Mission: Research

C. Michael Moriarty
Interim Vice President for Research

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Purpose of Briefing

- **University Research**
  - What it is and why do we do it?
  - Some issues that must be dealt with.
  - How are we organized to provide the required oversight?
  - How do we compare with others?
  - How do we grow?
Guiding Principles

- **Vision Statement:** “FAU aspires to be......internationally acclaimed for its contributions to creativity and research.”

- **Mission Statement:** “....FAU fulfills its mission through excellence and innovation in.....outstanding research and creative activities....”

Guiding Principles (continued)

- **Strategic Plan (Goal 3):**
  “FAU will develop academic and research programs of the highest caliber to support Florida’s strategic engagement in building an economy based on high technology and to foster a culture based on scholarly inquiry.”
A Different Perspective

- Creation of new knowledge is the one characteristic that distinguishes a research university from all other educational outlets.

A Quick Mind Game

- Think of five of the top U.S. educational institutions.
Foundation of a Research University

- A strong research university rests on an institutional culture where research is openly valued, rewarded and, importantly, expected.

- It must, in effect, become part of our institutional DNA.

- This does not imply that it transcends teaching.

Three Critical Elements

- People
- Infrastructure
- Strategic Investments

Institutional Culture
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Institutional Culture

People

- **Faculty**: recruit and retain the best. We compete in a national market so there are real costs and competitive pressures.

- **Students**: Particularly graduate students. The best are highly competitive and they form the cornerstone of a strong research program.

- **Staff**: Skilled and trained support staff are critical to provide strong laboratory and administrative support.
Infrastructure

- To support and enhance the technical aspects of all research efforts.
- To insure institutional compliance with federal requirements.
- To assist in the administrative aspects of research.

Strategic Investments

- Relationship to local, state and/or national needs.
- Availability of a source(s) of sustaining funding in order to leverage the investment.
- Exploit niches to gain a competitive advantage.
- Emphasize multidisciplinary or cross college efforts.
- Identify leaders with a “fire in the belly”.
Sponsored Research

- Contractual relationship between sponsor and university for a specific scope of work.

- Federal, state, industry, non-profits.

- Usually follows competitive review of submitted proposal.
Office of Sponsored Programs

- Unit in the Division that works closely with faculty in submission of a proposal.
- Staff assigned to specific colleges.
- Unit also responsible for negotiating with sponsors to insure that terms and conditions are acceptable to FAU.

Office of Research Accounting

- Accepted awards are processed and a specific auditable account is set up for the investigator(s) to use.
- Responsible for overseeing all aspects of financial compliance with funded projects.
- Invoice sponsor for payments since most awards are cost reimbursable.
**Direct vs. Indirect Costs**

- **Direct costs** are those costs that are specifically related to one project (salaries, supplies, equipment, travel, etc).

- **Indirect Costs**: (also known as overhead or F&A) are other required costs of doing the research but are not assignable to a specific project (utilities, electricity, HR, payroll, library, etc).

**Indirect Costs (Overhead)**

- Negotiated with the federal government usually every 3-5 years.

- Amount is calculated as a percentage of the direct costs. Our current rate is 42.5%.

- Represents our break-even point.
Office of Research Integrity

- Federal R&D funding to universities is approaching $30B annually and this makes up about 2/3 of a university’s R&D funding.

- With the federal money comes the federal requirements: both financial and programmatic.

- Two examples (out of many): Protection of Human Subjects and Animal Care and Use.

Office of Research Integrity

- Protection of Human Subjects extends to all research protocols involving humans not just medically invasive projects.

- Oversight committee (IRB) has wide discretion and reviews and approves all protocols.

- Primary goal is to minimize risk and insure informed consent.
Office of Research Integrity

- The oversight for the use of animals in research is similar to that of human subjects.
- Each area has strict mandates, wide discretion, reviews all protocols and maintains continual oversight.
- Currently, these groups oversee more than 800 new or active protocols.

Office of Technology Transfer

- Manages and protects the intellectual property (IP) arising from research discoveries.
- Deals with outside entities interested in licensing our IP and/or forming a start-up business.
- Revenues generated are shared with inventor.
Realistic Expectations for OTT

- It can be a significant revenue generator to the university IF we hit a home run like reverse transcriptase at UC or Google at Stanford.

- Important that we be viewed as AN engine of economic development and not THE engine.

Office of Research Communications

- Responsible for disseminating news and information to the media and both internal and external audiences.

- Works with OCM to coordinate efforts.

- Assists faculty with special events related to research, media requests, arranges interviews, manages web site, etc.
Similar to the conductor of the symphony.

Must divide time between the three critical areas: people, infrastructure and strategic investment.

Important: VPR should think strategically and take the lead in creating new initiatives and collaborations.

VPR also takes the lead in working with Florida’s Congressional delegation to secure earmarks and plus-ups.
Bottom Line: How are we Doing?

Number of Proposals Submitted

Research Funding Trend

Explanations

- Increasingly competitive funding (e.g. NIH ~15%)
- Loss of some quality faculty.
FY 2007 & 2008 Funding by College

Sources of FY 2008 Research Funding
Some Important Dates in FAU History

- First Ph.D. degree awarded in 1987.
- Division of Research established in 2001.
- First permanent Vice President for Research hired in 2001.
- Conclusion: we've come a long way in a short time.

Build a University Slowly and Continually

Set institutional expectations for research

- Recruit good faculty.
- Provide an effective and efficient infrastructure to support them.
- Make careful strategic investments.
- Provide incentives & rewards: both financial and recognition.
We do have some unique resources

- Scripps Florida
- Torrey Pines Institute for Molecular Studies
- Max Planck Institute
- Oregon Health & Science University’s Vaccine and Gene Therapy Institute
- FAU medical school still developing

What is Reasonable to Expect?

- You should anticipate a non-compounded rate of growth of at least 10% per year – if (1) we focus on the three critical elements and (2) we continually reinforce the institutional culture.

- For comparison, for 6 years at UGA, we grew at 10% per year and over my 12 years at Auburn we averaged over 12% annual growth.

- It can be done, but “non compounded” means the goal posts move every year and you have to do it all over again.
Recommendations: No Cost

- President and BOT publicly emphasize the importance of research to FAU’s mission.
- Provost to encourage deans to make budget decisions strategically with one important consideration being future research growth.

Recommendations: Low Cost

- The VPR and the Division of Research must provide leadership to initiate and nurture targeted, strategic efforts in selected areas where FAU can be highly competitive.
- Consider implementing a salary incentive program that will stimulate and encourage submission of proposals. (Also assists in faculty recruitment and retention).
Recommendation: Modest Cost

- Stealing an idea:
  
  FAU Peaks of Excellence

Strategic Investments

- Relationship to local, state and/or national needs.
- Availability of a source(s) of sustaining funding in order to leverage the investment.
- Exploit niches to gain a competitive advantage.
- Emphasize multidisciplinary or cross college efforts.
- Identify leaders with a “fire in the belly”.
Wrap Up

- Referring only to the calendar, FAU is a young and maturing research university.

- FAU’s recent research funding is, at best, stable but is not growing.

- We have a base of talented, competitive researchers but significant research growth will require additional faculty in strategically selected areas.

Wrap Up (continued)

- There is considerable unrealized potential and opportunities that can lay the groundwork for growth.

- VPR and the administration must risk being unpopular by setting research priorities. No one has the resources to grow across-the-board.
Convergence with Clearwire

- Increase contract/grant funding.
- Start up funding for new faculty.
- Upgrade major core research equipment.
- Supplement grad student stipends in selected areas.
- Establish cost sharing fund for proposals targeting major research equipment.
- Fund for patent applications for promising technologies.

Finally

- You are currently doing a national search for a permanent VPR. This is a very critical hire for the future of FAU.
- Current economic times are, admittedly, challenging but planning can (and must) precede the actual investment.