

New Technology Transfer Paradigms

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University-Industry research relationships have become increasingly important for both universities and industries.

University-Industry research relationships have assumed various forms:

- **Industry initiated**
 - **Direct grants to specific scientists or schools**
 - **Direct contracts with specific scientists**
 - **Corporate consortia and industrial groups that sponsor research of general interest**
 - **Consulting relationships**

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Forms of University-Industry Research Relationships (con't.)

- **University initiated**
 - **Industrial liaison programs**
 - **Patent management offices**
 - **Development of for-profit and non-profit corporations**
 - **Clinical trials offices**
 - **Consulting relationships**

Benefits to Universities of University-Industry Research Relationships

- Involve less red tape than federal funding
- Increase rate of applications from basic research
- *Provide resources not otherwise obtainable (direct and indirect funds)*
- Enhance career opportunities for students
- Enhance scholarly productivity
- *Produce patents that increase university revenues (though this is a low probability)*

Risks to Universities of University-Industry Research Relationships

- **Results in trade secrets**
- **Results become property of sponsor and can't be published without sponsor's consent**
- **Likelihood of commercial application affects research topics selected**
- **Faculty simultaneously hold equity in companies that sponsor their research**
- **Shift too much emphasis on applied research**

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Risks to Universities of University-Industry Research Relationships (con't.)

- **Create pressures for faculty to spend too much time on commercial activities**
- **Undermine intellectual exchange and cooperative activities within departments**
- **Creates delays in the publication of new findings**
- **Creates conflict between faculty who support and oppose such activities**

Critical Questions for Universities

Do University-Industry Research Relationships . . .

- **Affect scholarly productivity?**
- **Alter the commitment of faculty members to teaching and administrative duties?**
- **Encourage secrecy among scientists?**
- **Disrupt relationships among colleagues?**
- **Lead faculty to shift the direction of their research toward applied or commercially oriented projects?**

Benefits to Industry of University-Industry Research Relationships

- **Keep current with research**
- **Reduce in-house R&D costs**
- **Result in licenses**
- **Enhance firm's public image**
- **Provide staff development**
- **Offer recruiting source**
- **Increase firms investment image**
- **Provide tax benefits**

Risks to Industry of University-Industry Research Relationships

- Lack of payoff in marketable products
- *Loss of proprietary information*
- Too much effort to monitor and control
- Premature university withdrawal
- Adversely affect morale of company staff

Many Solutions to U-I Problems Have Been Developed

- Alter promotion-tenure rules for faculty, giving credit for patents/licenses, entrepreneurial activities
- Pass state laws that enable universities to take equity in companies
- Allow faculty to use laboratory space for company formation
- Allow assignment of Intellectual Property to companies resulting from sponsored research
- Link with business schools for use of students, formation of companies

One of the More Aggressive

- University of Nebraska Medical Center (UNMC) offers Nebraska-based businesses “free” access to intellectual property.
- Under the program, AdvanceNebraska, companies that want to develop UNMC’s intellectual property the licensing fee and patent cost is waived for 3-5 years.
- Companies have to stay in the state

What are the limits to the types of breaks Universities could give In-State Companies?

- Royalty free?
- Ownership of IP?
- Free consulting?
- Sabbatical leaves for faculty to start companies?

Virginia

- Has passed law allowing for assignment of state-sponsored intellectual property

New York

- Is in the formative stages of examining same options as Virginia--assignment of IP

Maine

- Considering a bill to mandate “favorable” pricing of IP

Oklahoma State University

- We CAN assign ownership of IP--it is negotiable, given certain conditions
- We allow faculty to use their laboratory space
- We are considering language to allow for patenting, licensing, entrepreneurship activities credit in tenure and promotion
- Allow for sabbatical leave for faculty to start companies

OSU, Cont'd

- Set up for-profit or non-profit companies to assist with commercialization, such as SBIR development
- We have various internal funding programs to assist early stage technology development (pre-angel)