



**Agricultural Research Service  
Office of Technology Transfer**

# **Technology Transfer: Patenting**

*Celebrating over 150 years serving every American  
Every Day, Every Way*



# What is an Invention

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**Any new and useful process, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of vegetatively propagated plant**

# Reasons for Patenting

- **Facilitates technology transfer:**
  - ✓ **Allows broader use**
  - ✓ **Incentive for investments by private sector**
  - ✓ **Increase research impact**
- **Directs technology use by others**
- **Expands use to foreign countries**
- **Enhances U.S. economic development, global competition, & sustainable economic security**

**Patenting and publishing are not incompatible, consult with a Patent Advisor before publishing.**

# ARS Patent Policy

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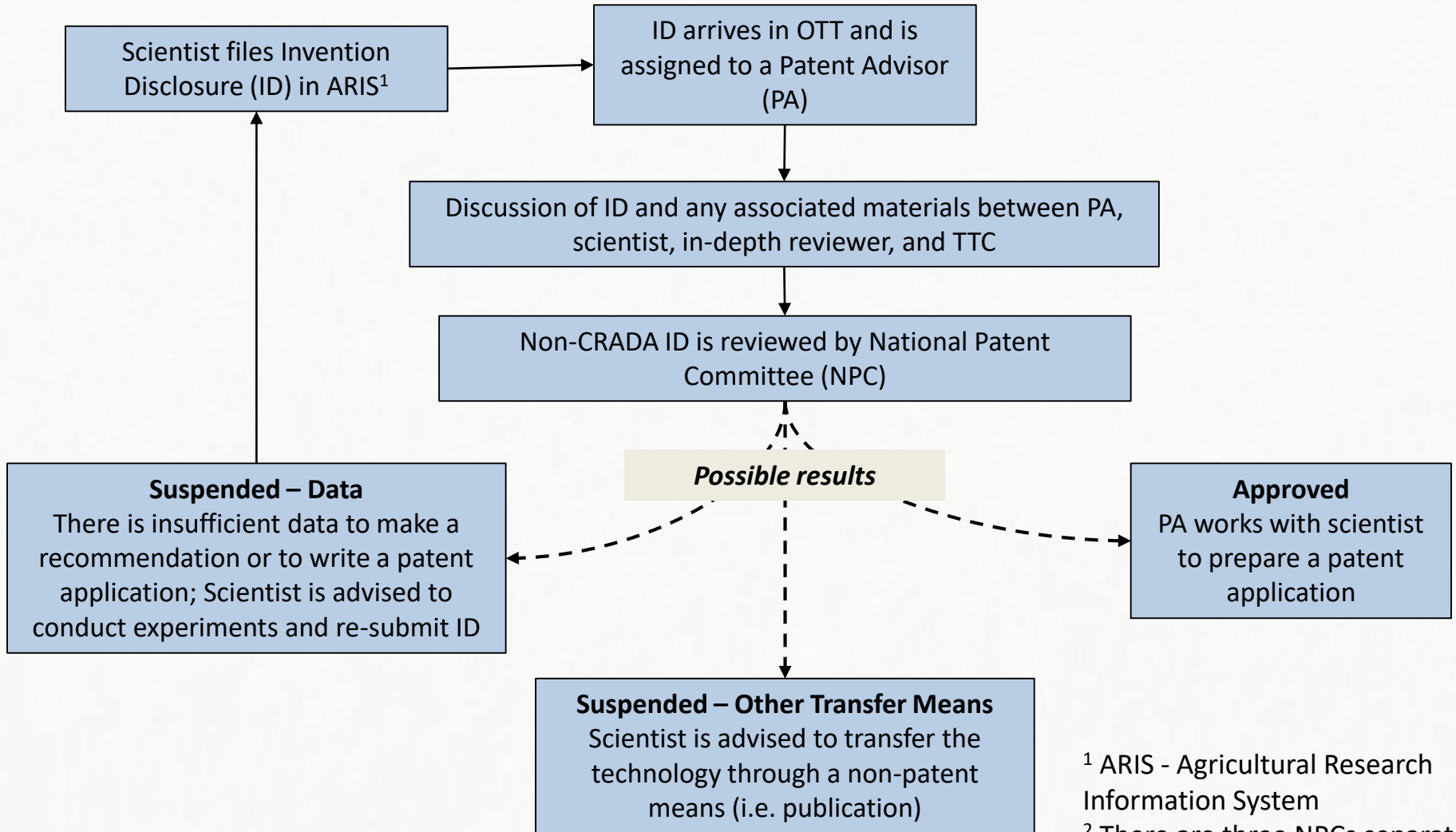
- **Pursues patent protection when it facilitates technology transfer**
- **Research ‘tools’ are usually not patented**
- **Generally allows non-commercial research without a license**
- **Research outcomes belong to ARS, not the scientist (scientists assign rights to ARS)**
- **ARS, not the scientist, decides whether or not to apply for a patent**

# Types of Protection for Inventions

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- **Utility Patent**
  - ✓ **Process, machine, manufacture, composition, etc.**
- **Plant Patent**
  - ✓ **Vegetatively propagated plants**
- **Plant Variety Protection Certificate**
  - ✓ **Seed propagated plants & tubers**
  - ✓ **Vegetatively propagated plants**

# Evaluation on Non-CRADA Inventions



<sup>1</sup> ARIS - Agricultural Research Information System

<sup>2</sup> There are three NPCs separated by subject matter: Mechanical, Chemical, and Life Science

# National Patent Committees

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## Four “Subject Matter” Committees:

- ✓ Life Sciences
  - ✓ Chemical
  - ✓ Mechanical and Measurement
  - ✓ Plant Protection
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- Committees members are scientists
  - Committees meets quarterly

# Committee Review

- **Presentation of invention by scientist in-depth reviewer**
- **Discussion by:**
  - ✓ **Committee members**
  - ✓ **Line management (Tech Transfer Coordinator & Area Office)**
  - ✓ **OTT (Partnership, Patenting, & Licensing staff)**
  - ✓ **Office of National Programs**
- **Committee members vote to recommend:**
  - ✓ **Approve**
  - ✓ **Suspend**
- **Based upon Committee's recommendation, final decision is made by HQ and Area tech transfer professionals. An email letter is sent to the inventor telling of the final decision the evening before a strategy call teleconference to discuss the decision.**
- **Decision may be appealed after the strategy call teleconference**





United States Department of Agriculture

Research, Education, and Economics  
Agricultural Research Service

Date

**SUBJECT:** Decision of National [TYPE] Patent Committee on 02/04/2015

**TO:** *Inventors*

**FROM:** Gail Poulos,  
Supervisory Patent Advisor, Office of Technology Transfer

The Invention Disclosure is USDA Docket No. XXXX.XX, entitled "TITLE"  
Inventor(s)

**Approved** (See Appendix A)

**Suspended:**

No data or insufficient data. Please consult with your patent advisor to submit a new Invention Disclosure once the conditions below are met.

Additional research data is required to draft a strong patent application.

Partner is needed to reduce the invention to practice (e.g., field test, prototypes, scale-up, etc.).

Other: \_\_\_\_\_

Recommend technology transfer by means other than a patent (e.g., scientific publication and/or conference, trade journal or like publication, newsletter, field day or workshop, university extension, etc.).

Other: \_\_\_\_\_

**For a Decision to Suspend, the Deputy Assistant Administrator, the Patent Advisor and the Technology Transfer Coordinator will contact the inventor(s) to discuss the decision. A letter appealing the final decision of the National Patent committee can be submitted after the teleconference with the Deputy Assistant Administrator, Patent Advisor, and Technology Transfer Coordinator.**

Thank you for taking the time to submit your invention disclosure. Your effort in documenting the invention with a disclosure is an essential step in the process of transferring the results into practical application. It helps the USDA Agricultural Research Service fulfill its mission to develop and transfer solutions.

# Patent Committee Criteria

- Q1:** Is there current commercial interest in the invention or a high probability of commercialization in the future?
- Q2:** Is the magnitude of the market relative to the costs of commercialization large enough to warrant a patent?
- Q3:** Would the patent likely play a significant role in transferring the technology to the user beyond what could be achieved through publication?
- Q4:** Would a patent on this invention be enforceable; i.e., is the invention drawn to, or does it employ, a unique and readily identifiable material or device which could be bought or sold?
- Q5:** Is the invention of sufficient scope to justify patenting?
- Q6:** Do you know of any ARS pending patent, invention disclosure or research that could impact the technology described in this invention disclosure?
- Q7:** Do you know of any non-ARS pending patent, invention disclosure or research that could impact the technology described in this invention disclosure?
- Q8:** Provide the names of any companies (and contact information) that you think may be interested in this technology for licensing.
- Q9:** Provide the names of any companies (and contact information) that you think may be interested in this technology for licensing.
- Q10:** Is the invention ready to write as a patent application right now if approved by the committee?

# Plant Committee Criteria

**Q1:** Would a patent likely play a significant role in transferring the technology to the ultimate user beyond what could be achieved through publication? How would a patent enhance the transfer of the technology?

**Q2:** Is the invention of sufficient scope to justify patenting?

**Q3:** Would a patent on this invention be enforceable, i.e., is the invention drawn to, or does it employ, a unique and readily identifiable material or device which could be bought or sold?

**Q4:** Would stakeholders support the patenting and licensing of this technology? Is there current commercial interest in the invention or a high probability of commercialization in the future? Provide the names of any companies and contact information that you think may be interested in this technology for licensing. Provide the names of any companies and contact information that you think may be interested in collaborating to further develop/commercialize this technology through a CRADA and/or SBIR proposal.

**Q5:** If this is a plant invention, is a cultivar needed for commercialization?

**Q6:** If the invention needs to be scaled-up, are there issues that need to be addressed?

**Q7:** Is the magnitude of the market relative to the costs of commercialization large enough to warrant a patent?

**Q8:** Do you know of any ARS or non-ARS patents, pending patent applications, invention disclosures, or research that could impact the technology described in this invention disclosure?

**Q9:** Is the invention ready to write as a patent application right now if approved by the committee?

# Invention Disclosure

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- **Scientist initiates through ARIS**
- **Invention is described in detail including a description of how it is different from the state of the art**
- **Provides the basis for assessment of an invention and drafting a patent application**
- **Invention does not need to be market ready**
- **Scientists are legally required to disclose all subject matter that could constitute an invention**

# Reasons for Consulting with a Patent Advisor

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- Inventions are seemingly easy to recognize but difficult to define
- Additional research and/or data may be required for a patent
- Get advice on preserving patent rights **before** making presentations (papers, posters, formal and informal talks, etc.)
- Help in preparing an invention disclosure

# Inventorship vs. Authorship

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## **Inventorship**

- **Legal determination, cannot be decided by the scientists**
- **Wrong inventorship may have serious consequences for the patent owner**
- **Inventorship is based on the claims in a patent application**

## **Authorship**

- **Can be decided by the scientists**
- **Based on contributions in designing or performing the experiments or in writing the manuscript**
- **Authorship can be based on any part of a scientific paper**

# Protecting Intellectual Property

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- **U.S. Patent Law is first inventor to file**
- **No public disclosure before a patent application is filed**
- **Inventors must respond to Patent Advisors in a timely and complete manner**
- **Inventorship determines ownership**
- **Lab notebooks are important for determining inventorship**

# Laboratory Notebook Guidelines

- Consecutive numbered bound pages
- Single line through errors, **NO** erasable media
- Date, title of experiment, objective, detailed description of experiment, results/data (include data downloads) and conclusion
- Notes of meetings and emails that discuss the research project
- Scientist's signature
- Signature & date of witness (**NOT** a co-inventor)
- See:

[https://www.ars.usda.gov/ARUserFiles/01090000/GOODLABORATORYNOTEBOOKPRACTICES\(Color\).ppt?web=1](https://www.ars.usda.gov/ARUserFiles/01090000/GOODLABORATORYNOTEBOOKPRACTICES(Color).ppt?web=1)



# Electronic Laboratory Notebooks

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- <https://axon.ars.usda.gov/Science%20Links/Pages/Electronic-Laboratory-Notebooks.aspx>
- **Recommendation is Microsoft OneNote or eNotebook**
- **Sign and witness same as paper notebooks**

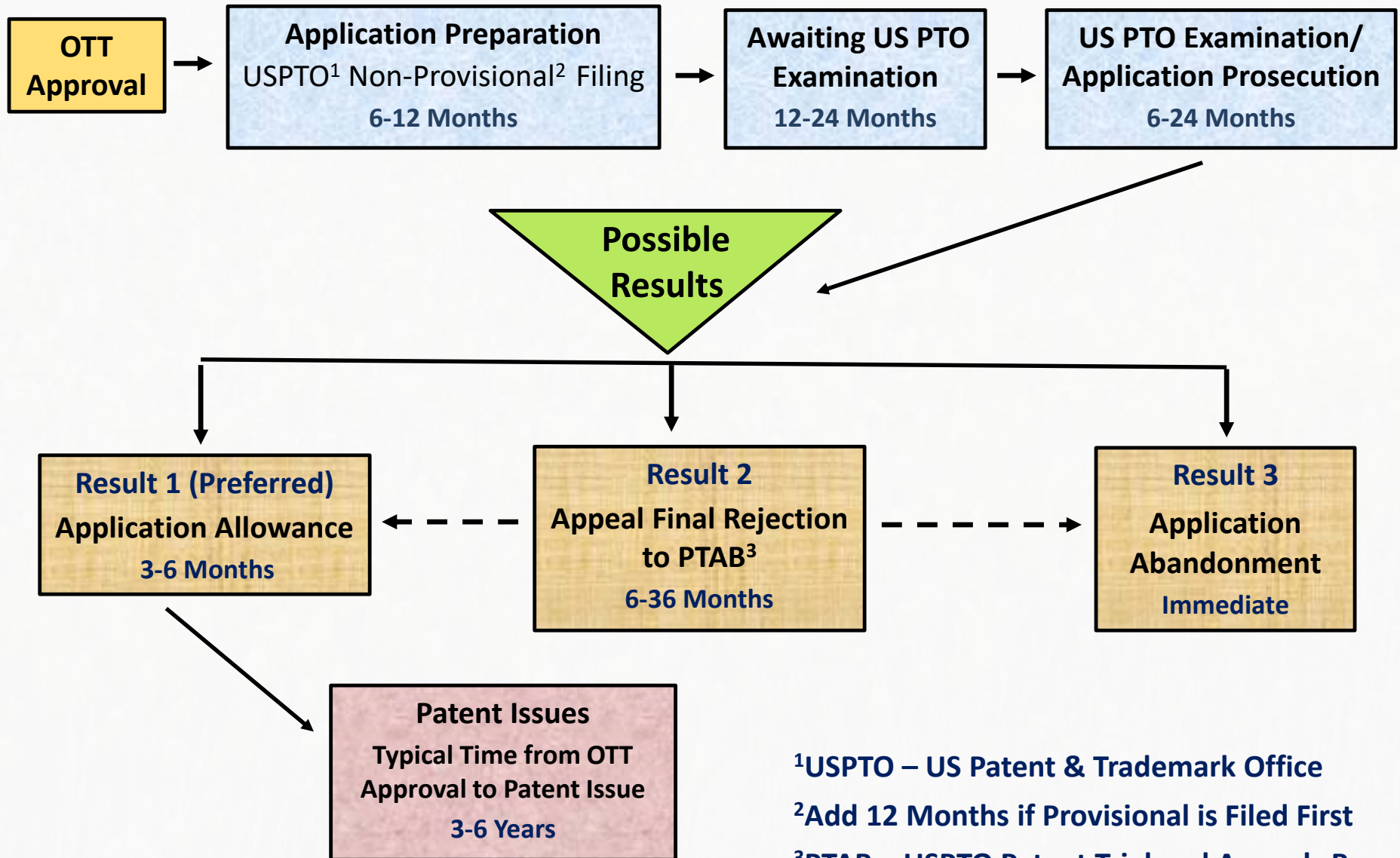
# IMPORTANT!!

## CRADA Projects Require Separate ARS Lab Notebooks

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- If you are conducting research under a CRADA all information and data must be recorded in a separate ARS notebook that is used only for that CRADA,
- If you are working on more than one CRADA project then you will have to use separate ARS notebooks for each project in addition to the ones you would use for non-CRADA.

# Patent Time Line



<sup>1</sup>USPTO – US Patent & Trademark Office

<sup>2</sup>Add 12 Months if Provisional is Filed First

<sup>3</sup>PTAB – USPTO Patent Trial and Appeals Board

**Thank you!**