Technology Transfer 101:

Taking Discoveries from Lab Bench to the Marketplace

Presentation by Michael Waring, University of Michigan

In the beginning……

Basic Research

Inventions and Discoveries

Goal: Maximizing an Invention

- Under Bayh-Dole, university and researcher may retain title to inventions made using federal research dollars
- This system incentivizes the transfer of technology to the private sector for job creation
- Any net licensing revenues to universities go back into more research and/or education, as well as patenting costs
- Other benefit: initial development usually happens locally
  - 2011 AUTM survey found that 73% of startups formed that year were in the same state where the research was conducted

Issues…

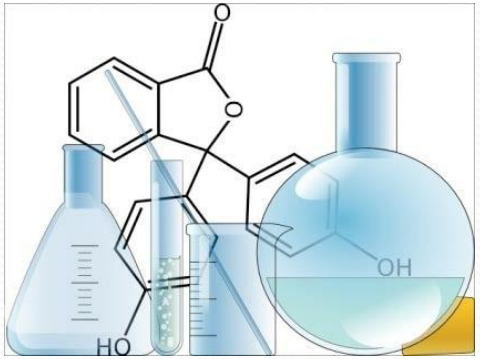
- Is this product/invention patentable?
- Is there a market for this invention?
- Can we find a business interested in licensing, developing and commercializing this technology?
- Can we start a new company?
- Are there available dollars to help further develop the inventive technology?

Answering Those Questions

- Technology Transfer Office
  - Professionals who analyze marketplace, develop business plans, and understand patent/licensing issues
  - Attorneys to help with patent application process
  - Experts in seeking venture/angel capital
  - Campus-based "accelerators," incubators and proof-of-concept programs to help advance technology and boost fledgling start-up companies
  - Resources for connecting people and/or companies looking for new technology inventions; helping faculty further develop the technology pipeline.

STEPS FOR SUCCESS

Patents/licensing agreements



Proof of concept programs

Industry partnerships

Business plans

Innovation/Entrepreneurship Initiatives

Venture capital/ patenting costs

Keys to Success

- Dedicated technology transfer and support team
- Understanding the marketplace and the local regional economy
- Establishing university–private sector relationships that may include additional research funding
- Bridging the gap between invention and commercialization
- Strong patents
- Outstanding researchers doing outstanding research
- Long-term financial commitment

Positive Economic Impact

- University licensing increased U.S. gross industry output by $836 billion between 1996 and 2010
- These technologies support an estimated 3 million jobs in the economy
- Tech transfer created 651 new companies in 2010 alone
- Direct correlation between amount of federal dollars invested in research and the innovations that research creates

Role for Policymakers

- Provide strong and sustained basic research funding to provide pipeline of great ideas
- Ensure that patent rights are protected for a given university, researcher, and the government
- Encourage policies that attract venture capital support
- Support SBIR/STTR and other translational initiatives
- Support the Bayh-Dole Act
- Do nothing to inhibit American ingenuity and innovation, which leads the world