Commercializing Tools for Biomedical Research

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Outline

- Introduction
- Disseminating Research Tools
- Commercialization strategies
What is a Research Tool?

- Research Tools are unique resources developed while conducting research that are necessary to perform further studies.

- For Example:
  - Monoclonal Antibody (e.g. hybridoma)
  - Polyclonal Antibody (e.g. ascites or purified antibody)
  - Cell lines
  - Cell products
  - Transgenic animals
  - Organisms
  - Synthetic compounds

- Cloned DNA
- DNA sequences
- Peptides
- Viral Vectors
- Mapping information
- Medium
- Crystallographic coordinates
- Spectroscopic data
Why Disseminate Research Tools?

- Facilitates the progress of biomedical research
- Promotes cooperation and collaborations
  - Academic and non-academic
- Complies with NIH policy and processes encouraging exchange of materials developed with federal funds
Dissemination of Research Tools

- Publication
  - Timely disclosure
- Transfer of material
  - Academic
  - Non-Academic
- Determination of ownership
  - Invention Disclosure
    - Determining patentability
  - Establishing Ownership
Publication

- Types
  - Peer-reviewed manuscripts, presentations, scientific meetings

- Facilitates the dissemination

- Reasonable delays in publications
  - Ensure confidential information for patent filing
  - Certain agreements allow a third party reasonable time to review data to determine patentability
    - Sponsored Research Agreement
    - Material Transfer Agreement
Transferring the Material

- **Academic Request**
  - Contact the Office of Research (OOR)
    - MTA submission form (http://www.pitt.edu/~offres/mta.html)

- **Biological Resource Center**
  - Examples: ATCC, Jackson Laboratory
  - Contact OOR
  - OOR and Office of Technology Management (OTM) will review the distribution policy of center
    - Limit distribution to academic parties only

- **Non-Academic Request**
  - License agreement to access material
  - Contact OTM
Establishing Ownership

- University policies
- Federal funding
  - Bayh-Dole Act
    ✓ Ownership reverts to grant recipient’s institute
- Non-federal funding
  - Grant award must be reviewed to determine ownership
  - Corporate Sponsored Research Agreement
    ✓ OTM and OOR review agreement terms
- Third party materials
  - OOR and OTM work with investigator(s) to relevant agreements (e.g. MTA)
Patenting Research Tools

- Patentable if new, useful, and non-obvious
- Research tools are typically not patented
  - Costs associated with the patent process
  - Exclusivity not necessary in research market
- Some research tools are patented if they have broad or therapeutic applications
  - Cre-lox system
  - GFP
  - Monoclonal antibodies
  - Viral vectors
Commercialization Strategy

- How does a company want to use it?
  - Sell your material as a research tool to the research market
    - Non-exclusive vs. Exclusive license
    - Example: Antibodies, Transfection Reagents, etc.
  - Use your material for internal research
    - Biomaterial Research License
      - Similar to non-exclusive
      - Limited scope and term
    - Example: drug development
License Types

- **Exclusive License**
  - One company allowed to develop and/or distribute your material
    - You retain the rights to use the material for internal research use and to distribute to your colleagues and other non-profits
  - Due Diligence Milestones
    - Licensee must develop the material
      - Payment associated with achievement of milestones
  - If appropriate, licensee must pay for patent expenses

- **Non-Exclusive License**
  - Materials can be licensed to multiple companies
  - No due diligence milestones
Research Tool Licensing

2000-2010

- Research Tool Licenses: 37
- Total Revenue Generated: $1.43M
- Revenue to Innovators: $643,500
Conclusions

- Research Tools are unique resources that enable innovation
- Distribution of Research Tools is strongly encouraged
- Commercializing Research Tools
  - Broadly enables innovation
  - Eases burden of distribution
  - Generates revenue
- Talk to OTM to learn more about Research Tools

http://www.otm.pitt.edu/