

THE UNIVERSITY OF TENNESSEE BOARD OF TRUSTEES

MINUTES OF THE
RESEARCH, OUTREACH, AND ECONOMIC DEVELOPMENT COMMITTEE

June 12, 2017

Videoconference
Knoxville, Tennessee

The Research, Outreach, and Economic Development Committee of The University of Tennessee Board of Trustees met at 1:30 p.m. EDT, Monday, June 12, 2017, by videoconference originating from the 8th Floor Conference Room in Andy Holt Tower on the UT Knoxville campus in Knoxville, Tennessee.

I. CALL TO ORDER

Dr. William E. Evans, Chair, called the meeting to order.

II. ROLL CALL

Chair Evans asked the Secretary to call the roll. The following members of the Research, Outreach, and Economic Development Committee were present by videoconference or telephone:

William E. Evans, Chair
George E. Cates
Terrance Cooper
Tim L. Cross
Susan C. Davidson
Joseph A. DiPietro
Andrew McBride
Margaret A. Norris
Rhedona Rose
David A. Shepard
Rachel M. Smith

Raja Jubran, Mike Krause, Candice McQueen, Jai Templeton, and David Stern were not present. Dr. David Millhorn, Dr. Stacey Patterson, and other members of the administrative staff were present.

The Secretary announced the presence of a quorum and reminded the Committee of Open Meetings Act requirements applicable when members are participating

electronically, including the requirement of a roll-call vote on all action items. Members were informed of the identity of any other persons present at each location from which a member was participating.

III. MINUTES OF THE LAST MEETING

Chair Evans asked for any corrections to the minutes of the March 28, 2017 meeting of the Committee. Hearing none, the Chair called for a motion to approve the minutes as written. The motion was made, seconded, and carried by a roll-call vote.

IV. REPORT ON CHEROKEE FARM INNOVATION CAMPUS

Chair Evans directed the committee's attention to the written report in the meeting materials (Exhibit 1) providing an update of Cherokee Farm progress to date.

V. ANNUAL REPORT OF ORNL

Dr. Thomas Zacharia, Deputy for Science and Technology and newly appointed Director of the Oak Ridge National Laboratory (ORNL), gave a presentation and update on ORNL (Exhibit 2). ORNL is one of the world's leading science and energy laboratories. The lab has 4800 employees and does \$1.4 billion in research activity. The lab transformed itself under the management of UT-Battelle. Historically it has been known for research capability in materials research. It has 3,200 guest researchers and 35,000 visitors each year. ORNL has the most diverse energy portfolio along with the most intense neutron source in the world. Signature strengths include: computation science and engineering; materials science and engineering; neutron science and technology; and nuclear science and technology. The premier user facilities are Spallation Neutron Source (SNS) and High Flux Isotope Reactor (HFIR). The Shull Wollan Center: A Joint Institute for Neutron Science helps in promoting industry use of SNS and HFIR.

Historically, ORNL has performed well in new materials. The lab has successfully launched a new Center for Predictive Simulation of Functional Materials, and is a key partner in DOE's Critical Materials Institute. ORNL continues to operate the Titan supercomputer, the third fastest computer in the world. The next machine is called the Summit. Part of it will be deployed by the end of the calendar year, and full machine operation should commence next summer. The Summit is the sweet spot due to the intersection of biomedical and data possibilities.

ORNL is managing three major projects for DOE. This gives the lab strong position to increase its impact. The partnership with UT is a major asset to help ORNL

become a premier lab. The lab is in great shape, but due to budget cuts, the budget outlook is challenging. UT will play a vital role as we execute the lab's strategy for the future. The current ORNL contract with UT-Battelle will end in 2020. By the end of 2018, it will be known whether the UT-Battelle contract to manage the lab will be extended or whether there will be a competition.

VI. UT OFFICE OF CORPORATE AND FOUNDATION ENGAGEMENT

Dr. Taylor Eighmy, UTK Vice Chancellor for Research and Engagement, informed committee members about the Office of Corporate and Foundation Engagement and some of the great things it has been doing (Exhibit 3). He said the office is serving as an example to other institutions. Several areas of focus include funding for scientific research, licensing and technology transfer support, faculty and student support through philanthropic opportunities, economic development support, student talent for workforce development, conduit to ORNL, and holistic relationship management. Research Awards have grown from \$2,229,662 in contributions from 18 awards in FY 15 to \$5,075,621 in contributions from 31 awards in FY 16. There have been several recent industry successes as well as foundation successes. The University has extensive alumni connections at Eastman—180 of the top 300 positions are UT alumni, and the University is one of three universities locally that belong to the Eastman Innovation System. Relationships with FedEx and Volkswagen have also been very productive.

VII. UT RESEARCH FOUNDATION

Dr. Stacey Patterson, Associate Vice President for Research and Vice President of UTRF, shared with committee members highlights from the past year for UTRF (Exhibit 4). She emphasized the four areas of the UTRF mission which are research growth, technology transfer, entrepreneurial support and economic development.

In the area of research growth, UTRF provides research agreement support to all campus research offices, working with faculty to identify new ways to enhance the discovery mission of the University. One example is UTRF and the UT Health Innovation Technology and Simulation Lab (HITS) working together to bring state-of-the-art technology and inventor expertise to healthcare-related companies and organizations. HITS is establishing an official partnership with East Tennessee Children's Hospital and are collaborating to develop an innovation hub.

In the area of technology transfer, UTRF helps with invention disclosures. As of today, there are 155 disclosures which is the largest number the University has ever had. UTRF is working to simplify the licensing process, calling it licensing, and there is marketing work to do to make it known. As of today, in terms of licensing, UTRF has completed 17 deals, and another dozen are in the term sheet stage or later. As

of May, we had 451 patents and patent applications. More are needed, and perhaps more risks should be taken. Revenues will reach around \$1.65 million by end of year which is an approximate 20% increase from last year.

Entrepreneurial support is provided in several ways. The checkerboard portfolio program provides UT affiliated startups with business development support and mentoring opportunities. It primarily works with entrepreneurs who are looking to commercialize UTRF technology and need guidance to take their business to the next level. This program emphasizes access to capital. A partnership between UTHSC, UTRF, and Bioworks competed and won the i6 Challenge Grant to help fund the Entrepreneur in Residence program in Memphis. This program supports entrepreneurs by hosting, promoting, and serving as mentors and judges in several regional business plan competitions. UTRF and UTK Anderson Center for Entrepreneurship and Innovation have partnered to bring NSF I-Corps to the area. They use the approach to understand the market before building the solution. The regional I-Corps are taught by successful entrepreneurs and nationally trained instructors. Recently, UTRF received a gift from the Wheeley family. The B. Otto and Kathleen Wheeley Foundation provides an award stipend, through an endowment fund established in 1989. The award is specifically intended to recognize faculty who take a direct and active role in the commercialization process. To settle the estate, the children decided to donate and gift the remainder of the estate to UTRF because they were impressed with what UTRF has done in supporting entrepreneurs.

The final piece of UTRF's mission is economic development. UTRF owns equity in more than 50 for-profit companies commercializing technology. UT based companies have raised nearly \$70M since 2015. UTRF is very proud of this part of its mission and wants to see it continue to grow. Dr. Patterson concluded by presenting the 2018 UTRF proposed budget (Exhibit 5), which was approved by the UTRF board in May.

VIII. ADJOURNMENT

There being no other business, the meeting was adjourned.

Respectfully submitted,



Stacey S. Patterson, Ph.D.