



Item: AS: I-1

**COMMITTEE ON ACADEMIC AND STUDENT AFFAIRS**

Wednesday, June 15, 2011

**SUBJECT: REPORT ON THE INSTITUTE FOR SCIENCE AND TECHNOLOGY**

---

**PROPOSED COMMITTEE ACTION**

This is an information item. No action required.

**BACKGROUND INFORMATION**

A business plan has been developed that details the creation of an Institute for Science and Technology on the MacArthur Campus of Florida Atlantic University. This plan is viewed as a joint venture between the Colleges of Science, Engineering and Computer Science and Medicine with our regional partners, the Max Planck Florida Institute, Scripps Florida and the Torrey Pines Institute for Molecular Studies and will create world class science and technology programs on the MacArthur Campus in Jupiter, Florida. The IST will be located in the research buildings (MC17 and MC19) owned by FAU but initially designed for Scripps Florida, and now occupied by FAU and the Max Planck Florida Institute.

The Institute for Science and Technology (IST) will initially focus on three areas that complement the current strengths of FAU colleges and our partner institutions. These areas include Integrative Neuroscience, Biotechnology & Drug Discovery, and Bioimage Informatics. New graduate and undergraduate programs will be developed as well as a postdoctoral training program. Indeed a new graduate program with the Max Planck Florida Institute has already been instantiated. Moreover, the recent award of a New Florida Cluster Grant will allow for the development of a state-of-the-art neurophysiology teaching and research laboratory in co-operation with the Max Planck Florida Institute. This initiative is the first step in the development of the Integrative Neuroscience program of the IST. The presence of the Wilkes Honors College on the Jupiter campus will provide an excellent opportunity to develop a specific undergraduate science honors degree.

Some current faculty will relocate to Jupiter; however, the business plan calls for

hiring of new faculty in the three areas described above. Dr. Herbert Weissbach, Director of the Center for Molecular Biology and Biotechnology has already re-established his research laboratory and center in part of MC17 after it was vacated by Scripps Florida. His move from Boca Raton to Jupiter represents a first step in developing the Biotechnology and Drug Discovery program. This coming Fall will see several faculty move to Jupiter in the area of Bioimage Informatics. In addition, a separate plan is being developed to place a High Performance Computing Data Center on the Jupiter campus to complement the research programs at the IST.

The anticipated timeline to fully establish the IST is five years (by AY 2015/16) at which time there will be 45 regular and research faculty, 30 post-docs and at least 75 graduate students participating in IST programs.

#### **IMPLEMENTATION PLAN/DATE**

Ongoing

#### **FISCAL IMPLICATIONS**

Funding will require redistribution of existing resources and allocation of new resources from New Florida, research-related resources, and increased FTE.

---

#### **Supporting Documentation**

Presented by:

#### **Executive Summary**

**Dr. Diane Alperin, Interim Provost**  
**Phone: (561) 297-3068**  
**Email: [alperind@fau.edu](mailto:alperind@fau.edu)**

**Dr. Gary Perry, Dean, Charles E. Schmidt College of Science**  
**Phone: (561) 297-3288**  
**Email: [perryg@fau.edu](mailto:perryg@fau.edu)**

**Institute for Science and Technology  
MacArthur Campus of FAU, Jupiter**

**Business Plan**

*Making Waves to Create the Future*

May 31, 2011

## **I. Executive summary**

Florida Atlantic University's life science programs stand at a crossroad of historical importance. Dynamic regional events have created an environment of enormous opportunity, as well as significant institutional challenge. A plan is proposed to capitalize on the nearly one billion dollars that the taxpayer has invested to attract world class biomedical research institutions to our region. The plan outlines a joint venture between the Colleges of Science, Engineering and Computer Science and Medicine with our regional partner institutes, the Max Planck Florida Institute, The Scripps Research Institute Scripps Florida and the Torrey Pines Institute for Molecular Studies to create world class life science and technology programs on the MacArthur Campus of Florida Atlantic University in Jupiter, Florida.

Specifically, we propose that an Institute for Science and Technology (IST) be created in Jupiter that will initially focus on three areas of science and technology that complement the current strengths of FAU colleges and departments as well as the partner institutes. These areas include Biotechnology and Drug Discovery – which will primarily target aging and cancer research and the development of potential therapeutics; Integrative Neuroscience - which will initially provide cutting edge research associated with neurodevelopment and neurodegeneration; and Biomaging Informatics - which will use advanced computational and imaging tools to address problems in systems biology. These three areas complement the research interests of the Max Planck Florida Institute, Scripps Florida, and the Torrey Pines Institute for Molecular Studies. Initially, FAU faculty would provide the core strengths in key areas with participation of the faculty of the partner institutes. A plan is proposed that will afford current faculty at FAU with specific interests related to the IST focus areas the opportunity to relocate their research programs to the MacArthur campus in Jupiter.

As part of the development of the IST, a separate, but related plan is being developed to establish a High Performance Computing Data Center in Jupiter. While the presence of such a computing center is not absolutely necessary to fulfill the mission of the IST, clearly having such a computer would enhance all research conducted in Jupiter especially in the Bioimage Informatics program. Indeed such a computing center would be beneficial to all stakeholders from around the state as well as nationally, and along with the IST would become a key asset in the emerging I95 Life Sciences and Technology Corridor in SE Florida.

A primary goal of the IST will be to create high quality graduate and post-doctoral training programs. Initially, PhD programs already existing at FAU such as those in Integrative Biology, Chemistry, Complex Systems and Brain Sciences and Computer Science and Engineering will serve to recruit outstanding students into these programs. Masters programs such as those in Bioengineering or Biotechnology Business will also allow graduate students to participate in IST programs. As needed new graduate programs will be developed. The presence of the Honors College in Jupiter will provide unparalleled opportunities for undergraduate honors students both at the Honors College and in department specific honors programs in other colleges to participate in IST programs. Indeed, the establishment of the IST will further allow for growth of science programs in Jupiter - specifically Biology, Chemistry & Biochemistry and Psychology.

The IST will be located immediately adjacent to the Max Planck Florida Institute and Scripps Florida in buildings MC17 and MC19 on the MacArthur campus of FAU in Jupiter, thus providing optimal

access to our partnering institutions in Jupiter. However, it is anticipated that a new building, constructed close to the partner institutes on the MacArthur campus, comprising approximately 100,000 NSF of state-of-the-art research facilities, classrooms and offices will be needed to sustain development of the IST beyond Phase5 of its operations. This will allow for additional faculty and researchers to not only expand the programs already part of the IST, but also to create new innovative programs in state-of-the-art areas such as nanotechnology and nanomedicine.

Funded-research intensive faculty from FAU as well as new research track faculty and postdoctoral scientists will be recruited to provide a critical mass of scientists on the Jupiter campus. The anticipated timeline to fully establish the IST is five to six years (by Fall 2015/16) by which time there will be 30 regular FAU faculty, 15 FAU research faculty, 30 post-docs and 75 graduate students participating in IST programs at Jupiter. However, it is expected that faculty from across FAU will participate in IST programs. Regular faculty will hold appointments in the colleges and assigned to the Jupiter campus, and will have teaching assignments in Jupiter and other campuses as necessary. Each research program area will be led by a Program Leader who will report to the Director of the Institute. The IST will have a Scientific Director who will report to a Steering Committee composed of the Deans of Science, Engineering and Computer Science and Medicine, and the Vice President for Research. In addition, the IST will have an External Advisory Board composed of members from the partner institutes as well as other stakeholders from the region.

The funding stream necessary to support the IST and faculty assignments in Jupiter will be initially from university E&G funds, but with a mixed model of funding from E&G and research grant sources developed as part of the ongoing IST operating budget. Philanthropic sources of funding will also be aggressively pursued. A summary of the projected steady state recurring expenditure budget at Phase 5 (2015/16) is shown in the table below. Approximately \$8.5 million (excluding campus and building operating costs) will be needed in recurring funds with an anticipated \$7.5 million one-time start-up cost over the first five years (\$2.55 million in Phase 5). A recurring appropriation of \$4 million will be requested as a Legislative Budget Request through the SUS and an additional \$7.6 million in E&G funding will be generated through annualized FTE recovery. Sponsored research funding is expected to reach \$5.5 million by end of Phase 5 (2015/16) with approximately \$3.6 million in grant funds expended on personnel; and \$2.5 million generated in indirect costs annually (assuming primarily Federal funding of research grants at an indirect cost rate of 45%). By end of Phase 5 the Institute will be fully established in MC17 and MC19 on the MacArthur campus of FAU in Jupiter with a new IST facility under construction.

<b>IST Expenditures</b>	<b>Total Budget</b>	<b>Grant Funds</b>	<b>E&amp;G Budget</b>
<b>X\$1000</b>	<b>Phase 5</b>	<b>Phase 5</b>	<b>Phase 5</b>
<b>Expenditures:</b>			
Regular Faculty	\$3,550	\$1,595	\$1,955
Research Faculty	\$1,814	\$907	\$907
Office Staff	\$390	-	\$390
Technical Staff	\$435	-	\$435
Post-doc Fellows	\$945	\$450	\$495
Graduate Students	\$1,326	\$663	\$663
Equipment startup	\$2,550	-	\$2,550
<b>Total</b>	<b>\$11,010</b>	<b>\$3,615</b>	<b>\$7,395</b>