


# 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 and to promote economic growth

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



**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)

Northwestern  
McCORMICK SCHOOL  
OF ENGINEERING

**M** Northwestern  
Medicine®

Northwestern  
WEINBERG COLLEGE  
OF ARTS & SCIENCES

Northwestern  
MEDILL

life sciences                      physical sciences

therapeutics                      engineering                      manufacturing

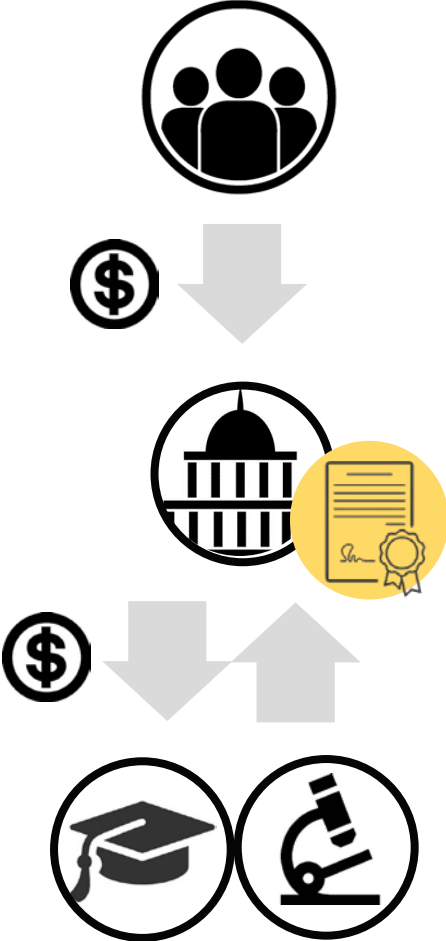
research tools                      advanced materials

nanotechnology                      biotechnology                      computer science

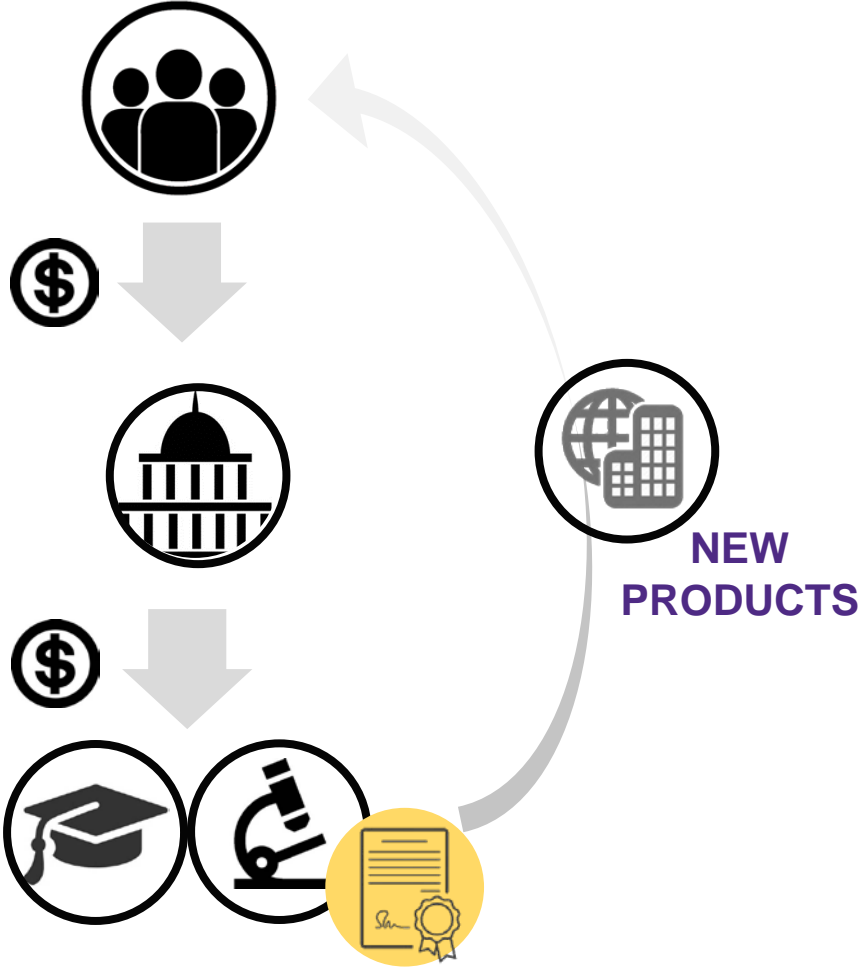
medical devices                      chemistry                      electronics

Technology transfer activities focus on moving technology from the University to the public domain

BAYH-DOLE ACT of 1980



## BAYH-DOLE ACT



PRE-BAYH-DOLE

<250 issued patent/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)

1980

2014

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



INVENTION MANAGEMENT TEAM



**Alicia Löffler, PhD**  
Executive Director



**Michael Moore, PhD**  
*Life Sciences*



**Vara Prasad Josyula, PhD**  
*Chemistry,  
Therapeutics*



**Nicole Janovick, JD, PhD**  
*Life Sciences,  
Copyright*



**Gwendolyn Humphreys, PhD**  
*Life Sciences,  
Research Tools*



**Danny Fisher, MBA**  
*Finance & Administration*



**Arjan Quist, PhD**  
*Physical Sciences,  
Engineering*



**Zach Brown, PhD**  
*Chemistry,  
Materials, BME*



**Sarah Kamper, PhD**  
*Chemistry*



**Lester Greenman, JD**  
*Policy, Copyright,  
Computer Science*



**Dimitra Georganopoulou, PhD**  
*Life Sciences,  
Medical Devices*

NEW VENTURES TEAM



**Lisa Dhar, PhD**  
*New Business Ventures  
for Engineering*



**Nick Maull, JD**  
*Venture Funds*



**Sonia Kim, PhD**  
*Marketing &  
Educational Programs*

**203**

DISCLOSURES

**15.7**

MILLION IN LICENSING REVENUES, DOLLARS

**169**

AGREEMENTS

**2.2**

MILLION IN EQUITY SALES, DOLLARS

**11**

STARTUPS

**3.2**

MILLION IN RESEARCH FUNDED BY STARTUPS

**488**

FILED PATENTS

**130**

ISSUED PATENTS

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**

## 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.



Northwestern

OFFICE FOR RESEARCH  
**INVO** Innovation and New Ventures Office

Search web and people

About ▾ The Process ▾ New Ventures Resources ▾ Technologies ▾ Educational Opportunities ▾ Contact

The Process

HOME > THE PROCESS

- Overview & Disclosure
- Policies
- Types of Agreements
- Forms**
- Videos

# 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

NU #: \_\_\_\_\_

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

Date Received: \_\_\_\_\_

[invodisclosure@northwestern.edu](mailto:invodisclosure@northwestern.edu)



Definition of Inventorship vs Authorship\*

INVENTION TITLE

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 investigation.		
NAME (first, middle initial, last)	NU SCHOOL or Joint Institution	DEPT. OF APPOINTMENT (w/ Division if Medical)	POSITION

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 listed. Please list all digits in funding sources and grant numbers, including zeros. ** Definition of Primary Agency: Federal agency that provided the greatest contribution to the invention, as initially determined by the grantee or contractor organization.		
SOURCE OF FUNDS	AGENCY OR ENTITY PROVIDING SPONSORSHIP/FUNDS	TITLE - GRANT/AWARD	GRANT/AWARD NO.*
U. S. Federal Agency PRIMARY AGENCY**			
U. S. Federal Agency			
U. S. Federal Agency			
U. S. Federal Agency			
Foundation:			
Corporate:			
Northwestern University Funds, Facilities:			
Other:			

Accuracy of Grant Information\*

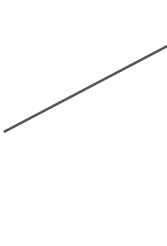
SUBCONTRACTOR INFORMATION	Provide only if Northwestern has subcontracted under another party; otherwise, indicate "NONE."		
Prime Contractor Name, City and State:	Prime Grant Number:	Subcontract Grant Number:	

- 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.

MARKETING ABSTRACT	
TECHNICAL FIELD (In a few words, what is the technical field or subject of the invention?)	
ABSTRACT (Write a short paragraph, in 200 words or less, describing the unmet need and a lay summary of the technology. Please use non-confidential language.)	
APPLICATIONS (Describe all potential applications of the technology in bullet points.)	<ul style="list-style-type: none"><li>•</li></ul>
ADVANTAGES (How does it improve upon existing technologies? What differentiates it from other solutions to the problem it addresses? Please write in bullet point format.)	<ul style="list-style-type: none"><li>•</li></ul>
KEY WORDS (Indicate any key words or phrases, preferably at least 3, that could be used to search for related art or identify this invention for use in a tracking database.)	
DESCRIPTION OF INVENTION	
Brief Summary of Technology (Also attach any relevant manuscripts and/or publications.)	
Technical Description (Also attach any relevant figures. Provide enough detail so that someone skilled in your field could replicate the invention.)	

- Note work that is similar and differentiate. Better to disclose information upfront.



PUBLIC DISCLOSURE		- Please list and attach relevant disclosures, both past and anticipated, and their dates below. If no disclosures have been made or are expected to be made, type "NONE" in respective fields.
	WHERE	DATE (MM/DD/YY or None)
Journal Article		
Conference Abstract		
Oral Presentation		
Poster Presentation		
Disclosure to Industry		
Grant Proposal		
Other		

DATE AND PLACE WHERE DISCOVERY WAS MADE	
When was the idea conceived?	
Where and how was it documented?	
Was the idea reduced to practice? If so, when?	

PRIOR ART	
List all known related patents and/or publications:	
List known researchers who are active in this field:	
How have others tried to solve the problem this invention overcomes?	

COMMERCIALIZATION	
What commercial problem does the invention solve? What is the unmet need?	
Who are potential licensees? (Please list companies with any known contacts or highlight relevant industries.)	



## Provide COMPLETE contact information.\*

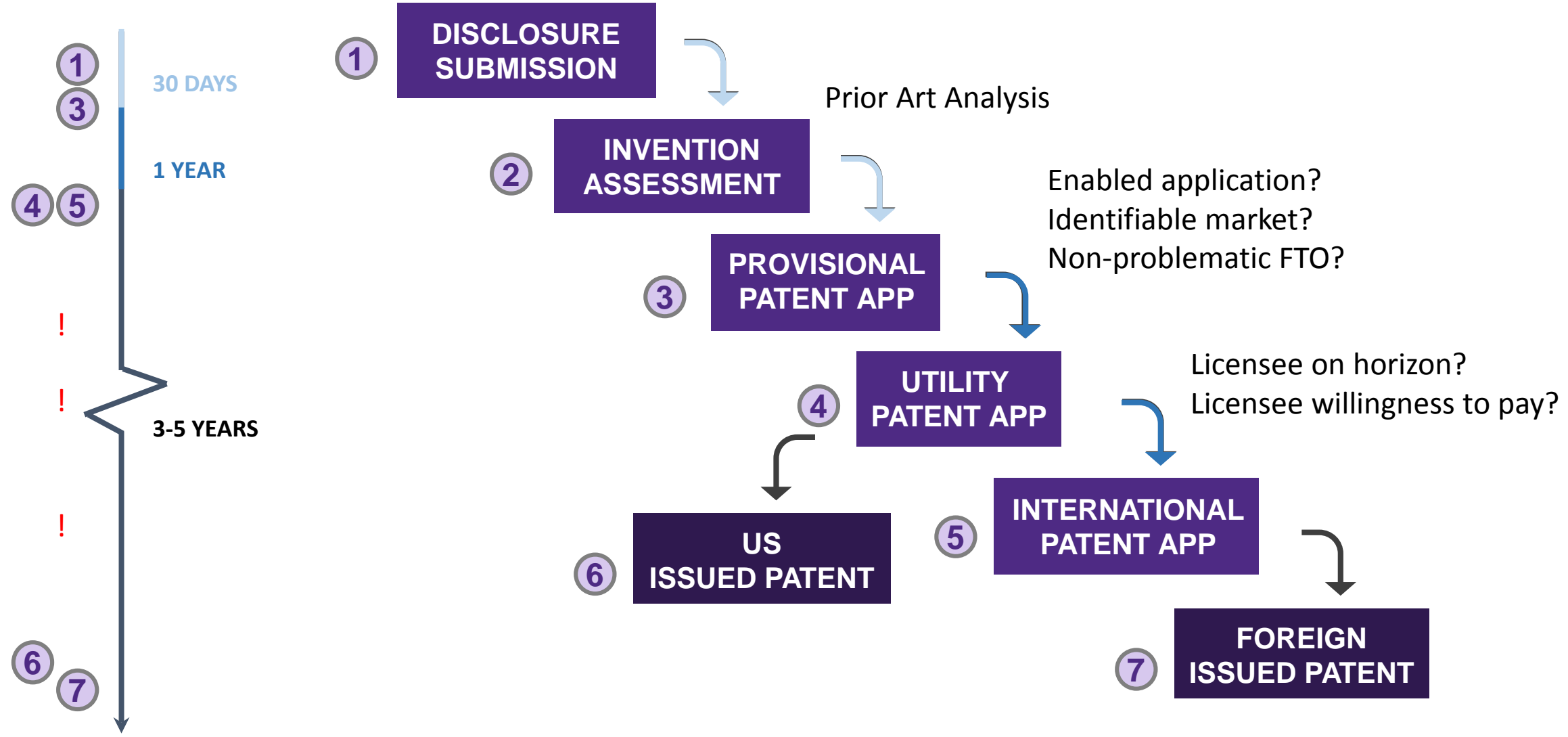
- Name should be a LEGAL name—what’s on a passport and legal documents.
- For patent filing, we need to include the country of citizenship.
- Please inform us of any address changes for future correspondences & royalty checks.
- Electronic signature is acceptable.

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Would you be interested in participating in campus-based programs for commercialization research or business planning for your invention?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Is there a primary inventor contact?	<input type="checkbox"/> YES <input type="checkbox"/> 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?	<input type="checkbox"/> YES <input type="checkbox"/> 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?	<input type="checkbox"/> YES <input type="checkbox"/> NO

**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, I/We hereby agree to execute all necessary documents, assigning to Northwestern our rights in any patent application filed on this invention.**

INVENTOR 1	
<small>* 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 INVO can use the primary address you provide to the Office of Human Resources, Northwestern University in order to send you royalty payments if applicable.</small>	
NAME (as it will appear on any patents i.e. first, middle initial, last)	
UNIVERSITY PHONE	EMAIL
CELL PHONE	
HOME ADDRESS	
CITIZENSHIP	EMPLOYEE ID (See the NU Wildcard)
*SIGNATURE:	





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.

**N 2. License Technology to Existing Company**

INVO helps identify and negotiate license agreements.  
If there's interest, IMs contact faculty to discuss.

**N 3. Create University Startup**

INVO has Startup Guide online.



Diagnostic Fingerprinting    **Big Data**    Gas Storage    Software Encryption

Nanomaterials    Tangible Haptics    Machine Learning    Electricity Storage

Personalized Medicine    **Robotics**    3D Imaging    Software Optimization

Geolocation    High Performance Alloys    Medical Devices    Microfluidics

Artificial Intelligence    Point of Care Diagnostics    Thin Film Transistors

Nanoparticles    Advanced Materials    **Wearables**    Surgical Devices

**Therapeutics**    Biomedical 3D Printing    3D Vision    Sound Engineering

Biotechnology    Nanofabrication    Cancer Diagnostics    Plastic Recycling



**\$56M+**

SBIR/STTR Funded Active Startups (2006-2016) 

**\$306M+**

VC-Backed Startups

**\$2.72B+**

Acquired Startups



### 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

**WEBSITE:** Visit [www.invo.northwestern.edu](http://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**