

RE89

Office of the Secretary and Chief of Staff

TO MEMBERS OF THE COMMITTEE ON FINANCE:

ACTION ITEM

For Meeting of September 20, 2007

ADOPTION OF POLICY REQUIRING SPECIAL REVIEW/APPROVAL PROCEDURES PRIOR TO UNIVERSITY SUBMISSION OF RESEARCH PROPOSALS TO TOBACCO INDUSTRY FUNDERS

RECOMMENDATION

Regent Moores recommends that the Board of Regents withdraw RE89 [“Adoption of Policy Restricting University Acceptance of Funding from the Tobacco Industry,” presented at the July 18, 2007 Regents meeting] from consideration, and instead adopt a substitute resolution that contains a combination of the following elements:

1. **Regental statement to researchers:** A Regental statement expressing concern about the tobacco industry and exhorting University researchers to exercise the utmost care to assure that their research adheres to the highest scientific and ethical standards, including vigilance in not allowing any funder to direct or control the outcome of their research or the dissemination of its results.
2. **Scientific review and Chancellorial approval of research proposals prior to submission to tobacco industry funders:** A direction that the President establish a policy requiring that prior to the University’s submission of any proposal seeking research funding from the tobacco industry, the research proposal must be reviewed by a scientific review committee drawn from the community of scholars and designated by the President for this purpose, and must be approved by the relevant Chancellor (who will take the recommendations of the scientific review committee into account in determining whether to approve submission of the proposal). The scientific review committee would be charged with advising the relevant Chancellor regarding whether a proposed study uses sound methodology and appears designed to allow the researcher to reach objective and scientifically valid conclusions.
3. **Annual report to The Regents.** A direction that the President prepare and submit to The Regents an annual report summarizing the number of proposals submitted to the scientific review committee, the number approved, and the number funded, along with a description or abstract of each proposal. [If #5 below is adopted as an alternative to #2,

this provision would be either deleted or modified so that the annual report would include information about research proposals submitted to (and funded by) tobacco industry funders, rather than information about proposals submitted to a scientific review committee].

4. **Authorization for individual academic units to request Regental permission to adopt tobacco funding restrictions.** A provision authorizing individual academic units within the University (e.g., departments, schools or campuses) to request Regental approval to adopt a policy declining to accept, process, or administer research awards funded by the tobacco industry. A majority vote of the Academic Senate faculty affiliated with the unit would be required.
5. [As a potential alternative to #2, above]: **Requirement that the University will not accept a research award from a tobacco industry funder until an abstract of the proposal has been included as an information item at a regularly scheduled Regents meeting.** A direction that the President establish a policy requiring that The Regents be provided with an abstract of any research proposal submitted by the University to a potential tobacco industry funder. The University would not accept a research award from a tobacco industry funder until an abstract of the proposal has been included as an information item at a regularly scheduled meeting of The Regents.

Possible language for such a resolution is provided below, following the background information.

BACKGROUND

At the July 18, 2007, Regents meeting, the Committee on Finance discussed RE89, "Adoption of Policy Restricting University Acceptance of Funding from the Tobacco Industry." In RE89, Regent Moores recommended adoption of a policy under which The Regents would decline all new funding from the tobacco industry or agencies substantially controlled by or acting on behalf of the tobacco industry, unless the funding is for activities clearly unrelated to the health effects of tobacco products, or to the promotion, regulation, or use of tobacco products. After discussion, the Committee decided to table the item to give time for a compromise proposal to be developed and brought back to the Committee for consideration.

Subsequent to the July meeting, three key ideas that were discussed at the July 18 meeting became the focus of efforts to reach a compromise. They are:

1. A Regental expression of concern about the actions of tobacco industry funders and about the importance of ensuring the quality and integrity of research.
2. Recognition that the community of scholars is the best judge of both quality and integrity of research, and the requirement that there be a special level of peer review for tobacco-industry-funded research proposals prior to submission.
3. The importance of "sunshine" measures that can keep the President and Regents informed about tobacco-industry funded-research conducted by University researchers.

Subsequent to the July meeting, a fourth element, which had been discussed previously, also emerged as part of the compromise discussions: to allow individual academic units within the University to request Regental permission to adopt their own policies declining to accept, process, or administer research awards funded by the tobacco industry. Forwarding such a proposal might require a majority vote of Academic Senate faculty affiliated with that unit.

This proposal would not require the University to decline research funding from the tobacco industry, but instead would require adoption of special review and approval procedures to ensure that before the University submits a research proposal to a tobacco industry funder, adequate consideration has been given to whether the proposal appears designed to yield objective and scientifically valid conclusions. It would also require reports that would keep the President and The Regents informed about tobacco-industry funded research conducted by University researchers. Finally, as noted above, it would allow individual academic units within the University, through the Academic Senate and through the Chancellor and the President, to request Regental permission to adopt their own policies declining to accept, process, or administer research awards funded by the tobacco industry. This last measure would address the concerns of faculty within some units that have, in the past, expressed a desire to adopt a policy that they felt would dissociate themselves from an industry thought to be incompatible with the unit's mission. Typically, these would be units associated with public health or cancer treatment and prevention.

Current University policy does not require formal internal scientific peer review of research proposals prior to submission to government, foundation, industry, or other private sponsors, nor does University require Presidential approval of research proposals. However, proponents of the current compromise proposal believe that a special level of review and a requirement of a higher level approval will provide an extra measure of protection to minimize the chance that "bad science" is being deliberately funded by the tobacco industry, with the added potential for manipulation of the research findings by the industry upon completion.

PRIOR BACKGROUND

Although the present proposal does not prohibit acceptance of research funding from the tobacco industry, it would allow individual academic units requesting Regental permission to adopt such a prohibition. For this and other reasons, some of the concerns voiced by both proponents and opponents of such a prohibition are relevant to consideration of adopting special review and approval procedures. Therefore, following is further background recapping and updating information that was provided previously to The Regents in connection with RE89:

Research at the University of California is funded by a variety of sources, including federal, State, foundation, individual, and corporate/industry support. Under current University policy, individual researchers are free to accept funding from any source, as long as the funds are otherwise in compliance with applicable University policy (for example, as long as the award does not give the sponsor the ability to control or restrict publication of research results). Individuals, foundations, and corporate/industry sources also provide funding to the University for purposes other than research (e.g., in the form of gifts to support arts and education programs,

buildings, endowed chairs and professorships, student support, etc.). There are no restrictions on the University's ability to accept gift or endowment funding from any source, as long as the awards comply with University policies.

Over the years, critics of tobacco and of the tobacco industry have raised serious concerns about the University's acceptance of funding from sponsors with ties to the tobacco industry. While the amount of such funding received by the University is quite small in proportion to the University's total research funding, the concerns raised about acceptance of such funds center not on the amounts but on underlying principles and on the belief that such acceptance is inconsistent with the University's missions. From 1995 through the end of FY 2006-07, UC researchers received approximately 113 awards totaling about \$39 million from tobacco-related companies¹ for research, training, and public service. By comparison, the University received more than \$4 billion in total contracts and grants revenue in FY 2006 alone.

At the end of FY 2006-07, there were approximately 23 active grants at UC from sponsors with known ties to the tobacco industry. These grants, supporting research and related activities on the Berkeley, Davis, Irvine, Los Angeles, San Diego, Santa Barbara, and Riverside campuses, were all from Philip Morris USA, and totaled approximately \$16 million.²

The University also has received gift funds from tobacco companies and sources related to tobacco companies. While comprehensive systemwide information is not currently available in the University's corporate databases, consultation with campus development offices identified gifts from a number of tobacco companies. Responding campus development offices reported receiving gifts from corporate donors such as RJR Nabisco, Kraft Foods, Brown and Williamson Tobacco Corporation, and Philip Morris, with approximately 11 gifts made from 2005 through the end of June, 2007, totaling about \$485,000. This is an extremely small proportion of the University's total receipt of gifts and pledge payments, which for FY 2006 alone totaled \$1.29 billion.

A number of individuals and organizations have encouraged the University to adopt a policy prohibiting acceptance of tobacco industry funds. Proponents of such a ban have expressed the strong view that the tobacco industry has exerted a corrupting influence on research and that even though the tobacco industry does fund some meritorious basic scientific research, it also funds scientifically inferior proposals and uses the more meritorious research to lend credibility to its funding program while minimizing the risks of tobacco. Adoption of a policy banning such funding is seen as a way for The Regents to make a strong statement and to dissociate the University from an industry that has been deemed to engage in corporate actions antithetical to the University's core missions.

¹ In addition to tobacco companies like Philip Morris, there are other companies, like Kraft Foods, that have been either parent companies, affiliates, or subsidiaries of tobacco companies. While UC does not maintain a comprehensive list of "tobacco companies," there are companies known to UC that have in the past been identified with the tobacco industry; this data shows funding that UC has received from companies that are known to be, or to have been, tobacco-related.

² Please see attached "Tobacco Industry Sponsored Projects at the University of California: Known Active Awards as of close of FY 2006/2007."

Proponents of a ban on acceptance of tobacco funding argue that the University should dissociate itself from an industry known to make a product harmful to human health and that has a history of attempting improperly to influence or misrepresent research results. A number of other highly regarded institutions have already adopted policies declining tobacco industry funding. These include Johns Hopkins School of Public Health, University of Arizona School of Public Health, Emory University School of Medicine, Harvard School of Public Health, Harvard Medical School, and Ohio State University School of Public Health.

Most recently, proponents of a ban have pointed to the August 17, 2006 federal district court ruling (*U.S. v. Philip Morris USA, Inc.*, U.S.D.C.D.C. Civ. No. 99-2496)³ that found defendant tobacco companies guilty of violating the Federal Racketeer Influenced and Corrupt Organizations (RICO) Act as evidence of the tobacco industry's fraudulent corporate actions and disingenuous relationship with academic research institutions. They particularly point to a concern that defendant Philip Morris, found to have engaged in fraudulent actions, funds research at the University of California. This decision is currently on appeal.

Opponents argue that an institutional policy prohibiting researchers from accepting tobacco funding would violate the academic freedom of individual faculty members. They argue that the University should reject the idea that accepting funding from a corporate sponsor connotes an endorsement of the corporate sponsor's products or corporate actions. They also argue that while the use (or *misuse*) of research results by tobacco companies may be objectionable, individual investigators are expected to ensure the integrity of the conduct of their research regardless of the source of its funding. The University's policy on Integrity in Research provides in part that "all persons engaged in research at the University are responsible for adhering to the highest standards of intellectual honesty and integrity in research."⁴ The University's Statement of Ethical Values, adopted by The Regents in May 2005, restates the University's expectation that all members of the University community engaged in research are to conduct their research with integrity and honesty at all times, and to meet the highest standards of honesty, accuracy, and objectivity.⁵ Opponents of a policy argue that restricting investigators' funding to ensure research integrity may be unnecessary and may undermine the ability of researchers to explore promising avenues of inquiry independent of political and moral judgments about the source of that funding.

Finally, opponents of a ban note that it is a dangerous "slippery slope" to adopt a policy of rejecting funding from certain types of industry sponsors whose products or corporate behaviors are objectionable to some, and caution that there are a number of other industries that some would argue should fall under such a policy. While acknowledging the legitimacy of concerns about tobacco and about the corporate behavior of some companies, opponents of a funding ban express the opinion that as long as a grant has no conditions that would prevent researchers from adhering to their obligation to engage in intellectually honest research and to release the results of such research, the sponsor's motivations should not preclude acceptance of funding.

³ The full text of the ruling is available online at: <http://www.dcd.uscourts.gov/opinions/2006/99-2496-082006a.pdf>

⁴ The University's Policy on Integrity in Research can be found online at: <http://www.ucop.edu/ucophome/coordrev/policy/6-19-90.html>

⁵ The full text of the University's Statement of Ethical Values can be found online at: http://www.ucop.edu/ucophome/coordrev/policy/Stmt_Std_Ethics.pdf

At the time RE89 originally was proposed, President Dynes asked that The Regents be advised that the University's Academic Senate had considered this issue a number of times (see below for information about the Senate's previous consideration of this issue). In addition, the President asked that The Regents be advised that the systemwide Council of Vice Chancellors for Research (COVCR) had expressed their opposition to adoption of a University policy restricting research funding from tobacco companies and had expressed the view that such a policy is likely to undermine researchers' academic freedom and set a troubling precedent for funding from other industries that may be involved in litigation regarding alleged corporate misdeeds. Given that existing University policies require researchers to adhere to the highest standards of honesty, accuracy, and objectivity in their work, the President expressed concern that a funding ban may be unnecessary and might unfairly impugn the integrity of the University's faculty.

Academic Senate Consideration

Although the Academic Senate has not conducted a formal review of the current proposal, the Senate has extensively reviewed the issue of restrictions on research funding from tobacco companies. Further information about the Academic Senate's previous consideration of this issue is presented below, since it may be relevant to The Regents' consideration of this item.

In 2004, the Academic Senate began what proved to be a long debate concerning restrictions on research funding from tobacco companies. In part the debate was a response to bans adopted by individual units of the University, including the UCLA School of Nursing, the UC Berkeley School of Public Health, the UCSD Cancer Center, and the UCSF Cancer Center. Eventually, in May 2005, the Assembly of the Academic Senate adopted a Resolution on Research Funding Sources. That resolution provided:

[P]rinciples of academic freedom and the policies of the University of California require that individual faculty members be free to accept or refuse research support from any source consistent with their individual judgments and conscience and with University policy. Therefore, a unit of the University may not refuse to process, accept, or administer a research award based on the source of the funds; nor may such a unit encumber a faculty member's ability to solicit or accept awards based on the source of the funds, except as directed by the UC Board of Regents.

The resolution also expressed the Senate's view that "[o]nly the UC Board of Regents has the plenary authority to establish policies on the acceptance of research funding" and proposed that individual units might propose that the Academic Senate, through the President, request the Board of Regents to adopt a policy to refuse funding from a particular source.⁶ Part 4 of the current proposal is similar to that aspect of the previous Senate resolution.

⁶ The Academic Senate's actions are described in a letter from then-Chair of the Academic Senate George Blumenthal to President Dynes dated May 31, 2005. On August 1, 2005, the President forwarded George Blumenthal's letter and a copy of the *Academic Senate Resolution on Research Funding Sources* to The Regents (attached).

In September 2006, following discussion of *Research Funding: Acceptance of Funding from Corporate Sponsors Associated with the Tobacco Industry*, The Regents asked the Academic Senate whether a policy banning funding from tobacco industry sources was justified in light of the August 17, 2006 federal district court ruling (*U.S. v. Philip Morris USA, Inc.*, U.S.D.C.D.C. Civ. No. 99-2496) that found defendant tobacco companies guilty of violating the Federal Racketeer Influenced and Corrupt Organizations (RICO) Act.

In response to this request, the Assembly of the Academic Senate debated the issue on October 11, 2006. The Assembly's actions [see note above] consisted of passage of three resolutions:

The Academic Assembly instructs the Chair of the Assembly to advise the President that grave issues of academic freedom would be raised if The Regents were to deviate from the principle that no unit of the University, whether by faculty vote or administrative decision, has the authority to prevent a faculty member from accepting external research funding based solely on the source of funds. Policies such as the faculty code of conduct are already in place on all campuses to uphold the highest standards and integrity of research. The Academic Assembly believes that Regental intervention on the basis of assumptions about the moral or political standing of the donor is unwarranted.

The Assembly declares its deep disapproval of funding arrangements in which an appearance of academic freedom belies an actual suppression of academic freedom.

and

The Assembly asserts its conviction that past funding arrangements involving the tobacco industry have been shown to suppress academic freedom.⁷

Academic Senate Response to Regental Request for Additional Input

At its January 2007 meeting, The Regents requested that the Academic Senate further consider and provide a formal and unambiguous position on RE89, the proposed Policy Restricting University Acceptance of Funding from the Tobacco Industry. On May 9, 2007, the Assembly of the Academic Senate voted 44-5 (with 3 abstentions) against adopting RE89.⁸ Then-Chair Oakley reported this result at the July 18, 2007 meeting of the Regents Committee on Finance.

Responses from Proponents and Opponents of RE89

Numerous organizations and individuals wrote in support of and in opposition to RE89. Their responses were distributed to The Regents in advance of the July 18, 2007 Regents meeting.

⁷ The Academic Senate's actions are described in then-Chair John Oakley's letter to President Dynes dated November 1, 2006 (attached).

⁸ A copy of then-Chair Oakley's May 31, 2007 letter to President Dynes describing the Academic Senate action is attached and may be found at the following url: <http://www.universityofcalifornia.edu/senate/assembly/may2007/as.re89.0507.pdf>

The Current Proposal

Parts 1, 2, and 3 of the current proposal were sent to the Chair of the Academic Senate and to the campus Vice Chancellors for Research for review and comment. Part 4 of the proposal (allowing individual units to request permission to adopt their own bans) and Part 5 (requiring an abstract of a proposal seeking tobacco industry funding to be provided to The Regents as an information item at a regularly scheduled meeting prior to acceptance of funds) were developed at the request of proponents of the original resolution (RE89), subsequent to that initial consultation.

The systemwide Vice Chancellors for Research have expressed their opposition to the compromise proposal currently under consideration. In a letter to the President dated August 29, 2007, Vice Chancellor Barry Klein, writing on behalf of all ten Vice Chancellors for Research, expressed concern that the proposal would stifle academic freedom, create an unneeded bureaucracy, and be contentious and divisive to faculty. The letter expresses serious concern about Provisions 2, 3, and 4 of the proposal under consideration [Provision 5 was added after the date the letter was received]. The letter respectfully urges The Regents to consider adopting a Regental exhortation to researchers (similar to the one contained in the first provision of the proposal), which could in the Vice Chancellors' view "go a long way toward accomplishing the goals of The Regents without heading down a path of 'research controls' that would have a negative impact on the creativity and greatness of our university."⁹

POTENTIAL LANGUAGE FOR REGENTAL RESOLUTION

The following language is provided for consideration by The Regents as possible text for a Regental Resolution:

PREAMBLE:

1. In order for the University to effectively carry out its research mission, its researchers must engage in objective, high quality research;
2. The University is committed to upholding the principles of academic freedom, which protect freedom of inquiry and research, freedom of teaching, and freedom of expression and publication, and which enable the University to advance and transmit knowledge;
3. The exercise of academic freedom entails correlative duties of professional care when teaching and conducting research;
4. The duty of professional care for University researchers includes a responsibility to adhere to the highest standards of intellectual honesty and integrity in research, regardless of the source of the funding for their research;
5. The Regents have serious concerns about tobacco industry funders, in part because there is evidence that such funders have a history of attempting to distort or manipulate research to de-emphasize or conceal the harmful effects of tobacco.

⁹ A copy of the August 29, 2007 letter from Vice Chancellor Barry M. Klein to the President is attached.

6. For the purposes of this Resolution, the “tobacco industry” means entities whose principal business is the manufacture and sale of tobacco products, and agencies that are substantially controlled by or acting on behalf of such entities.

RESOLUTION:

Because of The Regents’ particular concern about the tobacco industry, and because of The Regents’ interest in staying informed about the research conducted by University researchers with tobacco industry funding, The Regents adopt all four of the following provisions:

1. The Regents exhort University researchers to:

- a) consider carefully whether to accept research funding from the tobacco industry (and whether their research might be better served by seeking funding from alternate sources);
- b) exercise the utmost care in assuring that their research (including research carried out with tobacco industry funding) adheres to the highest scientific and ethical standards. This includes being particularly vigilant about not allowing any funder to direct or control the outcome of the research or the dissemination of its results.

2. The Regents direct the President to establish a policy requiring that prior to the submission of any proposal to seek research funding from the tobacco industry, the research proposal must be reviewed by a scientific review committee drawn from the community of scholars designated by the President for this purpose, and must be approved by the Chancellor. Under the policy:

- a) The scientific review committee shall be charged with reviewing proposals intended for submission to tobacco industry funders, and with advising the relevant Chancellor regarding whether a proposed study uses sound methodology and appears designed to allow the researcher to reach objective and scientifically valid conclusions.
- b) The review committee shall be composed of at least three faculty members with expertise in areas of science relevant to the proposal being submitted. If a standing committee is established for this purpose, a provision shall be made allowing for consultation with experts in additional areas or from specific campuses, as needed, to appropriately evaluate a particular research proposal.
- c) For each proposal it reviews, the scientific review committee shall produce a written report including a recommendation as to whether the proposal should be approved for submission, and/or whether any changes should be made to the proposal prior to submission, along with the rationale for the committee’s recommendation. The report should be sent to the researcher, the Chancellor, the President, and The Regents [*consider*: and shall be publicly posted on the UCOP website].
- d) Chancellors shall be directed to take the advice of the review committee into account in deciding whether to approve submission of the proposal by the campus. Chancellors shall also be directed to take into account any advice issued by the campus conflict of interest committee, in cases where under existing policy

requirements, the researcher has disclosed a financial interest in the research sponsor.¹⁰

- e) The Chancellor shall issue his or her determination (i.e., whether the proposal is to be approved for submission, with or without changes) in writing, including a rationale for his or her determination, with a copy to be sent to the researcher, the President, and The Regents. [*Consider: A copy of the Chancellor's determination letter shall be publicly posted on the UCOP website.*]
3. **The Regents direct the President to prepare and submit to The Regents an annual report** summarizing the number of proposals submitted to the scientific review committee, the number approved, and the number funded, along with a description or abstract of each proposal. The reporting requirement shall be in kept in place for at least five years, which will allow The Regents to review the type of research conducted by University researchers with funding from the tobacco industry. After five years, the President will consult with The Regents to evaluate whether the reporting requirement should be continued. [*Note: The Regents may wish to delete or modify provision #3 if they decide to adopt #5, below, in lieu of #2.*]
 4. **Individual academic units within the University (e.g., departments, schools, or campuses) may request Regental approval to adopt a policy of declining to accept, process, or administer research awards funded by the tobacco industry.** An individual academic unit may request Regental approval for such a policy only upon a majority vote of the Academic Senate faculty affiliated with that individual unit. Any such request is to be submitted to the divisional Senate for comment. The divisional Senate shall forward any such request, along with the divisional Senate's comments, to the systemwide Academic Council for comment. The Academic Council shall forward the request, along with the comments of the divisional Senate and the Academic Council, to the Chancellor, who shall forward the request and all comments to the President for submission to The Regents for consideration.
 5. **[As a possible alternative to #2, above]: The Regents direct the President to establish a policy** requiring that when a researcher submits a research proposal to campus officials for submission to a tobacco industry funder, the researcher shall also provide the President's office with an abstract of no more than 100 words that shall include a description of the proposed research, the amount of funding being requested, the proposed funding source, and a description of any anticipated deliverables. The President's office will forward any such abstracts to the Secretary

¹⁰ Under existing University policy (and pursuant to state law), UC employees with principal responsibility for a research project that is to be funded in whole or in part by a nongovernmental entity (this would include a tobacco company) must disclose whether they have a financial interest in that entity. Among other things, they must disclose whether they are a director, partner, trustee, consultant, employee or hold another management position in the entity, whether they have an investment of \$2,000 or more in the entity, whether they have received income or loans of \$500 or more from the entity, whether they have received a gift of \$50 or more from the entity in the last twelve months, and whether the entity has paid for the researcher's travel. Positive disclosures are reviewed by a campus conflict of interest committee, which determines whether a conflict exists and if so, how to manage, reduce, or eliminate it to ensure that it does not compromise or appear to compromise the researcher's objectivity in performing research, in mentoring students involved in the research, or in reporting the project's results.

and Chief of Staff to The Regents for submission to The Regents. The University will not accept a research award from a tobacco industry funder until an abstract of the proposal has been included as an information item at a regularly scheduled meeting of The Regents.

(Attachments)

Tobacco Industry Sponsored Projects at the University of California
Known Active Awards as of Close of FY2006/2007*

Sponsor	Award Title	Campus	Award Amount
PHILIP MORRIS U.S.A.	Role Of SnoN Oncoprotein In Lung Carcinogenesis	Berkeley	\$985,805
PHILIP MORRIS U.S.A.	Chemical-Genetics And Proteomics Of Mitotic Kinases And Their Targets	Berkeley	\$842,139
PHILIP MORRIS U.S.A.	SnoN as a Negative Regulator of Smad Activity in T Cells: Role in Leukemogenesis	Berkeley	\$43,200
PHILIP MORRIS U.S.A.	The Biology of Chromosomal Amplification at 8q24 in Cancer	Berkeley	\$195,723
PHILIP MORRIS U.S.A.	Pulmonary Dispersion And Deposition Of Ultrafine Particles	Davis	\$384,426
PHILIP MORRIS U.S.A.	Tobacco Oxidants Prolong EGF Receptor Signaling In The Lung	Davis	\$684,292
PHILIP MORRIS U.S.A.	Genomic Responses Of The Lungs To Tobacco Smoke: Roles Of Inducible Nitric Oxide Synthase And A-Tocopherol Transfer Protein Genes	Davis	\$654,276
PHILIP MORRIS U.S.A.	Mechanisms And Treatment Of Tobacco Smoke-Induced Pulmonary Inflammation And Epithelial Damage In Rats	Davis	\$773,230
PHILIP MORRIS U.S.A.	Regulation Of Mucin Gene Expression By Smoke	Davis	\$497,214
PHILIP MORRIS U.S.A.	Mechanisms Of Release And Role Of T Cell Exosomes In Intercellular Communication	Davis	\$650,036
PHILIP MORRIS U.S.A.	Development of an Optical spectroscopy Technique for In Vivo Monitoring of the Efficiency of Therapy in Atherosclerotic Cardiovascular	Davis	\$154,000
PHILIP MORRIS U.S.A.	Characterization of Emulsion Stability	Davis	\$13,726
PHILIP MORRIS U.S.A.	A Novel Non-Selenocystenic Phospholipid Glutathione Peroxidase Mediating Oxidative Stress Serves as a Prognostic Biomarker for Breast Cancer	Irvine	\$582,228

PHILIP MORRIS U.S.A.	UCLA Adolescent Smoking Cessation Center	Los Angeles	\$6,000,000
PHILIP MORRIS U.S.A.	Salivary Biomarkers For Early Oral Cancer Detection	Los Angeles	\$250,000
PHILIP MORRIS U.S.A.	Patient-Based Genomic Predictors Of Oral Premalignancy Progression In Heavy Smokers	Los Angeles	\$1,031,110
PHILIP MORRIS U.S.A.	An Aerosol Lab-On-A-Chip For In-Situ Quantification Of Soluble Airborne Toxics	Los Angeles	\$393,494
PHILIP MORRIS U.S.A.	Nicotinic Signaling Using Nicotinic Acetylcholine Receptors (nAChRs) And Their Contribution To Higher Order Brain Functions	San Diego	\$43,200
PHILIP MORRIS U.S.A.	Nicotinic Receptors On Hippocampal Neurons	San Diego	\$810,727
PHILIP MORRIS U.S.A.	Tobacco Smoke and Chronic Inflammation – The Role of NOD2 Protein and its Ability to Activate IL-1B Production	San Diego	\$43,200
PHILIP MORRIS U.S.A.	A Structure-Activity Model For Eye Irritation Potency F	San Diego	\$640,686
PHILIP MORRIS U.S.A.	Smoking-Altered Gap Junction Hemichannel Structure and Activity Modulate Cell Physiology and Viability	Santa Barbara	\$647,815
PHILIP MORRIS U.S.A.	MCP-1 Functions in Cigarette Smoke-Induced Atherogenesis	Riverside	\$327,134

Total Number of Awards: 23 / Total \$: 16,647,661

* As of the date this item was prepared, corporate data systems maintained by the Office of the President showed only those awards processed before December 31, 2006. That information has been supplemented by data provided by individual campus Contract & Grant offices in June, 2007.