, after expenses, a far larger share of any gross royalties than it would have received from Research Corporation, we have recommended a formula for the division of royalty income that is roughly consistent with the

incentives to inventors provided under the old policy. This provides the inventor with 30% of net royalty income up to \$200,000 and 20% of net income in excess of \$200,000. In addition, another 30% of all net income will be allocated directly to the inventor's department or facility for the support of research. The remaining funds will be allocated by the Provost to the general support of research.

To encourage collaboration and collegiality in research that may lead to patentable results, we have also recommended an additional incentive. Where all participating investigators in a department or facility agree in advance, in writing, to share equally in royalty income, regardless of which individuals are designated as "inventors" for legal purposes, the University will commit an additional 50% of its residual share of royalty income (20% or 25% of the total) to that department or facility. We make this recommendation because the law has very specific requirements concerning the designation of inventors, and these must be met to uphold the validity of a patent. Yet in the University it is well understood that many individuals contribute to the success of a research program without being legally qualified as "inventors." Such an extra inducement for prior division of royalties rewards all collaborators, and it may help to remove tendencies toward secrecy and isolation that quest for a patent might engender. Even where collaborators in a patentable discovery do not reach prior agreement on the division of royalties, it is hoped that they will, in a spirit of generous collaboration, share a portion of any royalties with co-workers

who have made significant, if not "inventive", contributions to the relevant research program. Where disputes do arise, however, we recommend that they be resolved by the Provost with the advice of the Committee on Cooperative Research, Patents, and Licensing. We would expect all those involved with a patentable invention to accept any adjudication by the Provost in a spirit of generosity and collegiality.

With regard to the licensing of patents, we recommend that the University seek the most effective means of insuring that the public reap the potential benefits of its research. Ordinarily, the University will prefer to grant non-exclusive licenses. Sometimes, however, the costs and risks of commercializing a patented invention will be such as to deter companies with relevant skills and experience from proceeding without the protection afforded by an exclusive license. We recommend that the University should be prepared to grant limited term exclusive licenses where this is clearly the most effective means for arranging public access to the benefits of an invention. Any agreement to grant an exclusive license should require the licensee to surrender the license if he fails to carry out effective development and marketing of the invention within a specified period of time.

Having proposed these revisions to the University's Patent Policy, the Committee on Cooperative Research, Patents, and Licensing is continuing to consider the University's treatment of non-patentable forms of intellectual property. The University has no formal copyright policy, and the traditional practice has

been for the University to waive its right to copyright on written scholarly materials and textbooks authored by the faculty. Computer programs are sometimes patentable, but they are more commonly protected by copyright. The creation of computer programs, like the discovery of patentable inventions, typically involves the use of costly University facilities and resources. Moreover, to the extent that computer programs and associated written manuals have potential commercial value in industrial application, they are more akin to "useful" inventions than to scholarly publications. We, therefore, recommend that faculty members and other University employees disclose to the University any potentially licenseable computer programs and associated materials. If the University chooses to assert its claim to copyright, licensing arrangements and the division of royalty income shall be governed by the terms of the Patent Policy. As in the case of patentable inventions, the University will make no claim to copyright any program that is unrelated to the activities for which the author is employed and has not involved the use of University facilities.