

# United States Department of Agriculture Partnership Intermediaries



SUBJECT: ATIP: A National Network of USDA Federal Partnership Intermediaries

It is national policy to transfer federally developed technologies to enhance the economic competitiveness of U.S. Industry. Congress has provided authority to the federal agencies for the use of partnership intermediaries to facilitate the transfer of technology to support U.S. economic competitiveness. The U.S. Department of Agriculture has embraced this authority by creating an Agricultural Technology Innovation Partnership (ATIP).

The USDA launched ATIP late in 2007. Since then, the USDA has worked to standardize an approach to use this capability, to make USDA developed technologies available for commercial license, use, and manufacturing. As an example, Crisp Tek is a product available as a commercial, off the shelf product, using technologies developed in USDA laboratories.

Providing support to USDA laboratories as well as the private sector, ATIP leverages the skills, knowledge, and capabilities of USDA's ten partnership intermediaries to enhance USDA's ability to transfer technology. ATIP members have knowledge about industry, market segments, and business processes that can enable USDA activities to successfully partner with the private sector for commercialization of technologies. ATIP can provide a proactive, focused, and sustained marketing of technologies and capabilities and facilitate communications with the private sector.

For private sector partners, ATIP can help find technology solutions or new product opportunities, as well as make government "red tape" invisible. ATIP also works with USDA/ARS to conduct market research to establish the value of licensable technologies and help ensure the license applications and commercialization plans received contain appropriate information for a decision on licensing or partnering regarding further development of a technology.

I anticipate you will find this brochure helpful both in defining what ATIP can do and in deciding whether – and how – to use this resource in your technology transfer efforts.

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## Introduction

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The purpose of the Agricultural Technology Innovation Partnership Program (ATIP) is to facilitate the transfer of Department of Agriculture (USDA) technologies to U.S. businesses for their research, development, and production to meet agriculture requirements as well as to foster commercial applications.

Partnership Intermediaries assist the USDA in its technology transfer efforts. These ten organizations, selected for their knowledge of industry, technology, and market sectors, assist USDA labs and research institution in locating potential industry partners for the purpose of collaborating on technology innovation and maturation. Ultimately, they do those things best done by industry: translating technology into products for the market. In addition, they assist in locating and making companies aware of those USDA patents available for licensing and research capabilities for solving problems of the agriculture sector.

The USDA encourages the private sector to use its technologies with commercial potential through technology transfer mechanisms such as Cooperative Research and Development Agreements, Patent License Agreements, and state/local government partnerships.

The USDA benefits by using technology transfer mechanisms that allow partnering arrangements with companies having interest and technical expertise in technologies important to the USDA. Such partnerships leverage the scarce federal resources. The USDA also gains access to companies that may not otherwise work with USDA due to perceived burdensome acquisition/contracting processes. Often, these companies are the leaders in their technological field and the USDA is able to gain knowledge/products not otherwise available.

The term “partnership intermediary” means an agency of a state or local government – or a nonprofit entity owned (in whole or in part) by, chartered by, funded (in whole or in part) by or operated (in whole or in part) by or on behalf of a state or local government – that assists, counsels, advises, evaluates, or otherwise cooperates with small business firms; institutions of higher education defined in section 201 (a) of the Higher Education Act of 1965 (20 USC § 1141 [a]); or educational institutions within the meaning of section 2194 of Title 10, United States Code, that need or can make demonstrably productive use of technology-related assistance from a federal laboratory, including state programs receiving funds under cooperative agreements entered under section 5121 of the Omnibus Trade and Competitiveness Act of 1988 (15 USC § 2781).

USDA formed ATIP to provide an intentional communication network, sharing knowledge, expertise, facilities, equipment, and other resources for USDA labs and

research. Activities include the following: spin off activities of USDA technologies to a broad spectrum of applications; dual use science and technology and other activities that develop technologies that have both USDA and non USDA applications; and spin-on promotion activities that shall demonstrate the utility of technologies developed outside the USDA.

The USDA has been very successful in utilizing technologies to enhance agriculture production. However, to compensate for diminishing resources and to keep pace with the commercial availability of advanced technologies, the USDA must field critical technologies and reduce costs in a timelier manner. That is, the USDA must put into practice methods that lead to the best balance of system performance, life cycle costs, and availability. Technology transfer is the process of inserting critical technology into agricultural use – to ensure the success and sustainability of U.S. Agriculture and global competitiveness.

## The ATIP Network

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### **What is ATIP and how is membership in ATIP formalized?**

The USDA's Agricultural Research Service (ARS) established the "Agricultural Technology Innovation Partnership" program (ATIP) with nine select local / state / regional economic development organizations to create and enhance opportunities for private sector partnerships. This is accomplished through licensing of ARS technologies, and/or through establishing Cooperative Research and Development Agreements (CRADA) with companies that can successfully commercialize ARS innovations. The overarching goal of ATIP is to increase the likelihood that ARS research outcomes are adopted by private sector firms and to increase impact and recognition of ARS research programs. Current ARS licensing and CRADA policies and processes are not affected by this program.

Membership in ATIP is formalized with a "Partnership Intermediary Agreement" executed by the Office of Technology Transfer on behalf of ARS. "Partnership Intermediary Agreements" (PIAs) are specifically authorized by federal statute as a technology transfer instrument. Currently, only the Department of Defense, NIH, and ARS are utilizing PIAs in an orchestrated manner. However, due to the early successes of ARS, several other agencies are now in the process of developing them. In ARS, the PIA document is a "mutual interest" cooperative agreement. ARS has broad flexibility in selecting the intermediaries best able to meet the needs of the agency by providing complementary services both to ARS and to its industry partners.

### **What is the ARS strategy for building ATIP membership and directing activities?**

ATIP is envisioned as providing an efficient network to ARS with each member serving as a conduit to a greater number of local (e.g., county, city), state, or regional organizations, including venture capitalists and angel investors. The ATIP "Partners" were selected in part on the basis of breadth of program, extent of services offered to ARS and its customers, and proximity to an Area Office or major concentration of ARS scientists. ATIP "Associates" are members selected on the basis of specific expertise or priorities in specialized agriculture sector areas. Associates work with all ATIP members, but coordinate primarily through the ATIP Partner proximal to their geography. Because of the ARS need for regional access to private sector companies and resources, and the 8-Area structure of ARS, ATIP has been established with 8 economic development-based ATIP Partners, strategically distributed across the country with each anchored in an Area of ARS. A 9<sup>th</sup> Partner is focused entirely on innovative food technologies to complete the 9 ATIP members ("portals"). This optimizes efficiency of information exchange and partner stewardship, and geographic representation of the agriculture sector.

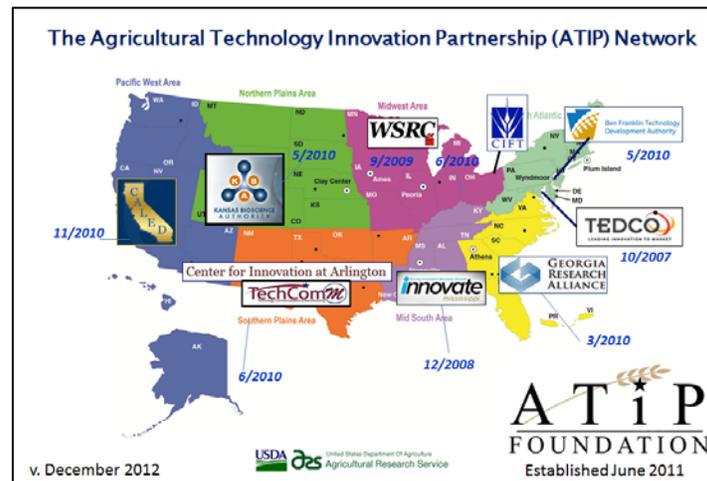
### **What are the roles of the ATIP members?**

ARS utilizes the ATIP members (a) to co-sponsor events whereby ARS technologies and research capabilities will be showcased, thereby increasing the opportunities for technology transfer partnerships; (b) to provide technology-readiness assessments and business plan development of select existing technologies in ARS (protected intellectual property) to create “Partnering Opportunity” documents for distribution and action among ATIP members; and (c) to link to entrepreneur schools (colleges and universities) and small business development centers to facilitate partnerships with ARS. All members are expected to have direct or indirect access to fiscal resources that can support the research partnerships of businesses with ARS.

### **Who are the ATIP Partners and Associates?**

As of March 1, 2012 (Figure 1), the ARS has established partnership intermediary agreements with (1) the Maryland Technology Development Corporation (**TEDCO**, September 2007), (2) Innovate Mississippi (**formerly Mississippi Technology Alliance (MTA)**, December 2008), (3) the Wisconsin Security Research Consortium (**WSRC/WTC**; part of Wisconsin Tech Council, September 2009), (4) the Georgia Research Alliance (**GRA**, March 22, 2010), (5) the Pennsylvania Department of Community and Economic Development’s Ben Franklin Technology Development Authority (**BFTDA**, May 13, 2010), encompassing the, the Ben Franklin Tech Partners (**BFTP**) and others in Pennsylvania and adjacent regions; (6) The California Association for Local Economic Development (**CALED**); (7) The Kansas Bioscience Authority (**KBA**); (8) The Center for Innovation at Arlington (**CFI Arlington**), (which is also is an intermediary of the Department of Defense, Homeland Security, Energy and National Institutes of Health) and (9) the Center for Innovative Food Technology (**CIFT; not anchored by an area of ARS**).

**Figure 1. The Agricultural Technology Innovation Partnership (ATIP) Network of ARS. Logos of members are accompanied by the date when joining the network.**



### **What are ATIP Affiliates?**

Licenses or CRADA partnerships (specific businesses or research relationships) that are facilitated by the PIAs become “**ATIP affiliates**” in the program.

### **What are examples of ATIP member activities and successes?**

**TEDCO:** Within the first 18 months with **TEDCO** as the founding ATIP Partner, 7 ATIP Affiliates were established; 5 with some funds provided by TEDCO’s signature Maryland Technology Transfer Fund (MTTF). One of these affiliates, a Maryland start-up business (CrispTek), exclusively licensed an ARS technology developed at the Southern Regional Research Center (SRRRC, New Orleans), received funding from TEDCO, made its first sale within 8 months, and has established a CRADA with SRRRC scientists. This process was initiated through an entrepreneurship program affiliated with TEDCO, and demonstrated the value these complementary business assets can bring in accelerating adoption of research outcomes by companies vetted by ATIP Partners.

**MTA:** Within the first few months of having joining ATIP, the **MTA** identified 6 projects to promote to Mississippi businesses that are expected to involve 8 ARS scientists. At least 2 specific technology specific meetings have occurred.

November 19, 2009, **MTA** co-hosted a Conference on High Technology that focused on GIS and geospatial research. The conference included 6 ARS scientists selected from across the agency to represent research capabilities in this subject area; potential partnerships with attending Mississippi companies are in review.

**WSRC:** Although joining ATIP as recently as September 16, 2009, the Wisconsin Tech Council and the Wisconsin Security Research Consortium (**WTC / WSRC**) has initiated several actions, including (a) introducing their network to ARS by adding a special session to their Early Stage Symposium (November 10-12, 2009) on *“Intellectual seeds: How your company can obtain federal ag research”*; (b) facilitating discussions with 4 potential technology and research partners; and (c) establishing a working relationship with Dr. Michael Tippins of the University of Wisconsin, Oshkosh, to develop a pilot program to provide students with real life entrepreneurial experience. Dr. Tippins introduced a list of ARS patented technologies to students in his Cap Stone consulting course to select and develop business plans based on these technologies. Consistent with the TEDCO example above, ARS has recognized the value of this approach and requests all Partners to find and engage such complementary business assets in their respective regions.

**TechComm:** Since joining the ATIP Network on June 22, 2010, TechComm has (1) established a National Biofuel/Biochemicals Consortium, working in partnership with the U.S. Departments of Agriculture, Defense, and Energy, currently focused on building a prototype supply chain and refinery that is replicable, scalable, and sustainable, utilizing non-food bio mass to refine jet fuel at a cost competitive with petroleum; and (2) established an Unmanned Aircraft System Consortium in partnership with the U.S. Departments of Agriculture, Defense and Homeland Security, focused on the research, development, and commercialization of unmanned aircraft systems.

## **ATIP Foundation Services**

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### **ATIP Partner Intermediaries provide complementary assets to ARS Office of Technology Transfer:**

- guiding local / regional business with research needs to the appropriate ARS scientist across ARS (CRADA opportunities);
- triaging business plans of private sector firms to identify well-qualified companies (e.g., likely to succeed) as prospective partners for licensing technologies (market “push” approach) or developing research agreements with ARS (market “pull” approach);
- providing analysis of the factors (e.g., financial, technical, manufacturing, marketing) that affect the commercialization of specific ARS-prioritized technologies and developing / implementing plan to obtain commercial partners. These “technology opportunities” may be developed by the intermediary or by 3<sup>rd</sup> party sources (business schools, entrepreneur programs, angel investors, etc.) facilitated by the intermediary; and
- coordinating “Technology Showcase” events with ARS and other ATIP members to enhance awareness of ARS and to facilitate licensing or research partnerships (CRADA) with private sector companies.

**ATIP Partner Intermediaries provide complementary assets needed by the private sector to succeed in commercializing ARS inventions:**

- assisting in accessing federal and state public funds, and private funds by providing local access to angel investors, seed or venture funds;
- providing business plan assistance through network of entrepreneurship programs or other local experienced business executives that can advise start-ups;
- assisting in preparation of funding proposals and other resource opportunities such as SBIR, STTR, and special initiatives;
- managing their own internal seed/venture funds to support CRADA and license partners of ARS;
- identifying services and expertise needed to resolve manufacturing capacity issues, such as scale-up, formulation, facility design, supply chains, etc.

## **Partnership with Department of Defense**

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**ATIP and the Department of Defense’s Partnership Intermediary Network (OTTPIN) working together: a potential model on how Partnership Intermediaries can work across federal Agencies.**

The Department of Defense Office of Technology Transition formed a Partnership Intermediary Network (**OTTPIN**) over the past decade, that currently includes four members; one of these (TechComm) is also a member of ATIP. Designed to serve all of DoD in a proactive, focused, and sustained marketing of lab technologies and capabilities, a significant part of their activities is to “spin in” technologies and products needed by DoD to meet its primary mission.

In November 2009, OTTPIN and ATIP agreed to formalize a working relationship to identify areas of common interest to USDA and DoD and to establish joint projects in research and technology commercialization. The inaugural full membership meeting was held on June 22, 2010, in Beltsville. ARS views this relationship as a model for other agencies and Departments to work together where there are common interests and complementary research capabilities. ATIP is in discussions with NIH and DHS as they are beginning to implement their network of intermediaries. Likely areas of cooperation include zoonotic diseases and food security.

# **Technology Transfer Mechanisms**

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## **Patent License Agreement (PLA)**

Under a Patent License Agreement (PLA), the patent owner permits a third party to make, use, or sell the patented invention in return for some valuable consideration, most commonly a royalty. The USDA process for patent licensing follows the principle that practically all federally owned inventions in the custody of the USDA will normally best serve the public interest when they are developed to the point of practical application and then rapidly made available to the public. The transfer of less-than-ownership rights in federal intellectual property to a third party permits the third party to use the intellectual property. PLAs can be exclusive or nonexclusive, for a specific field of use or geographical area. Licensees develop plans for commercialization of the invention. PLAs are authorized under Title 37 CFR § 404.

## **Cooperative Research and Development Agreement (CRADA)**

A CRADA is a legal agreement between a federal laboratory and one or more nonfederal parties such as private industry or academia. CRADAs offer both parties the opportunity to leverage each other's resources when conducting mutually beneficial research and development (R&D). Through teaming, the parties share the benefits and risks of collaborative R&D. The USDA through the Agriculture Research Service, provides personnel, facilities, equipment, or other resources to the nonfederal parties. USDA laboratories can be reimbursed by the nonfederal parties but cannot provide funds to the nonfederal parties. The nonfederal parties can provide funds, personnel facilities, equipment or other resources to conduct specific R&D. CRADAs are authorized under Title 15 USC § 3710. CRADAs convey two important elements that no other agreement can do:

- the right to negotiate an exclusive license to any invention arising from the cooperative research – whether solely or jointly owned by the U.S. government, and
- confidentiality of data for up to five years (negotiated) as if the data were proprietary (exempt from Freedom Of Information Act (FOIA)).

## **Trust Fund Cooperative Agreements (TFCA)**

A Trust Fund Cooperative Agreement is a collaborative research agreement between ARS and a Sponsoring Organization that involves cooperative research of mutual interest between both parties where ARS is paid in advance of performance. This agreement is awarded under the authority of 7 USC 3318(b). TFCAs do not convey rights to intellectual property, nor exemption from FOIA.

## **Reimbursable Cooperative Agreements (RCA)**

Agreement between ARS and a Sponsoring Organization that involves cooperative research of mutual interest between both parties where the Sponsor pays when billed by ARS for costs incurred in performance of project. Awarded under the authority of 7 USC 3318(b). RCAs do not convey rights to intellectual property, nor exemption from FOIA.

## **Non-Assistance Cooperative Agreements**

This is an agreement between the Agency and another party that describes in detail a **jointly** planned and executed research program or project of mutual interest between the parties where **both** parties contribute resources. There is no direct transfer of funding or in-kind resources e.g., salaries, travel expenses, materials and supplies, etc., from ARS to the other party. Awarded under the authority of 7 USC 3318(b).

## **Agreements with Other Federal Agencies (Interagency Agreements)**

ARS can enter into a reimbursable agreement with another agency of the U. S. Department of Agriculture or an agency of another Department of the Federal government to provide services, supplies, and equipment requested by the ordering/requisitioning agency. The legal authority for entering into this type of agreement is normally 31 USC 1535, as amended by Public Law 97-332. This statute is commonly referred to as 'The Economy Act'. When the ordering agency has broader authority, e.g. multi-year spending authority, it overrides the fund availability time limits in The Economy Act and becomes the operative authority for both parties.

## **Enhanced Use Lease Authority (EUL)**

The Enhanced Use Lease (EUL) Authority under Section 7409 authorizes the Secretary to lease real property, both facility space and land, at the Beltsville Agricultural Research Center (BARC) on terms and conditions acceptable to the Department of Agriculture (USDA) consistent with the mission of the Agricultural Research Service (ARS). The property cannot be used for public retail or wholesale of merchandise or residential development. EUL program at USDA differs from other agencies with EUL authority because USDA is using it strictly as a technology transfer tool i.e., tenants must establish either a joint research project, or be a licensee of a USDA technology in order to qualify. A lease cannot allow for the construction of facilities financed by non-Federal sources to be used by an agency, except for incidental use. Finally, a lease cannot include any property that the agency needs to carry out its mission. Authorized under Section 7409 of the Food, Conservation and Energy Act of 2008, Public Law 110-246 (112 Stat.1651).

## ATIP and Tech Transfer Contacts

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California Association for Local Economic Development	Gurbax Sahota <a href="mailto:gsahota@caled.org">gsahota@caled.org</a>	<a href="http://caled.org">caled.org</a>	(916) 448-8252 EXT. 15
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