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FOR
TECHNOLOGY TRANSFER AND RESEARCH COMMITTEE

Committee Meeting: 2/5/2014
Austin, Texas

Wallace L. Hall, Jr., Chairman
Ernest Aliseda
Alex M. Cranberg
R. Steven Hicks
Jeffery D. Hildebrand

1. **U. T. System: Update on the U. T. Horizon Fund portfolio**

REPORT

Mr. Bryan Allinson, Executive Director of Technology Commercialization, will provide an update on the U. T. Horizon Fund portfolio.

The U. T. Horizon Fund completed a follow-on investment in M87, Inc., a U. T. Austin start-up to improve wireless communication technology. The company was the subject of a report to the Committee on February 13, 2013. Several other investments are being reviewed with advisors.

2. **U. T. System: Report on proposed Innovation Framework to strengthen and advance industry and commercialization paths for the U. T. System institutions**

REPORT

Dr. Patricia Hurn, Vice Chancellor for Research and Innovation, will report on the proposed new Innovation Framework designed to advance research collaboration and commercialization throughout the U. T. System.

BACKGROUND INFORMATION

Currently, the U. T. System research and commercialization engine drives $3.1 billion in total sponsored programs, including federal, state, and private research grants and contracts; receives a U.S. patent every two days; signs a commercialization agreement every three days; and starts a new company every nine days.

To advance our discovery enterprise to the next level of vibrancy, the proposed Innovation Framework will strengthen and advance industry and commercialization paths for emerging research within the U. T. System universities and academic health centers.

The proposed Innovation Framework comprises three initiatives designed to complement campus research and technology transfer programs, as well as the U. T. Horizon Fund that is moving toward realizing return on investment out of university innovation. The first initiative will focus on developing a deep understanding of research "product inventory" and propose creation of a research/commercialization data warehouse with analytical platforms.

The second initiative will capitalize on 2013's successful FreshAIR program and recommendations from FreshAIR's industry advisory group on how best to develop new academic-industry partnerships in the areas of biopharmaceuticals and biomedical devices.

And thirdly, a new approach to educating and advancing student and faculty entrepreneurs will be developed, a key ingredient in advancing novel research and products that impact the State's economy.

3. <u>U. T. System: Report on Academic Analytics and SciVal, online information tools for publications and research funding</u>

<u>REPORT</u>

Dr. Stephanie Huie, Vice Chancellor for Strategic Initiatives, will report on Academic Analytics and SciVal, online information tools for publications and research funding, including how the U. T. System institutions are utilizing those programs to enhance collaborations. A PowerPoint presentation is set forth on the following pages.

<u>BACKGROUND INFORMATION</u>

The U. T. System purchased Academic Analytics for U. T. System academic campuses and SciVal for the U. T. System health institutions in September 2012.

Academic Analytics is an online tool that provides information on publications and research funding relative to peers at the department and faculty levels.

SciVal, which is also an online tool, provides publication and research funding data along with a networking tool to help researchers form collaborations.

Academic Analytics and SciVal Overview

Stephanie Huie, Ph.D.
Vice Chancellor for Strategic Initiatives

U. T. System Board of Regents' Meeting

Technology Transfer and Research Committee

February 2014

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Academic and Health Institutions' Needs

- A need for faculty data to make strategic decisions to enhance quality, improve management, and reduce costs

- Institutions sought to:
  - Establish metrics on research and scholarly productivity of U. T. System faculty
  - Increase internal and external research collaboration
  - Make data easily accessible to institutional administrators
  - Benchmark consistent data across all U. T. System and peer institutions

What is Academic Analytics?

- Academic Analytics is an online tool that provides:
  - Publications of scholarly work such as books and journal articles
  - Citations to published journal articles
  - Research funding by federal agencies
  - Honorific awards bestowed upon faculty members
- Primary Users
  - Academic institutions
  - Office of Strategic Initiatives

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What is Academic Analytics? (cont.)

- Academic Analytics purposes:
  - Program review and indicators of excellence
  - Peer identification/comparisons at the discipline level
  - Benchmarking performance and goal-setting
  - Metrics on faculty scholarly productivity at the discipline level
  - Source of data for dashboard metrics

What is SciVal? (cont.)

- SciVal purposes:
  - Networking/collaboration and interaction among faculty
  - Faculty development
  - Increase knowledge about research grant opportunities
  - Evaluate the contributions of faculty members
  - Identify faculty expertise/research strengths
  - Source of data for dashboard metrics

Agreements

- ## Academic Analytics
  - Five-year agreement: September 2012 to August 2017
  - Users: Academic institutions
  - Funding: $3,671,800; Years 1-5 (U. T. System)

- ## SciVal
  - Five-year agreement: December 2012 to November 2017
  - Users: Health institutions
  - Funding: $2,171,632; Years 1-2 (U. T. System); Years 3-5 (individual institutions)

How are Academic Institutions using Academic Analytics?

- ## U. T. El Paso

  – Using data in strategic metric dashboards for all programs/departments on campus

  – Benchmarking against peers and aspirational institutions

- ## U. T. Austin

  – Assessing program quality via the placement and productivity of Ph.D. graduates

  – Examining faculty productivity compared to peers in the field by program

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How are Academic Institutions using Academic Analytics? (cont.)

- ## U. T. Dallas

  - – Using tool for the program review process

  - – Preparing to examine academic outcomes data to explore doctoral education outcomes

- ## U. T. Arlington

  - – Determining how close certain U. T. Arlington programs are to being top programs in the country, and which programs can help U. T. Arlington take the next step higher as a research institution

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How are Health Institutions using SciVal?

- U. T. M. D. Anderson Cancer Center
  - Assessing faculty productivity as a part of the recruitment process
  - Examining faculty productivity, promotion, and tenure through Academic Profiles portal
  - Identifying experts quickly and efficiently
  - Strengthening research relationships between U. T. M. D. Anderson and other institutions through enabling research collaborations

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How are Health Institutions using SciVal? (cont.)

- U. T. Southwestern Medical Center
  - Providing a mechanism to notify faculty, students, and other trainees of funding opportunities
  - Creating a mechanism to assist with publication reporting requirements to external agencies
  - Using SciVal for internal faculty productivity reporting

How are Health Institutions using SciVal? (cont.)

- U. T. Health Science Center - San Antonio
  - Integrating SciVal data into campus information systems
  - Using the Grants module for funding opportunity announcements
  - Increasing internal and external research collaborations

How are Health Institutions using SciVal? (cont.)

- U. T. Medical Branch - Galveston
  - Finding research funding
  - Expanding research collaborations
  - Using SciVal data with internal faculty profiles and Curriculum Vitaes
  - Utilizing the SciVal data in a research dashboard that monitors and reports on research faculty productivity and focus
  - Assessing the alignment of the research operation with the strategic direction

How is U. T. System using Academic Analytics and SciVal?

- Using data from SciVal and Academic Analytics as a source for metrics in
  - Topical dashboards (Faculty Productivity & Research and Technology Transfer)
  - Institutional profiles
  - College/Department profiles
  - Special topical dashboards (e.g., Emerging Research Universities)

4.   **U. T. System: Report on novel programs in education for innovation and entrepreneurship**

REPORT

President Callender and President Romo will introduce the following presenters and provide a report on the status of faculty entrepreneurship and innovation grant funding provided by the U. T. System:

- **Dr. Cory Hallam**, Chief Commercialization Officer and Director of the Center for Innovation and Technology Entrepreneurship in the College of Engineering at U. T. San Antonio

- **Dr. Stanley Watowich**, Associate Professor in the Department of Biochemistry and Molecular Biology at U. T. Medical Branch - Galveston

The U. T. System Translational Research Advancement Network to Support, Fund, Organize, Roll-out and Motivate U. T. Innovations (TRANSFORM) Program

The creation and maintenance of a transformational and progressive entrepreneurial ecosystem within the university environment is essential to foster, support, develop, and commercialize new technologies.

Such an ecosystem will not only help to change academic mindsets and cultures, but will also result in higher competiveness in global markets, increased external funding via follow-up research dollars, an enhanced educational environment for students and faculty, increased marketability of U. T. graduates, and greater financial returns to the university via technology commercialization. These objectives coincide with goals to improve the State of Texas' economy and elevate the visibility and success of the U. T. System by implementing an entrepreneurial evolution at the university level.

Accepting the status quo in technology commercialization is not the answer to such a great transformative challenge. The creation and commercialization of intellectual property will have a high significance and impact on U. T. System as well as the State of Texas and any affiliated organizations, attracting further outside investments and improving the desirability of the U. T. System for students, faculty, and research partners alike.

Dr. Hallam will provide his insights on the U. T. TRANSFORM Program that addresses two major phases:

1.   Education in innovation, entrepreneurship, and commercialization

2.   Creation of a platform to identify promising and competitive technologies and to provide the inventors with an appropriate support network to help develop, seed fund, and commercialize these technologies. With a clear set of performance metrics, growth in awareness, participation, technology development, and commercialization will be tracked as the key indicators of U. T. System success at leading an entrepreneurial evolution in higher education.

Enhanced education and new platforms offered through U. T. TRANSFORM serve to improve the academic-industry ecosystem and complement existing programs offered through the U. T. System Office of Technology Commercialization, such as the U. T. Horizon Fund.

Summaries of two selected success stories, Hoot.Me and Molecular Match follow:

- Funds offered through U. T. TRANSFORM were utilized to launch a featured expert platform for massive open online discussion (MOOD) with U. T. Austin professor Dr. Robert Metcalfe (http://hoot.me/BobMetcalfe). This funding enabled questions and answers to be discoverable on Facebook's Open Graph platform, better enabling discoverability and optimization. In August 2013, **Hoot.Me** announced that it was acquired by Civitas Learning.

- Funds offered through U. T. TRANSFORM assisted in the development of prototype software, production of an instructional video, and to cover fees. With that funding, **Molecular Match** has a signed term sheet to acquire funds necessary to further develop the technology. Most importantly, development of the technology enables a new approach whereby doctors and patients can potentially make personalized medicine a reality.

The Texas CTSA Collaborative Innovation and Entrepreneurship Program

Dr. Stanley Watowich will review the Texas Clinical and Translational Science Awards (CTSA) funded by the National Institutes of Health (NIH) Center for Advancing Translational Sciences.

The emergence of cellular and molecular medicine provides academic health centers with unparalleled opportunities to re-engineer health research and patient care through innovation. However, implementing innovation typically requires entrepreneurship, and unique component skills that include management, team building, and risk acceptance. Without an integrated training program in these areas, biomedical investigators who seek to commercialize their discoveries and/or become entrepreneurs must find ways to acquire those skills.

Academic health centers generally are not organized to promote, teach, and sustain innovation and entrepreneurship, and as such may not reach their full potential to generate significant commercial innovations. The NIH CTSAs offer the resources, expertise, and vision to work with academic health centers to improve commercialization.

The U. T. System is the only system in the United States to receive four CTSA awards. U. T. System institutions receiving awards include U. T. M. D. Anderson Cancer Center, U. T. Southwestern Medical Center, U. T. Health Science Center - Houston, and U. T. Medical Branch - Galveston.

The Texas CTSA Collaborative Innovation and Entrepreneurship Program seeks to address major challenges faced by institutions as they seek to develop and commercialize discoveries in basic and translational research. Those challenges include:

1. Lack of support to establish sustainable infrastructure and promote, expand, and retain talent for health care entrepreneurship and successful commercialization of medical discoveries and inventions in Texas;

2. Lack of training in the innovative approaches and skills needed to promote and commercialize campus discoveries; and

3. Lack of early-stage support and partnering to facilitate the development and transfer of inventions and discoveries from the academic medical centers into successful commercial ventures.

The Texas CTSA Collaborative Innovation and Entrepreneurship Program provides opportunities for the U. T. System to expand health care entrepreneurship to commercialize campus discoveries and facilitate development and transfer of inventions, including two new ventures. The program also complements new programs offered through the Office of Technology Commercialization, including the U. T. Horizon Fund.