

The TTO – Does Size Matter? Challenges and Opportunities

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Challenges of Small Offices

- So much work, so little time
 - Strategic Planning
 - Prioritizing
 - Creating Standard Operating Procedures
 - Budgetary Constraints
- Diversity of skills needed to run an office



Opportunities for Small Offices

- Leveraging
 - Federal Grants
 - Students
 - Colleges & Programs
 - Capstone Projects
 - Center for Entrepreneurship
- Using metrics from peer institutions
 - Demonstrate size of research vs. size of office
 - Establish realistic goals



Florida Innovation Hub at UF



UF Office of
Technology Licensing
UNIVERSITY of FLORIDA



UF OTL Staff



Challenges of Large Offices

- Justifying your Budget
- Team Cohesiveness
- Mission Creep
- Resource Envy
- Space
- Expectations, Expectations, Expectations



Challenges of Both Sizes

- Garnering Support from Upper Administration
- Multiple & Conflicting Office Goals
 - Revenue
 - Faculty Service
 - Industrial Partnerships
 - Startups vs. Established Company Licenses



Keys to Success of Any Size

- Regular communications with all constituents
 - Management
 - Administration
 - Faculty & Students
 - External Constituents
- Regular updates on successes achieved
 - Human Nature to Complain
 - Must Balance Complaints with Successes
- Clear established goals agreed upon by TTO and TTO Management



Setting & Measuring Realistic Goals/Metrics



Bayh-Dole Act of 1980

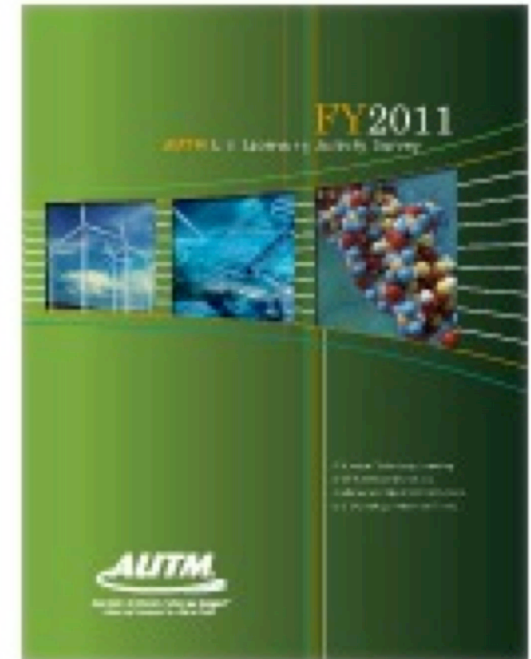
- Gave universities/researchers the opportunity to **patent** and reap **financial rewards** from technologies
- Gave industry a mechanism to generate return on investment for developing and marketing university technologies
- Has stimulated industrial productivity and innovation in the U.S.
 - Federal agencies prior to Bayh-Dole had a dismal rate of success



AUTM

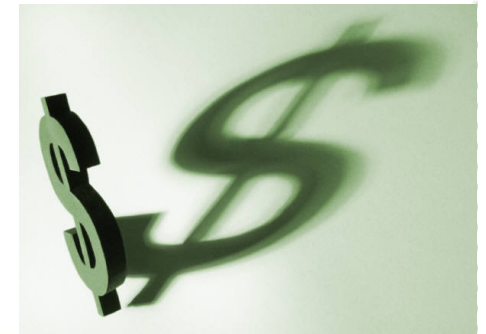
- Association of University Technology Managers (AUTM)
 - nonprofit organization
 - international membership
 - more than 3,000 technology managers and business executives
 - Representing more than 300 universities, research institutions and teaching hospitals as well as numerous businesses and government organizations

AUTM Annual Survey, www.autm.net/metrics



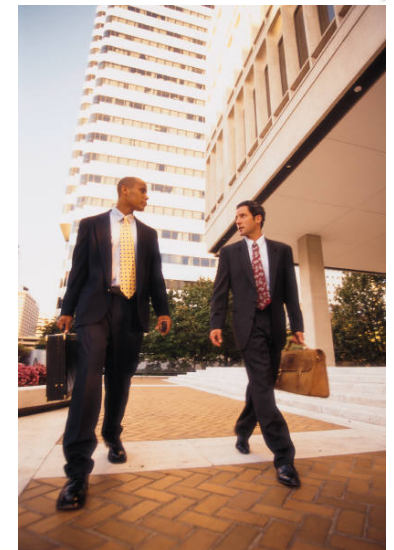
Tech Transfer Nationwide*

- 23,741 invention disclosures
- 5,567 total licenses and options executed
- \$63.7 billion total sponsored research expenditures
- \$2.6 billion total licensing income
- 22,150 total U.S. patent applications



Tech Transfer Role in U.S. Economy

- AUTM's statistics for 2012:
 - U.S. institutions formed 705 startup companies
 - Seventy institutions reported 15,741 employees by 1,383 operational startups
 - Average of 11.38 employees per startup
- Startups are going to have the biggest impact on the health of U.S. economy
 - Multipliers of 2 – 7 depending upon who you believe



Economic Contribution of University/ Nonprofit Inventions in U.S. 1996-2010

- Biotechnology Industry Organization Report June 2012 estimates on economic impact of academic licensing:
 - total contribution of academic licensors to gross industry output ranges from \$199B to \$836B
 - contributions to GDP range from \$86B to \$388B
 - total number of person years of employment supported by licensed-product sales range from 900,000 to over 3 million



UF Spinoff -RTI



Genetics/Cancer
Research Institute



Orthopaedics &
Sports Medicine Institute

- Regeneration Technologies, Inc. is a UF spin-off and the leading provider of sterile biological implants for surgeries around the world – enabling people to stay active longer
- Currently employs 800 people
- Sale of RTI stock provided \$30 million each for new research buildings at UF



Measuring Success

- Revenues
- Taxes
- Companies
- Jobs
- Private Investment

=

Economic
Impact



Measuring Success

**Social
Economic
Impact**

=

- Whole New Industries
- Cures for Diseases
- Reduction in Healthcare Costs
- Increased Food Supply



Gatorade developed to reduce heat-related conditions, launched a whole new sports drink industry



U.S. Market Alone
= \$7.4 Billion



Cures for Diseases



Emma Whitehead has her Leukemia cured by HIV cells. With funding from National Institutes of Health researchers at the University of Pennsylvania have been developing and testing a new cancer treatment that reprograms T-cells using a disabled form of HIV to fight leukemia.



Reduced Health Care Costs

Hospital Acquired Infection Estimates in the U.S Alone:

- 1.7 million hospital-associated infections
- Over 100,000 deaths each year
- Average 5.2 extra days in hospital.
- **Daily cost of a hospital stay averages \$3949**
- Economic impact is billions of dollars



Michael Skolnik - March 1979-June 4, 2004 – Died from hospital acquired infection. *“It is difficult not to feel the sadness that permeates our house, as hard as we try, our beloved child, who made us a family of three, is gone forever.”*



Tracey of California - life devastated by hospital acquired infection, *“ I am grateful for my life and that my children didn’t lose their mother over a preventative hospital infection.”*

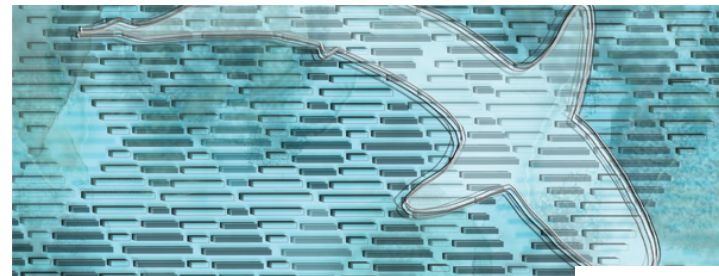


Technologies to Prevent Hospital Acquired Infections



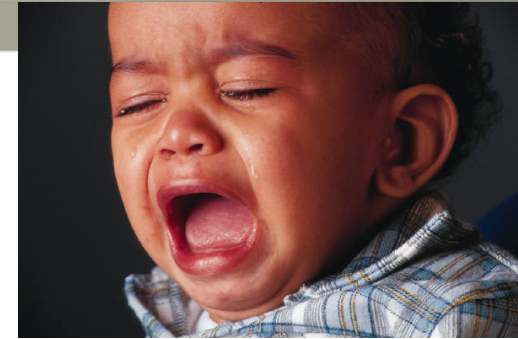
Xhale's HyGreen technology – a hand-hygiene system to safeguard health during hospital visits

Sharklette technologies – manufacturing hospital surfaces and other hospital products using a topographical pattern of shark skin which prevents hospital acquired infections from growing



Technologies for Reducing Hunger

3.5 Million Children Die Each Year From **Hunger**



Dr. Borlaug at Purdue University developed successive generations of wheat varieties with disease resistance & broad adaptation to growing conditions across many degrees of latitude, and with exceedingly high yield potential - "saved more lives than any other person who has ever lived."



AUTM Better World Project



Promotes public understanding of academic research and technology transfer benefits to society

www.betterworldproject.org

Also

“[PUT A FACE ON IT](#)” campaign featuring the “[Edward Bonfiglio video](#)”



Conclusion

- Metrics are important whether you are large or small
- Measuring the success of Tech Transfer is complicated
 - Many measures of success
 - Achieving impact takes a long time
- Must find better ways to measure true impacts rather than measure what is easy to measure!



Thank You!

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