Northwestern | INVO
Innovation and New Ventures Office

Sonia Kim, PhD
Managing Director
Marketing & Educational Programs

Nicole Janovick, PhD, JD
Invention Manager
TODAY’S GOALS

1. Who are we & what do we do at Northwestern?
2. How do faculty, post-docs, students, and staff engage with INVO?
3. What does the disclosure process look like? What should you know as someone who might support a potential inventor?
4. How can you learn more about what we do at INVO?
WHO ARE WE?

WHAT DO WE DO AT NORTHWESTERN?
INVO is the Innovation and New Ventures Office.

We are focused on activities that move technologies from the University to the public domain such as patent protection, licensing, and funding.
INVO Staff

INVENTION MANAGEMENT TEAM

Alicia Löffler, PhD
Executive Director

Vara Prasad Josyula, PhD
Chemistry, Therapeutics

Zach Brown, PhD
Chemistry, Materials, BME

Arjan Quist, PhD
Physical Sciences, Engineering

David Tiemeier, PhD
Senior Director

Becky Crump, PhD
Associate Director

Michael Moore, PhD
Life Sciences

Dimitra Georganopoulou, PhD
Life Sciences, Medical Devices

Gwendolyn Humphreys, PhD
Life Sciences, Research Tools

Nicole Janovick, JD, PhD
Life Sciences, Creative Works

Liuchun Yang, JD, PhD
Nanotechnology

Sarah Kamper, PhD
Chemistry

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Innovation and New Ventures Office
INVO Staff

NEW VENTURES TEAM

Alicia Löffler, PhD
Executive Director

Nick Mauill, JD
Venture Funds

Jeff Coney, MBA
Startup Formation & Post License Management

Lester Greenman, JD
Policy, Copyrights, Computer Science

MARKETING

Sonia Kim, PhD
Managing Director, Marketing & Commercialization Education

Northwestern INVO
Innovation and New Ventures Office
Tech transfer activities focus on moving technology from the University to the public domain

Why do we do this?

BAYH-DOLE ACT of 1980
# Impact of Bayh-Dole*

<table>
<thead>
<tr>
<th>PRE-BAYH-DOLE</th>
<th>POST-BAYH-DOLE</th>
<th>2014 STATS</th>
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<tbody>
<tr>
<td>&lt;250 issued patent/year</td>
<td>5-6k issued patents/year ('12-'14)</td>
<td>6363 issued patents</td>
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<td>30k university patents</td>
<td>80k issued patents ('94-'14)</td>
<td>965 new commercial products</td>
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<td>5% led to new products</td>
<td>10-15% new products ('12-'14)</td>
<td>$28B net product sales</td>
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Innovation and New Ventures Office

*AUTM US Licensing Activity Survey Highlights 2012-2014
Impact of Bayh-Dole*

**PRE-BAYH-DOLE**

- <250 issued patent/year
- 30k university patents
- 5% led to new products

**POST-BAYH-DOLE**

- 5000 startup companies
- >$500B GDP increase
- 3.8M US jobs

*AUTM US Licensing Activity Survey Highlights 2012-2014
FY15 INVO Activities

- Invention Assessment: 211 disclosures
- Intellectual Property Prosecution: 417 patents filed
- Compliance & OSR Support: $594M research awards
- Technology Marketing: 692 available inventions
- License Negotiations: 121 agreements
- Translational Funding: $10M N.XT
- Commercialization Programs: 12 startups

Northwestern INVO
Innovation and New Ventures Office
HOW DO FACULTY, POST-DOCS, STUDENTS AND OTHER NU STAFF ENGAGE WITH INVO?
Faculty Involvement

Invention Disclosure

Pre-Disclosure
Communication with INVO
Student & Post-Doc Involvement

Pre-Disclosure
Communication with INVO
NU Staff Involvement

- Invention Disclosure
- Invention Assessment
- Intellectual Property Prosecution
- Sponsored Research Compliance
- Technology Marketing
- License Negotiations
- Translational Funding
- Commercialization Programs

Pre-Disclosure Communication with INVO
WHAT DOES THE DISCLOSURE PROCESS LOOK LIKE?

WHAT SHOULD YOU KNOW AS POTENTIAL INVENTORS?
Why disclose inventions to INVO?

1. EVALUATE 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 inventions to respective public and private research sponsors

4. IMPROVE MARKETING EFFORTS WITH INDUSTRY PARTNERS
   If INVO is aware of inventions, they can be properly recorded. This also helps with providing opportunities to industry

Northwestern INVO
Innovation and New Ventures Office
What is an INVENTION DISCLOSURE?

It is Northwestern’s record of an invention, the inventors involved, sponsorships, & other public disclosures and publications.

LIFE OF AN INVENTION

DISCLOSURE SUBMISSION ➔ INVENTION ASSESSMENT ➔ PROV PATENT APP*UTILITY PATENT APP* ➔ ISSUED PATENT*
What is a PUBLIC DISCLOSURE and why does it matter?

1.

2. Public Disclosures may jeopardize patent rights!

3.

4.
What is a PUBLIC DISCLOSURE?

1. PRINTED PUBLICATIONS (e.g. journal articles, book chapters)
   - Likely to be public disclosures
   - Posters/abstracts/proceedings
   - Oral disclosures such as conference presentations
   - Might be public disclosures...
     - Departmental seminars and thesis defense
     - Grant proposals

2. INVENTIONS USED BY PUBLIC (e.g. research materials and prototypes)
   - If materials are provided only for testing and/or evaluation or for research purposes under written agreement, this may not be a disclosure

3. INVENTIONS ON SALE

4. INVENTIONS AVAILABLE TO THE PUBLIC
PLAN TO SUBMIT YOUR DISCLOSURE 3-4 WEEKS PRIOR TO YOUR PUBLIC DISCLOSURE.

INVO encourages REGULAR DIALOGUE between faculty and respective Invention Managers

- Consider inviting us to a lab meeting where you will discuss research you’d like to disclose
- IMs can provide guidance regarding the timeline for disclosing and patent filing

WHEN IN DOUBT, CONTACT INVO.
Forms

Disclosure Forms

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

**NU #:**

**Date Received:**

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**INVENTION TITLE**

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**INVENTOR(S):**

- Please place an asterisk next to the principal investigator's name.
- List all inventors, inside and outside Northwestern, and where they were employed at the time of invention and invention.

<table>
<thead>
<tr>
<th>NAME (first, middle initial, last)</th>
<th>NU SCHOOL, or Joint Institution</th>
<th>DEPT. OF APPOINTMENT (w/ Division if Medical)</th>
<th>POSITION</th>
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**SOURCES OF SUPPORT, RESEARCH SPONSORS AND GRANT NUMBERS**

- All Funding Sources and Grant Numbers must be correct. If applicable, please include subcontract information corresponding to the funding. Please list all digits in funding sources and grant numbers, including zeros.
- **Definition of Primary Agency:** Federal, agency that provided the greatest contribution to this invention, as jointly determined by the grantees or sponsors organization.

<table>
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<tr>
<th>SOURCE OF FUNDS</th>
<th>AGENCY OR ENTITY PROVIDING SPONSORSHIP/FUNDS</th>
<th>TITLE - GRANT/AWARD</th>
<th>GRANT/AWARD NO.*</th>
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<tr>
<td>U.S. Federal Agency PRIMARY AGENCY**</td>
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<td>Corporate:</td>
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<td>Northwestern University Funds, Faculties:</td>
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<td>Other:</td>
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**SUBCONTRACTOR INFORMATION**

Provide only if Northwestern has subcontracted under another party. Otherwise, indicate "NONE."

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<tr>
<th>Prime Contractor Name, City and State:</th>
<th>Prime Grant Number:</th>
<th>Subcontract Grant Number:</th>
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</table>
- Describe your invention in a less technical manner.
- What is the relevance to the public?

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

- Name should be your LEGAL name—what’s on your passport and legal documents.
- For patent filing, we need to include the country where you have 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 this 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?

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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, peptides, 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://invr.northwestern.edu/policies/patent-invention-policy](http://invr.northwestern.edu/policies/patent-invention-policy)

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

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INVENTOR 1

* A digital signature (Example: John Brown) or ink pen signature can be inserted in the Signature Box below and the completed disclosure form can be scanned and submitted via email.

** By signing this form, you understand and agree that NUS can use the primary address you provide to the Office of Human Resources, Northwestern University in order to send you royalty payments if applicable.

NAME (as it will appear on any patents i.e. first, middle initial, last)

UNIVERSITY PHONE

CELL PHONE

HOME ADDRESS

CITIZENSHIP

*SIGNATURE

EMPLOYEE ID

(See the NU Wildcard)
Why does INVO need to evaluate disclosures?

- Not all inventions are eligible and/or ready for patenting.

ALL INVENTIONS MUST MEET THE LEGAL REQUIREMENTS FOR PATENTABILITY: NEW, USEFUL, AND NON-OBVIOUS
Why does INVO need to evaluate disclosures?

- Not all inventions may be ready or able to be commercialized.
- There may not be a market for the potential product.
- There may be significant regulatory hurdles associated with the invention.

**Cost of patenting:** US is $25,000–30,000; other countries is >$100,000

INVO’S DECISION NOT TO FILE DOES NOT REFLECT THE SCIENTIFIC MERIT OF THE INVENTION.
Common Evaluation Factors

**PATENTABILITY**

- Are there other papers or patent applications that describe inventions that may be similar to the disclosed invention?
- What potential claims can be pursued? Are they broad or narrow?
- Is there enough description or data collected to file the application?
- Are there others with patents in the space that may block use of a patent?

**COMMERCIAL POTENTIAL**

- Is there a market for the technology?
- What are the potential challenges of the market?
- Are there a lot of competitors? What are the benefits of this invention over others?
- What level of interest do those in industry or investors have?
- How close is the invention to a commercial product?
- How does this product fit with what is already available in the market?
Patent Timeline

Disclosure
Provisional Filing
Non-Provisional Filing and/or PCT Filing (International)
Office Action
Office Action
Allowance
Issued Patent

60 days* 1 year 3-10+ years*
Potential Destinies of Disclosures

- READY TO PATENT
  - ALL DISCLOSURES
    - RELEASED
    - WAITING FOR DATA
      - RELEASED
      - READY TO PATENT
Important Take-Homes

- Complete the disclosure as thoroughly as possible.
- Be available to meet with IM to discuss your technology.
- Respond to IMs as quickly as possible as they may have time-sensitive questions.
- Send relevant updates to IMs, such as future public disclosures or technology development.
HOW CAN YOU LEARN MORE ABOUT WHAT WE DO AT INVO?
Ways to Learn More about INVO

• VISIT OUR WEBSITE: www.invo.northwestern.edu
• INVO NEWSLETTER: Sign up on our home page
• SOCIAL MEDIA: Follow us on Twitter (@INVOatNU)
• INVO PRACTICUM: Graduate students and post-docs interested in IP landscape analysis and market analysis, exposure to marketing
• I2C SUMMER FELLOWSHIP: Graduate students interested in commercialization
• CD2 FELLOWSHIP: Engineers and Physicians interested in medical innovation
Sonia Kim, PhD
Managing Director, Marketing & Commercialization Education
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Invention Manager
nicole.janovick@northwestern.edu