Technology Transfer: Protecting and commercializing University Innovations

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Ants

Beer

Grad school

Me
My perspective...

BS: ChemE
BA: Plan II
PhD: Biomolecular Chemistry
Technology transfer is a confluence...

Business

Law

Successful commercialization

Technology/Research
Where could you work?

- Universities
- Industry
- Government
- Law firms
- Start-ups
- Venture capital
Bayh-Dole Act (1980)

Before:
• Gov’t took title to inventions from federally funded research.
• ~5% of inventions were commercialized (licensed)

Objectives:
• Improve U.S. industrial competitiveness
• Encourage U.S. economic development

Results:
• Universities take title to inventions from federally funded research
• More technology is reaching industry

The Act is "perhaps the most inspired piece of legislation to be enacted in America over the past half-century,” - The Economist.
Intellectual property (IP)

**Definition:** Creations of the human mind (items of information or knowledge)

Four main types:

- **Copyright:** ©
  - *Original works*

- **Trademarks:** ®
  - *Identifies commercial entity:*

- **Trade secrets**
  - *KFC recipe and Coke formula*

- **Patents**
  - *USPTO*
Steps in University Licensing

- **Disclose invention**
  - Faculty/Student disclose technology to OTT
  - Licensing officer meets with inventors

- **Protect IP**
  - Licensing officer evaluates invention
  - Develops and enacts IP protection strategy with outside counsel

- **Market and license**
  - Develop Non-disclosing descriptions for web
  - Values technology and negotiate licenses
  - Manage licenses
To protect or not to protect?

**Intellectual Property position**
- Is it patentable? (novel, useful, non-obvious)
- Prior art landscape
- Narrow vs. Broad rights

**Commercial/economic position**
- Size of market
- Time to market
- “Game changer” vs. improvement
- Licensee in hand

**Additional factors**
- Options
- Joint IP?
  - *PI/inventor “Buy-in”*
  - *PI/inventor “Buy-in”*
Licensing considerations

Are they a good partner?
- Knowledgeable in space
- OK with some R&D
- Good plan and means to execute

Fair return to the university
- “Comparables”
- Share in potential upside

Additional factors
- Reputational risk for University
- Legal/contract details
Day in the life...

• Check email for any fires
• Meetings
  – Inventors, licensees, internal, etc.
• Manage IP decisions
• Review agreements
  – MTAs, CDAs, License agreements
• More emails/calls
  – Very much an “office job”
Rainbows

• Stay close to research
• Help products get to market
• Interact with amazing people
• Help people achieve goals
• See tangible(-ish) work products – contracts
• Variety

• Mission oriented work
• Quality of life
  – No billable hours
  – Set own pace of work
  – Academic setting
  – Worklife balance
Rainclouds

- Lots of email/high volume
- Understaffed at times
- Lots to know
  - Miles wide, inch deep if lucky
- Data always lacking
- Hard to focus
- Lower salary (vs industry)
- Unique – smaller niche world
- Fairly flat structure
  - Eg: move to advance
Bull 🖤
Remember, a job is still a job

like people, friendships, relationships, etc. ... they all have rainbows and rainclouds

Find those trade-offs that work for you (and be ok with them)

“This is Water” – David Foster Wallace
Skimmers

• Where do you like to work?
• How much detail?
• How comfortable with gut checks?
• Do you like to know little about a lot, or vice versa?

& Divers
Intellectual Property (IP) Law

- More lucrative
  - Billable hours
  - Lifestyle (not the client)
- More Diver-ish
  - More detailed
  - More focused
    - peer reviewed level
Transferable skills/traits needed

- Communication skills
- Ability to multi-task
- Interpersonal skills
  - Managerial (?)
- Adaptability
- Network building
- OK with some chaos
- OK with limited data

--Negotiation → Rice interview
Weave a narrative

• Research your target
  – Diction/word choice

• Plausible story
  – Narrative hook
    • Networking: “Referred by ______”

• Highlight transferable skills
  – Bite size examples (practice anecdotal answer or 2)
IP resources

• Association of University Technology Managers (AUTM)
  – http://www.autm.net/Home.htm
  – https://careercenter.autm.net/jobs/?str=1&max=25&sort=start_&vnet=0&long=1

• Licensing Executive Society (LES)
  – http://www.lesusacanada.org/

• USPTO
  – http://www.uspto.gov/
General career resources

  – by Richard N. Bolles

• Alternative Careers in Science, Second Edition: Leaving the Ivory Tower (Scientific Survival Skills)
  – by Cynthia Robbins-Roth

• So What Are You Going to Do with That?: Finding Careers Outside Academia
  – by Susan Basalla and Maggie Debelius
BREATHE
You’ve got this