

RHODE ISLAND ECONOMIC DEVELOPMENT CORPORATION
MEETING OF THE SCIENCE & TECHNOLOGY ADVISORY COUNCIL
PUBLIC SESSION

January 28, 2009

The Rhode Island Science & Technology Advisory Council (“STAC”) met on Wednesday, January 28, 2009 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), Kimball Hall and Jeffrey Seemann (Co-Chair).

Members absent were Peter Alfonso, David Hibbitt, Saul Kaplan, Arthur Klein, Margaret Leinen, Richard Nadolink, Thomas Rockett, Thomas Ryan, Donald Stanford

Also present were Governor Cariceri, Lt. Governor Roberts, RIEDC’s staff. Drs. Briant and Seemann presided over the meeting.

Welcome

Co-Chair Clyde Briant opened the meeting noting that with the current economic distress, STAC initiatives take on an ever increasingly critical role. He welcomed both the Governor and the Lt. Governor who have supported investments in science and technology over the past three years and have positioned Rhode Island to benefit from the federal government’s efforts to direct resources to science and technology. The Governor and Lt. Governor agreed that supporting economic growth through the strategic support of research and development is an economic development priority and will lead to long term economic security and job viability.

Next Dr. Briant reviewed the topics to be covered which included 1) a progress report on the Council’s activities during the previous year and recommendations for the coming year to insure Rhode Island is taking the required steps to leverage science and technology for maximum economic benefit; 2) the announcement of the 2009 RI Research Alliance Collaborative Grant awardees, and; 3) an overview of the Washington climate and agenda for 09-10 and what he and his firm sees as likely government spending and investment priorities by James Fabiani of Fabiani & Company a government relations firm in Washington DC.

STAC Collaborative Grant Awardees

One of STAC's primary efforts is to promote inter-organizational, multidisciplinary research. Through annual collaborative research grant awards, the RI Research Alliance provides seed funding to projects which represent a combination of exciting science in areas that promise to deliver value to society and are likely to lead to follow-on funding or commercialization in the near term. To date the program has received 140 proposals requesting \$22 million and has been able to disperse just under \$4 million dollars to support 24 research projects. Seven projects received funding in 2009

1. **Development of a Reliable Stumble Detection System for Artificial Legs:** This team is working to develop a more reliable stumble detection system for prosthetic legs utilizing input from the user's own neural reactions and motion feedback. This will greatly improve the safe use of prosthetic legs for the growing population of lower leg amputees. **Collaborators:** He Huang, Ph.D, University of Rhode Island; Susan E. D'Andrea, Ph.D, Brown University; Michael Nunnery, CPO, Nunnery Orthotic & Prosthetic Technologies, Inc.
2. **An Application of the 3D Petri-dish: The Human Artificial Ovary:** This collaboration is working to create a human artificial ovary using a 3D Petri dish engineered at Brown. This artificial ovary would be used by female cancer patients whose reproductive abilities have been damaged by disease. **Collaborators:** Jeffrey Morgan, PhD, Brown University; Sandra Carson, MD, Women and Infants Hospital; Anubhav Tripathi, PhD, Brown University.
3. **Decreasing Bacterial Adhesions to Medical Devices Prevents Nosocomial Infection:** This team shows how we need to think small to innovate big. Using nanotechnology, the team is developing a surface treatment technique to decrease the ability of bacteria to stick to medical devices, such as incubation tubes, which in turn will reduce the risk of serious infections commonly found in hospitals and healthcare facilities. **Collaborators:** Keiko M. Tarquinio, MD, Rhode Island Hospital; Thomas J. Webster, PhD, Brown University;
4. **Identification of Deficiencies and Establishment of Predictive Assays for Enigmatic Pregnancy Complications:** This project aims to identify a protein found in patients suffering from serious pregnancy complications, such as preeclampsia. Identification of the protein will lead to identification of a new drug treatment. **Collaborators:** Surendra Sharma, MBBS, PhD, Women and Infants Hospital; James Padbury, MD, Women and Infants Hospital; Zahir Shaikh, PhD, University of Rhode Island
5. **Synthesis and Development of Novel Neuroprotective Drugs:** the MultiSynth Labstation available to scientists working on drug development in Rhode Island and will thus enhance Rhode Island's research infrastructure by making a critical piece of equipment available. Specifically this team is working on new therapies to decrease

brain degeneration suffered by patients who have suffered a stroke or other chronic ailments such as Parkinsons or schizophrenia. **Collaborators:** John Marshall, PhD, Brown University; John Williams, PhD, Rhode Island College; Christopher Seto, PhD, Brown University.

6. Development of Renewable Energy Wave Powered Generator for Free Floating Ocean Buoys: __This collaboration between Electro Standards Laboratories and the University of Rhode Island will develop designs for a reliable system to convert ocean wave energy into electrical energy to power items such as surveillance buoys. **Collaborators:** Raymond B. Sepe Jr., PhD, Electro Standards Laboratories; Steven P. Bastien, PhD, Electro Standards Laboratories; Malcolm L. Spaulding, PhD, University of Rhode Island; Stephan T. Grilli, PhD, University of Rhode Island; Annette R. Grilli-Delrez, PhD, University of Rhode Island.

7. Development of Lagrangian Measurement Techniques for Coastal Water Management: _This team seeks to design a shallow water Lagrangian float that is capable of tracking the path and rate of currents flowing in coastal waters. This will provide a new technique to better understand the circulation of coastal waters for ecosystems management. **Collaborators:** Henry Sharpe III, President, Bluewater Designworks, LLC; Chris Roman, PhD., University of Rhode Island; Chris Kincaid, PhD., University of Rhode Island; Thomas P. Uva, Director of Planning, Policy and Regulation, Narragansett Bay Commission

Preview of Federal Stimulus Opportunities

Dr. Briant introduced James Fabiani

Report on 2008 Initiatives

Dr. Briant provided an update on the status of STAC 2008 initiatives and Dr. Seemann summarized STAC recommendations for 2009 to build upon progress made in connecting researchers and accelerating support of entrepreneurship and commercialization efforts

1. Renew the state's \$1,500,000 investment in the Rhode Island Research Alliance

Funding will enable STAC to further develop the suite of Alliance programs to foster connectivity and a culture of collaboration and will also meet the federal mandate for significant state support for science and technology and allow the state to continue its federal-state partnership and deploy the next phase of a \$20 million five-year National Science Foundation grant.

2. Work with public and private institutions in the State to strengthen the statewide innovation and entrepreneurship platform by creating an Alliance for business like

the Research alliance to enable and strengthen business and innovation activities throughout Rhode Island. Such an entity will help create a statewide vision for the development of Rhode Island's entrepreneurial community with the goal of attracting and retaining entrepreneurs in high priority industries and bringing greater visibility to the accomplishments of Rhode Island's most successful entrepreneurs.

3. Renew the state's \$100,000 investment in STAC for FY10. Continued funding will strengthen organizational capacity for STAC and allow it to continue current initiatives and develop a strategic long range plan for the state that encourages a culture of collaboration and cooperation and provides a framework for research, technology transfer and innovation activities.

Adjournment

There being no further business the information session concluded at 2:50 p.m.

Christine M.B. Smith
Secretary