A Career in Technology Transfer: Commercializing Research in Academia

Christopher Barton, J.D. Ph.D.
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My Background

Finding the fit that was “just right” took me 12 years of schooling.
Bayh Dole Act

Created uniform federal Intellectual property policy for federally sponsored research.

Nonprofits and small businesses could elect title to inventions that were created in whole or in part with federal funding.

However universities and labs would have to agree to set due-diligence requirements.

In return, Universities could:

- Manage the commercialization process
- Grant Licenses (including exclusive licenses)
- Take royalties (including mandated sharing of royalties with inventors)
What is Technology Transfer?

“The process of transferring scientific findings from one organization to another for the purpose of further development and commercialization.”

The process typically includes:

- Protecting UofL Intellectual Property through patents and copyrights.
- Analyzing market potential.
- Forming development and commercialization strategies such as marketing and licensing to:
  - Existing companies.
  - Start-up companies.

Source: http://www.autm.net/Tech_Transfer.htm
Copyright

- **Original work on tangible media**
- e.g., book, music, art, choreography, software
- **Author’s life + 70 years**

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Patent

- **Exclusive right in exchange for sharing your invention**
- **Exclusivity limited to 20 years**
- **Has to be new, non-obvious and useful**

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```python
def composeimage( x, y, colr, radius, points, diminish ) :
    nofill()
    stroke()
    strokewidth( 0.05 )
    autoclosepath( False )
    count = int( radius * 1.3 )
    colr = colors.color( ccolr )
    grad = colors.gradient( colr.darken( 1.0 ), colr,
                             colr.lighten( 1.0 ).desaturate( 0.4 ),
                             steps = count )
    for i in range( count ) :
        stroke( grad[ i ] )
        a = 0.75 - 0.25 * float( i ) / count
        colors.shadow( dx = 5, dy = 8, alpha = a, blur = 15 )
        path = oval( x - radius + i * 0.5, y - radius + i * 0.5,
                     radius * 2 + i, radius * 2 + i, draw = False )
        drawpath( brushpaint( path, points = int( points - i * 0.2 ),
                             length = radius - i + random( count - i ) / 3,
                             diminish = diminish )
```
Value of Technology Transfer to the Academic Institution

- Recognition for discoveries made at the institution
- Compliance with federal regulations
- Attraction and retention of talented faculty
- Local economic development
- Attraction of corporate research support
- Licensing revenue to support further research and education
The Typical Technology Transfer Professional

- Education: Ph.D., J.D., or M.B.A. (sometimes even a M.S.)
- Jack of all trades mindset
- Interested in learning about new technologies
- Interested in learning about cross functional areas
- Attention to detail
- Creative
- Desire for a good work/life balance.
Commonly Seen Job Titles

Technology Transfer Associate
Technology Transfer Manager
Technology Transfer Officer
Commercialization Officer
Licensing Assistance
Licensing Associate
Licensing Manager
Licensing Officer
Business Development and Licensing manager
Technology Licensing Analyst
Technology Transfer Specialist

Many titles, but often the same function.
What is the typical day like?

(May depend on the type of office you are in)

- Review New Disclosures
  - Do literature searches and review
  - Do preliminary Market Searches
- Meet with Inventors/Faculty
- Review Patent Actions and interact with patent attorneys
  - Prompt inventors to respond and provide input
- Generate Marketing Materials
  - Abstracts and Slide Decks
- Research and Contact Companies
- Negotiate and Draft License or Option Agreements
- Monitor company compliance with Agreements
How is success measured?

**Overall Office Measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invention Disclosures</td>
<td>*</td>
</tr>
<tr>
<td>Research Support Agreements</td>
<td>*</td>
</tr>
<tr>
<td>Material Transfer Agreements</td>
<td>*</td>
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<tr>
<td>Patent Applications</td>
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<tr>
<td>Patents Awarded</td>
<td>*</td>
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<tr>
<td>License/Option Agreements</td>
<td>*</td>
</tr>
<tr>
<td>Royalties/License Income</td>
<td>*</td>
</tr>
<tr>
<td>Associated Income</td>
<td>*</td>
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<tr>
<td>Patent Reimbursement Income</td>
<td>*</td>
</tr>
<tr>
<td>Total Income</td>
<td>*</td>
</tr>
</tbody>
</table>

Individual measures are how well you contribute to these Office Goals.

* Can influence, but not directly control.
Challenges

- Early Stage Technology.
- Finding an interested commercial entity can be difficult.
- Your docket is driven by researcher output.
- Valuing a technology can be difficult.
- Prior deals are always under scrutiny.
- Learning curve is steep but forgiving.
- Career progression may require institution jumps.
Salaries (for Licensing Associates)

0-4 years

2-10 years
Director/Associate Director Salaries

Associate Director (5+ years)

Director (5+ years)
But it’s not for everyone...

• Someone who can’t handle uncertainty.
• Those who are extremely risk averse.
• Those who want to be constantly moving.
• Extreme introverts.
• Those who lack diplomacy skills (you can’t call a researcher’s “baby” ugly).
How to break in...

Hello
my name is

INTERN
Exit Options

- Corporate
  - Business Development
  - Technology Scout

- Venture Capital

- Patent Examiner/Patent Agent

- Scientific Advisor for A Law Firm
Current Internship Opportunities

• Volunteer Interns always welcome!
  – Like to have a commitment of ~6-8 hours per week.
  – Always looking for volunteers with scientific backgrounds.
  – Duties can vary based on background and desire to learn.
  – Can work with Intern and PI for schedule flexibility.
Technology Transfer Resources

• University of Louisville Office of Technology Transfer: http://louisville.edu/research/technologytransfer

• Association of University Technology Managers: www.autm.net

• Licensing Executives Society: www.lesusacanada.org
EVPRI’s Office of Technology Transfer

Who we are:

T. Allen Morris, Director
Holly Clark, Deputy Director – Cancer Center technologies
Chris Barton – Health Science Campus technologies
Eric Castlen – Engineering technologies
Mary Anne Copeland – MTAs, NDAs, other agreements
Matthew Hawthorne – Software technologies, industry engagement
Jody Carrol – Financial Coordinator
Karen Johnson – Office Manager
Corin Hindenach – Patent/IP Correspondence
Jacob Edmonds – Agreement Docket Coordinator
Brett Moreno – Marketing
Interns – Agreement negotiation, technology review, marketing

Also: Eugene Krentsel
Office of Technology Transfer

Questions? Please contact us!

Where to find us:
300 E. Market St., 3rd floor
Phone: (502) 852-2965

http://louisville.edu/research/offices/technology-transfer