Innovation and Technology Transfer

Prof. Ilan Chet
ac*a*dem*ic (ak’e-dem’ik) adj.

a. Theoretical or speculative without practical purpose or intention.

b. Having no practical meaning or usefulness.

(Webster’s University Dictionary)
Interdisciplinary Science
Academia-Industry Relationship

University

Public Grants

Idea

Research

Publications

Contracts

Royalties

Patents

Industry

Research Strategy

R&D Chief Scientist

Product
Bridging the Gap
Innovation

• We cannot teach innovation

• We need to nurture the right atmosphere for innovation

• We need to give incentives to researchers
Examples of innovations in Agriculture
The Tal-Ya Tray: A simple, scalable solution to some of the world’s biggest problems
Effects

2 lemon trees planted simultaneously, after 3 years of identical care. Tree on left uses Tal-Ya Tray, tree on right does not (with drip irrigation)
The future belongs to those who believe in the beauty of their dreams.

(Eleanor Roosevelt)
Technology Transfer

• Universities in Israel own transfer technology companies who deal with their inventions.
• In order to successfully bring these findings to the marketplace, the company protects the University inventions and licenses them out through its professional team.
Typical departments in Technology transfer companies

- Intellectual Property Department
- Legal Department
- Business Development Department
- Finance Department
## Activity at Harvard University

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invention disclosures</td>
<td>301</td>
</tr>
<tr>
<td>New Patents application filed</td>
<td>133</td>
</tr>
<tr>
<td>US Patents issued</td>
<td>38</td>
</tr>
<tr>
<td>Licenses</td>
<td>37</td>
</tr>
<tr>
<td>Start-up companies</td>
<td>7</td>
</tr>
</tbody>
</table>
# Patent revenues in Universities

<table>
<thead>
<tr>
<th>University</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weizmann Institute</td>
<td>$150M</td>
</tr>
<tr>
<td>MIT</td>
<td>$76M</td>
</tr>
<tr>
<td>Standford University</td>
<td>$62M</td>
</tr>
<tr>
<td>California University</td>
<td>$57M</td>
</tr>
<tr>
<td>Hebrew University</td>
<td>$50M</td>
</tr>
</tbody>
</table>
The Patents

1. The researcher is always the inventor registered on the Patent.

2. The University always owns the Patent.

3. The University doesn’t sell the Patent but gives an exclusive license to a company, investor, venture capitalist, etc.
IP income divided between the University and the researcher

Royalties:
60% to the University 40% to the researcher

Stocks:
60% to the University 40% to the researcher
Anticipated Time for Research Application

- Not Forseen
- 7-10 Years
- 5-7 Years
- 2-4 Years
- 1-2 Years
- Already Applied

Time for Application (years)
Marketing: Facts vs. Fiction

1. Non-aggressive marketing
2. Distance difficulties
3. Difficulty in making good contracts
4. Exploitation by companies (in signing and execution of contracts)
5. Weakness in litigation
Compensation/Rewards to the Scientist

1. "Consultation Bonus" added to salary
2. Registration as patent inventor
3. Occasionally – scientific recognition
4. Royalties from product or development
5. Stocks in company
6. Future expectations
7. SATISFACTION and PLEASURE
The Five Stages of a Project

1. Excitement and Euphoria
2. Disenchantment
3. Search for the Guilty
4. Punishment of the Innocent
5. Distinction for the Uninvolved
Thank you!