

I've got an idea...now what?



Ideas empowered.

## Academic Perspective: Role of Technology Transfer

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# Bridging the Gap: USC Stevens

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*Academia*

*Marketplace*



# About USC Stevens

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- **Mission: Empower USC innovators to make impact with their ideas**
- **University-wide resource in the Office of the Provost**
- **Significant university commitment**
  - Staff of 24 (~30 by early 2008)
  - Encompasses former “Office of Technology Licensing”
  - Supported by Provost’s office and \$22M naming gift from Mark and Mary Stevens

# Expanding Roles for University

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- Traditional (since 1980s) patenting and licensing
- Integration of inter-departmental resources
  - Clinical departments with research labs (CTSA, etc.)
  - Business school with marketing/business analysis of clinical projects
  - Cross-disciplinary educational programs - legal, business, biology, etc.
- Inter-Institutional partnering to share resources
- Proof-of-principal, gap funding sources
- Mentoring programs with outside experts
- Early-stage meetings with angel, VC investors
- Incubator facilities

# Functions of Traditional Tech Transfer Office

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## Patenting

- Receives disclosure, investigator initiated
- Federal (sponsor) reporting
- Confirm ownership status of materials
- Evaluate patentability
  - Novel? Non-obvious? Useful?
- Evaluate commercial potential
  - Identify products/markets/sizes/need
  - Ability to police infringement
- Evaluate technical feasibility
- Decisions to file
  - Provisional application
  - Nonprovisional and PCT
  - National Phase

# Functions of Traditional Tech Transfer Office

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## Licensing

- Who best able to commercialize?
  - Inventor contacts
  - TT office contacts, databases, market studies
- Attract Licensing Interest
  - Meet with Inventor contacts
  - Direct email/phone contacts
  - Mass marketing campaign
- Negotiate Agreement
  - Deal terms, fees + royalties
  - Patent strategy/control
  - Improvement technology
  - Diligence to commercialize
  - Warranties, Indemnification
- Manage Relationship with Licensee

# Patent Costs over Time

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	00 years	01 years	02 years	03 years	04 years	05 years	06 years
U.S.	<b>PRV Filed</b> (\$100 - \$5k)	<b>Non-PRV Filed</b> (\$8k - \$15k)		<b>1<sup>st</sup> O.A.</b> (\$2k - \$3k)	<b>Prosecution</b> (\$2k - \$3k)	<b>Patent Issues</b> (\$2k)	<b>Total</b> (\$15k - \$25k)
Foreign		<b>PCT Filed</b> (\$4k - \$5k)	<b>National Phase</b> [ Europe - \$15k Japan - \$30k Canada - \$2k Australia - \$2k China - \$5k ]		<b>Prosecution</b> (\$3k - \$15k)	<b>Prosecution</b> (\$3k - \$15k)	<b>Patent Issues</b> [ Europe - \$30k Japan - \$10k Canada - \$2k Australia - \$2k China - \$5k ]
<b>Total</b>	(\$100 - \$5k)	(\$12k - \$20k)	(\$2k - \$3k)	(\$5k - \$50k)	(\$3k - \$15k)	(\$3k - \$15k)	(\$55k)
<b>Cumulative (approx)</b>	<b>\$100 - \$5k</b>	<b>\$15k - \$25k</b>	<b>\$17k - \$28k</b>	<b>\$22k - \$78k</b>	<b>\$25k - \$93k</b>	<b>\$28k - \$108k</b>	<b>~ \$165k</b>

# Changing Patent Landscape

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- Patents on many biological modifiers due to expire
  - Cytokines, growth factors, associated genes
  - Novelty and obviousness become higher hurdles
  - Breadth of future patent coverage narrows
  - Freedom-to-operate probably increases
- New Rules – USPTO Patent Reform
  - First-to-file instead of first-to-invent
  - Information disclosure requirements increased
  - Limits on continuation, divisional applications, and claims
  - Patents will cost more (minimum 2X)



# Invention Disclosure Elements

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- “Non-Confidential” Title
- Date received in Office
- Inventor Names/Contact Info
- Funding source/Grant #s
- Third party materials involved?
- Subject of Contract Research or Consulting Activities?
- Published or Presented?
- When or when anticipated?
- Complete description of technology
- Market information if available
- Key words for searches
- Signature, Home Address, Country of Citizenship

Date Received	University of Southern California Technology Disclosure					USC File No.
1. Non-Confidential and Descriptive Title of Technology						
2. Inventor(s) &/or Software Author(s) – Identify one preferred contact	Telephone	Fax number	Email address	Employer Position	Departmental Address	
3 a. Has any funding been used, in whole or in part, to conceive, make, test, or develop the technology? (List additional sponsors on a separate sheet.) Please note that accurate and complete sponsorship information is necessary to fulfill USC obligations under research contracts and Federal grants. <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list the following information:						
Grant Number	USC Account No.	Sponsor	Principal Investigator			
3 b. Have any USC funds and/or facilities been used, in whole or in part, to conceive, make, test, or develop the technology? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please identify and list the specific USC account numbers and/or USC facilities used. If necessary, list on a separate sheet of paper.						
4. Are any of the inventors affiliated with the Alfred Mann Institute (AMI-USC)? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please identify the inventor(s) and affiliation(s).						
5. Does the technology include software? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please complete the "Software Addendum."						
6. Have you received materials or equipment from a third party in connection with this technology? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please attach any relevant written agreements with the third party (for example, material transfer agreement (MTA)).						
7. Are there any other arrangements with a third party that may affect patent rights, including research or consulting agreements? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please attach the relevant written agreements.						
8. Please list the dates and locations of the following: (see Instruction Sheet for definitions)						
Conception of the invention	Date	Notebook No. or Publication Citation	Page			
First written description						
First reduction to practice						

# Keys to Success with Tech Transfer Office

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## DO

- ✓ Fill out disclosure form completely
- ✓ Identify publication/presentation dates
- ✓ Seek meeting with licensing officer
- ✓ Demonstrate knowledge of prior art and your improvement to it
- ✓ Evidence fundability
- ✓ Build relationships with companies of interest

## DON'T

- ✗ Send just manuscript
- ✗ Give short notice of publication/presentation
- ✗ Withhold information about funding or materials sources
- ✗ Assume tech transfer office will file patents and find licensee
- ✗ Provoke adversarial relationship with TTO
- ✗ Drive unreasonable license terms

# What's selling and for what price?

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- Patented or unique biologics with positive animal data and a credible strategy for clinical development
- Technical risk, market opportunity, and extent of third-party royalty obligations help determine licensing fees and royalty
- Total known royalty burden >5% will seriously limit investment interest
- University licenses of biologics generally return ~2% royalty, license fees in range of \$50-100K/yr, with \$250-500K upon clinical success
- Patent cost reimbursement is assumed

# Buck says “Find a cure—woof”

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# USC Contacts

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