第一セッション

TLO personnel and the types of IP expertise they need

Robert Kneller, J.D., M.D.
Professor, Department of Intellectual Property
Research Center for Advanced Science and Technology (RCAST)
University of Tokyo

NIH Office of Technology Transfer (*unusual case*):

Professional staff: 34

PhD & JD (science doctorate and attorney):	3 (9%)
PhD & MBA:	5 (15%)
PhD:	12 (35%)
JD (attorney):	10 (29%)
MBA:	2 (6%)
Other:	2 (6%)
female:	12-13 (37%)

Mainly licensing and patent management. Most of invention screening, commissioned/joint research contracts and material transfer agreements handled by other offices.

In 2003: 405 invention disclosures, 141 patent applications, 205 licenses, $54 million royalties (#4)

Stanford Office of Technology Licensing

Professional staff: 20 (includes 3 dealing with contracts, 1 with trademarks, and 8 who serve mainly as assistants)

PhD 1

JD 1 (handles contracts, not licensing)

MS & MBA 1

MS or MA 5

BS or BA 8

female 16 (80%)

industry experience: at least 5 of 8 licensing associates

In 2002: 321 invention disclosures, 324 US patent applications, 106 licenses executed, $50 M royalties (#7)

Katharine Ku

Director
B.S. Chemical Engineering (Cornell University);
M.S. Chemical Engineering (Washington University).
Registered Patent Agent; Sigma Chemical (research); Monsanto (research); Protein Design Labs (V.P. Business Development); Univ. of California (Clinical dialysis study); Stanford (Sponsored Projects Office, OTL).
OTL Responsibilities: Serves as Director. Primary focus is on management, planning, and policy issues.

Linda Chao

Senior Licensing Associate
B.S. Electrical Engineering (M.I.T.);
M.S. Electrical Engineering (M.I.T.);
M.B.A. (M.I.T.).
Digital Equipment Corporation (VLSI design);
SEMATECH (competitive analysis of semiconductor industry);
Applied Materials (product marketing).
Registered Patent Agent
OTL Responsibilities: Photonics, Nanotechnology, Semiconductor, Communications, and Bio-engineering technologies.

Luis Mejia

Senior Associate

B.S. Mechanical Engineering (Arizona State University);
PG&E (Energy Engineer, Marketing).

OTL Responsibilities: Engineering, high energy physics, robotics, environmental remediation, materials science, micromachining, biotechnology and medical devices.

Hans Wiesendanger

Senior Associate
D.Sc. Chemistry (Swiss Federal Institute of Technology)
Teaching Technical College Winterthur (Switzerland); Post-doctoral research UCLA; University of Zurich,
Kaiser Aluminum, SRI (research & development); Electronics Associates, Uthe Technology, Barnes-Hind Pharmaceuticals,
Plessey Environmental Systems, Chemetrics Corp. and Sequoia-Turner (Director of Marketing/International Operations).
Independent consultant for international business and marketing.
OTL Responsibilities: Biotechnology, medicine, medical devices, chemistry, physics, instrumentation, materials, vacuum technology, fiber optics, and superconductivity.

Irit Gal **Licensing Associate (new)**

B.S. Chemical Engineering (The Technion, Israel)
M.S. Chemical Engineering (The Technion, Israel)
MA Economics CUNY
Alcatel incubation operation in Israel (VP Investments)
Ceramight Composites (Manager of Business Development)
PricewaterhouseCoopers (Manager of Life Sciences Technologies)
OTL Responsibilities: Physical Sciences, Life Sciences, Chemistry

Sara Nakashima (new)

Associate

B.S. Biological Sciences (Stanford University)

OTL Responsibilities: Biotechnology

Gregg Kyle (new)

Licensing Associate

B.A. Biological Sciences, Hiram College, Ohio

M.S. Biological Sciences, Wayne State University, Michigan

OTL Responsibilities: Biotechnology

Jackie Bley (new)

Licensing Liaison
B.A in English, Creative Writing, San Francisco State University
OTL Responsibilities: Licensing assistant to Luis Mejia

Jacqueline Tay (new)

Licensing Liaison
B.S. Biology, Genetics and Development, Cornell U.
OTL Responsibilities: Licensing assistant to Irit Gal.

Carey A. deRafael (new)

Licensing Liaison
B.S. Operations and Technology
(Stanford University)
OTL Responsibilities: Medical Devices

Daniel Weinstein (new)

Licensing Liaison
Education: B.A. in The Biological Basis of Behavior, University of Pennsylvania
OTL Responsibilities: Licensing assistant to Mary Watanabe.
Editor and designer of OTL's newsletter, Brainstorm.

Imelda Oropeza (new)

Licensing Liaison
B.A. Stanford University
Stanford: School Of Engineering, Dean's Office (Editor), Stanford Center for Professional Development (Marketing)
OTL Responsibilities: Software-Testing, Security, Optimization, Genetics, Imaging, Compression, Internet, Communications, Animation, Educational, Open Source; Copyrights.

Elaheh Sigari (new)

Licensing Liaison
B.S. and M.S. in Physics
R&D Engineer, Material Characterization Scientist, MEMS Process Engineer and product manager in IBM, Charles Evans and Associates, Applied Materials, Kokusai Electric, CIS Stanford University, Transparent Networks, and Lilliputian Systems (Fuel Cell).
OTL Responsibilities: Assistant to Linda Chao.

Sally O'Neil (new)

Manager,
Industrial Contracts Office
B.A. English (Oberlin College);
M.A.T. English (University of Chicago);
M.J. (University of California, Berkeley)
J.D. (University of Santa Clara)
Price Waterhouse Technology Centre (Editor);
Russo & Hale LLP (Litigation Associate)
Responsibilities:
Manages ICO team. Handles agreements for sponsored research with industrial sponsors, including intellectual property, licensing, and publication provisions, for Engineering, Humanities and Sciences, and Medical Schools.

Monique Schareck (new)

Industrial Contracts Associate
B.A. Communications and Political Science (Simon Fraser University)
M.H.A. (University of British Columbia)
Communications and Compliance, MS/MRI Research Group (University of British Columbia, Vancouver, Canada)
Responsibilities
Handles MTAs and assists with sponsored research agreements. Web page administrator.

Sandra Bradford

Industrial Contracts Associate
B.A. Human Biology (Stanford)

Cornell Center for Technology, Enterprise and Commercialization (CCTEC)

Professional staff: 11 (includes staff dealing with contracts and administration and staff based in NYC to cover medical school)

- DVM (veterinary medicine) & MBA 1
- PhD & Masters IP law 1
- PhD 3
- MS & MBA 1
- MBA 2
- BS 1
- uncertain: 2
- female: 3
- industry experience: 9

In 2002: 213 invention disclosures, 191 US patent applications, 82 licenses, $2.8 M royalties

RICHARD S. CAHOON, Acting Director

BS biology , BA political science, M.S. in bioprocess engineering. Ph.D. is in Natural Resource Policy
Founder & President of a biotech company and founder of a bioprocess engineering company. Associate Director for Industrial Relations at an NSF National Engineering Research Center. In 1990, joined Cornell Center for Technology, Enterprise & Commercialization as Assistant Director for Technology Marketing.

Scott Macfarlane Senior Technology Manager for physical sciences.

M.B.A University of Virginia.
Work experience: Carrier (air conditioner manufacturing). Syracuse Language Systems (Director of New Business Development). Founded Xgene Corporation, a Bay-area biotech company that is developing tools for drug discovery.

John Brenner, Senior Technology Manager, joined CCTEC 1999.

B.S. 1985 plant science, U. New Hampshire, M.S. 1987 science education, Syracuse U., M.B.A. 1997 Cornell
President of a landscaping and construction company (9 years). 1997-1999, President of Aureus, Inc., a management consulting firmfocused on technology start-up companies.

Corine Farewell, Senior Technology Manager, Life Sciences, joined CCTEC 2001

BS 1983 Cornell, DVM 1989 Cornell
Veterinary practice. 1991 Iams Company (a pet food manufacturer expanding its presence in Europe). 1999, started Career Services Office at the Cornell College of Veterinary Medicine (faculty member on the campus-wide Entrepreneurship and Personal Enterprise Program). MBA Cornell. 2001

James Heitner, Technology Manager, Life Sciences, joined CCTEC 2002

B.S. Biochemistry and Molecular Biology, University of Georgia.
1999-2001, licensing associate, University of Georgia, and then the Georgia Institute of Technology. Licensing Associate, Business Development at Paradigm Genetics, Inc., a functional genomics company located in Research Triangle Park, NC.

Ernest Davis, Technology Manager, joined CCTEC 2002

BS mechanical engineering, North Carolina State University in 1995. Master of Science in Management (MSM), North Carolina State University's) 2000.
IBM, manager for personnel systems division, then manager working in customer liaison for new printed circuit boards.

Alice Li, Technology Manager, Life Sciences, joined CCTEC 2002

B.S. biology and bioengineering, Tsinghua University (Beijing). 1991.PhD plant molecular biology, Cornell 1998
1998- 2002, R& D manager at BioArray Solutions, a NJ biotech company pioneering in DNA, protein and cellular microarrays for diagnostic and drug discovery applications. She managed evaluation of outside technologies and several collaborations with industrial and academic partners. She helped in attracting capital for early stage business development. While at BioArray, Alice had several patent applications filed in molecular diagnostics and bioimaging.

Medical School in NYC

Brian Kelly, Director of Technology Development

B.S. in Chemistry and a Ph.D. organic chemistry, U. of Leicester (UK), 1988-1990 postdoctoral fellow, Yale University.
Worked in patent law firm in London, simultaneously M.S. in Intellectual Property, University of London.
Technology licensing associate at the University of Minnesota. Director of Intellectual Property for New York University, responsible for commercializing and developing technology from NYU Medical School

Carol Dempster, Senior Technology Manager

BA. Chemistry, Harvard; Ph.D. organic chemistry, Harvard University, post-doctoral research at Bell Labs
Science publishing (Harper & Row). Chemical marketing (Union Carbide). Business development and communications for Enzo Biochem and other biotech companies.
Associate Director of the Office of Technology Transfer at Cold Spring Harbor Laboratory. Manager of Technology Commercialization at the Long Island Research Institute, to stimulate the Long Island economy by developing new high-tech companies based on technology arising at Long Island's research institutions, including Brookhaven National Laboratory, Cold Spring Harbor Laboratory, North Shore University Hospital and SUNY-Stony Brook.

Purdue Office of Technology Commercialization

Professional staff: 7

- PhD 1
- MS & MBA 1
- MS 1
- BS or BA 4
- female: 2
- industry experience: 5

Most important skills and experience

- Communication and building cooperative relationships
- Technical/scientific
- Business

How important is legal expertise?

- Attorneys on TLO staffs are rare, as are patent agents. Patent attorneys on TLO staff are very rare.
- Almost all patent work is outsourced.
- Necessary legal expertise: familiarity with technology transfer and conflict of interest laws.
- Licensing does not require lawyers—license agreements are standard forms—issues for negotiation concern business strategy:
- Cooperative research contracts also do not require lawyers.

However, the following skills are important

- Understanding of basic points of patent law
- Dealing with issues related to start-ups
- Dealing with secrecy issues (too much, to little) in the context of industry contract research.
- Awareness of conflict of interest issues

Controversial issues for US TLOs

- Exclusive vs. non-exclusive licenses and the "public" interest.
- Appropriateness of licensing to start-ups.
- Reach through patents and licenses.
- Ownership of student inventions.
- Due diligence clauses.
- Sub-licenses.
- Bonuses for negotiating big license contracts.

Students and faculty should have basic instruction in:

- Basic IP law: What is IP? How is it obtained? Why important. Who can help on IP- related issues?
- IP considerations in technology commercialization: obligation to report and assign inventions, licensing, contract research, venture company formation
- Conflict of interest and ethical issues that involve IP considerations (infringement, copyright violations, etc.)

References

- Owen-Smith J. & Powell W.W., 2001, “To patent or not: decisions and institutional success at technology transfer,” Journal of Technology Transfer 26, 99-114.
- Owen-Smith J. & Powell W.W., 2003, “The expanding role of university patenting in the life sciences: assessing the importance of experience and connectivity,” Research Policy 32, 1695-1711.