Thank you to our Medallion Members for your support of BioForward and commitment to uniting and growing Wisconsin’s Biohealth Industry!
LISA JOHNSON  
CEO, BIOFORWARD

I have been asked, “Where do you get your energy and passion?” It comes from believing in what you do and giving 100% of your energy to your goals. BioForward’s member companies and their employees don’t back down. Every day they are driven to achieve their mission, and they should expect their industry association to do the same. 2018 was a fantastic year for Wisconsin’s biohealth industry, for our research institutions, and for BioForward as you will read in the pages to follow. BioForward does not work in isolation – it is our members’ organization. Thus, the BioForward team is committed to supporting our members through service and investments into key initiatives, focused on facilitating partnerships, and dedicated to advocating for the economic and business impact of Wisconsin’s biohealth industry. Thank you members! We look forward to having an even greater year in 2019 as we tell the nation our stories, our impact, and how they can become a part of it.

NICOLAS PARIS  
CHAIRMAN OF THE BIOFORWARD BOARD, CEO, GILSON

Over 107,000 directly supported jobs, 4,300 firms, and $27 billion in direct economic output: this is Wisconsin’s biohealth industry, and this is for whom BioForward Wisconsin stands. Wisconsin’s biohealth ecosystem is unique because it covers all the critical components of the industry, from research to patient care. Our integrated health solutions make Wisconsin stand out nationally and internationally, making it one of the few states that can offer all aspects of our industry’s value chain locally. This, combined with our central location and an unmatched quality of life, means we have what it takes to make a difference.

Partnering on several initiatives in 2018 such as Women in Biohealth, HealthTechMKE, and the Forward Bio Initiative, BioForward continues our dedication to supporting the growth of Wisconsin’s biohealth industry through member support and advocacy, leveraging our unique ecosystem, and cross-state collaboration that supports innovative research, entrepreneurship, and economic value for the state.

The board joins me in thanking you, our members, and our partners for your ongoing involvement and engagement in designing the future of integrated healthcare solutions with us. For those of you who are discovering our ecosystem as we reflect on the past year, join the movement today!
BioForward Wisconsin serves as the independent voice of the Wisconsin biohealth industry, providing services and resources to support the growth of our industry throughout the U.S. and the world. BioForward is the only Wisconsin organization representing over 200 biohealth member companies including biotech, biopharma, medical devices, healthcare systems, diagnostics, and digital health, as well as our research institutions and service providers. BioForward is committed to providing value to our members through collaborative assistance, educational and networking events, legislative advocacy, investing resources into key initiatives that support the industry, and through our Select Savings program. We have the vision and resources to grow Wisconsin's companies, developing integrated health solutions that define the future of healthcare. Learn more about BioForward and our members at www.bioforward.org.

BIOFORWARD'S YEAR BY THE NUMBERS

- **210** Members
- **$10M** Saved in Select Savings Program
- **4.8K+** Social Media Followers
- **$4,500** in Community Donations
- **1,500+** Event Attendees
- **$80K** Awarded in International Conference Scholarships
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BIOFORWARD INITIATIVES

TALENT ATTRACTION CAMPAIGN INITIATIVE

We have been listening to our members who stated the most critical initiative we should undertake was to help retain and attract talent. Together with a group of member companies, we conducted brainstorming sessions and arrived at a list of action items. BioForward and its members have been devoting resources, time, and investment in talent attraction activities, which include expanding our partnerships with our academic institutions.

BioForward invested in a talent brochure demonstrating the multitude of companies that comprise Wisconsin’s biohealth industry. The brochure is utilized by member companies and UW-Madison. We then proceeded to invest in a new career site and a LinkedIn campaign directed at alumni of UW-Madison, UW-Milwaukee, and Marquette. It was a short-term campaign to test the waters for a larger digital campaign. We have now begun the planning process for BioForward to make a major investment in a national digital marketing talent campaign and industry landing page.

www.bioforward.org/quality-of-life

WOMEN IN BIOHEALTH

Women in Biohealth (WiB) provides a platform for women in biohealth to connect and uplift one another and provide opportunities for professional development, career mentoring, and networking. BioForward has had the privilege of partnering with women from Illumina, UW-Madison, University Research Park, Exact Sciences, and Catalent to develop this organization and initiative that currently has over 350 women involved in our networking and professional development events.

www.womeninbiohealth.org

HEALTHTECHMKE

HealthTechMKE is focused on connecting the growing healthcare technology ecosystem in southeastern Wisconsin and providing resources to entrepreneurs. With expanded leadership and several website improvements, including a directory of Milwaukee Healthtech companies and an event calendar, 2018 was a year of growth for HealthTechMKE. We plan to continue that growth into 2019 with continued networking events, a HealthTech resource directory, and increased efforts to generate a collaborative network between innovators and mentors and foster partnerships between providers, the HealthTech industry, and regional leaders.

www.healthtechmke.org
FORWARD BIO INITIATIVE

Our goal is to build Wisconsin into a national hub for biomanufacturing. We possess all of the elements to be successful including a novel partnership approach from pre-incorporation within the Forward BIO Institute, to the facilitation of efficient startup launches by Forward BIOLABS, through industry guidance and support offered by BioForward.

ACHIEVEMENTS

- **Forward BIO Institute** was established at UW-Madison with a commitment to developing robust and effective public-private partnerships which seek to find innovative solutions for critical global biomanufacturing challenges. The Institute features a Biomanufacturing Consortium, which will include major industry players focused on identifying and solving critical, pre-competitive bottlenecks in the biomanufacturing industry, and fostering development of new, innovative technologies and companies.

- **Forward BIOLABS** has begun initial operations in the University Research Park, Madison and was recently notified that the IRS has granted them 501(c) 3 status. The pilot lab is already full with four startups that have 14 Wisconsin employees and more startup companies requesting occupancy. The next step is to make the larger lab operational, adding equipment, services, and staff.

- **BioForward** was awarded a $750,000 grant by WEDC and will administer the grant funds that will be 100% dedicated to Forward BIOLABS to support young companies through shared lab space and support services.

Contact one of the partners to become involved. forwardbioinitiative.org

BIOMANUFACTURING - WHY WISCONSIN?

Biomanufacturing as an industry is experiencing explosive growth within the United States. Wisconsin’s research universities are internationally recognized leaders in areas critical for developing biomanufacturing technologies (engineering, life sciences, medicine, veterinary, and technology transfer) and have a proven track record in successfully spinning out biomanufacturing companies, which have attracted an influx of larger industry partners. Wisconsin’s inordinately large life science industry relative to its size, well-established supply chain, and proximity to medical device and pharma hubs, make it an ideal Midwest epicenter for biomanufacturing innovation.
## 2018 State Legislation

<table>
<thead>
<tr>
<th>Legislation &amp; Policy Positions</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improving Patient Access and Outcomes</strong></td>
<td></td>
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<tr>
<td><strong>Biosimilars:</strong> This bill will allow pharmacists to dispense biosimilars, unless the prescribing authority specifically prohibits substitutions, saving patients money through cheaper equivalents. Bill passed with bi-partisan support (AB679 / SB575).</td>
<td>Signed Into Law</td>
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<tr>
<td><strong>Step Therapy Protocols for Prescription Drug Coverage under Health Benefit Plans:</strong> Establishes state specifications on the development of, use of, and exceptions to step therapy protocols for prescription drug coverage.</td>
<td>Bills pending in 2019 Session</td>
</tr>
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| Economic Development Priorities |
| Wisconsin Workforce and Innovation Network for Success (WINS) Legislation: This groundbreaking economic development legislation would create an Innovation Fund and Council charged with identifying opportunities for more private sector engagement and national and international exposure for industry clusters in Wisconsin. | Bills co-authored in Assembly & Senate. Reintroduce in 2019 |
| **Data Collection on Job Sector Growth for Wisconsin:** The State of Wisconsin does not currently collect any data on which industry sectors are growing (i.e., which sectors are hiring NEW employees). This budget initiative would be valuable in analyzing economic impact by industry sectors. | Pending 2019 Budget |
| **Repeal of Personal Property Tax—Budget Bill (and AB 277/SB 218):** The 2017-19 biennial budget included a provision that provides, effective with property assessed as of January 1, 2018, machinery, tools and patterns (Schedule C from Statement of Personal Property) will be exempt from the personal property tax for businesses not specifically classified by DOR as manufacturers. | Signed Into Law |

| Workforce Development Initiatives |
| **Support New Wisconsin Worker Signing Bonus—Income Tax Exemption:** We are facing a significant workforce shortage. We propose allowing a one-time income tax exemption for any signing bonus provided to a new employee who moves to Wisconsin to work in the biohealth sector. Limited to new hires only; and limited to workers who move into Wisconsin for the position. Importantly, this is a tax benefit to the individual worker—not to the company offering the bonus. | Pending 2019 Budget |
## 2018 STATE LEGISLATION CONTINUED

### LEGISLATION & POLICY POSITIONS

#### PROTECTING & SUPPORTING WISCONSIN’S RESEARCH INSTITUTIONS

**Stopping Restrictions on Biomedical Research:** Over the past several sessions, BioForward and our partners in the Cures for Tomorrow Coalition have battled against legislative initiatives that would restrict the types of cells and tissues that our researchers can use to conduct lifesaving research in the state of Wisconsin. As such, we oppose any legislative initiatives in the 2019 biennial budget bill, or elsewhere, that would restrict biomedical research in the state of Wisconsin.

**Support Legislation that Stimulates Research, Entrepreneurship, and Jobs:** The UW-Madison is seeking an amendment to Wisconsin’s restrictive self-dealing law that includes an overly cumbersome and lengthy process for allowing research companies to contract with the university when a faculty or staff member has an interest in the company.

### 2018 FEDERAL LEGISLATION

### LEGISLATION & POLICY POSITIONS

#### TAX AND FISCAL POLICY

**Repeal of the Medical Device Tax:** This tax took effect in January 2013, creating a new excise tax of 2.3% levied on medical devices regardless of company profit. Repealing the Medical Device Excise Tax has been one of BioForward’s top priorities, which is putting jobs and innovative companies in our state at risk. Medical device companies create more than 11,500 direct jobs in Wisconsin and this sector has a major impact on Wisconsin’s entire statewide supply chain.

### STRENGTHENING HEALTHCARE SYSTEM

**Prescription Drug Price Transparency & Cost Controls:** BioForward supports our national partners, the Biotechnology Innovation Organization (BIO) and Pharmaceutical Research and Manufacturers of America (PhRMA), in urging federal policymakers to adopt responsible solutions that would make prescription drugs more affordable for America’s patients. We oppose policies that limit patient access to lifesaving treatments.

### PATENT REFORM

**U.S. Patent and Trademark Office (PTO):** Rule change that significantly improved the fairness of post-issuance patent challenge proceedings. The action by the PTO helped ensure that patent claims are construed consistently, whether they are reviewed by the PTO, a federal court, or the International Trade Commission.

### RESEARCH FUNDING

**NIH and SBIR/STTR Funding:** Advocated for increased funding for the Small Business Administration to support the SBIR and STTR grant program to encourage the development of new medical innovations. We opposed restrictions that would have further impeded the use of federal funding for fetal tissue research or any efforts to reduce funding for science and medical research.
HIGHLIGHTED EVENTS

PROMOTING THE WISCONSIN BIOHEALTH INDUSTRY

BioForward and initiative-related partners launched purpose-driven events in 2018, providing value to our members and industry in new and engaging ways through a variety of events and programming.

WISCONSIN BIOHEALTH SUMMIT

The 2018 summit explored the new healthcare revolution and how it was unlocking Wisconsin's biohealth industry. With over 500 attendees at the Overture Center of Performing Arts, the event was launched by Dr. Chris Mason delivering an extraordinary presentation on Decoding Life on Earth and Beyond: How Genomics is Transforming the Future of Medicine, Forensics, and Space Travel. Attendees then had an opportunity to interact with Dr. Mason's MetaSUB experiment that included swabbing attendees’ phones. Other highlights included the 2018 Biohealth Awards ceremony, panels on gene editing, discovering new markets, analyzing the industry’s economic impact, and advancing women into leadership roles within the biohealth industry.

MetaSUB Experiment Results: wisconsinbiohealthsummit.org/metSUB-experiment

2018 ANNUAL MEMBER MEETING

BioForward’s 2018 Annual Member Meeting was held at the Edgewater Madison with over 250 members enjoying networking time with other member companies, promoting their teams in our photo booth and listening to an industry review of achievements and challenges ahead. Keynote speaker, Jay Hill, Chief Operating Officer of Imaging at GE Healthcare and BioForward Board Member, delivered a presentation on GE Healthcare’s impact on Wisconsin and their vision of the future of precision health.

BioForward donation commitment: 10% of registration fees were donated to EgGS Initiative and BTCI for their programs focused on high school STEM education.

With a successful 2018 behind us, BioForward took some time to celebrate and network with our members at our second annual holiday celebration event! Over 100 members enjoyed an evening recognizing member accomplishments, followed by speaker Penn Vieau. Penn conveyed to members how to manifest the power of positive thinking as well as how companies can effectively implement positive cultures to retain and attract talent.

BioForward donation commitment: Members and BioForward made a total donation of $1,500 to support Gilda’s Club of Madison for their rebuilding efforts after the major summer flood destroyed their building.
WOMEN IN BIOHEALTH EVENTS

As a network, Women in Biohealth (WiB) provides mentoring, professional development, and an environment for women in biohealth to connect. In 2018, WiB held four networking events, four professional development sessions, and had a panel discussion at BioForward’s Biohealth Summit. Professional development events were focused on: coaching skills, leadership workshop on personal styles, managing conflict, and identifying strategies to impact the outcome of negotiations.

HEALTHTECHMKE

started out the year with an event detailing the WINS Act and how this unique legislation will affect the healthtech industry by giving back and challenging innovators to solve industry-related problems. HealthTechMKE went on to curate a HealthTech Track of events for StartupWeek Milwaukee that included eight events featuring BioForward members and partners. Two of those events were created by HealthTechMKE, covering both physician entrepreneurship and how healthtech can tackle healthcare disparities in Milwaukee.

PECHAKUCHA MADISON & MILWAUKEE

BioForward had the unique opportunity to partner with Yahara Software and SupraNet Communications on PechaKucha events centered around healthtech in both Madison and Milwaukee. These fun and one-of-a-kind events have presenters tell a fast-paced story about their career, their company, or their lives with a 20-slide presentation over 6 minutes and 40 seconds.

WI BIOHEALTH AWARDS

In 2015, BioForward launched the tradition of annually recognizing scientific and business achievements in the biohealth industry. Our recipients in 2018 captured Wisconsin’s broad impact on global human health. Additionally, these individuals, through their scientific and business contributions, have had a significant impact on Wisconsin’s economy.

2018 HECTOR F. DELUCA SCIENTIFIC ACHIEVEMENT AWARD

DR. ALLEN W. COWLEY, JR.

Allen W. Cowley, Jr. has been Professor and Chair of the Department of Physiology at the Medical College of Wisconsin since 1980. He is an international leader in cardiovascular research having made seminal observations that have advanced our understanding of hypertension. Dr. Cowley has forged the development and integration of genomics, bioinformatics, computational biology, and physiology to address questions of clinical importance. Under his leadership, MCW has ranked nationally in the top 1-3 for NIH funding among all medical school physiology departments.

2018 WISCONSIN BIOHEALTH BUSINESS ACHIEVEMENT AWARD

KEVIN CONROY

Kevin Conroy is Chairman and Chief Executive Officer of Exact Sciences Corporation. Exact Sciences is focused on the early detection and prevention of cancer, establishing a new standard for colon cancer screening with its noninvasive, advanced DNA screening test, Cologuard. Since being appointed as CEO in April 2009, Kevin has built Exact Sciences into a true success story with over 1,500 employees but more importantly, his company is saving lives daily through early detection of colon cancer.
In 2018, BioForward released its second economic impact report on Wisconsin’s flourishing biohealth industry. BioForward’s investment in this report was to obtain critical data related to a number of direct industry jobs and the multiplier effect our industry has on the state of Wisconsin. We analyzed the economic output by the number of businesses and how each sector within our industry was contributing to jobs and median wages. Wisconsin’s biohealth industry has a business concentration in southern Wisconsin, yet we are dependent upon a robust in-state supply chain and as we expand our operations, we are driving economic output through those construction projects. For the first time, we are analyzing those impacts from our industry through construction and our supply chain. This report allows us to educate legislators representing districts throughout the state and provides us with data to enlighten those outside of Wisconsin of our diverse and economically impactful biohealth industry.

Read the full report at bioforward.org/impact
In 2018, BioForward’s Select Savings program continued to bring value back to BioForward members with better reporting, better explanation of benefits, and vetting of potential new vendors to add to the program and increase member value. BioForward values your input as a member and hopes to increase the offering and the savings to members who enroll in the program.

$10 Million saved through the BioForward Select Savings Program in 2018.

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**SELECT SAVINGS**

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**MEMBER HIGHLIGHTS**

- **Advocate Aurora Health** to become the 10th Largest Health System in the U.S.

- **Alcam**i to become industry-leading platform CDMO following acquisition by Madison Dearborn Partners

- **Aldevron** Partners with Sarepta Therapeutics to support the development of gene therapies

- **Arch Virtual** Wins “Best in Show” at IMSH for VR medical simulation

- **Arrowhead Pharmaceuticals** and Johnson & Johnson strike gene-silencing drug deal worth $3.7B

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THANK YOU TO OUR SELECT SAVINGS PARTNERS!

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**MEMBER HIGHLIGHTS**

- **Catalent** plans expansions at Madison Biologics facility
- **Fujifilm Cellular Dynamics** Announces agreement with UC-Irvine to commercialize iPSC-derived microglia cells
- **Exact Sciences** Breaks ground on corporate headquarters in University Research Park
- **Flugen** Launches new test of its universal flu vaccine
- **GE Healthcare** Named to Fast Company’s Top 10 Most Innovative Companies in Biotech for Patient-Empowering Mammograms
- **Gilson** Partners with Eight Life Science Labs to provide hands-on learning and develop future technologies
- **iMARK** is Spending $18M and adding 40 jobs in western Wisconsin
- **Imbed Biosciences** Raises $1.6M to commercialize infection-preventing dressing
- **LGC** acquires **Lucigen** to strengthen its reagents offerings to the genomics market
**PROMEGA PLANS BUILDING PROJECT IN FITCHBURG**

- **Mallinckrodt’s Stratatech** Awarded $26M in additional BARDA funding for pediatric studies of StrataGraft® skin tissue in thermal burns

- **Medical College of Wisconsin** and Versiti Wisconsin CAR-T Cell Immunotherapy trial patient in remission; first-in-the-world cancer treatment shows promise

- **NorthStar Medical Radioisotopes** Announces FDA approval of Beloit facility for RadioGenix™ System Manufacturing

- **Promega** Plans biggest building project in Fitchburg’s history

- **Tosoh Bioscience** invests $3M in Madison-based **Semba Biosciences**

- **Shine Medical Technologies** Secures $150M in financing

- **Somna Therapeutics** Receives FDA approval for OTC acid reflux device, RefluxBand

- **TAI Diagnostics** Completes $10M round and investing $13M in clinical trials, product development

- **UW Program for Advanced Cell Therapy** Receives FDA IND permit to test treatment for bone marrow transplant complications

- **Versiti Wisconsin** Launches breakthrough, FDA-cleared leukemia test