

RHODE ISLAND ECONOMIC DEVELOPMENT CORPORATION

MEETING OF THE SCIENCE & TECHNOLOGY ADVISORY COUNCIL

PUBLIC SESSION

February 3, 2011

The Rhode Island Science & Technology Advisory Council (“STAC”) met on Thursday, February 3, 2011 in Public Session at the offices of the Rhode Island Economic Development Corporation, Providence, Rhode Island pursuant to notice of the meeting to all Members and public notice of meeting, a copy of which is attached hereto, as required by applicable Rhode Island Law.

The following Members were present and participated throughout the meeting as indicated: Clyde Briant (Co-Chair), David Farmer (Co-Chair), Peter Alfonso, Pierre Corriveau, Kimball Hall, Stuart McGuigan, Thomas Rockett and Peter Snyder. Members absent were, David Hibbitt, Saul Kaplan, Margaret Leinen, Jeffrey Seemann and Donald Stanford.

Also present were Governor Chafee, RIEDC Executive Director Keith

Stokes and RIEDC staff. Co-chairs Briant and Farmer presided over the meeting.

Welcome

Co-Chair Clyde Briant welcomed Governor Chafee to his first STAC meeting and introduced new STAC member Peter Snyder, Vice President of Research, Lifespan who joins the Council to complete the term of Timothy Babineau. Co-Chair Briant then announced the agenda would focus on the announcement of the 2011 Rhode Island Research Alliance Collaborative Grant Awards, a presentation on how previous awardees have successfully received follow-on funding and a presentation on the RI Center for Innovation and Entrepreneurship.

Announcement of Awardees for 2011 Rhode Island Research Alliance Collaborative Research Grants

Co-Chair Farmer announced that this year is the fifth round of awards aimed at facilitating collaborative research in Rhode Island. The 2011 awards, totaling \$1,435,822, will support eight projects, representing 23 scientists from 13 educational institutions, hospitals and private companies throughout Rhode Island. The program is designed to stimulate collaborative research projects that are well-positioned to attract significant follow-on funding from agencies such as the National Science Foundation and the National Institutes of Health or that are ripe for commercialization.

Following is a list of the awards presented:

Development of multi-scale brain injury models for concussion and traumatic brain injury: This team is working to aid companies in designing safer and improved protective gear and to aid the medical community in producing improved quantitative traumatic brain injuries (TBI) diagnosis and assessment tools. This collaboration will result in a sustainable, long-term TBI-focused research program that include student training opportunities. Collaborators: Brown University, Rhode Island Hospital and Simulia.

Marine biofouling on high-performance molded materials: Researchers will use microscopic and molecular techniques to characterize the development of marine biofilms. By collaborating with a research university, Ametek SCP will be able to evaluate novel coatings and to expand its markets. Collaborators: University of Rhode Island and Ametek SCP.

A novel efficient technology for mercury emission control application: This team will work to develop new technologies for reducing human health risks associated with anthropogenic mercury emissions from coal-fired power plants and cement kilns. The group hopes its research will attract small business federal grants, angel

investments, venture capital and collaborative investments from the industry. Collaborators: Brown University and Banyan Environmental Inc.

A wound healing product for diabetic ulcers containing choroid plexus growth factors: Researchers will collaborate on development of a topical regenerative product for wound healing and will work to expand and strengthen preclinical research studies on the topic.

Collaborators:

Brown University and CytoSolve.

Antigenic targets of Candida albicans specific antibody fragments: The grant will support work to identify the molecular structure on the surface of the fungus Candida albican that are recognized by previously discovered antibodies to stop infection. This collaboration will support infrastructure at Bryant University, preliminary research for future federal grant dollars, student training and collaboration between universities. Collaborators: Women & Infants Hospital and Bryant University.

The inner-space classroom - Innovation for research and education in the ocean state: This group will develop software to provide access to marine science data and information through the University of Rhode Island's Inner Space Center. The grant will provide for increased marine science educational opportunities and enabling of research and education projects for federal funding. Collaborators:

University of Rhode Island and RITE-Solutions.

Tick bite patch: Proof of concept for a first generation immunoinformatics derived anti-tick vaccine with transdermal delivery: This group will work to establish proof-of-principal for a catalytic approach to accelerate bench-to-clinic translation of a novel anti-tick vaccine for humans.

Collaborators: University of Rhode Island, EpiVax and Isis.

Tracing business-critical web applications: Researchers will develop techniques for comprehensive measurement of the performance of rich web applications by applying causal tracing techniques to both the server and client. This effort will combine the strengths of a university research setting with real client data. Collaborators: Brown University and Tracelytics Inc.

Approval of Minutes from October 14, 2010 meeting. Citing no changes, upon a motion duly made by Ms. Hall and seconded by Dr. Alfonso, the minutes of the October 14, 2010 STAC meeting were accepted.

Economic Impact of Collaborative Grant Program

Co-Chair Farmer introduced previous awardee, Pradeep Guduru of

Brown University and Rhode Island General Treasurer Gina Raimondo. To date, the STAC Collaborative Research Awards have yielded nearly \$10 million to the state in the form of follow-on funding from federal and private sources. That outside investment has supported additional research efforts, new patents, equipment and products, and the formation of new companies. Since STAC's inception in 2007, the state has invested nearly \$6.5 million in 38 teams, representing 97 researchers from 35 public and private institutions that conducted multi-disciplinary, multi-institutional research with great promise for follow-on funding.

Dr. Guduru explained how a STAC grant provided the catalyst for his team, which is working on a next generation lithium ion battery, to win an award of \$1 million from NASA. Treasurer Raimondo shared her experience as a venture capitalist and the importance of seed funding for early stage R&D. Previous grant awardee Nabsys received \$4 million in venture capital funding from Raimondo's VC firm, Point Judith Capital. The STAC grant and other seed funding allowed Nabsys to mature to a point where it was feasible for Point Judith to invest in the start-up company. Nabsys currently employs forty at its new home in the Providence Knowledge District.

Co-Chair Farmer then introduced Brendan McNally, RI-CIE Executive Director and Jeffrey Morgan, a 2009 Collaborative Grant Awardee and founder of MicroTissues, a start-up company. In 2009, STAC called for the creation of RI-CIE to train and enable the next generation of

entrepreneurs and to provide a physical space where entrepreneurs from across industries, and at all stages of development, can interact and collaborate. Morgan shared his experiences as a start-up venture and how RI-CIE programs have helped him. McNally, shared how the center helps Morgan and other entrepreneurs translate their big ideas into new ventures and products.

Report on Council Initiatives

Co-Chair Briant stated STAC has been active in efforts to advance experiential learning in the STEM disciplines, supporting Congressman Langevin's Cyber Challenge High School program, First Vex Robotics and Lego Robotics. STAC has also been an active supporter of the Greater Providence Chamber of Commerce's Innovation Providence Implementation Committee. He then explained that STAC has the opportunity to partner with the Chamber of Commerce to develop a RI Innovation Index which will provide an independent review of our progress in meeting long term and intermediate goals. The Index will be used to set the baseline for the Knowledge Economy Action Plan and STAC investments, and over time, to track results. It will be a benchmark, comparing RI with the nation, other EPSCoR states, and selected comparator states. The Council agreed to provide funding to the Index project. Estimated total cost to be shared by the Chamber and STAC is \$15 to \$20K. Estimated project completion is June.

NSF EPSCoR Director Report

Council member Peter Alfonso shared that RI EPSCoR has developed and submitted a comprehensive five-year strategic plan to NSF. This Plan will guide the work of EPSCoR for the five-year grant. Dr. Alfonso also stated that the NSF is pleased with the State Governing Committee model that has been developed here in RI to align economic development and the EPSCoR program and has selected RI to participate on a panel at the national EPSCoR Conference to discuss the model.

Adjournment

There being no further business in Public Session, upon a motion duly made by Ms. Hall and seconded by Dr. Snyder, the meeting was adjourned at 2:30 p.m.

Christine M.B. Smith

Secretary