
How to:

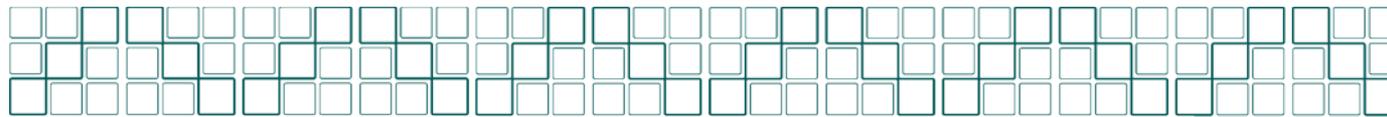
Technology Transfer

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Technology Transfer

Share scientific and technological advances from one enterprise, institution, or country to another for further development and commercialization.

- Science
- Health
- Agriculture
- Industry
- Business
- Etc.

Technology Transfer Definition

Technology transfer includes patenting and licensing:

Patenting

The obtainment or granting of a privilege or right of its owner to exclude others from making, using, or selling the invention.

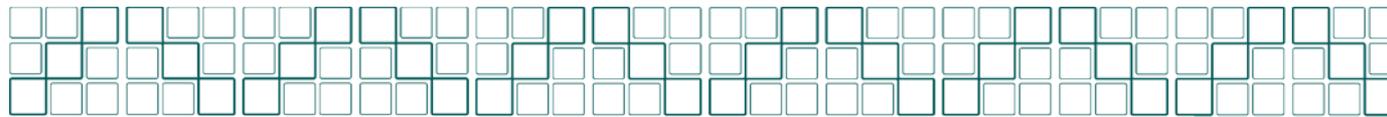
Licensing

The granting of permission to use intellectual property rights, such as trademarks, patents, or technology, under defined conditions.



What can be transferred?

- Discoveries
- Inventions and Innovations
- Intellectual Property
 - Patents: Functional and design inventions
 - Trademarks: Commercial origin and identity
 - Copyrights: Literary and artistic expressions
 - Trade secrets: Proprietary capability of a firm



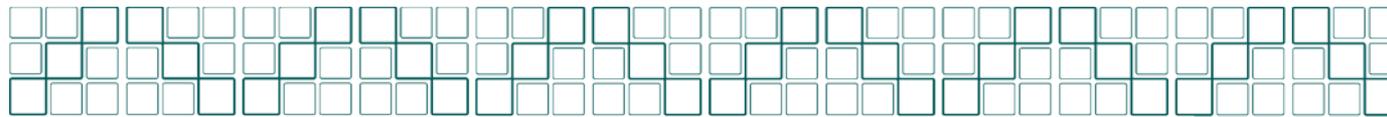
Organizations with Technology Transfer Positions

- Government:
 - NIH Office of Technology Transfer (OTT)
- Universities
 - University of Pennsylvania Center for TechTransfer
- Technology transfer services
 - Stratel the Technology Transfer Company
- For-Profit Companies
 - Merck, Technology Transfer Engineers
- Patent Law Firms
- Trade Organizations
 - Association of University Technology Managers (AUTM)
- Non-Profit Organizations
 - Licensing Executive Society (LES)



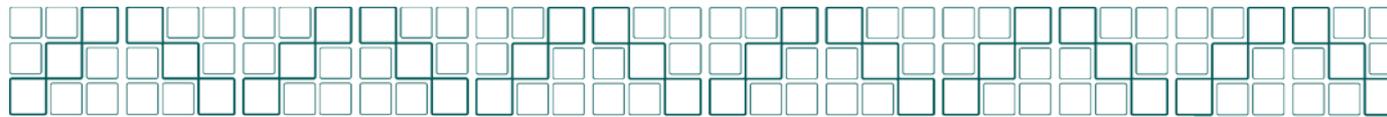
Positions in Technology Transfer

- Licensing and Patenting Associate
- Licensing and Patenting Manager
- Technology Transfer Specialist
- Technology Transfer Policy Specialist
- Royalties Assistant
- Royalties Coordinator
- Marketing Coordinator
- Monitoring and Enforcement Officer
- Senior Licensing and Patenting Manager
- Senior Advisor for Licensing
- Senior Advisor for Intellectual Property Transactions
- Senior Technology Transfer Policy Advisor
- Senior Royalties Administrator
- Senior Monitoring and Enforcement Officer
- Senior Expert Monitoring and Enforcement
- Senior Advisor for Monitoring and Enforcement



Where are jobs posted?

- AUTM/LES and other societies mentioned later
- Organization websites
- Bio.org



Skill Sets

- Strong science background
- Technology transfer knowledge
- People skills
- Communication skills
- Negotiation skills
- Time and management skills
- Transferable skills

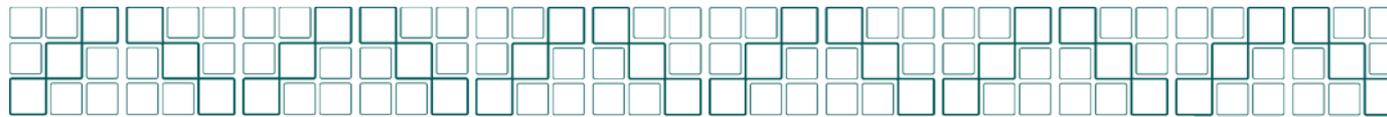
Knowledge of Science

What you'll be doing:

- Examine a wide range of science, meet with investigators, understand needs of scientific community

How to prepare yourself:

- Read about science broadly – in journals and in the popular press
- Keep abreast of the latest scientific and technological developments (read the New York Times or Washington Post science sections)
- Listen to podcasts about recent discoveries (<http://www.nature.com/nature/podcast/>)
- Attend seminars, journal clubs, conferences (esp outside your field)

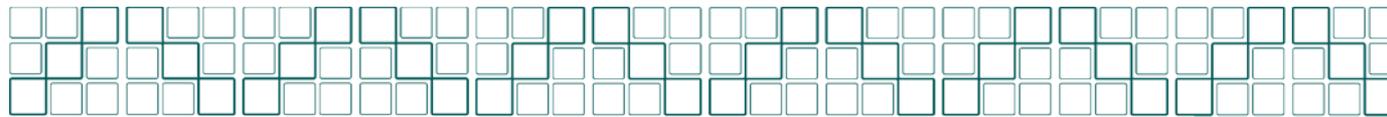


Knowledge of Technology Transfer

- Patents, intellectual property and licensing
- Policies and laws
- The range of technology transfer services
- Standard agreements and procedures

How to prepare yourself:

- Informational interviews
- Internships/fellowships: e.g., NIH/OTT Internships
- Courses: e.g., FAES courses in Technology Transfer
- Seminars/Meetings: AUTM, LES
- Be familiar with patent law and government regulations related to technology transfer



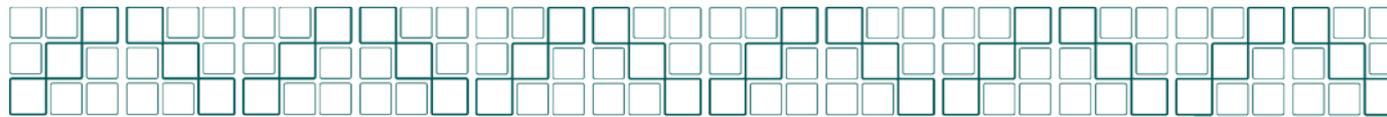
People Skills

Able to

- Deal with multiple constituencies with conflicting objectives
- Deal with highly ambiguous, confusing situations
- Work as part of a team
- Have patience, diplomacy and tact

How to prepare yourself:

- Participate in community services:
e.g. Felcom, NCI CCR-FYI, etc.
- Join, organize and lead meetings, journal clubs
- Collaborate with people in own and other labs
- Take Leadership courses in OITE



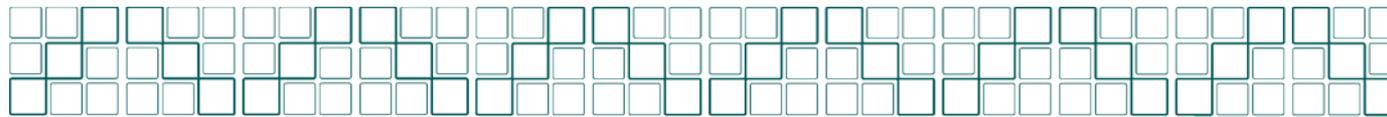
Verbal and Written Communication Skills

Able to

- explain science in plain English
- communicate with scientists, inventors, institutes, business people and lawyers
- write for both scientific and non-scientific audiences

How to prepare yourself:

- Give public speaking and presentation
- Join Toastmasters International
- Write papers, reviews, grants
- Join NIH Fellows Editorial Board
- Take Science Writing classes (OITE)



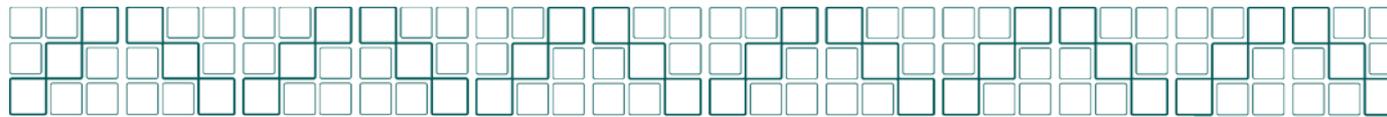
Negotiation skills

Preparation. Preparation. Preparation!

- In technology transfer, negotiations go around license agreements – with inventors, owners, other parties, etc.
- Preparation leads to higher royalties percentages, gain of value, increased opportunities, creation of good precedents, etc.

How to prepare yourself:

- Transferrable skills from real-life experience:
e.g. Negotiate time on the PCR machine
- FAES Courses – TECH 579 Negotiation Workshop



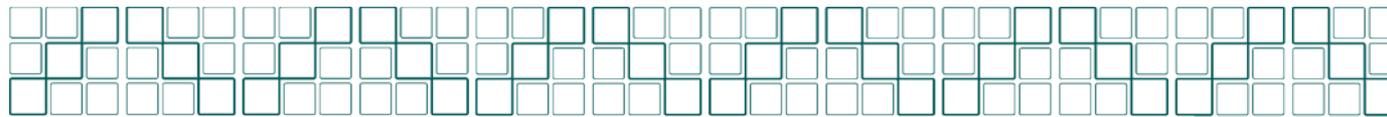
Project and Time Management

Able to

- Juggle, multitask and meet the deadline
- Work and solve problems in an *ad hoc* manner
- Have a drive to completion – to getting the job done

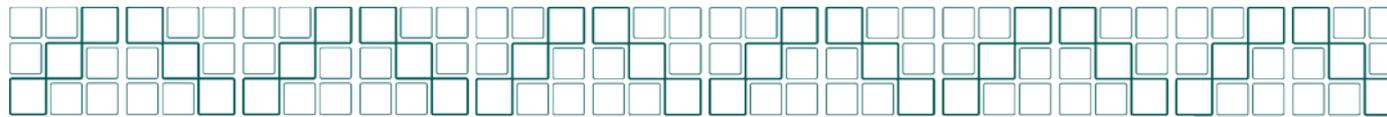
How to prepare yourself:

- Goal Setting
- Planning, scheduling, and prioritizing
- Organizing
- Creative problem solving
- To-do list



Transferrable Skills

- Research skills
- Analytical and organizational skills
- Attention to details
- Enthusiasm, passion and a genuine interest in science
- The initiative to meet researchers and ask questions
- The drive to answer questions and solve problems



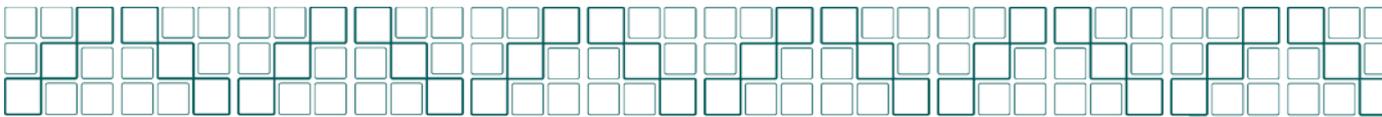
Average Salaries in Rockville, MD (data from Simply Hired)

Technology Transfer

- Associate: \$76,000
- Assistant: \$79,000
- Specialist: \$87,000
- Manager: \$92,000
- Director: \$98,000

Licensing

- Assistant: \$54,000
- Specialist: \$59,000
- Associate: \$65,000
- Manager: \$66,000
- Director: \$78,000



How to Get There

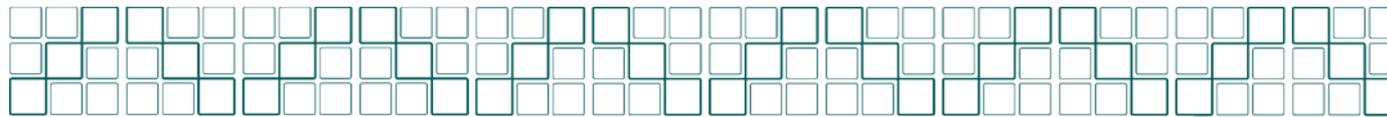
- Fellows/Interns (NIH/OTT, NCI, NIDDK, NIAID, NHLBI)

- Patent Examiners (USPTO)

- Community Service
 - NCI Center for Cancer Research
Fellows & Young Investigators (CCR-FYI)
 - Small Business Innovation Research (SBIR)

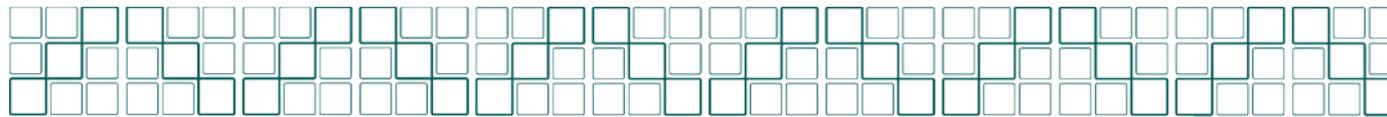
- Patent agents/attorneys (patent law firms)

- Training
 - Technology Transfer courses/certificate (FAES)
 - Intellectual Property classes/programs
 - Meetings (AUTM, LES)
 - Others: JD, MBA



Professional Societies

- Association of University Technology Managers (AUTM, <http://www.autm.net>)
- Licensing Executive Society (LES, <http://www.lesi.org>)
- Alliance of Technology Transfer Professionals (ATTP, <http://www.attp.info/>)
- Association of European Science and Technology Transfer Professionals (ASTP, <http://www.astp.net/>)
- Technology Transfer Society (<http://www.t2society.org>)



Sources of Trainings

- NIH FAES Graduate School Technology Transfer courses
- Federal Laboratory Consortium (FLC)
Technology Transfer Training

Fellowships/Internships

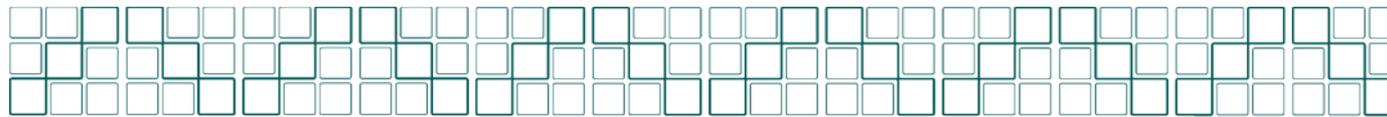
- NIH Office of Technology Transfer Internships
- NCI Technology Transfer Center Fellowships
- Fellowships/Internships in the NIDDK, NIAID, NHLBI, etc.

Take advantage of every training opportunity you get!

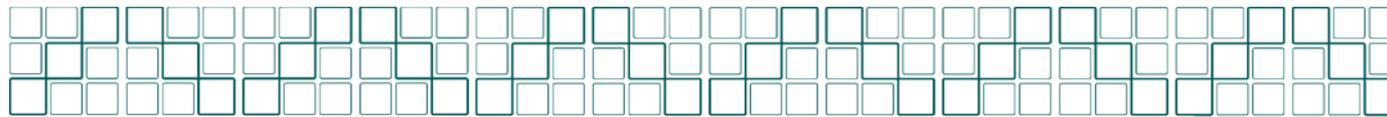


Resources/References

- NIH Office of Technology Transfer
 - (<http://www.ott.nih.gov/>)
- FAES Graduate School (<http://www.faes.org>)
 - TECH 513 Introduction to Technology Transfer
 - TECH 579 Negotiation Workshop
- United States Patent and Trademark Office (USPTO)
 - (<http://www.uspto.gov>)
- Association of University Technology Managers (AUTM)
 - (<http://www.autm.net>)
- Licensing Executive Society (LES)
 - (<http://www.lesi.org>)



Questions??



NIH Office of Technology Transfer (OTT)

- Develops technology transfer policies for NIH
- Evaluates, protects, markets, licenses, monitors and manages NIH and FDA discoveries, inventions and other intellectual property
 - Oversees patent prosecution
 - Negotiates and monitors licensing agreements