Research Awards $403M

Sponsored Research Awards
system-wide excluding ARRA

FY06 $261
FY07 $301
FY08 $334
FY09 $332
FY10 $332
FY11 $396
FY12 $351
FY13 $319
FY14 $389
FY15 $401
FY16 $403

Millions
FY16 Awards System-wide: $403 million

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Source</th>
<th>Amount</th>
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<tr>
<td>4%</td>
<td>USDA</td>
<td>$16 M</td>
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<tr>
<td>7%</td>
<td>PRF/PU</td>
<td>$29 M</td>
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<tr>
<td>8%</td>
<td>DOE</td>
<td>$32 M</td>
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<tr>
<td>9%</td>
<td>Other Fed &amp; Foreign Govts.</td>
<td>$34 M</td>
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<tr>
<td>10%</td>
<td>State/Local Govts.</td>
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<tr>
<td>10%</td>
<td>DoD</td>
<td>$40 M</td>
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<tr>
<td>12%</td>
<td>DHHS (NIH)</td>
<td>$50 M</td>
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<tr>
<td>20%</td>
<td>NSF</td>
<td>$81 M</td>
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<tr>
<td>20%</td>
<td>Industrials &amp; Fdns.</td>
<td>$82 M</td>
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</table>
“New” Partnership Approach

**Strategic Partnership**
- Comprehensive Institutional-level engagement, long-term horizon, interconnected facets
- Joint strategic planning

**Partnership**
- Broader engagement, focus on mutual benefits

**Preferred Supply Chain**
- HR-driven relationships
- Primarily for recruiting, testing

**Niche Connections**
- Engagement to meet narrow clustered needs

**Open Season**
- Transactional, one-off interactions

Acknowledgement: P.J. Hommert, Sandia
**Purdue’s Research Ecosystem**

**Innovations & IP Portfolio**
- Purdue Research Park
- Office of Technology Commercialization
- Foundry
- Innovation District
- Aerospace District

**Talent**
- World Class Faculty & Staff
- Graduate and Undergraduate Students

**Experience**
- $1.2 Billion in Federal Research 5yrs - 2012-2016
- Flexible Contracting Models
- $600 Million in Annual Research Expenditures

**Connections**
- Strategic Partnerships
- Strategic Alliances
  - Government
  - Private Sector
  - NGOs
  - International
  - Alumni

**Facility Clearance**
- Classified Research

**Pre-Award Services**
- Research Development Support
- Budget Preparation
- Contracting Support
- Project Logistics
- PI Support

**Contracting Mechanisms**
- Contracts/Grants
- Cooperative Agreements
- ID/IQ – Task Orders
- CRADA/PIA
- OTAs
- IPAs

**Educational Programs**
- Master Agreements
- BOA
- WFO
- NDA
- MTA
- Facility Use Agreements

**Collaborations**
- Research Projects
- Faculty Sabbaticals
- Professionals in Residence
- Consulting
- On-line/Distance Education

**Access to Talent**
- Internships/Co-Ops
- Job Opportunities
- Fellowships

**Acknowledgement:** P.J. Hommert, Sandia
IP Policy – I.A.1 Updated 7/1/16

• Optimize the environment and incentives for research and scholarship, and for the creation of new knowledge at the University

• Facilitate contract administration and efficiency (especially among frequent users in both SPS and OTC)

• Enhance and protect the discovery, learning and engagement missions of the University;

• Recognize and protect the interests of the public; of individual creators of novel concepts, Inventions and materials; of the University; and of sponsors of research and scholarship;

• Bring the fruits of scholarship into practical use for the benefit of society as quickly and effectively as possible;

• Protect the traditional freedom of its faculty and staff to publish pedagogical, scholarly or artistic works.

• Reflect substantive rule changes and principles (including, for example, Trustee-approved policy exceptions that had not been incorporated into the four corners of the document, and changes in legal doctrines that had arisen in seminal cases such as the 2011 U.S. Supreme Court case of Stanford v. Roche).
What is Intellectual Property?

- The following types of property are recognized as IP under applicable law:
  - An Invention and any associated patent application or patent
  - A Copyrightable Work and any associated copyright or copyright registration
  - A Trademark and any associated registration
  - Research Data
  - Tangible Research Property or other evidence produced in the course of research
  - A trade secret
- Intellectual Property that arises in any part in the course of employment or enrollment at the University, or in the course of a work-for-hire relationship or visiting scholar relationship with the University
What is Not Intellectual Property?

• The University permits **authors to retain and manage the copyright** to Instructional Copyrightable Works and Scholarly Copyrightable Works, subject to a license in favor of the University.

• The University permits a **student to retain title** to Intellectual Property that the student creates for (1) credit and (2) without compensation in a University course through the use of (3) course-wide resources, provided that the Intellectual Property is not burdened by any pre-existing contractual obligation of the University (all 3 must exist).

• Intellectual Property from **research directed and funded under a work-for-hire contract** administered by the University’s Sponsored Program Services is not Purdue Intellectual Property.

• Intellectual Property from research performed pursuant to a **University contract that expressly exempts the research** from the application of this policy is not Purdue Intellectual Property.

• Intellectual Property generated **solely in the course of an Outside Activity** without the use of University Resources or pre-existing Purdue Intellectual Property is not Purdue Intellectual Property.
Traditional Approach – IP and Publications

- Research IP made by one party belongs to that party (i.e., ownership follows inventorship under US Patent Law)
- Research IP made jointly by both parties belongs jointly to both parties
- Each party retains its rights in background IP
- Each inventor assigns IP to employer
- Sponsor may receive non-exclusive royalty-free license (“NERF”) for research purposes
- Sponsor gets first option to negotiate an exclusive, royalty-bearing license on “commercially reasonable” terms
- Options are typically time limited; university seeks to find licensee to develop or commercialize and pay patent expenses
- Researchers free to publish research results – researcher must have unfettered publication rights. Copy of publication provided to Sponsor
- Sponsor given time to review & comment on publication
- Sponsor may request limited delay for filing patent application
Current Trends – Sponsor Demands/Impact

Demand

• Sponsors no longer satisfied with a “traditional” approaches
• Requesting/insisting that agreements include CNERF
• NERFs and CNERFs do not generate licensing revenues to university or ensure commercialization of IP
• Sponsors are asking for specific license terms or pre-negotiate the license agreement or assignment

Impact

• Research no longer qualifies as “basic research” and may instead be considered a “private business use”
• May jeopardize university’s tax-exempt status & cause university to violate tax-exempt bond commitments if not managed
• Non-exclusive licenses may impair commercialization of IP because university cannot grant an exclusive license to any third party
• Certain rights may limit the PI’s ability to do follow-on projects
Novel Approach

• Some universities are offering Sponsors additional and less restrictive IP rights to encourage high levels of privately-sponsored research funding
• These novel approaches are generally not available for any projects that receive funding from federal grants
• Leaders in novel approaches
  o University of Minnesota
  o University of Arizona
  o Penn State
  o Georgia Tech
  o Iowa State University
  o University of Oregon
  o University of Michigan
  o Purdue University
Purdue’s Novel Approach

• **Model 1:** Basic Fundamental Research offers no assignment rights; Sponsor receives NERF with option to negotiate a royalty-bearing license
• **Model 2:** Expanding Technologies Model offers no assignment rights; Sponsor receives a five-year, royalty-free license for an upfront IP fee
  – protects faculty’s publication rights
• **Model 3:** Work-for-Hire/Industry-Focused Applied Research: Sponsor will own new IP outright once the upfront IP fee is paid
  – protects faculty’s publication rights
• **Model 4:** Testing Services does not contemplate new IP being created; Sponsor owns data created. No Purdue BIP is included. Sponsor controls publications
• **Model 5:** Industry Sponsored Student Class Projects
  – Starting point Purdue’s intellectual property policy generally allows students to retain ownership of intellectual property created in their courses, the University does not interfere with a sponsor’s ability to negotiate directly with the student regarding intellectual property rights once the course has been completed
  – Consider - assigning or licensing IP rights to the Sponsor, but allows students to opt out of these projects to pursue projects that do not force them to give up IP rights
Basic Research (model 1)
Sponsor receives non-exclusive royalty-free license (non-commercial)
IP Fee – none
F&A – Federally Negotiated Rate – 55%

Expanding Technologies (model 2)
Sponsor receives exclusive license for 5 years
IP Fee - Minimum of 10% or $5,000
F&A - Uncapped Rate - 64.75%

Work-for-Hire (model 3)
IP Assignment to Sponsor
IP Fee - Minimum of 25% and $10,000
F&A -Uncapped Rate - 64.75%
Commercialization – Procedures

• Supporting Organization evaluates whether to invest in commercialization of the Purdue Intellectual Property

• Supporting Organization reports the investment decision to the disclosing researchers within 180 days of receipt of the disclosure.

• If the Supporting Organization determines to invest, it is authorized and responsible to:
  o License the Purdue Intellectual Property for commercialization.
  o Recover legal fees and any other out-of-pocket expenses incurred by the University or the Supporting Organization
  o Administer Net Proceeds as directed by the EVPRP

• If the Supporting Organization determines not to invest .....will make a recommendation to the EVPRP regarding an appropriate disposition of the disclosed Purdue Intellectual Property.
Assignment – Procedures

• All employees and students are required to adhere to the IP policy and its supporting Procedures on Disclosure, Assignment and Commercialization of Intellectual Property.
  ○ Addressed in offer letter language

• Individuals who create Purdue Intellectual Property must periodically (including prior to departing the University for sabbatical, leave of absence, termination of employment, or graduation) execute a general assignment of title in favor of the University for all Purdue Intellectual Property.
Net IP Fee Distribution – Procedures

- The University will in its discretion distribute Net Proceeds* on an equitable basis:
  - 1/3rd to the department or administrative unit(s) from which the underlying Purdue Contract originated, with due consideration of appropriate requests for sub-allocations to particular centers and research units.
  - 1/3rd to the Trask Fund to support its research and development programs.
  - 1/3rd to the Principal Investigator(s)

*25% of the fee retained to covers costs of processing contracts with special IP terms and conditions
Intellectual Property

Roles and Responsibilities
Purdue Faculty and Staff

- Familiarize themselves with the definitions and requirements of the IP policy
- Disclose Purdue Intellectual Property in accordance with the policy’s supporting procedures
- Comply with instructions regarding custody and protection of Purdue Intellectual Property
- Execute a general assignment of title for Purdue Intellectual Property in accordance with the policy’s supporting procedures
Office of Technology Commercialization

The Purdue Research Foundation's Office of Technology Commercialization (OTC) helps inventors on the path from discovery to delivery.

• OTC operates a technology transfer program
• OTC works with Purdue faculty and researchers
• OTC assists Purdue inventors in creating successful new companies - turn their ideas into reality
• OTC supports the Supporting Organizations that receive IP assigned from Purdue faculty and staff
  ○ Purdue Research Foundation (incorporated in Indiana),
  ○ Boilermaker Health Innovations, Inc. (incorporated in Delaware)
  ○ Purdue International, Inc. (incorporated in Indiana).
**Senior IP and Campus IP Officer**

- Assist in the interpretation of the policy
- Assist University researchers and Supporting Organizations in compliance and implementation of the policy
- Direct disclosures of Purdue Intellectual Property and oversee applicable custodial arrangements
- Recommend appropriate disposition of Purdue Intellectual Property in which a Supporting Organization determines not to invest

<table>
<thead>
<tr>
<th>Subject</th>
<th>Contact</th>
<th>Telephone</th>
<th>Email/Web Address</th>
</tr>
</thead>
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<tr>
<td>Policy Clarification</td>
<td>Senior IP Officer Ken Sandel</td>
<td>765-494-1063</td>
<td><a href="www.purdue.edu/business/sps/general/allspstaff.html">www.purdue.edu/business/sps/general/allspstaff.html</a></td>
</tr>
<tr>
<td>Fort Wayne: Campus IP Officer</td>
<td>Director of Engagement Sean Ryan</td>
<td>260-481-0286</td>
<td><a href="www.ipfw.edu/offices/engagement/about.html">www.ipfw.edu/offices/engagement/about.html</a></td>
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<td>Northwest: Campus IP Officer</td>
<td>Dean, College of Technology and Executive Director of Commercialization and Manufacturing Excellence Center Niaz Latif</td>
<td>219-989-3251</td>
<td><a href="centers.pnw.edu/cmec/contact-information/">centers.pnw.edu/cmec/contact-information/</a></td>
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<tr>
<td>West Lafayette: Senior IP Officer</td>
<td>Senior Director, Sponsored Program Services Ken Sandel</td>
<td>765-494-1063</td>
<td><a href="www.purdue.edu/business/sps/general/allspstaff">www.purdue.edu/business/sps/general/allspstaff</a></td>
</tr>
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Executive Vice President for Research and Partnership

- Provide oversight for the Senior IP Officer’s direction of disclosures of Purdue Intellectual Property
- Make a determination on the disposition of Purdue Intellectual Property in which a Supporting Organization determines not to invest
- Determine the distribution of Net Proceeds
- Convene an advisory committee as needed to address concerns arising from this policy or its supporting procedures
Intellectual Property

Current Landscape
Current Lifecycle Model

Business Development

Current - IP Decisions

SPS Pre-Award

Funding

SPS Contracting → SPS Post Award (PI Education, Multi-Issue Management)

Past - IP Decisions

Discovery

Commercialization

Past - IP Decisions

OTC

Rainmakers

• Faculty
• Suresh Garimella
• OCCGP
• Tomas Diaz de la Rubia
• Tom Verhoeven
• Dan Delaurentis
• Dan Hasler
• Deans/Associate Deans for Research
• Many Others

“The Queue”

• Strategic Alliances/Partnerships
  o Comprehensive
  o Enduring
  o Physical Presence

• Master Agreements

• Basic Research
• Testing
• Work-for-Hire/Expanding Technologies
• Contracts involving $ coming into Purdue
Strategic Partnership Stewardship Model

**Business Development**
- **Rainmakers**
  - Academic Leads
  - OCCGP
  - Rainmakers
  - Others

**Strategic Contracting Team**
- **Deal Team**
  - Deal Team Lead
  - Academic Lead
  - Legal Counsel
  - Secondary
  - Alliance Managing Director
  - Pre-Award Specialist
  - Post Award Specialist

**Alliance Team**
- **Primary**
  - Principal Investigator
  - Alliance Managing Director
  - Pre-Award Specialist
  - Post Award Specialist
  - Contract Analyst
- **Secondary**
  - Deal Team Lead
  - Academic Lead
  - Legal Counsel
Intellectual Property

Questions