

RIVERSIDE: AUDIT & ADVISORY SERVICES

June 29, 2011

To: Craig Sheward, Assistant Vice Chancellor
Office of Technology Commercialization

Subject: Review of Technology Commercialization

Ref: R2011-13

We have completed our review of Technology Commercialization in accordance with the UC Riverside Audit Plan. Our report is attached for your review.

We appreciate the cooperation and assistance provided by your department. Should you have any questions concerning the report, please do not hesitate to contact me.

Michael R. Jenson
Director

cc: Audit Committee Members

UNIVERSITY OF CALIFORNIA AT RIVERSIDE

AUDIT & ADVISORY SERVICES

MEMBER OF ASSOCIATION OF COLLEGE & UNIVERSITY AUDITORS

INTERNAL AUDIT REPORT R2011-13

TECHNOLOGY COMMERCIALIZATION

JUNE 2011

Approved by:

Noahn Montemayor
Principal Auditor

Rodolfo L. Jeturian, Jr.
Assistant Director

Michael R. Jenson
Director

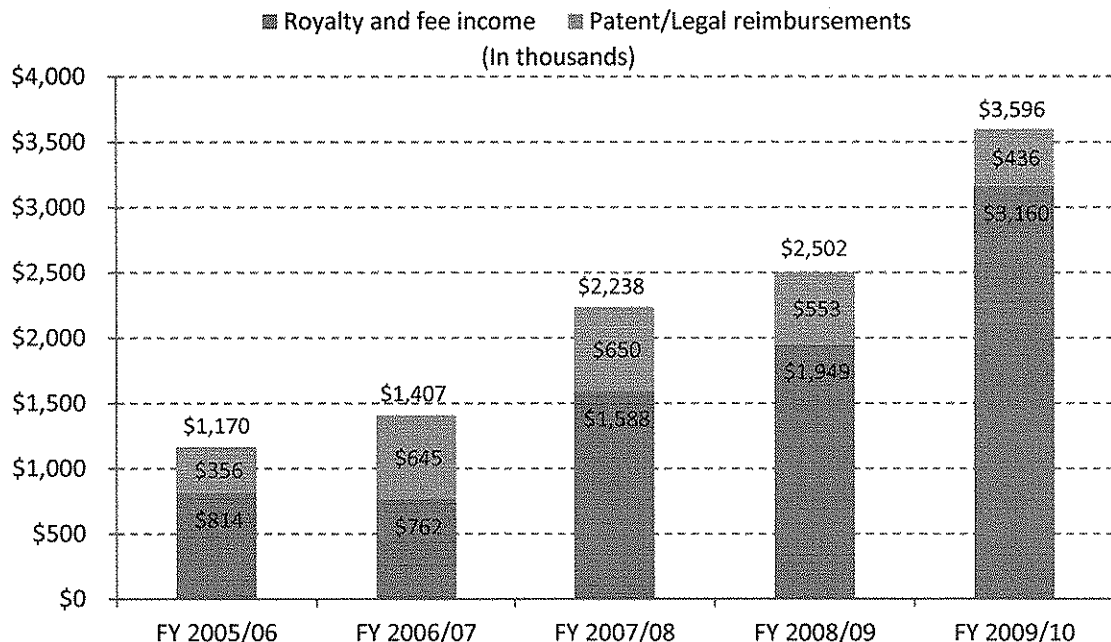
**UC RIVERSIDE
TECHNOLOGY COMMERCIALIZATION
INTERNAL AUDIT REPORT R2011-13
JUNE 2011**

I. MANAGEMENT SUMMARY

We performed a review of the UCR technology commercialization program; specifically, the UCR Office of Technology Commercialization (OTC) system of internal controls and operating processes designed to facilitate the licensing of campus research generated intellectual property for commercial application to evaluate compliance with University technology transfer policies and guidelines. Based upon the results of work performed within the scope of the review, it is our opinion that, overall, the system of internal controls over technology commercialization is operating satisfactorily and is generally in compliance with University policies and procedures.

Positive observations included:

- * UCR's technology commercialization program continues to generate significant benefit, with notable growth of its portfolio of inventions, patents, licenses, and startups.
- * Total licensing income, consisting of (1) royalty and fee income and (2) patent and legal expense reimbursements, increased more than threefold during the last five years:



- * A record number of eight (8) startup companies were formed in FY 2010/11.

II. INTRODUCTION

A. PURPOSE

UC Riverside Audit & Advisory Services (A&AS), as part of its Audit Plan, reviewed the campus technology transfer program to evaluate compliance with certain University policies and procedures, efficiency and effectiveness of selected operations, and adequacy of certain internal controls.

B. BACKGROUND

Within the context of the academic research environment, technology transfer is the migration of new discoveries and innovations resulting from scientific research to the commercial sector, primarily through the patenting and licensing of new inventions.

Until passage of the Bayh-Dole Act in 1980, the major restraining force on technology transfer was the federal government's retention of ownership of all technology developed in university laboratories with taxpayer funds. The government would agree to license these technologies only through non-exclusive licenses. This meant that a potential manufacturer would have a very limited opportunity to recover its investment in an early stage technology. The inevitable result was that few companies were interested.¹

The Bayh-Dole Act allowed universities and small businesses to elect ownership of inventions made under federal funding and to become directly involved in the commercialization process. The Act also permitted exclusive licensing when combined with diligent development and transfer of an invention to the marketplace for the public good. It was understood that stimulation of the U.S. economy would occur through the licensing of new inventions from universities to businesses that would, in turn, manufacture the resulting products in the U.S.

One significant aspect of the University of California's public service mission is to ensure that the results of its research are made available for public use and benefit. This "technology transfer" is accomplished in many ways: through educating students, publishing results of research and ensuring that inventions are developed into useful products in the commercial marketplace for public use. In pursuit of this latter objective, the University of California has maintained an active patenting and patent licensing program for over 40 years.²

¹ Robert C. Mullins, CPA & Janice L. Crowe, CPA; "Technology Transfer: A Roadmap"; February 1999 issue of *College and University Auditor*, the magazine of the Association of College & University Auditors.

² UC Technology Transfer Program website – <http://www.ucop.edu/ott/genresources/ttprog.html>

The UCR OTC operates under the UC Technology Transfer Policies and Guidelines that include the UC Patent Policy, the UC Equity Policy, the UC Copyright Policy, and related policies and operating guidelines pertaining to intellectual property, technology transfer and licensing, sponsored research / research collaboration, biological materials transfers, faculty consulting / consulting with industry, and conflict of interest.

Reassignment of Responsibility – Administration of University Patent and Other Intellectual Property Matters, Riverside Campus

Effective July 1, 2008 and for a period of five years through June 30, 2013, the UCR Chancellor was assigned the responsibility to implement policies and procedures on matters pertaining to intellectual property, including patents and tangible research products, and to execute documents necessary for the administration of such intellectual property. The *Reassignment of Responsibility Operating Guidelines*, signed on August 1, 2008, constitutes an understanding between the UC Executive Vice President – Academic and Health Affairs and the UCR Chancellor for the implementation of the *Reassignment of Responsibility*.

UCR licenses intellectual property to industry to promote active development and commercialization of inventions. Invention-related royalty revenue supports further research and education at UCR, with a share of the income going to the inventors. OTC manages these inventions to assure that UCR meets its patent-related obligations to sponsors of research. UCR's inventions come from a variety of technical areas including plant varieties, plant genomics, biomedical sciences, materials science and engineering.³

C. SCOPE

A&AS reviewed OTC management practices and operating processes for compliance with UC Technology Transfer Policies and Guidelines and to evaluate the status of the implementation of the *Reassignment of Responsibility*. The scope of the review was principally limited to UCR OTC responsibilities and activities prescribed in the *Reassignment of Responsibility Operating Guidelines*.

We conducted interviews, obtained and evaluated responses to a customized internal control questionnaire, reviewed OTC management controls, operating procedures, and pertinent records relating to the following major administrative and technology transfer program areas:

- OTC Organizational Structure / Control Environment
- Invention Case Management
- Patent Prosecution and Licensing
- Accounting and Finance

³ UCR Office of Research webpage: Office of Technology Commercialization – <http://or.ucr.edu/otc.aspx>

- General Responsibilities, Communications, and Other Matters

We reviewed OTC technology commercialization program activities during the fiscal year 2009-2010, with emphasis on current controls and procedures. OTC management is responsible for establishing and maintaining adequate internal controls and complying with all policies, procedures, regulations and contractual agreements. A&AS is responsible for assessing the effectiveness of internal controls and compliance with these policies, procedures, regulations and contractual agreements, and reporting significant findings to management for corrective action. Our limited review procedures cannot be relied upon to disclose all errors, irregularities, or violations of policy, procedures, regulations, contractual agreements or laws that may have occurred.

III. INTERNAL CONTROLS AND COMPLIANCE

As part of the review, internal controls were examined within the scope of the audit.

Internal control is a process designed to provide reasonable, but not absolute, assurance regarding the achievement of objectives in the following categories:

- * effectiveness and efficiency of operations
- * reliability of financial reporting
- * compliance with applicable laws and regulations

Substantive audit procedures were performed during March through June 2011. Accordingly, this evaluation of internal controls is based on our knowledge as of that time and should be read with that understanding.