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Maine Economic Improvement Fund Annual R&D Report

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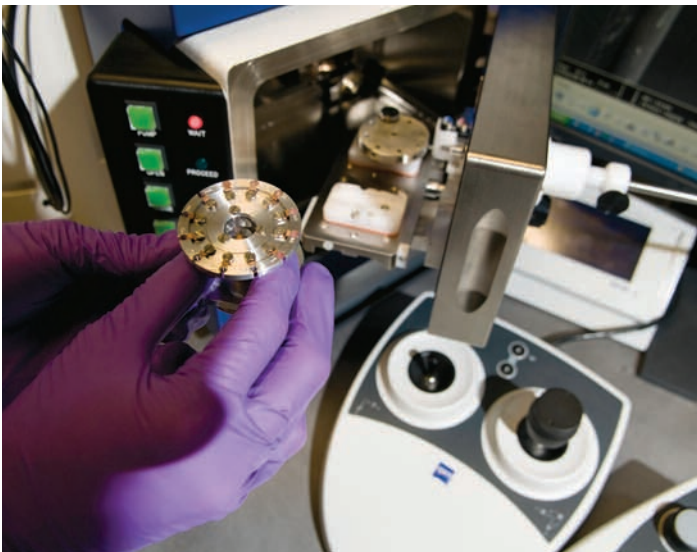
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Maine Economic Improvement Fund

Building Maine's Economy through Research, Development, and Jobs

A SUCCESSFUL PARTNERSHIP AMONG
MAINE'S PUBLIC UNIVERSITIES, GOVERNMENT, AND THE PRIVATE SECTOR





Targeted Research Areas

The University of Maine System directs MEIF dollars specifically to support university-based research in the State's legislatively designated seven strategic technology areas:

- Aquaculture and Marine Sciences
- Biotechnology
- Composites and Advanced Materials Technologies
- Environmental Technologies
- Information Technologies
- Advanced Technologies for Forestry and Agriculture
- Precision Manufacturing

University-based Research Drives Economic Development

The Maine Economic Improvement Fund is a key component of Maine's science and technology plan. Since the Maine Legislature established it in 1997, MEIF has positioned the University of Maine System at the center of statewide efforts to leverage economic development through targeted investment in university-based R&D. Indicators of success show that Maine's MEIF investment is paying dividends:

- creating businesses and jobs, including more than 600 for people working on MEIF-funded projects
- boosting Maine's economy by leveraging MEIF funds to bring federal and private-sector grants and contracts to Maine
- building capacity and expertise to help Maine companies solve problems and commercialize innovation
- helping commercialize patents, innovations and intellectual property
- capitalizing on natural resources and core strengths by focusing R&D efforts on economic sectors where Maine can make real gains

University research personnel use MEIF resources to support the staff, equipment and facilities they need to successfully pursue and

develop research projects. MEIF funds often provide the required match to acquire federal or private-sector grants. MEIF money also supports equipment purchases or facilities renovations to make the universities competitive for federal grants.

MEIF increasingly fosters university partnerships with business and industry through economic development collaborations, entrepreneur training programs, business incubators, business research and other programs. These efforts lead to new Maine-based products, technologies, patents and spin-off businesses.

All seven of Maine's public universities are involved in research working to improve Maine's economy and quality of life. This document focuses specifically on MEIF-funded university work in the state's seven technology sectors. The two universities with graduate programs in some or all of those targeted research areas (sidebar) have received MEIF funds, with approximately 80 percent allocated to the University of Maine and 20 percent to the University of Southern Maine. In 2009, a small fund was established to promote targeted research at the other five universities.

MEIF History

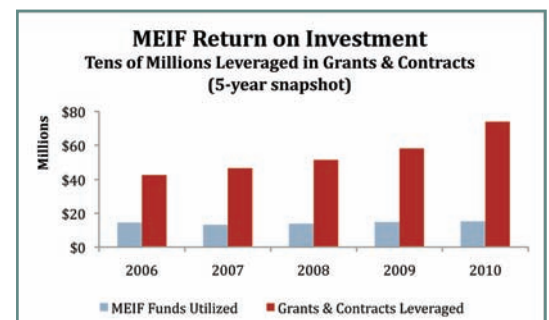
One of Maine's best and most successful public investments began in 1997, when the Maine State Legislature's Joint Standing Committee on Research and Development recommended an investment approach that ultimately led to development of the Maine Economic Improvement Fund (MEIF).

In March 1997, an Economic Improvement Strategy was created. It appropriated \$500,000 to the University of Maine System to administer investments in targeted research and development to provide the basic investment necessary to obtain matching funds and competitive grants from private and federal sources.

MEIF continues to be funded through an annual State appropriation and periodically augmented through voter-approved bond referenda. The R&D fund provides researchers at Maine's public universities with the investment necessary to leverage federal and private sector research grants and contracts to:

- create and sustain economic development and innovation
- attract and retain world-class researchers
- provide support for modern laboratories and state-of-the-art equipment
- create new jobs, products, patents, technologies, companies, and exciting opportunities—right here in Maine.

Each year, the MEIF investment in university research helps faculty and students successfully leverage tens of millions of dollars in grants and contracts.



MEIF: One of Maine's Best Investments



UMaine recently passed the \$100 million-a-year mark in grants and contracts for the first time in history—with the State's MEIF investment playing a key part of that overall research milestone.

UMaine is heavily involved in basic and applied research, with a wide array of research facilities and resources on its Orono campus as well as at off-campus research sites located around the state. UMaine's extensive research infrastructure, accumulated over many decades, has enabled it to successfully pursue federal and private grants and contracts.

Since 1997, when the State of Maine made its first targeted MEIF investments, UMaine has grown its overall external grants and contracts by more than 250% and increased its patent portfolio and spin-off businesses by a factor of 10. Through improvements to its research infrastructure, UMaine has also increased its ability to compete for federal grants and contracts and its capacity to serve its students, as well as Maine business and industry.

For every dollar Maine invests in UMaine through MEIF, researchers have leveraged approximately five dollars from sources outside Maine—making it one of the best investments the State makes.

Small Campus Initiative

The MEIF Small Campus Fund was created in fiscal year 2009 to support and develop research performed at the five smaller UMS campuses: UMA, UMF, UMFK, UMM and UMPI.

The \$100,000 fund is distributed annually on a competitive basis to ensure that each university in the System has an opportunity to build and improve research infrastructure and capacity. The MEIF Small Campus Fund is administered by the University of Maine System Office.



MEIF funding continues to be a critically important tool in USM's efforts to sustain and grow applied R&D programs relevant to Maine's economic and educational needs.

MEIF supported projects in such areas as bioinformatics, environmental science and health, precision manufacturing, and toxicology link USM researchers to projects that can stimulate economic growth. USM's emphasis on engaging students in faculty research whenever possible also has the added benefit of providing learning experiences that will help graduates drive Maine's innovation economy.



University R&D is a Driving Force in Maine's Economy:



Photo by Edwin Remsburg, USDA



SUCCESS

By leveraging MEIF funds, in the past five years UMaine and USM have attracted more than \$250 million in federal and private-sector grants and contracts related to the seven strategic research areas. This funding directly results in Maine products and technologies such as the Bridge in a Backpack™, offshore wind turbines, advances in regional biomedical research, and studies which lead to improvements in Maine's marine science based industries.

RETURN ON INVESTMENT

Each year the State's MEIF appropriation is matched by tens of millions of dollars in federal and private funds for important university research. UMaine utilizes its long-established research capacity to attract the majority of these matching funds. USM continues to build its research capacity in federal and private-sector grants and contracts.

STRATEGIC IMPACT

In the MEIF's most recent five year period, nearly \$300 million was invested in university-based research and development related to the targeted areas. The amount represents the combined total of grants and contracts received, including more than \$70 million in MEIF funds invested to leverage federal and private dollars.

CREATING JOBS

Several hundred full-time equivalent jobs are funded annually in Maine through the funds leveraged and expended related to MEIF. These positions include faculty, graduate assistantships, undergraduate students involved in research, and other key staff.

INNOVATION ENGINEERING

The University of Maine System recently made a decision to invest in UMaine's relatively new Innovation Engineering® program. Under the guidance of UMaine alum Doug Hall, a nationally renowned innovation expert and founder of Eureka! Ranch, the program will be established at all seven universities and include courses for undergraduate and graduate university students, as well as intensive three-day leadership institutes for Maine's business, government and nonprofit leaders. MEIF research and development—and Maine as whole—will benefit from this investment as our students, business leaders, and others learn a systematic approach to innovation which provides the “tools and confidence to lead the creation, communication, and commercialization of meaningfully unique ideas.”

For more information about the University of Maine System visit:
www.maine.edu or call (207) 973-3201