Innovations & New Ventures at Northwestern
TODAY’S GOALS

1. Who are we & what do we do at Northwestern?
2. What does the invention disclosure process look like?
3. What should research administrators know about INVO?
4. How can you learn more about what we do at INVO?
To catalyze the translation of Northwestern innovations to benefit the public

- Become a source of impactful innovations and products that improve lives
- Become a magnet for entrepreneurial talent
Our Activities

Technology Transfer
- IP Support (*Consultation, Filing, Office Actions, etc.*)
- Technology Evaluations
- Marketing Efforts

Innovation & Entrepreneurship Programming
- Workshops
- Seminars
- Mentoring
- Internships
- Coordination with Classes, etc.

Space
- The Garage
- Faculty Hub
- University Memberships (*mHub, 1871 & MATTER*)

Funds
- N.XT Fund ($10M)
- NuSeeds Fund ($4M)
Areas of Innovation

- computer science
- life sciences
- nanotechnology
- engineering
- advanced materials
- therapeutics
- research tools
- physical sciences
- manufacturing
- biotechnology
- medical devices
- chemistry
- electronics
Technology transfer activities focus on moving technology from the University to the public domain

BAYH-DOLE ACT of 1980
Change in IP Ownership

BAYH-DOLE ACT

NEW PRODUCTS
Impact of Bayh-Dole on IP*

**PRE-BAYH-DOLE**
- <250 issued patents/year
- 30k university patents
- 5% led to new products

**POST-BAYH-DOLE**
- 5-6k issued patents/year ('12-'14)
- 80k university patents ('94-'14)
- 10-15% new products ('12-'14)

**Significant Economic Impact of Bayh-Dole Act**
- 5000 startup companies
- >$500B GDP increase
- 3.8M US jobs

*AUTM US Licensing Activity Survey Highlights 2012-2014
<table>
<thead>
<tr>
<th>Description</th>
<th>FY16 Stats</th>
</tr>
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<tbody>
<tr>
<td>Disclosures</td>
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<tr>
<td>Licensing Revenues</td>
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<td>Agreements</td>
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<td>Equity Sales</td>
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<td>Startups</td>
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<tr>
<td>Research Funds</td>
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<tr>
<td>Issued Patents</td>
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An **INVENTION DISCLOSURE** is Northwestern’s record of an invention, the inventors involved, sponsorships, & other public disclosures and publications.

Inventors should plan to submit their invention disclosure **3-4 weeks prior** to a public disclosure

- Posters/abstracts/proceedings
- Journal articles, book chapters
- Conference presentations
- Some departmental seminars & thesis defenses
- Some grant proposals

**DISCLOSING AN INVENTION TO INVO DOES NOT PROTECT AN INVENTION. A PATENT APPLICATION MUST BE SUBMITTED TO THE USPTO**
Reasons to Disclose to INVO

1. **PROTECT COMMERCIAL POTENTIAL**
   INVO can provide feedback on how to proceed in the commercialization process.

2. **PROTECT INTELLECTUAL PROPERTY**
   If IP protection is appropriate, INVO can maximize IP protection if invention is disclosed in advance of public disclosure.

3. **FULFILL NU’S RESPONSIBILITY TO REPORT TO RESEARCH SPONSORS**
   INVO must report all inventions to respective public and private research sponsors.

4. **IMPROVE MARKETING WITH INDUSTRY PARTNERS**
   INVO can help provide industry with insight into available technologies and the research that is taking place at the university.
Forms

Disclosure Forms

- Invention
- Copyright - includes but not limited to literary and artistic works
- Software - includes but not limited to source code
- Research Tool
### INVENTION DISCLOSURE FORM

Please COMPLETE, SIGN and SEND with any relevant attachments by EMAIL to:

invectionDisclosure@northwestern.edu

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**INVENTION TITLE**

**INVENTOR(S)**
* Please place an asterisk (*) by principal investigator's name.
* List all inventors, male and female, who are affiliated with Northwestern and were involved in the invention or issuing patent.

<table>
<thead>
<tr>
<th>NAME (first, middle, initial, last)</th>
<th>NU SCHOOL or Joint Identification</th>
<th>DEPT. OF APPOINTMENT (if Division of Medicine)</th>
<th>POSITION</th>
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**SOURCES OF SUPPORT, RESEARCH SPONSORS AND GRANT NUMBERS**
* All funding sources and grant numbers must be listed. If applicable, please include all support information corresponding to the funding listed. Base list all major funding sources and grant numbers, including:

<table>
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<tr>
<th>SOURCE OF FUNDS</th>
<th>AGENCY OR ENTITY PROVIDING SPONSORSHIP</th>
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**SUBLICENSEE INFORMATION**
* Provide only if Northwestern has sublicensted under another party; otherwise, indicate "NONE."

<table>
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<tr>
<th>Prime Contractor Name, City and State</th>
<th>Prime Contractor Number</th>
<th>Subcontractor Grant Number</th>
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### Definition of Inventorship vs Authorship*

Inventorship typically refers to the legal ownership of an invention, while authorship refers to the credit given for creating a work, such as a publication or patent. Inventorship often involves the application for patent and is usually governed by the terms of the employment agreement or the nature of the work. Authorship, on the other hand, is often associated with the contribution to a creative or intellectual work and is typically based on the role and contribution of the individual in the creation of the work.
Describe the invention in a less technical manner.
What is the relevance to the public?

Describe the invention in a more technical manner.
This helps our team and outside counsel to understand how this invention is distinct from other inventions.
- Note work that is similar and differentiate. Better to disclose information upfront.
Provide COMPLETE contact information.*

- Name should be a LEGAL name—what’s on a passport and legal documents.
- For patent filing, we need to include the country of citizenship.
- Please inform us of any address changes for future correspondences & royalty checks.
- Electronic signature is acceptable.

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What commercially available products (if any) address the same problem, at least in part (list company and product)

Value of the invention (in a few sentences, explain how the invention will have strategic and/or tactical value, whether in economic or non-economic terms)

Would you like to develop this invention further with corporate research support?  ☐ YES  ☐ NO

Would you be interested in participating in campus-based programs for commercialization research or business planning for your invention?  ☐ YES  ☐ NO

Is there a primary inventor contact?  ☐ YES  ☐ NO

If so, then who is it?

MATERIALS ASSOCIATED WITH INVENTION

Did this invention use any materials which were obtained with a Materials Transfer Agreement from a company or another institution?  ☐ YES  ☐ NO

If yes, please list the name of the company or institution

Did you transfer to any researcher outside Northwestern any new Materials (DNA, pedigrees, cell lines, vectors, catalysts, polymers, alloys, etc.) of this invention?  ☐ YES  ☐ NO

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This disclosure is submitted pursuant to the Northwestern University Patent and Invention Policy and is subject to all the terms of that Policy.
http://invo.northwestern.edu/policies/patent-invention-policy

If this invention is accepted by the Innovation and New Ventures Office at Northwestern University, INVO hereby agree to execute all necessary documents, assigning to Northwestern our rights in any patent application filed on this invention.

INVENTOR 1

* A digital signature (e.g., John Doe, .doc) or a handwritten signature can be included in this Signature Box (below) and can be scanned and stored as a PDF.
* By signing this box, you understand and agree that INVO can use the primary address you provide to the Office of Sponsored Research. This information is used to route necessary payments if applicable.

NAME (as it will appear on any patents)  [last, first; indicate middle, ( Optional)]

UNIVERSITY PHONE

CELL PHONE

HOME ADDRESS

CITIZENSHIP  [employee ID]

SIGNATURE
Life of a Patented Technology

1. Disclosure Submission - 30 days
2. Invention Assessment - 1 year
3. Provisional Patent App - 3-5 years
4. Utility Patent App - 3-5 years
5. International Patent App - 3-5 years
6. US Issued Patent
7. Foreign Issued Patent

Prior Art Analysis
- Enabled application?
- Identifiable market?
- Non-problematic FTO?

Licensee on horizon?
Licensee willingness to pay?
Complete the disclosure as thoroughly as possible

Be available to meet with IM to discuss your technology.

Respond to IM as quickly as possible as they may have time-sensitive questions.

Send relevant updates to IM, such as future public disclosures or technology development.
1. **Explore Additional Sponsored Research Opportunities**
   INVO coordinates with other offices to review IP stipulations. Ideally, several weeks are needed to review these agreements.

2. **License Technology to Existing Company**
   INVO helps identify and negotiate license agreements. If there’s interest, IMs contact faculty to discuss.

3. **Create University Startup**
   INVO has Startup Guide online.
<table>
<thead>
<tr>
<th>Funding Category</th>
<th>Amount</th>
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<tr>
<td>SBIR/STTR Funded Active Startups (2006-2016)</td>
<td>$56M+</td>
</tr>
<tr>
<td>VC-Backed Startups</td>
<td>$306M+</td>
</tr>
<tr>
<td>Acquired Startups</td>
<td>$2.72B+</td>
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Recent Issues for Discussion

Pre-Award
- Commercialization Plan or IP Provisions – Reach out to INVO/Invention Manager early

Disclosures – Key items
- Employee ID to identify personnel @ NU – our system is linked to myHR
- Funding accuracy
  - Corrections result in costly fees to NU – each one can be hundreds of $
  - When possible, include grant Project Award Summary as an attachment to disclosure

Agency Requests
- If you are ever asked from an agency about reporting, please reach out to INVO early
- iEdison Reporting – INVO takes care of this; Please reach out to INVO/Invention Manager if asked by agency
- Foundation/Private funding compliance – INVO takes care of this; Please reach out to INVO if asked by agency
Ways to Learn More about INVO

WEBSITE: Visit www.invo.northwestern.edu

INVO NEWSLETTER: Sign up on our home page

SOCIAL MEDIA: Follow us on Twitter (@INVOatNU)

STUDENT OPPORTUNITIES: INVO Practicum Interns and N.XT Associates
THANK YOU

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sonia.kim@northwestern.edu

Andrea Minogue
a-minogue@northwestern.edu