



Federal Laboratories & State and Local Governments

Partners for Technology Transfer Success

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- 1** Technology Transfer for State and Local Government
- 2** NASA Goddard and TEDCO Join Forces to Build Maryland’s Technology Economy
- 4** INL Provides Technical Assistance to Idaho Communities and Small Businesses
- 6** New Mexico Launches Technology Research Collaborative
- 8** USDA Gives the California Table Grape a Competitive Advantage
- 10** Tennessee Bioenergy Initiative to Develop Better, Environmentally Friendly Fuel
- 12** Idaho Accelerator Center Stands as a Monument to the Future
- 14** PNNL—Federal Resources with State Impact
- 16** EPA Pledges Financial and Technical Support for Clean Water
- 17** National Cancer Institute, Maryland TEDCO, Frederick County Sign Partnership Agreement
- 19** About the FLC
- 20** FLC Tools for Technology Transfer Professionals
- 22** FLC Regions

Technology Transfer for State and Local Governments

It has long been the policy of the federal government to ensure full use of the nation's investment in research and development. One practical approach to this challenge is to encourage collaborations and partnerships between federal laboratories and state and local governments.

The Federal Laboratory Consortium for Technology Transfer (FLC) was established and tasked by federal legislation to assist and encourage state and local governments and regional organizations, such as small business development centers and Chambers of Commerce, to participate in—and benefit from—the technology transfer process with federal laboratories.

The FLC's State and Local Government Committee ensures that state and local government organizations are aware of the benefits available to them and their regions through technology transfer partnerships and collaborations with federal laboratories.

This brochure highlights some of the successful technology transfer collaborations between state and local governments and federal laboratories. Such collaborations demonstrate the accomplishments that are possible when state and local government organizations take advantage of the opportunities available through technology transfer partnerships with federal laboratories. The message is simple—collaboration with federal laboratories is a good way to do business.

Belinda Padilla



FLC State and Local Government
Committee Chair

NASA Goddard and Economic Corp. Join Forces to Build Maryland's Technology Economy

The word “team” is often turned into an acronym standing for “Together Everyone Achieves More.”

Such a sentiment was the driving force behind the collaboration between the Innovative Partnerships Program (IPP) Office at NASA Goddard Space Flight Center in Greenbelt, Maryland, and the Maryland Technology Development Corporation (TEDCO)—a collaboration that is helping bring space program technologies down to Earth.

“TEDCO’s mission is closely aligned with our own,” said IPP Office chief Nona Cheeks. “Working with TEDCO allows us to leverage the state’s investment in technology-based economic development for the benefit of NASA as well as the State of Maryland. It’s definitely a win-win situation.”

As the largest organization of combined scientists and engineers dedicated to learning and sharing their knowledge of the Earth, Sun, solar system, and universe, NASA Goddard develops innovative information systems; electrical systems; mechanical systems; guidance, navigation, and control systems; and instrument technology. Goddard’s IPP Office helps make these technologies available beyond NASA, creating innovative, mutually beneficial collaborations with industry, academia, and other government agencies that yield positive impacts for NASA, the economy, and mankind.

Established by the Maryland General Assembly in 1998, TEDCO facilitates the creation of businesses and fosters their growth in all regions of the state through the commercialization of technology. Goddard’s IPP Office works with TEDCO under the auspices of a Space Act Agreement (SAA) put in place in August 2006.

The SAA’s purpose is to foster the development of a technology economy that will create and sustain businesses throughout Maryland and to serve as a valuable link between Maryland companies looking to benefit from the capabilities and technologies developed by and available from Goddard.

One approach to making that goal a reality is the Technology Showcase—an event at which Goddard researchers present their technology innovations and the Center’s capabilities to an audience of companies, universities, and government organizations. The first showcase, which focused on information technology (IT) innovations, was held October 12, 2006, with attendance exceeding 200.

“Through TEDCO and NASA’s formal partnership and events such as today’s showcase, technology transfer will continue to grow and serve as a way to advance Maryland’s promising technology economy,” said Renée Winsky, president and executive director of TEDCO. “The latest innovations intro-



Goddard-TEDCO Technology Showcases give representatives of industry, academia, and government in Maryland and its surroundings the chance to interact with NASA innovators whose cutting-edge technologies are available for their use.

duced today provide the state's technology companies and entrepreneurs opportunities to conduct further research and development in order to develop products that can enter the public marketplace."

"NASA understands the value in opening our doors to local businesses and entrepreneurs to facilitate technology transfer that can result in products that help our society as a whole," said IPP's Ms. Cheeks. "Seeing our initial technologies taken to the next level is an important part of our vision."

The IPP Office and TEDCO are now working on future Technology Showcases.

For more information, contact Goddard's IPP Office (301-286-5810 or techtransfer@gsfc.nasa.gov).

NASA Goddard Space Flight Center

<http://ipp.gsfc.nasa.gov>

The mission of NASA Goddard Space Flight Center is to expand knowledge of the Earth and its environment, the solar system, and the universe through observations from space. To assure that our nation maintains leadership in this endeavor, Goddard is committed to excellence in scientific investigation, in the development and operation of space systems, and in the advancement of essential technologies.

INL Provides Technical Assistance to Idaho Communities and Small Businesses

Federally mandated in 1986, Idaho National Laboratory's (INL) Technical Assistance Program allows the laboratory to provide knowledge and specialized equipment to be used for promoting U.S. competitiveness.

Through the program, laboratory scientists and engineers can provide, without a fee, assistance that is not normally available to a community or small business. It offers technical skills and laboratory resources to the people of Idaho.

This year, INL's Jennifer Morton, who is part of the Sustainable Design Group at INL, worked with an Idaho Falls, Idaho committee of community representatives looking at the logistics of holding a household hazardous waste collection day. The project included selecting a contractor, reserving a date and location, and getting local governments committed to the event financially. With these planning steps in place, the event was no longer just a possibility, and Morton was able to get funding from the INL Pollution Prevention Program to carry out the remainder of the planning/committee work.

Because of INL's Technical Assistance Program, Morton was able to participate in committee meetings, review the Request for Proposal for the hazardous waste contractor, and support the fund-raising and logistical efforts for the event. The event was a huge success, especially since it

was the first time an event like this had occurred in the Idaho Falls area in over 10 years. More than 900 households participated, and many of them waited in line 40 minutes or more to drop off their hazardous material!

Along with the household waste removed by the contractor (which included thousands of gallons of paint, as well as rarer items like mercury), 1200 gallons of used oil and 500 gallons of used antifreeze were collected.

The hope is that this will become an annual event, and residents won't have to stockpile their hazardous wastes, thereby removing the threat to the environment, themselves, or any responders who may need to go to their house in the case of an emergency.

Another significant Technical Assistance project during this year came by request of Dr. Pat Clark, a range scientist with the USDA Agricultural Research Service working in the Northwest Watershed Research Center in Boise, Idaho.

Dr. Clark requested the help of INL with electronic hardware and embedding software programming related to his own GPS-based animal tracking system that he uses to conduct ecological research examining the effects of fire and other disturbance process on range use patterns by livestock and wild animals. Dr. Clark soon found himself needing some assistance with the embedded



With an estimated 900 households participating in the event, the Bonneville County Household Hazardous Waste event collected thousands of gallons of paint, 1200 gallons of used oil, and 500 gallons of used antifreeze.



These cashmere goats are just one example of the type of animals that can be tracked using Dr. Clark's GPS system.

programming and integrating electronic hardware to continue his work. With the help of INL's David Spencer, a software analysis engineer, the main framework for the firmware code was designed, and testing is ongoing.

In addition, the preliminary version of the printed circuit board was designed, three of the circuit boards were built, and basic tests of the satellite modem interface were successfully completed.

The INL Technical Assistance Program is a win-win situation. INL is given the opportunity to assist local communities and businesses, which in turn allows the recipients to solve problems or provide alternative methods to their dilemmas.

Idaho National Laboratory www.inl.gov

In operation since 1949, INL is a science-based, applied engineering national laboratory dedicated to supporting the Department of Energy's missions in nuclear and energy research, science, and national defense. INL is operated for the Department of Energy by Battelle Energy Alliance and its partners, each of which provides unique educational, management, research and scientific assets to a world-class national laboratory.

New Mexico Launches Technology Research Collaborative

The New Mexico Technology Research Collaborative (TRC) was created to promote cutting-edge technology commercialization through interinstitutional collaborations that promote economic development for the state.

By encouraging collaborations among the state's universities, federal laboratories and other research institutions, TRC stimulates technology commercialization, thus growing the New Mexico economy through the creation of new startups and new jobs in the technology sector.

In 2005, under the leadership of former New Mexico Governor Gary Caruthers, the state legislature appropriated \$1.1 million to TRC. TRC awards technology maturation funds for interinstitutional projects with strong commercialization potential.

In 2005, funding was given to four projects in New Mexico. Each lead institution collaborated with other research institutions on a range of projects, including developing or improving fuel cells, optics, supercapacitors and radiopharmaceuticals.

The radiopharmaceutical isotopes project, led by the University of New Mexico (UNM) in collaboration with Los Alamos National Laboratory (LANL), is one of the most successful projects funded by TRC in 2005. GE Healthcare has agreed to collaborate on the initial project.

Supported by TRC funds, the New Mexico Center for Isotopes in Medicine (NMCIM) is in the pro-

cess of developing gallium-68 (Ga-68), an element used in positron-emission tomography (PET) imaging. This isotope, and other radiopharmaceuticals in general, are used to diagnose and treat multiple diseases. Scientists from UNM, LANL, and GE Healthcare, working at NMCIM, are developing a commercial germanium (Ge-68)/Ga-68 generator technology that will allow production of Ga-68 radiopharmaceuticals.

"The New Mexico Center for Isotopes in Medicine considers the funding provided by the state of New Mexico Technology Research Collaborative to be a key first step in the development of a medical isotopes industry in New Mexico," said Scott Burchiel, Director of the NMCIM and Principal Investigator for the TRC-funded project. "The resources and technology provided by Los Alamos National Laboratory through the LANL Neutron Science Center Isotope Production Facility are unparalleled and are leading to important business relationships with global leaders in the industry, such as GE Healthcare.

"The development of a distributed gallium-68 generator system will allow PET imaging technology to be achievable in small and rural communities, meeting an important goal of improved healthcare access," Burchiel stated.

After the 2006 legislative session, four additional grants were awarded with the \$2 million appropriated to the TRC that year.

Los Alamos Neutron Science Center (LANSCE) Isotope Production Facility hot cell used for production of Ge-68/ Ga-68 generators



After the 2007 legislative session, and the subsequent appointment of Fred Mondragon as the New Mexico Cabinet Secretary of Economic Development, the TRC was incorporated into the New Mexico Economic Development Department.

“The state Economic Development Department will lead the effort to accelerate the transition of technology from our many excellent research institutions into companies that will generate the kind of high-paying technology jobs that New Mexico needs for the right kind of economic growth,” Mondragon said. “The theme of targeted business and technology maturation, combined with better leveraging of existing incentives to establish more product development and manufacturing jobs here, will continue.”

Los Alamos National Laboratory www.lanl.gov

Los Alamos National Laboratory is the largest institution in northern New Mexico. From its origins as a secret Manhattan Project laboratory, LANL has attracted world-class scientists and applied their energy and creativity to solving the nation’s most challenging problems. LANL’s five priorities are safety, security and compliance; the national security mission; outstanding science in support of its mission; business operations and management practices; and community partnerships.

USDA Gives the California Table Grape a Competitive Advantage

The California Table Grape Commission was established in 1967 with the purpose of increasing worldwide table grape demand. At the time, per capita consumption was less than 2 pounds per year and table grapes were sold only in the U.S. Today that number is close to 8 pounds per person, and table grapes are exported to over 50 countries.

It is thanks to a federal-state partnership, the innovation and research done at the USDA's Agricultural Research Service (ARS)—Fresno, California grape breeding program, and the California Table Grape Commission.

In the tradition of a strong research heritage, researchers at the ARS's San Joaquin Valley Agricultural Sciences Center in Parlier, California, developed several new varieties that have taken hold of the U.S. table grape industry and abroad. These new varieties were developed in cooperation with the California Table Grape Commission. This partnership was established to help give California grape growers a fair market advantage against growing pressure from international grape imports.

Today there are approximately 500 California grape farmers, mostly family-owned businesses, covering over 120,000 acres, producing high quality, reasonably priced, world-class variety grapes. The very best varieties in the world come from

California, and 45% of California's volume are USDA-developed varieties. A team of researchers established a pilot program in which ARS licensed several of its new grape varieties to the Commission.

The first U.S. grape variety to be licensed to the commission was Sweet Scarlet, a Muscat-flavored grape. Muscat-flavored grape production for the fresh market is currently limited to one cultivated variety, Italia, a seeded grape.

Production of Italia has gone down since 1997 due in no small part to Sweet Scarlet, a seedless variety, making it more desirable for the fresh market. It is likely that Sweet Scarlet grapes will exceed sales of \$500,000 this season. Over 131,000 plants were sold during the 2004 and 2005 nursery season.

This summer, ARS exclusively licensed two more grape varieties to the California Table Grape Commission: Scarlet Royal and Autumn King.

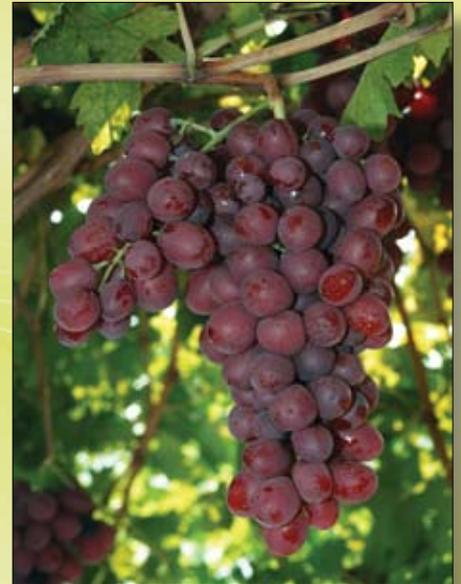
Scarlet Royal is a mid-season red grape that has large seedless berries and good storage capacity. The flesh is translucent and medium-firm. Because there is a gap in production between early and late red seedless grapes, it is likely that Scarlet Royal could replace half of the red seedless grape production. It is estimated that within 10 years the value of Scarlet Royal production could be \$68 million.



Sweet Scarlet



Autumn King



Scarlet Royal

Autumn King is a very late-ripening white seedless table grape that has very large berries. It will extend the season that white grapes are available. Its very large berries develop without the use of gibberellic acid, a commonly used additive to enhance fruit size. It is expected that production from Autumn King will replace a majority of the white table grape market within 10 years of its release.

Agricultural Research Service
www.ars.usda.gov

The Agricultural Research Service is responsible for developing new knowledge and technology to solve agricultural problems; ensure the productivity of high-quality food and agricultural products to meet the nutritional needs of U.S. consumers; sustain a viable food and agricultural economy; and maintain a quality environment and natural resource base.

Tennessee Bioenergy Initiative to Develop Better, Environmentally Friendly Fuel

The Tennessee Bioenergy Initiative, a unique partnership between Oak Ridge National Laboratory (ORNL) and the state of Tennessee, promises to bear fruit both for national science objectives as well as economic development in the state—not to mention establishment of Tennessee and ORNL as leaders in bioenergy development and research nationwide.

Last year, ORNL began preparing to bid on one of three \$125 million bioenergy research centers funded by the Department of Energy, with the goal of developing cost-effective, cellulosic sources of transportation fuels from readily available plants such as switchgrass, which grows native in most states, and poplar trees.

Funding already promised from the state offered a brand new building for the center, dedicated to the multidisciplinary quest toward reducing the nation's dependency on foreign oil sources. Partnering with the University of Tennessee and other research institutions in the South—as well as others across the nation—ORNL leaders continued to work with state policy makers to launch an effort that will transition scientific research efforts into industrial success.

In early June, the Tennessee General Assembly approved a \$61 million funding package, proposed by Gov. Phil Bredesen, that will provide ORNL with research dollars, offer incentives to farmers, and

establish a \$40 million, 5 million gallon-per-year plant for demonstration of switchgrass-to-ethanol production—effectively filling the gaps needed to deliver ORNL's research to the marketplace.

When DOE selected the ORNL-led Bioenergy Science Center as one of the three winners, the award was announced to local media by none other than Gov. Bredesen.

“These two investments,” he said, “position Tennessee and the South to be among the leaders in the emerging field of bioenergy.”

“The bioenergy efforts underway in the state of Tennessee through ORNL's bioenergy center show how far the Laboratory has come in our cooperation with the state in which we reside,” said Tom Ballard, interim director of Technology Transfer and Economic Development for ORNL. “This all started in 2000 when UT-Battelle began jointly operating the Laboratory, and that partnership is now succeeding in ways we could not have imagined then. The national movement toward harnessing bioenergy cannot succeed without local support from the agriculture industry and state regulators and policymakers. And in the end, working together benefits everyone.”

Some of those benefits will be the growth of a new agri-economy in the state of Tennessee with creation of an anticipated 4,000 jobs as, first, the precommercial demonstration ethanol plant and

In June 2008, the Tennessee General Assembly approved a \$61 million funding package to establish a \$40 million, 5 million gallon-per-year plant for demonstration of switchgrass-to-ethanol production.



follow-on production-sized facilities convert switchgrass and other crops to ethanol and other biofuels.

The initiatives also promise to produce technologies and startups that can be spun out of the lab, as scientists develop microbial enzymes to break down lignin and free sugars locked securely inside plants' matrix of cellulose and hemicellulose—a process that has yet to be proven economically feasible. In short, the partnership promises to create a new bio-energy industry from scratch.

“The relationship between the state and ORNL in an initiative with a specific, expressed technology transfer goal of developing viable, economical energy production will pay big dividends both for the Laboratory and for taxpayers,” Ballard said.

Oak Ridge National Laboratory www.ornl.gov

ORNL is a multiprogram science and technology laboratory managed for the U.S. Department of Energy by UT-Battelle, LLC. Scientists and engineers at ORNL conduct basic and applied research and development to create scientific knowledge and technological solutions that strengthen the nation's leadership in key areas of science; increase the availability of clean, abundant energy; restore and protect the environment; and contribute to national security.

Idaho Accelerator Center Stands as a Monument to the Future

Born of an alliance between Idaho National Laboratory (INL) and Idaho State University (ISU), the Idaho Accelerator Center (IAC) in Pocatello, Idaho, has been in operation since 1994.

The pyramids rise from the rounded hills like a monument to some civilization, but not an ancient civilization. The IAC stands as a monument to the future.

At the Accelerator Center, the nature of physics is studied, and solutions to global human problems—polluted soils, brain cancers, smuggled nuclear weapons, and aging and failing superstructures—are discovered and sent out into the world.

Bright-eyed students and gray-headed researchers work side-by-side studying fundamental radiation science and developing practical accelerator applications.

From the university, the Accelerator Center takes basic nuclear research capabilities and the fresh ideas of students led by seasoned researchers. From INL, the Center takes nuclear engineering experience forged from 50 years of designing, building and testing reactors. Add to this an array of small accelerators not seen elsewhere in the world and the result is, according to Associate Director James Jones, a major, world-class research center.

Jones, an INL physicist, has worked with the IAC alliance since 1994 and has seen it continue to

evolve through acquisition, expansion and imagination. In 1999, he was instrumental in bringing a one-of-a-kind, 30-million electron volt linear accelerator to the new university facility built into the foothills just north of the university's main campus.

Driven by the INL deliverable approach, students, faculty and INL researchers tackle challenging short-term projects. The IAC, however, owns another whole set of deliverables unlike any encountered by INL.

It is still an integral part of ISU, and Director Frank Harmon and Jones never lose sight of student needs—education and diplomas. “The students get more than a great university education,” said Jones. “They get unparalleled research opportunities and pragmatic problem-solving projects.”

From foiling smugglers to x-ray vision, the IAC is more extensive than ever imagined. In July 2001, Positron Systems, Inc., of Boise, Idaho, licensed a new INL process that predicts material failure and its remaining useful life, saving money and extending uninterrupted operation for critical components such as those used in airplanes, bridges and utilities.

By September, an agreement was in place with the IAC to operate using the Center's equipment, and a Work for Others agreement was signed to utilize ISU physicists.



The Idaho Accelerator Center

Then, in 2004, Positron Systems opened its first company-owned accelerator center at the Testing Service Center in Pocatello, and became part of the IAC campus.

“It’s much more extensive than I ever envisioned. I thought it would be more R&D, but instead it’s very problem focused,” said Jones. “A program manager comes to us and says ‘can you do this?’ and we get the students, faculty, engineers and scientists figuring out a way.”

Idaho National Laboratory www.inl.gov

In operation since 1949, INL is a science-based, applied engineering national laboratory dedicated to supporting the Department of Energy’s missions in nuclear and energy research, science, and national defense. INL is operated for the Department of Energy by Battelle Energy Alliance and its partners, each of which provides unique educational, management, research and scientific assets to a world-class national laboratory.

PNNL—Federal Resources with State Impact

For more than 40 years, Pacific Northwest National Laboratory (PNNL) has leveraged its federally funded resources to support technology-based economic development with state governments.

For more than a decade, staff at PNNL have served as science and technology advisors to the governors of Washington, Oregon and Idaho. These advisors reside in offices proximate to state leadership, providing objective advice that helps shape programs and legislation for the state. Two of PNNL's commercialization team members were appointed as business representatives to craft a set of recommendations for the Washington Economic Development Commission.

PNNL and WSU-Tri-Cities are building the Bio-products, Sciences, and Engineering Laboratory on the WSU Tri-Cities campus and working with other organizations on a research program to develop biofuels and other value-added products from biomass.

The Oregon Nanoscience and Microtechnologies Institute (ONAMI) was created to research and commercialize nanoscience and microtechnologies for new products, companies, and jobs in the Pacific Northwest. PNNL has played a significant role in ONAMI, spawning a new and important industry in the Pacific Northwest based on small, lightweight, and more efficient chemical, energy and biological systems.

PNNL, Idaho National Laboratory, Idaho State University, Oregon State University, the University

of Idaho, and the University of Washington teamed to form the Northwest Regional Collaboratory. Led by PNNL, the collaboration combines satellite images into watershed models for streamflow forecasting and decision making about water release from reservoirs.

With the University of Washington, PNNL played a leadership role in electronically connecting research and development centers in the Inland Northwest and linking them to research centers around the world.

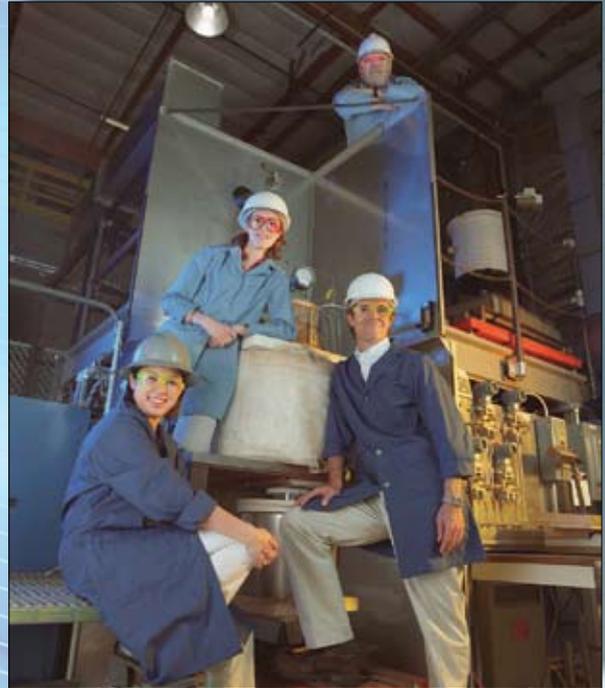
The Northwest TeraLink network is extending to eastern Washington, Idaho, and Montana; it is the kind of high-speed access to national research and education networks that was previously available only in Seattle and Portland. The network greatly improves the ability for research institutions to work together to solve challenging research problems.

The GridWise project teamed with regional utilities and industry in a demonstration in Northwest homes.

200 homeowners in Washington and Oregon tested new energy technologies designed to improve grid efficiency and reliability to use electricity more wisely at peak times, reducing the need for new electricity infrastructure.

PNNL staff hold active governor-appointed positions on boards such as Spokane Intercollegiate Research and Technology Institute and the Washington Technology Center (WTC).

In addition to lending their expertise in collegiate lecture halls throughout the region, PNNL researchers also participate in a variety of programs that offer students practical experience on their own research projects.



Both organizations are state-funded economic development agencies that provide advice and support for technology-based businesses.

Active in both K-12 and higher education programs at the state level, the Laboratory co-manages LASER (Leadership and Assistance for Science Education Reform). The program is bringing national best practices in curriculum and teacher training to K-12 science classrooms in more than 150 school districts in Washington state.

Dozens of PNNL's staff scientists and professionals serve in faculty positions at several state universities in the region, teaching and inspiring the next generation of technology entrepreneurs.

Through the Laboratory's Technology Entrepreneurship Program, business and law students at the University of Oregon and other universities evaluate technologies from PNNL for commercial potential, sometimes forming new businesses.

Key appointments on committees and boards at Washington State University, the University of Washington, and the University of Oregon keep PNNL plugged into these vital curricula.

Pacific Northwest National Laboratory www.pnl.gov

Pacific Northwest National Laboratory (PNNL) is one of ten Department of Energy multi-program national laboratories. PNNL delivers breakthrough science and technology to meet selected environmental, energy, health and national security objectives; strengthen the economy; and support the education of future scientists and engineers.

EPA Pledges Financial and Technical Support for Clean Water

Arsenic is a widely distributed, naturally occurring semi-metal that is found in ground water throughout the United States.

Long-term exposure to arsenic has been linked to adverse health effects, including cancers of the bladder, lungs, skin, kidneys, and liver.

In January, 2001, when the U.S. Environmental Protection Agency (EPA) announced the final standard for arsenic in drinking water, the EPA Administrator pledged financial and technical support for small drinking water system owners and operators to reduce the costs of implementing and meeting the new standards.

Over the next several years, the EPA conducted two rounds of demonstrations of technologies for removing arsenic from drinking water. In order to assist each community water system with choosing the most appropriate arsenic removal technology for its specific needs, the EPA coordinated efforts between municipalities, local governments, and tribes with equipment producers through Cooperative Research and Development Agreements (CRADAs). This allowed the agency to demonstrate

new technologies where their effectiveness could be demonstrated onsite.

Demonstrations typically follow a set procedure. First, new water treatment equipment, matched to the characteristics of the water source, is installed. This new equipment is operated by the local systems managers while EPA-contracted scientists monitor water samples weekly. The EPA used the results from this and similar projects to demonstrate new methods, tailored to community water conditions, for the removal of arsenic from drinking water.

The expected outcomes of this demonstration project include widely communicating the benefits and accessibility of the latest, most cost-effective technologies for removing arsenic from drinking water.

The results of this effort will assist small communities with selecting the most appropriate and cost-effective technology for use at their sites. In addition, residents will benefit by having arsenic levels in their drinking water reduced to levels that comply with the new EPA standard.

Environmental Protection Agency
www.epa.gov

The mission of the Environmental Protection Agency is to protect human health and the environment. Employing more than 18,000 people, the EPA staff is comprised of highly educated and technically trained engineers, scientists, and policy analysts.

National Cancer Institute, Maryland TEDCO, Frederick County Sign Partnership Agreement

To further fulfill its role of Maryland's leading source of funding for seed capital and entrepreneurial business assistance for technology transfer and development programs, the Maryland Technology Development Corporation (TEDCO) has signed a Partnership Intermediary Agreement (PIA) with the Frederick County Board of County Commissioners via the Frederick County Office of Economic Development (OED) and the National Cancer Institute (NCI).

The goals of the arrangement are to foster cooperative research activities and enhance awareness about technology transfer opportunities between NCI, small businesses and universities throughout the state.

With this agreement, NCI will share with TEDCO and Frederick County OED information about its technological inventions that are available for licensing.

In return, TEDCO and Frederick County OED will identify local businesses, entrepreneurs and universities that would be interested in licensing NCI technologies. NCI will locate its unique capa-

bilities and technology-related assistance services about which TEDCO and Frederick County OED can jointly generate awareness with local business and educational institutions.

In addition, NCI will also highlight research and development activities in which small businesses and universities, identified by TEDCO and Frederick County OED, can submit proposals describing how their technologies can contribute to NCI's work. Together, NCI and TEDCO will work to provide various technology marketing events that feature NCI technology and research and development areas of interest.

The first of these events, "Preventing, Diagnosing and Treating Cancer: Working With Industry to Promote Public Health," will highlight opportunities to transfer and commercialize technologies developed by NCI's intramural program, the Center for Cancer Research (CCR).

CCR is an organization of scientists, physicians, trainees and support staff dedicated to making fundamental discoveries in the prevention, diagnosis, and treatment of cancer and HIV/AIDS.

National Cancer Institute
www.cancer.gov

The National Cancer Institute (NCI) is a component of the National Institutes of Health (NIH). The NCI coordinates the National Cancer Program, which conducts and supports research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer, rehabilitation from cancer, and the continuing care of cancer patients and their families.

FEDERAL LABORATORY CONSORTIUM

FLC

FOR TECHNOLOGY TRANSFER

The Only Government-wide Forum for Technology Transfer

About the FLC

The Federal Laboratory Consortium for Technology Transfer (FLC), a nationwide network of over 250 federal laboratories, is the only government-wide forum for technology transfer (T2). Organized in 1974 and formally chartered by the Federal Technology Transfer Act of 1986, the FLC provides the framework for developing T2 strategies and opportunities by promoting and facilitating technical cooperation among federal laboratories, industry, academia, and state and local governments.

As the recognized leader in maximizing collaborative research for the transfer of technologies, the FLC enhances the socioeconomic well-being of the nation in the global marketplace.

Industry, government, and academic personnel looking to strengthen their T2 capabilities to capitalize on the nation's investment, better their position in the marketplace, or research technology can look to the FLC to foster the rapid movement of federal laboratory research results into the mainstream of the U.S. economy. The FLC advances T2 by expanding communication among industry, government, and academia. The FLC's website, Technology Locator, *T2 Desk Reference*, *FLC NewsLink*, trade show exhibits, awards program, education and training publications, and network of experts are only a few of the tools it provides for successful T2.

The FLC is a consortium driven by the dedicated people of the federal laboratory system.

These people are the scientists, agency representatives, and T2 professionals who transfer federally funded technology and expertise to the marketplace. Serving as a gateway for industry, government, and academia to access research and development, the FLC also serves as a resource for T2 education and training, news, programming, awards, and initiatives.

The FLC Vision

The vision of the FLC is to actively promote the fullest application and use of federal research and development by providing an environment for successful technology transfer. The Consortium will be the recognized leader in maximizing collaborative research and transferring federal technologies to enhance the socioeconomic well-being of the nation in the global marketplace.

FLC Tools for Technology Transfer Professionals



www.federallabs.org

The FLC website makes it easy to find people, capabilities, and applications within the FLC's network of federal labs and centers. The site publicizes T2 news and technology trends, and provides a gateway to FLC products and services.



FLC Washington, DC Representative

To keep the technology transfer community informed of changes in relevant legislation and policy, the FLC monitors congressional studies, proposals, and announcements via the Washington, DC Representative.



Education and Training

The FLC provides education and training on all aspects of T2 to laboratory personnel. Services include fundamentals, intermediate, and advanced training courses offering continuing education units (CEUs); a wide range of publications and resources; a training resources database; and an online T² curriculum.



FLC Awards Program

The FLC honors technology transfer excellence through its awards program. Each year, the FLC recognizes those who advance federal technology and expertise to the marketplace.



FLC NewsLink

A free monthly newsletter reporting on a host of technologies and training events, and highlighting the technological advances of federal laboratories, industry, and academia.



Technology for Today

An annual collection of T2 success stories.

FLC Technology Locator *(Personalized 1:1 Assistance!)*



For industry and other technology seekers, the FLC Locator Network serves as a point of entry to federal laboratory expertise and technology. Through its network of representatives, the FLC puts a potential partner in contact with a federal laboratory with expertise and capability in a specific area of interest. Once the FLC identifies the contact, the arrangements for the technical exchange are between the user and the laboratory.

Contact the
FLC Technology Locator,
Frank Koos, at 856-667-7727
or fkoos@utrs.com

FLC Technology Transfer Training DVD Set

The FLC has created this 21-hour, 11-DVD, 3-CD set containing 14 video courses covering a variety of technology transfer topics presented by subject-matter experts from industry and government.

Technology Transfer Fundamentals Training - \$50.00

- 3 DVDs, 1 CD, 1 booklet with presentations
- Introduction to T2 and the FLC
- CRADA Workshop

Technology Transfer Intermediate Training - \$50.00

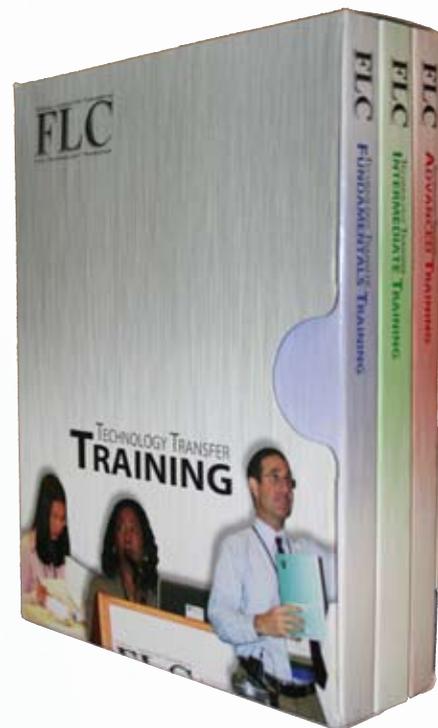
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FLC Regions

To manage the technology transfer efforts of the FLC, the U.S. is divided into six geographical regions. Each of the regions is run by a Regional Coordinator and Deputy Regional Coordinator.



Far West

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