

# Montana *REDI*

Research and Economic Development Initiative:



MONTANA  
UNIVERSITY SYSTEM

*Leveraging technology, agribusiness, energy and entrepreneurship into more jobs.*

## Investing in Research—scaling up new ideas into new industries

Citizens, government leaders, business leaders and public university systems in all 50 states widely recognize the role of research as a catalyst for economic development. The U.S. Chamber of Commerce finds that “states most likely to grow in the next decade” will be those where government, universities and the private sector “collaborate effectively to make sure that more new ideas developed by companies and in research labs scale up into industries (*Enterprising States: Policies that Produce/2012*).”

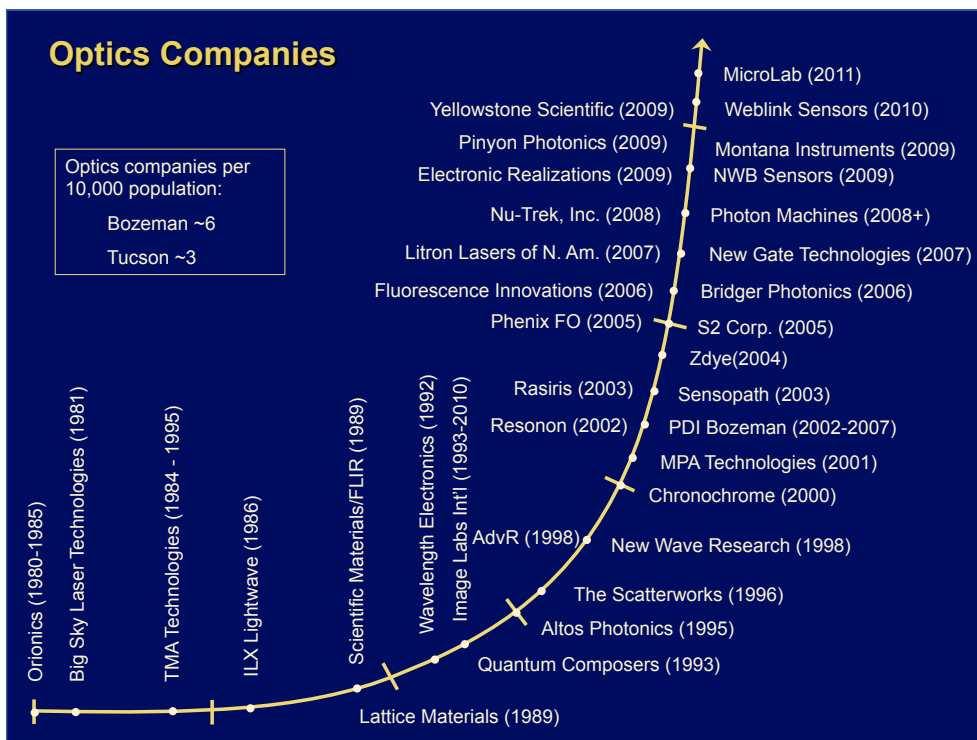
Montana has already seen success from the intersection of university-based research and industry. Two recent examples include:

- **Rivertop Renewables, Missoula** will hire 20 employees next year after raising \$26 million in 2014 to advance its line of detergents and corrosion inhibitors derived from plant sugars. The company formed in 2008 from research done at the University of Montana.
- **Ligocyte, Bozeman** was purchased in 2012 for \$60 million by Takeda Pharmaceutical for its work on a norovirus vaccine with worldwide application. Ligocyte’s growth and success was helped by technology from, and a strong relationship with, Montana State University.

In addition, three of the top four wheat varieties planted in Montana in 2012 were developed by university researchers. Yellowstone, Genou and Rampart made up more than half of the total winter wheat planted. Winter wheat generates roughly \$600 million in revenue annually in Montana.



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With funding from the National Science Foundation in 1995, investments in research and faculty have given Bozeman more optics companies per capita than the nation's optic's capital, Tucson, Ariz.

## Montana REDI—a strategic investment portfolio in key areas:

- 1. Agriculture and Natural Resources.** Historically, the agriculture and natural resource sectors have been plagued with uncertainty from year to year, linked to variation in crop prices, weather, prevalence of pests and disease. Investment in reducing uncertainty through precision and system wide informed practices is merited. Food production, agribusiness, forestry and hard-rock mining are vital resources in Montana's economy.
- 2. Energy.** Montana's energy picture has a diverse base of coal, oil, gas, hydropower, wind power, solar and geothermal potential. Households, communities and industries rely on scientific advancements that improve exploration, generation and delivery. University-private industry research partnerships are critical vehicles for these advancements.
- 3. Technologies.** The Montana University System can advance technologies in three key areas:
  - **Materials and Manufacturing.** A materials research effort will provide benefits to manufacturing, transportation and construction, which rely on the development of stronger, cheaper and lighter-weight materials.
  - **Big Data/Montana Cloud.** Montana's research and technology development depends on substantial computing capability. Investment in information networks has improved the ability to create, analyze and share information important to economic development.
  - **Health and Biomedical Advancement.** University-based research has the potential to improve health-related services ranging from basic health care to immunization advancements to advancements in mental health and veterinary medicine.

Many states are strengthening and diversifying their economies by investing specifically in university research as growth in the high-tech industry has outpaced the national economy by an average of four-to-one. Success stories include:

- **Utah**— *The Utah Science, Technology and Research (USTAR) Initiative*  
University researchers leveraged a modest state investment into nearly \$140 million in research, growing the state's research activity by 44 percent.
- **Georgia**— *The Georgia Research Alliance (GRA)*  
This initiative leveraged \$595 million of state funding into \$2.6 billion of direct grant investment in Georgia, supporting or assisting 300-plus newly launched companies and 6,000-plus high-value jobs.
- **Arizona**— *The Technology and Research Initiative Fund (TRIF)*  
The Arizona initiative has generated nearly \$630 million in entrepreneurial research activity geared toward identified state research priorities.



**The Montana University System is the largest research and development enterprise in Montana,** with total research expenditures in excess of **\$160 million annually.** About **90 percent** of those funds come from non-state-funded external grants that are earned by university researchers in a highly competitive national and international arena. University researchers will compete for *Montana REDI* funding on the merits of their research productivity and potential to move Montana's economy forward and provide jobs.



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