



Presentation to
**French American
Technology Transfer Panel**

Office for Technology Licensing
and Industry Collaboration
Tufts University

July 29, 2010



Tufts



Presentation to
French American
Technology Transfer Panel

- Technology transfer @ Tufts, Tufts data and case studies, Future Challenges
- Feedback of the exchange with previous laureate
- Interest to collaborate with France?

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Office for Technology Licensing and Industry Collaboration
Staff Members

Nina Green
6-0360

Director
Veterinary Medicine, Nutrition

Tom McVarish
6-6747

Associate Director, Operations
Trademarks, Government Compliance

Martin Son
6-3605

Associate Director, Licensing
Art & Science, Engineering

John Cosmopoulos
6-0366

Senior Associate Director
Medicine, Dental Medicine

Colm Lawler
6-4349

Associate Director
Tufts Medical Center

Vacant Position

Licensing Associate
MTAs, NDAs, Clinical Study/Trial Agreements
Other Agreements, Marketing



OTL&IC Mission

- To promote research at Tufts by facilitating appropriate relationships between the university and industrial collaborators
- To make Tufts inventions and discoveries available for public benefit
- To generate income to support research at Tufts



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Office for Technology Licensing and Industry Collaboration

Core Activities

Invention disclosure intake

Patent applications

Patent maintenance

Nondisclosure agreements

Options

License agreements

Startups

Material transfer agreements

Clinical trial agreements

Industry-sponsored research agreements

Trademark and copyright agreements

Interinstitutional agreements

Technology development

Marketing

Outreach

Industry Networking

Intellectual property seminars

Departmental Visits

Tech transfer traineeships

AUTM Association of University Technology Managers

BIO Biotechnology Industry Organization

MATTO Massachusetts Association of Technology Transfer Offices

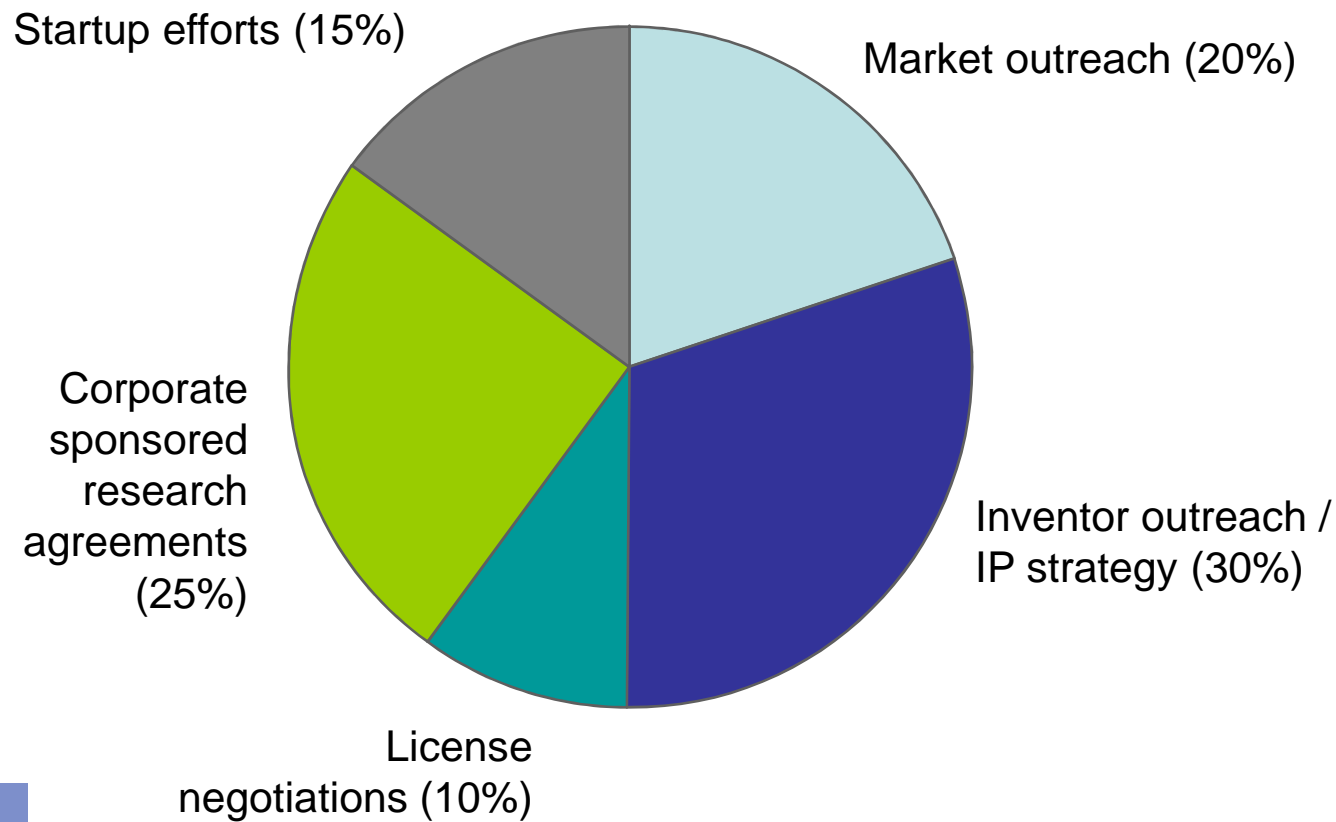
MTTC Massachusetts Technology Transfer Center



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Business Development Activities





Technology Transfer Process: Internal Process

- Disclose invention to OTL&IC
- Discuss with OTL& IC case manager
- Review patentability
- Evaluate commercial potential
- Make patenting decision
- Additional technology development
- Market research: Who are the potential licensees?



Marketing & Closing a Deal

- Market research for potential licensees
- Contact companies, market invention
- Non-confidential disclosure
- Disclose confidential data, scientific interaction
- Structure and negotiate deal terms
- Draft & license agreement



When to Commercialize

- Exciting scientific discovery that targets important commercial opportunity
- Potential for strong patent position
- Provides the possibility to generate revenues
- Inventors are interested!



When Not To Commercialize

- Difficult to protect/Difficult to enforce
- Lacking freedom to operate
- Low degree of novelty, incremental improvement
- Small market impact
- Too early-stage — basic science
- Inventors are not interested

Office for Technology Licensing and Industry Collaboration
Tufts University

	2005	2006	2007	2008	2009	2010
Invention disclosures	45	41	56	62	45	76
New US patent apps	23	25	22	22	20	28
US patents issued	14	16	11	8	5	19
Options/licenses	18	14	19	13	9	10
Startup companies	1	0	5	2	0	1
License income	\$638K	\$1,34M	\$ 3,525M	\$4,077M	\$8,474M	\$7,506,988
Legal expense reimbs	\$551K	\$529K	\$746K	\$798K	\$1,190M	\$1,057,738
Total income	\$1,189M	\$1,870M	\$4,271M	\$4,875M	\$9,664M	\$8,564,726

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	2005	2006	2007	2008	2009	2010 (3Q)
Invention disclosures	17	15	10	29	23	16
New US patent apps	10	4	5	15	13	3
US patents issued	7	5	4	1	2	2
Options/licenses	5	4	3	4	2	6
Startup companies	0	3	0	0	1	2
License income	\$1,209M	\$1,149M	\$927K	\$1,196M	\$538K	\$289K
Legal expense reimbs	\$ 99K	\$ 261K	\$187K	\$564K	\$409K	\$321K
Total income	\$1,308M	\$1,410M	\$1,114M	\$1,760M	\$947K	\$610K



Sharing of Net Royalty Income

Expenses are reimbursed

OTL&IC	10% (up to \$150K) & 2% (after \$150K)
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The remainder is shared accordingly:

Inventor(s)	40%
Department(s)	20%
School	20%
University	20%

Tufts University Startup Companies



1996	Ion Signature Technology Data analysis software	2007	BA Logix Software, multiple applications
1997	Nanoframes Protein-based nanostructures	2007	Centegen Drug-resistant bacterial infections
1997	Paratek Pharmaceuticals Antibiotic therapy	2007	Lakewood Pharmaceuticals Hemolytic-uremic syndrome therapy
1997	Point Therapeutics Cancer, diabetes <i>Acquired by DARA Biosciences</i>	2007	Quanterix Single molecule detection
1998	Illumina Sensors, diagnostics	2008	Electric Truck Shock absorbers/electrical generators
1999	Arisaph Pharmaceuticals Drug profiling & development	2008	DC Polymers Electrochemically degradable polymers
2000	Serica Technologies Silk-based medical devices <i>Acquired by Allergan</i>	2010	Ekteino Laboratories Silk-based drug delivery
2003	Cogniscent Chemical sensing devices		



Tufts Medical Center Startup Companies

- 1997 **Point Therapeutics** (*Acquired by DARA Biosciences*)
Cancer, diabetes
- 2004 **Katama Bay Biosciences**
Drug discovery
- 2004 **Accugesics**
Pain therapies
- 2006 **IGAN Biosciences**
Kidney disease therapy
- 2006 **Anchor Therapeutics (f/k/a Ascent Therapeutics)**
Platform pharmaceutical technology: cancer,
inflammation cardiovascular disease
- 2009 **Mindchild Medical**
Fetal ECG monitoring
- 2010 **Strohl Medical**
Stroke diagnostics
- 2010 **SafePath Medical**
Safety Suturing Device

Tufts Investing Long Term in Intellectual Property Portfolios

Startup	Paratek Levy TUSM	Point Bachovchin TUSM	Illumina Walt A&S	Serica Kaplan Engineering
Portfolio	Antibiotics	Inhibitors	Sensors	Silk
First patent expense	1982	1987	1991	2002
Option/License date	1997	1997	1998	2004
Cumulative expense at option/license date	\$160K	\$130K	\$158K	\$60K

Tufts Investing Long Term in Intellectual Property Portfolios (cont'd)

Startup	Anchor Kuliopulos TMC	Galenea (licensee, not a start-up) Shuster TUSM
Portfolio	Therapeutics	Therapeutics
First patent expense	2000	2003
Option/License date	2006/2007	2008
Cumulative expense at option/license date	\$250K	\$60K



Future Challenges

- VC and pharma are investing in later stage deals
- TTO needs to create value prior to deal:
 - Technology development or seed funds
 - Catalyze collaborations with small companies
 - Creativity – business development vs licensing approach



Future Challenges (cont'd)

- TTO needs to create value prior to deal (cont'd):
 - Bundle technologies from different inventors and/or institutions
 - Some institutions have entered into drug development deals with large pharma



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Feedback of the exchange with previous laureate

- Sandrine Testaz, PhD, MBA, Université Pierre et Marie Curie
- Interacted closely with Tufts OTL&IC case managers
- Obtained hands-on exposure to US TTO practices
- Facilitated IP Management Agreement with French university which led to start-up formation
- Limited by time (3 week exchange)



Interest to collaborate with France?

- Facilitate contacts with French & European companies, share networks
- Joint commercialization projects – dependant on investigators and technologies
- Learn from French best TTO practices
- Spend the summer in Provence!



techtransfer.tufts.edu

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