



Wisconsin

Programs & Initiatives Advancing the Biopharmaceutical Industry



Key Programs & Initiatives

The opportunities generated by the biopharmaceutical sector as a leader in innovation and high quality job creation are not limited to just a few states, but have a substantial national footprint across states. States proactively pursue the development of the biopharmaceutical sector because it represents: a large-scale, geographically dispersed supply chain spanning R&D through to production and distribution; a key driver of the economy including the recent economic recovery; and a sector paying high wage rates in quality jobs. States are deploying a range of programs and initiatives to support and grow the biopharmaceutical industry, including: comprehensive state development strategies; investments in R&D and related infrastructure; programs to boost venture capital, entrepreneurship, and innovation development; advanced manufacturing; economic incentive initiatives; and programs working to advance STEM education and training. Wisconsin continues to focus on the biosciences as one of its key strategic industry clusters and the state and its science and technology-focused organizations have developed a supportive innovation ecosystem for industry growth.

Quick Guide: Wisconsin's Programs & Initiatives Advancing the Biopharmaceutical Industry



Comprehensive State Strategies to Support Biopharmaceutical Development:

- The Wisconsin Economic Development Corporation (WEDC)
- BioForward



R&D Investment:

- The Wisconsin Institute for Discovery



Biosciences Infrastructure Development:

- The University Research Park (URP) in Madison
- The Milwaukee County Research Park



Venture Capital, Entrepreneurship, and Other Innovation Related Programs and Initiatives:

- SBIR Advance Program
- The Wisconsin Technology Council
- WEDC Seed Accelerator Program
- SBDC's Entrepreneurial Training Program
- Business Incubators and Accelerators
- WEDC Capital Catalyst Program
- Wisconsin's Early-Stage Business Investment Program and Qualified New Business Venture Program
- WEDC Technology Development Loans



Economic Incentives:

- R&D Tax Credit
- Manufacturing and Agriculture Tax Credit



STEM Workforce & Education:

- Wisconsin Department of Public Instruction STEM Grants Program

Impacts

- **Wisconsin Institute for Discovery (WID)** – Since its inception in 2010, WID has been awarded more than \$22 million in grant funding from a variety of foundations and agencies.
- **University Research Park (URP) in Madison** – A 2010 economic impact study found the URP supported nearly 9,300 jobs across Wisconsin, generated \$43M in state and local tax revenue annually, and provided an overall economic impact of more than \$825M each year.
- **Early-Stage Business Investment Program and Qualified New Business Venture Program (QNBV)** – Since the program's inception in 2005, total funding received by certified companies reached \$1.4 billion through 2015 including qualifying investments, other private investments and grant funding. Through 2015, the total number of certified companies reached 180 which includes many in the biosciences and in health technologies.

Wisconsin by the Numbers



Source: National Science Foundation, Science & Engineering Indicators 2014.

Comprehensive State Strategies to Support Biopharmaceutical Development

The Wisconsin Economic Development Corporation (WEDC) is the State of Wisconsin's lead economic development organization. Following a trend seen in multiple states, WEDC replaces the former state agency (The Department of Commerce) with a quasi-private agency (although the majority of the organization's budget comes from state funding). WEDC works across all business sectors in the state, but has designated seven industry clusters for specific attention based on their strategic promise for high-wage job growth in the state, and the bioscience industry is one of these.

WEDC has streamlined its economic development support programs, with a strong focus on supporting early-stage capital access for emerging and expanding business enterprise. Access to capital and entrepreneurial development services are facilitated through close relationships between WEDC and regional technology-based economic development partner organizations – including several with a direct focus on biomedical and life science commercialization (such as Bridge to Cures in Milwaukee, and the Wisconsin Innovation Initiative in Madison). The state, advised by WEDC, has also expanded its tax credit programs and other incentive programs designed to foster innovation commercialization and reward those providing risk capital for enterprise development.

BioForward (formerly the Wisconsin Biotechnology Association), the state's bioscience industry association, was founded in 1987 and includes members representing a broad set of "bio-health" industry subsectors across Wisconsin including health IT, drug development, medical devices, and research instrumentation and reagents. In 2016, the organizational focus and emphasis shifted to advocacy of the state's strengths in healthcare solutions and research. BioForward promotes the interests of Wisconsin's bio-health industry via efforts in legislative advocacy, attracting talent, coordinating industry programming, and communicating the impacts and presence of the industry in the state.

R&D Investment Programs and Initiatives

The Wisconsin Institute for Discovery (WID) is a transdisciplinary research institute at the University of Wisconsin-Madison which opened in 2010. The State of Wisconsin made an initial investment in the Discovery Building, home to the Institute, and continues to provide funding for ongoing operations. The WID's

mission is to "enhance human health and welfare by facilitating interdisciplinary research spanning biotechnology, nanotechnology and information technologies." The Institute's researchers look for connections among fields and unlikely collaborations and partnerships to accelerate innovation. A major research focus at the WID is in the life sciences with current research focused in epigenetics, systems biology, and tissue engineering.

- **Outcomes:** Since its inception in 2010, WID has been awarded more than \$22 million in grant funding from a variety of foundations and agencies.

Programs and Initiatives to Build Bioscience Infrastructure

The University Research Park (URP) in Madison, established in 1984, has grown into a significant science and technology park development. The URP has 260 developed acres, with 1.8 million square feet spanning 37 buildings and accommodating 121 tenants. Life science and pharmaceutical-related businesses comprise a significant percentage of park occupants, with upwards of 30 companies engaged in therapeutics, vaccine or diagnostics development, contract research support services, and the production of critical research inputs (e.g. genomic tests, research reagents, stem cell lines, etc.).

The URP contains a wet-lab equipped business incubator facility, the MGE Innovation Center, of 113,000 square feet and a separate accelerator building providing suites and lab space up to 6,000 square feet per use in an 80,000 square foot building. As the URP approaches capacity, the University of Wisconsin is moving forward with URP West in Madison, a significant expansion comprising 64 development sites.

- **Outcomes:** A 2010 economic impact study found the URP supported nearly 9,300 jobs across Wisconsin, generated \$43 million in state and local tax revenue annually, and provided an overall economic impact of more than \$825 million each year.

The Milwaukee County Research Park comprises 175 acres adjacent to the Medical College of Wisconsin and the Milwaukee regional Medical center. Four universities are affiliated with the Park, which currently contains 115 businesses distributed across 14 buildings and 1.7 million square feet of developed space. Several companies operating in the park are in pharmaceuticals and associated life science operations. The Park contains a 137,000 square foot business incubator facility called the Technology Innovation Center. Close by, the University of Wisconsin-Milwaukee (UWM) is constructing a 24,000-square-foot UWM Innovation Campus Innovation/Accelerator Building designed to accommodate engineers and biomedical researchers collaborating on joint projects.

Venture Capital, Entrepreneurship, and Other Innovation Related Programs and Initiatives

Innovation Development

Small Business Innovation Research (SBIR) Advance Program. WEDC created the SBIR Advance Program to provide state matching funds, training, and other resources to Wisconsin businesses in order to advance the commercialization and economic impacts of federal SBIR-funded technology in the state. The program is focused on filling funding gaps for firms applying for SBIR awards for activities such as market research, customer validation, patent development, business model development, and regulatory assessment restricted under federal awards. SBIR Advance grants can be used for commercialization activities that will improve company opportunities for Phase 2 and Phase 3 federal awards and for investor funding.

The Wisconsin Technology Council, launched in 2001, is the science and technology advisor organization to the Governor and the State Legislature. The Tech Council is an independent, non-profit and non-partisan board with members representing technology companies, venture capital firms, higher education, research institutions, government and law. The Council plays key roles in promoting and fostering innovation and entrepreneurship. The Council organizes the Wisconsin Innovation Network (WIN), a membership arm of the Tech Council that acts as an in-state network to promote innovation and entrepreneurship. WIN works as an educational and networking resource throughout the state.

Entrepreneurial Development

The WEDC Seed Accelerator Program provides grants to communities and organizations that train, mentor, and provide financial assistance to entrepreneurs. Grant funding can fund accelerator programs but also may be used as seed capital for companies in an accelerator. Recipient organizations are required to implement programming that includes the Lean Startup methodology or other approved curriculum by WEDC. Up to \$50,000 in grant funding can be used for accelerator startup and operating costs. Up to \$300,000 in funding is available to provide direct grants to companies in the accelerator.

Small Business Development Centers (SBDC's) of the University of Wisconsin-Extension Entrepreneurial Training Program. Delivered by the SBDC's of the University of Wisconsin-Extension, the Entrepreneurial Training Program provides guidance on business plan development to Wisconsin entrepreneurs and small businesses through an 8- to 12-week course. A majority of program costs are reimbursed through funding provided by WEDC upon successful completion of the course.

Multiple regional organizations within Wisconsin are funded by WEDC to provide entrepreneurship support, mentoring and capital access programs. Funded organizations such as Bridge to Cures (Milwaukee) and the Wisconsin Innovation Initiative (Madison) are specifically focused on supporting biomedical entrepreneurship (see further discussion below).

Several programs of the **Wisconsin Technology Council** are focused on promoting entrepreneurship including the Wisconsin Entrepreneurs' Conference, the Wisconsin Early-stage Symposium, the Governor's Business Plan Contest, and Wisconsin Yes! which works with students to turn their science and technology ideas into business plans.

Wisconsin has an extensive network of **business incubators and accelerators**. Examples of those with several biopharmaceutical and bioscience industry tenants include:

- The MGE Innovation Center and @1403 at the University Research Park in Madison;
- The Technology Innovation Center at Research Park in Milwaukee.

Venture Financing

The Wisconsin Economic Development Corporation (WEDC) Capital Catalyst program makes seed grants to business start-up assistance organizations in Wisconsin. Several of the regional organizations within Wisconsin that are recipients of Capital Catalyst support are specifically focused on biomedical business development. WEDC provides seed grants typically ranging from \$50,000 to \$500,000 to approved organizations that have existing seed funds in place or the ability to create such funds. These locally-managed funds may make grants, debt and/or investments in startups and early-stage and innovative small businesses that operate in their region. Recipient organizations must match at least 1:1 the amount of seed grant funding provided by WEDC. Recipients must provide at least one-third of WEDC funds as grants to companies, but are allowed to make debt or investments with the remaining funds. Examples of regional Wisconsin organizations leveraging Capital Catalysts funding to advance biomedical business development include:

- **Bridge to Cures** (Milwaukee). A collaboration between WEDC and six southwestern Wisconsin research institutes focused on start-up advisory services, mentoring and capital access for life science companies – especially companies focused on therapeutics for underserved diseases. Bridge to Cures will support proof-of-concept funding in the preclinical phase, helping to advance products towards a clinical prototype. For therapeutics, the organization will support funding into preclinical testing or initial human trials.
- **Wisconsin Innovation Initiative** (Madison) is also medical technology focused and works to support the translation

of biomedical innovations into therapeutics products. The organization has a \$1 million seed fund provide by WEDC and will work with companies from the proof-of-concept phase into clinical phase II trials.

Wisconsin's Early-Stage Business Investment Program and Qualified New Business Venture Program (QNBV) work together to encourage investment in early-stage Wisconsin businesses. Early-stage businesses developing products, processes or services may be designated as QNBVs. Investments in QNBVs made by angel investors, angel investment networks and qualified venture capital funds are then eligible to receive a tax credit equal to 25 percent of the amount of the equity investment through the Early-Stage Business Investment Program. Businesses can receive up to a total of \$8 million in tax-eligible cash equity investment (up to \$2 million in tax credits for the investors). There is no limit on the amount of credits investors can claim.

- **Outcomes:** From its inception in 2005 through 2015, the QNBV Program has distributed more than \$94 million in tax credits. More importantly, since the program's inception, total funding received by certified companies reached \$1.4 billion through 2015 including qualifying investments, other private investments and grant funding. Through 2015, the total number of certified companies reached 180 which includes many in the biosciences and health technologies.

WEDC Technology Development Loans. Technology companies, including bioscience companies, demonstrating significant national or global market potential are the focus for WEDC Technology Development Loans. These funds are targeted towards business initiatives in product/process development, commercial launch and rapid expansion. Loans typically range between \$100,000 and \$750,000 and are required to be part of a larger funding round. Among the criteria WEDC uses to make investment decisions are financial need, private investment leverage, management team experience, the potential to increase production, and the potential for long-term, positive economic impact in Wisconsin. Loans are generally limited to 25 percent or less of an identified project. There is an origination fee of 2 percent of the loan amount and loan interest is at a fixed rate of 2–10 percent. Loan term will typically range from 5–7 years and will not have a term of more than 10 years.

Economic Incentives

R&D Tax Credit. Wisconsin offers a Research Credit program with a credit for taxable years beginning in 2015 equal to 5.75 percent of the amount by which the claimant's qualified research expenses for the taxable year exceed 50 percent of the average qualified research expenses for the 3 taxable years immediately preceding the taxable year for which the claimant claims the credit. If the claimant had no qualified research expenses in any of the 3 taxable years immediately preceding the taxable year for which the claimant claims the credit, the claimant may claim an amount equal to 2.875 percent of the qualified research expenses for the taxable year for which the credit is claimed. The research credit is nonrefundable, although any unused credits may be carried forward and credited against Wisconsin income or franchise taxes for up to 15 years.

Manufacturing and Agriculture Tax Credit. Wisconsin is working to encourage manufacturing development, including in biopharmaceuticals and life science products, through its Manufacturing and Agriculture Tax Credit (MATC). The overall Wisconsin business tax rate is typically 7.9 percent, but the use of the MATC can bring corporate income tax down to a 0.4 percent rate for 2016 onwards.

STEM Workforce & Education Programs and Initiatives

Wisconsin Department of Public Instruction STEM Grants Program. The Wisconsin Department of Public Instruction operates a STEM grant program covering grades PK-12 at Wisconsin public schools. Grant awards range from \$3,000 to \$20,000 and are intended to seed programs that are sustainable beyond the grant, and encourage participation of traditionally underrepresented students in STEM technical applications or careers. Funds are expected to be used by teachers and schools to create innovative STEM programming in collaboration with industry and community partners. The STEM Grant has a 25 percent district matching funds requirement.