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# Protecting Intellectual Assets in Collaborations

**nanoCluster Alberta**  
**February 27, 2018**

# Overview

## **Protecting IP:**

- What is IP?
- Strategies for Protecting IP
- Role of IP in Commercializing Technology

## **Pitfalls to Avoid in Collaborations:**

- Disclosures
- Inventorship
- Ownership



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# What is Intellectual Property?

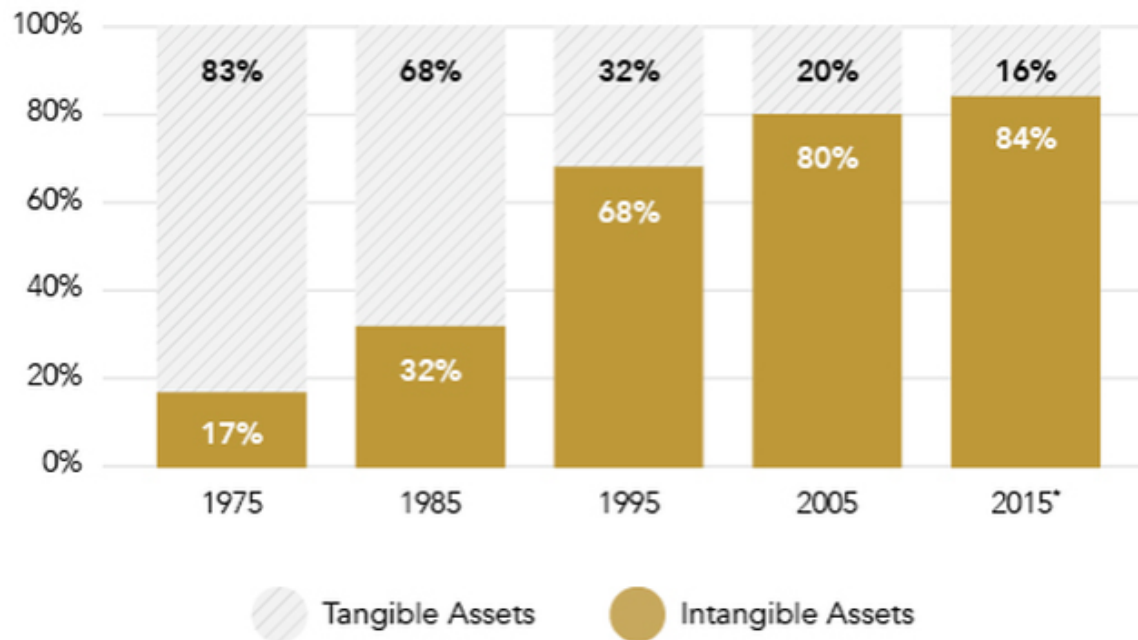
## Intangible Assets

“An intangible asset is an identifiable non-monetary asset without physical substance held for use in the production or supply of goods or services...”

International Accounting Standard Committee IAS 38,  
September 1998

# Intangible Assets – Increasing Importance

## COMPONENTS *of* S&P 500 MARKET VALUE



SOURCE: OCEAN TOMO, LLC  
\*JANUARY 1, 2015

# Intangible Assets

- **products**
- **processes**
- **methods**
- **compositions**
- **formulae**
- **databases**
- **software data**
- **compilations**
- **manuals**
- **drawings**
- **marks**
- **biological materials**
- **designs**
- **schemes**

# Protecting Innovation



**“Ideas won’t keep. Something must be done about them.”**

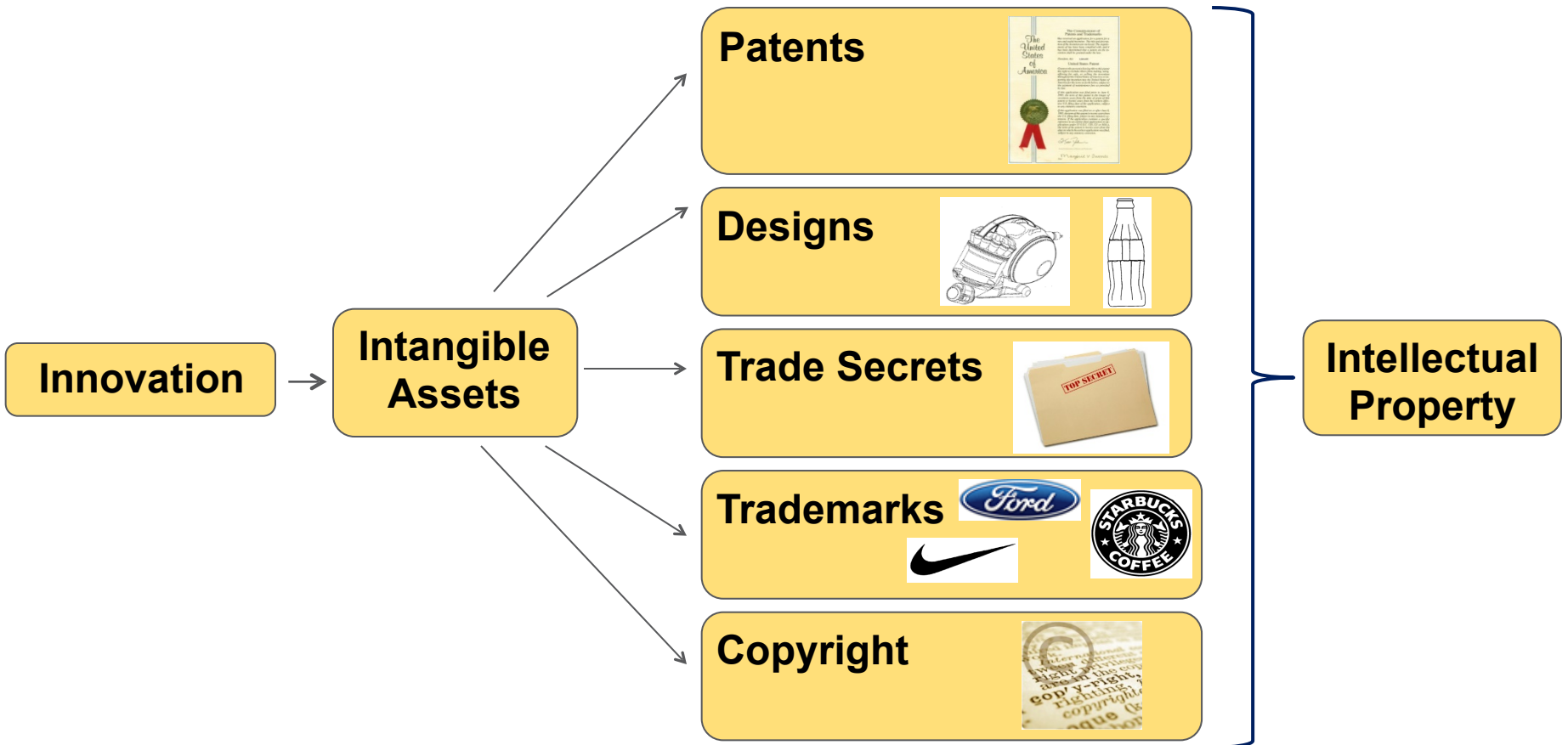
**-Alfred North Whitehead**



# Intellectual Property Rights

- Certain kinds of original, novel, or creative ideas and designs that have economic value and are protected by national law.
- Legally created business tools that allow an intangible asset to be owned, protected, and commercially leveraged.

# What is Intellectual Property?



# Types of Intellectual Property Rights

IP Right	What is protected	Monopoly granted and term
<b>Patent</b>	Functional features of a process, machine, manufacture or composition of matter	Right to exclude others from making, using, or selling an invention  20 years from filing date
<b>Industrial Design/Design Patent</b>	Shape, configuration, pattern, ornament or any combination thereof of an article of manufacture	Right to exclude others from making, using, or selling an ornamental design  10 years (Canada) or 14 years (U.S.) from grant date (15 years if filed after May 13, 2015)
<b>Trademark</b>	A word, symbol, design, colour, smell, sound, or look and feel that distinguish the source of a product or service	Right to exclude others from using a mark in association with specified goods and services  15 years renewable for consecutive 15 year periods indefinitely
<b>Copyright</b>	Expression of ideas for literary, dramatic, musical and artistic works (including software)	Right to exclude others from producing or reproducing the work  For the life of the author plus 50 years
<b>Trade Secret</b>	Information that has business value	For as long as the information is kept secret

# IP Rights – Protect Different Aspects

Synthetic pathway

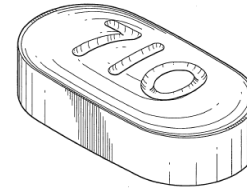
New use

Class of compounds (genus)

Formulation

Single compound (species)

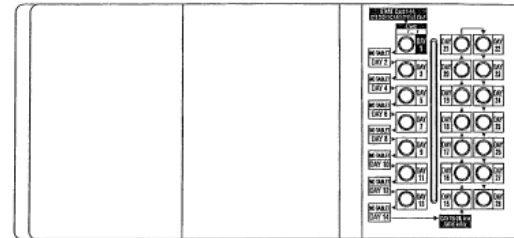
Patent



Industrial Design  
No. 109697  
(Merck)

**TYLENOL**

Trademark No.  
109890 (J&J)



Industrial Design  
No. 113868  
(Glaxo)

# IP Rights – Protect Different Aspects



- **Patent No. 2,735,309**
  - Scroll and Swipe functionality of the touch screen display
- **Industrial Design No. 121231**
  - Home button, rounded corners and tapered edges
- **Trademark No. 728304**
  - IPHONE in relation to handheld telephone devices

## IP Rights = Business Tools for Creating Business Opportunities

- Establish market position
  - Protects technology
  - Creates a public identity through branding
  - Blocks competition
- Generate Revenue
  - Licensing, sale, commercialization of products
- Increase Market Value
  - Attract investment
  - Support financing

**IP is not about neat technology and  
innovations ....**

**IP is all about protecting the  
business opportunities  
created by the technology and  
innovations**



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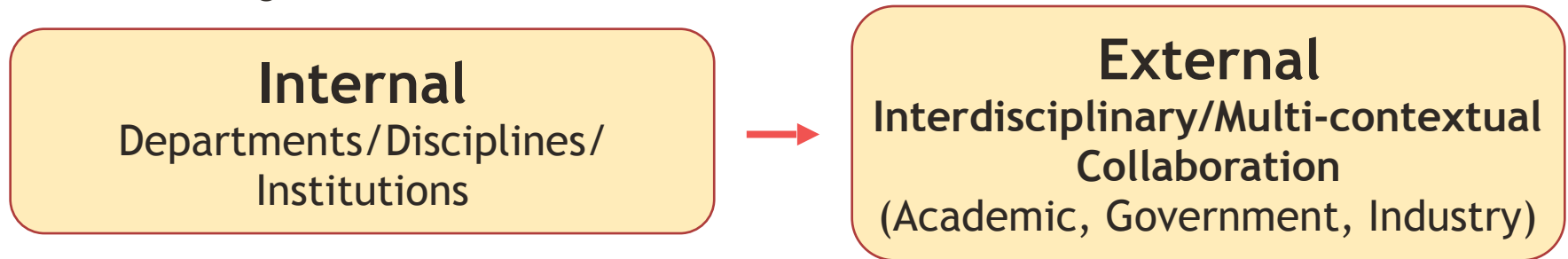
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# Pitfalls to Avoid in Collaborations



# Innovation Collaboration

The Evolving Nature of Collaboration:



Factors:

- Increased options for funding from sources that favour interdisciplinary research teams
- Technologies that demand cross-disciplinary expertise (e.g., Nanotechnology, Human Genome Project utilized more than 1000 investigators from diverse disciplines)
- Division of labor and shared resources
- Opportunity to learn from other disciplines and lend credibility and validity to the project

Increased complexity of collaborations has the potential to introduce risks for the protection of the IP flowing from these collaborations



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# Patents: Protecting the Invention

# Patents

## Protect “inventions”

“any new and useful art, process, machine, manufacture or composition of matter or any new and useful improvement in any art, process, machine, manufacture or composition of matter” (*Section 2, Canadian Patent Act*)

## What is the monopoly granted?

- ...the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used...”

*(Section 42, Canadian Patent Act)*

- Monopoly lasts 20 years from the date of filing the application

# What are the Criteria?

## Requirements:

1. Novelty – invention must not have been publicly disclosed prior to filing
2. Non-obviousness – invention must be more than a minor tweak on what has been done before
3. Utility – invention must be useful
4. Appropriate subject matter



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# Disclosures

# Disclosure is a Bar to Patenting

- To be patentable, an invention must be new
- Must not have been publicly disclosed prior to filing patent application

# What is a “Public Disclosure”?

- Provides enough detail to enable a person of skill in the art to reproduce the invention
- Takes place in Canada or elsewhere in the world, in front of one or several people
- A communication under any written, printed, electronic or oral form
- A public use or sale of the invention

# Examples

- **Information publicly disclosed and available anywhere in the world before filing**

## **For example:**

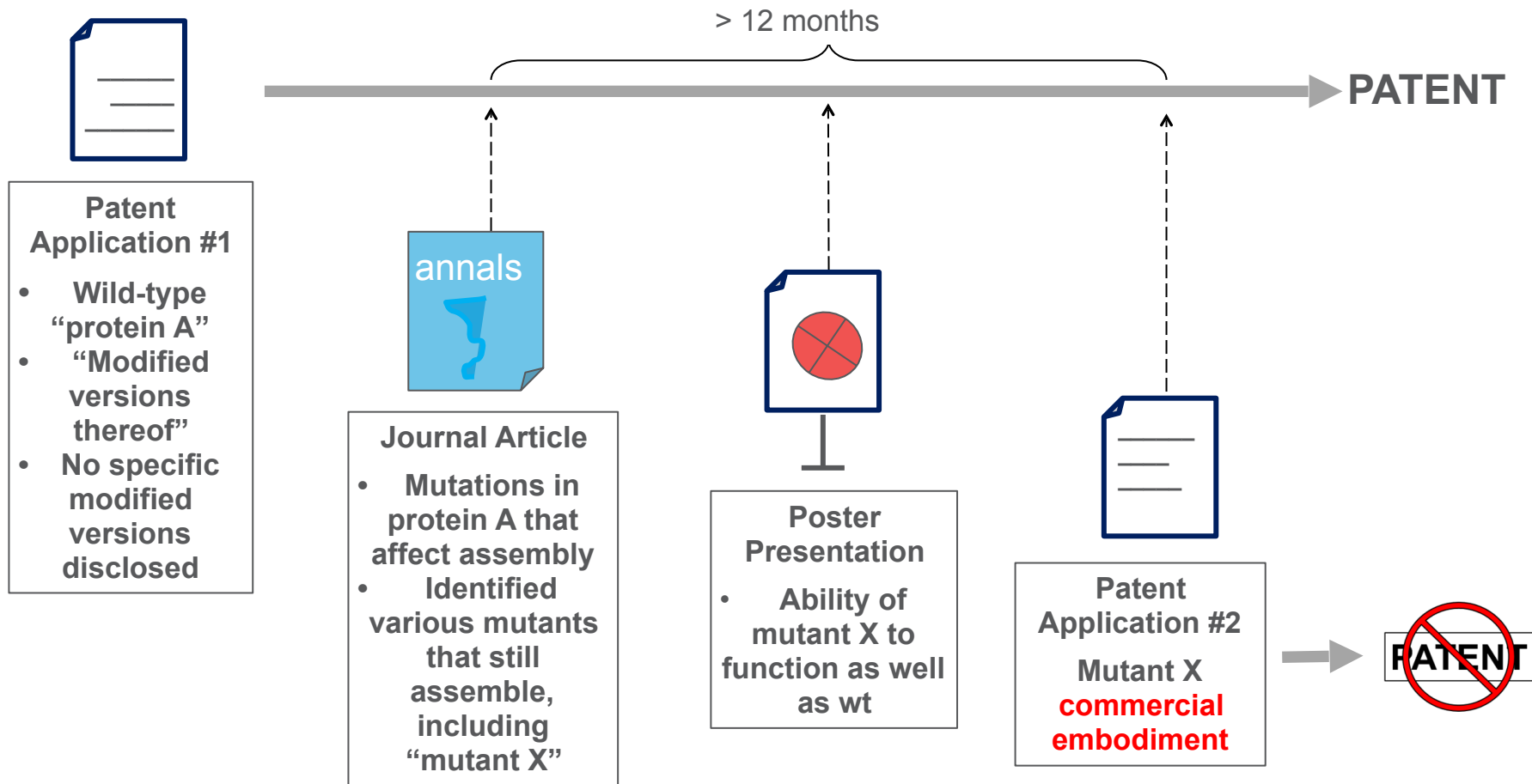
- Publications (journal, patent, internet, catalogue, press release)
- Poster sessions and abstracts
- Presentations to open forum (e.g., conference, thesis defence)
- Student's thesis in the library
- Non-confidential discussion
- Public display



# What About Post-Filing Disclosures?

- Patent application can only protect what is included in the application
- Improvements or updates may not be protected
- Post-filing developments can potentially be patentable improvements to an invention
- Avoid inadvertent pre-disclosure of post-filing improvements

# Cautionary Tale



# How to Protect Patentability and Still Publish

Patentability can be protected while still allowing researchers to publish and collaborate:

- **Establish a system and terms for disclosures at the start of the collaboration in order to manage where, what, when, and how disclosures will be made:**
  - Type of disclosures to be kept confidential and out of the public
  - Timing of disclosures
    - File first then disclose
  - Measures to ensure confidentiality
    - Confidentiality Agreement (small groups or meetings, thesis defence)
  - Measures to control the content of disclosure
    - Don't give "enabling" information
    - Ensure presentation/publication is reviewed by patent counsel prior to disclosure
    - "Sanitize" presentations/publications to remove enabling information



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# Ownership of IP

# Inventorship

- **Ownership begins with the inventor but can be transferred**
- **Inventorship ≠ Authorship**
- **Inventorship is a legal concept not to be confused with authorship**
- **Inventor must have made material contribution to idea claimed in the patent**
  - Idea must be complete enough to allow skilled person to reduce it to a definite and practical shape, i.e., practice the invention
- **Contributing to verification alone does not make one an inventor**
  - Someone providing “a pair of hands” is not an inventor

## The AZT Decision - Who is responsible for the inventive concept?

### *Apotex v. Wellcome Foundation Ltd. [2002] SCC 77*

1. HIV/AIDS was first reported in 1981
2. Two years later, the pharmaceutical company Glaxo Inc. assembled a team of researchers to develop a drug to combat the retrovirus
3. The Glaxo team had conceived the new use of the known drug AZT to treat HIV/AIDS
4. Very few facilities in 1984 that could test AZT on HIV in human cells
5. Glaxo sent AZT specimen to the NIH for blind testing on HIV
6. Two NIH researchers established the utility of AZT on human cell lines
7. Patent applications were filed
8. Even though the research conducted by the NIH scientists was crucial evidence to support the utility of AZT for the treatment of HIV/AIDS, not found to be co-inventors on the patent
9. Had not participated in the inventive concept, merely its verification.

# Who owns the IP?

## Would be the inventor unless:

- **Employee-inventor**
  - Deemed to be transferred to employer if hired to invent and the invention was made in the course of employment
- **Independent contractor-inventor**
  - Presumption that you own your own inventions
- **Contract stating otherwise**
  - Employment agreements, confidentiality agreements, joint research agreements, assignment agreements, license agreements...

# A Cautionary Tale

***Stanford v. Roche Molecular Systems***  
(U.S. Supreme Court Decision No. 09-1159, June 6, 2011)

## **Background:**

- 1988 - Dr. Holodniy, a research fellow at Stanford University, was developing an assay for quantifying HIV levels in patients using PCR.
- Because he was unfamiliar with the technique, Holodniy went to the company that developed PCR, Cetus.
- Holodniy worked at Cetus developing the assay, and then returned to Stanford where he pursued the research further.
- Stanford eventually acquired three patents as a result of Dr. Holodniy's research.



# *Stanford v. Roche*

## **Background continued:**

- 1991 - Roche acquired Cetus, and Roche commercialized HIV test kits based on the assay developed by Holodniy.
- 2005 - Stanford sued Roche asserting that Roche's test kits infringed Stanford's patents.
- Roche argued that they were co-owners of the patented invention, thus, Stanford could not sue Roche for infringement.

# *Stanford v. Roche*

## **Issue:**

- Who owned the patents?
- To whom had the inventor, Holodniy, assigned his rights?

# *Stanford v. Roche*

## **Conflicting Assignment Agreements:**

1. Holodniy signed an agreement upon joining Stanford

- ***Stanford Assignment***

“agree[d] to assign [his] right, title and interest in” inventions resulting from his employment to Stanford.

2. In order to initially gain access to Cetus, Holodniy signed a confidentiality agreement

- ***Cetus Assignment***

“will assign and do[es] hereby assign [his] right, title and interest in each of the ideas, inventions and improvements [made] as a consequence of [his] access” to Cetus.

# *Stanford v. Roche*

## **Takeaways:**

- Rights to an invention belong to the inventor but can be transferred.
- Need to be careful with respect to the agreements signed when collaborating.
- Determine ownership and obligations relating to ownership as early as possible.

# Conclusions

- Intellectual property rights are business tools that can be used strategically to create value.
- Understand and be aware of the potential pitfalls to protecting the IP flowing from a collaboration.
- Address these pitfalls at the start of every collaboration to maximize your ability to leverage the IP.



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# THANK YOU & QUESTIONS

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