

# Statement on Corporate Funding of Academic Research

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**R**esearch universities have long collaborated with industry to their mutual benefit. The relationship has been the most productive for both parties when scholars are free to pursue and transmit basic knowledge through research and teaching. Learning, intellectual development, and progress—material, scientific, and technological—require freedom of thought and expression, and the right of the researcher to convey the results of inquiry beyond the classroom, laboratory, or institution.

The relationship, however, has never been free of concerns that the financial ties of researchers or their institutions to industry may exert improper pressure on the design and outcome of research. This is especially true of research that has as its goal commercially valuable innovations, which is the most common type of industry-sponsored research. Although corporate funding of academic research accounts for a relatively small percentage of all university research funds—approximately 7 percent of the total—that percentage has grown more rapidly than support from all other sources over the past two decades.<sup>1</sup> It may be expected to continue to grow absent an expansion of federal monies on a scale comparable to 1953–68, the halcyon years of federal funding. Moreover, the impact of corporate funding of university research has greater influence where it is most heavily focused, primarily in the fields of medicine, biology, chemistry, and engineering.

Some recent examples of university-industry and faculty-industry relationships that have drawn public attention are:

1. The death of a patient in a gene-transfer study at the University of Pennsylvania in fall 1999 and claims that the financial ties of the researchers to the company that financed their work biased their judgments.
2. Grants for biomedical research from tobacco companies and the Council for Tobacco Research. Though many recipients of these grants state that they have never been pressured to alter or “cook” data, some critics have questioned whether the availability of such funding lends credibility to company claims that health damage caused by smoking is still an unproven hypothesis and undermines public confidence in the possibility of disinterested science.
3. Research on a thyroid-replacement drug funded by a company with a vested interest in demonstrating the drug's superiority to generic drugs. In this case, the manufacturer intervened to try to prevent publication of an article that had been rigorously vetted by the *Journal of the American Medical Association*.
4. Endowed chairs in which a corporate sponsor retains some measure of control through the device of rotating as opposed to tenured appointments.
5. Activities of a university center on credit research, sponsored by major firms in the retail credit industry, whose findings are used by lawmakers debating changes in federal bankruptcy law.
6. A highly visible whistle-blowing episode in Canada in which a faculty researcher was removed as a principal investigator in a drug study when she broke a gag rule about the toxic risks to some of her patients. The institution denied her legal assistance on grounds that she had not obtained the approval of the administration for her confidential

agreement with the drug company, an agreement that an investigator characterized as a “very big mistake.”

7. Universities actively encouraging faculty members to form private research companies to promote licensing of innovations, which in turn can induce rivalry among faculty.
8. A study (published in *Science and Engineering Ethics*, II) of 789 journal articles that showed that in 34 percent of the articles one or more author had a financial interest in the subject matter being studied.

Perhaps the most striking example of a new form of university-industry partnership and a possible harbinger of future developments is the 1998 agreement between the Department of Plant and Microbial Biology at the University of California, Berkeley, and the Novartis Corporation, a Swiss pharmaceutical company.<sup>2</sup> Under a five-year, \$25-million arrangement, Novartis is funding research in the department and will receive licensing rights to a proportion of the number of discoveries by the department’s researchers equal to the company’s share of the department’s total research budget, whether or not the discoveries result directly from company-sponsored research. Where the financial resources of an academic department are dominated by a corporation there is the potential, no matter how elaborate the safeguards for respecting academic freedom and the independence of researchers, for weakening peer review both in research and in promotion and tenure decisions, for distorting the priorities of undergraduate and graduate education, and for compromising scientific openness.

An additional concern focuses less on research and teaching in a single department than on the ethos of the entire university. President George Rupp of Columbia University has observed that research may become somewhat too domesticated, aimed at short-term objectives dictated by corporate sponsors, or even our own faculty, as their entrepreneurial instincts lead them to try to identify and patent discoveries that will have a payoff. That is a risk that the university as a whole faces. It can involve not only the sciences and engineering, but the humanities and social sciences as well. For example, consider the impact of some of the new media capabilities. There are current commercial attempts to harness the ideas, even the lectures and presentations, of faculty members. The danger exists that universities will be so assimilated into society that we will no longer be the kind of collectors of talent that allow creativity to blossom. We must guard against being harnessed directly to social purposes in any way that undermines the fundamental character of the university.<sup>3</sup>

The increasingly complex and controversial relationships among universities, researchers, and corporations led the federal government in 1995 to require researchers who receive grants from the National Science Foundation or the Public Health Service (the latter includes the National Institutes of Health) to disclose to their institutions any “significant financial interests . . . that would reasonably appear to be affected by [their] research.” Specifically, researchers must report any income (“when aggregated for the investigator and the investigator’s spouse and dependent children”) greater than \$10,000 that they receive from a corporation that could benefit from their research, or any equity interest greater than \$10,000 that exceeds 5 percent ownership interest in such a corporation. The government also requires universities to have “adequate enforcement mechanisms,” and, as appropriate, to impose sanctions.<sup>4</sup>

Most research universities have adopted policies, with varying degrees of specificity, that reflect the government’s requirements. Some have adopted more stringent regulations. At Washington University in St. Louis, for example, there is no monetary minimum for reporting financial ties with a corporation that sponsors research, while researchers at Johns Hopkins University must have the approval of the institution before they accept a fiduciary role with a company, if such a position is related to their academic duties. In addition, at least two professional organizations—the American Society for Gene Therapy and the American Society for Human Genetics—have called on their members not to own stock in any company that funds their research.

These various initiatives rest on the premise that conflicts of interest generated by university-industry ties can thrive if researchers do not know what standards of professional conduct are expected of them.<sup>5</sup> It is safe to say, however, that the pressures that brought these government and university requirements into being are not likely to diminish for the foreseeable future, and that there will be a continuing need to ensure that conflict-of-interest policies are properly

implemented. The primary responsibility for such efforts resides within the academic community and especially with the faculty. The possible efforts are several:

1. Consistent with principles of sound academic governance, the faculty should have a major role not only in formulating the institution's policy with respect to research undertaken in collaboration with industry, but also in developing the institution's plan for assessing the effectiveness of the policy.<sup>6</sup> The policy and the plan should be distributed regularly to all faculty, who should inform students and staff members associated with them of their contents.
2. The faculty should work to ensure that the university's plan for monitoring the institution's conflict-of-interest policy is consistent with the principles of academic freedom. There should be emphasis on ensuring that the source and purpose of all corporate-funded research contracts can be publicly disclosed. Such contracts should explicitly provide for the open communication of research results, not subject to the sponsor's permission for publication.
3. The faculty should call for, and participate in, the periodic review of the impact of industrially sponsored research on the education of students, and on the recruitment and evaluation of researchers (whether or not they hold regular faculty appointments) and postdoctoral fellows.
4. The faculty should insist that regular procedures be in place to deal with alleged violations by an individual of the university's conflict-of-interest policy. Should disciplinary action be contemplated, it is essential that safeguards of academic due process be respected.<sup>7</sup>
5. Because research relationships with industry are not static, the faculty, in order to ensure that the assessment of conflict-of-interest policies is responsive to changing needs, should regularly review the policies themselves as well as the instruments for conducting the assessment.

## Notes

1. National Science Board, *Science & Engineering Indicators-1998* (Arlington, Va.: National Science Foundation, 1998), 2.

2. A somewhat similar arrangement in 1982 between Monsanto and the medical school at Washington University in St. Louis produced about \$150 million in basic-research money for the university. See Goldie Blumenstyk, "Berkeley Pact with a Swiss Company Takes Technology Transfer to a New Level," *Chronicle of Higher Education*, December 11, 1998, A56.

3. Government-University-Industry Research Roundtable, *A Dialogue on University Stewardship: New Responsibilities and Opportunities. Proceedings of a Roundtable Discussion* (Washington, D.C.: The National Academies, 1998), 22.

4. In 1999, the National Institutes of Health (NIH) issued principles and guidelines to discourage researchers from entering into unduly restrictive agreements with corporations about sharing their work with others. The NIH's remarks about "academic freedom and publication" merit full citation: "Academic research freedom based upon collaboration, and the scrutiny of research findings within the scientific community, are at the heart of the scientific enterprise. Institutions that receive NIH research funding through grants, cooperative agreements, or contracts ("Recipients") have an obligation to preserve research freedom, safeguard appropriate authorship, and ensure timely disclosure of their scientists' research findings through, for example, publications and presentations at scientific meetings. Recipients are expected to avoid signing agreements that unduly limit the freedom of investigators to collaborate and publish, or that automatically grant co-authorship or copyright to the provider of a material.

"Reasonable restrictions on collaboration by academic researchers involved in sponsored-research agreements with an industrial partner that avoid conflicting obligations to other industrial partners are understood and accepted. Similarly, brief delays in publication may be appropriate to permit the filing of patent applications and to ensure that confidential information obtained from a sponsor or the provider of a research tool is not inadvertently disclosed. However, excessive publication delays or requirements for editorial control, approval of publications, or withholding of data all undermine the credibility of research results and are unacceptable." 64 *Federal Register* 72090 (December 23, 1999).

5. See, for example, "On Preventing Conflicts of Interest in Government-Sponsored Research at Universities," issued jointly by the AAUP and the American Council on Education, *Policy Documents and Reports*, 10th ed. (Washington, D.C.: AAUP, 2006), 182–84.

6. See "Statement on Government of Colleges and Universities," *Policy Documents and Reports*, 135–40.

7. See Regulations 5 and 7 of the Association's "Recommended Institutional Regulations on Academic Freedom and Tenure," *Policy Documents and Reports*, 26–28.