



2017 YEAR IN REVIEW
MEDICAL ALLEY ASSOCIATION
POWERING THE EVOLUTION OF HEALTHCARE



FOUNDATIONAL MEMBERS



SUSTAINING MEMBERS



Letter from the President & CEO

Thank you, Medical Alley, for 34 years of support and leadership! It is an honor to serve the Medical Alley and to promote our solutions around the world. Over the past few years, the Association has continued to renew our dedication and service offerings to reflect the greatest needs of our members in a time of constant change. We are proud to represent the most diversified and impactful health technology cluster in the world.

2017 has been a tremendous year for Medical Alley; we've seen record investments in companies, significant new product launches and many national honors bestowed upon several of our early-stage companies that are driving change in healthcare. Every day, we see firsthand the difference that our members make in people's lives. Medical Alley is the global epicenter of health innovation and care. If you want to know what's going to change healthcare tomorrow, visit Medical Alley today! Thank you from our entire team!



Message from the Chairman

The Medical Alley region aspires to be acknowledged as the global epicenter of health innovation and care that includes a unique ecosystem of stakeholders in healthcare – payers, providers, medical devices, pharmaceuticals, service providers, digital health, and many more. The Medical Alley Association is also unique in that it's truly inclusive of the industry and the stakeholders, as it leverages the strengths and intellectual capital of key leaders across every touchpoint in the healthcare sector. This wide net of expertise has allowed us to think about ways Medical Alley can transform healthcare around the world by being a trusted advisor.

But we also need to focus on Minnesota – the Medical Alley region. Today we have a robust ecosystem of 500,000 people working in the regions healthcare industry. As the healthcare market gets more competitive, it's important to have a sense of urgency in ensuring that hub stays here as we look ahead to the future. Keeping Minnesota a globally competitive business environment requires us to find opportunities to support entrepreneurs and early stage companies, promote and tell our story to the right people, and bring top talent to our community – which includes developing them and identifying meaningful reasons for them to stay here.



You can do simple things to make a positive impact on our industry. Consider engaging with policymakers to help them understand how they can contribute to establishing circumstances for success in our sector, and take the time to understand legislation. Also, please be active in promoting and recruiting talent to our region – directly or with partners, and find opportunities to support medtech innovators and entrepreneurs. Know that the Medical Alley Association is here for you along the way; I encourage you to leverage the Medical Alley brand, insights, and data in your efforts.

Thank you for your ongoing commitment and engagement to our evolving association. Together we have achieved some great successes, and I'm excited to see how we'll continue to influence the future of our ever-changing industry.

Medical Alley is the Global Epicenter of Health Innovation and Care

2017 was characterized by Medical Alley companies changing the game and redefining healthcare.



Boston Scientific / University of Minnesota Partnership Tackles Parkinson's Disease

On the heels of the first multi-center clinical trial of a deep brain stimulation (DBS) device in the treatment of Parkinson's Disease, Boston Scientific announced in December that it had received approval from the FDA for its Vercise™ Deep Brain Stimulation (DBS) System. Following the approval, Boston Scientific announced physicians at the University of Minnesota would perform the first commercial implants of the device.



RoverMed
BioSciences

RoverMed Selected For Google-Funded Blackbox Connect 18

One of only three U.S. companies selected for the May 2017 cohort, RoverMed BioSciences participated in Blackbox Connect 18, a Google-backed two-week residential entrepreneurial program designed to help the founders of startups develop as strong leaders. Laura Brod, CEO of the precision medicine startup that is revolutionizing drug delivery, believes that "Minnesota is the best place to launch and grow a bio-science business. We have an amazing, talented work force and a diverse economy that attracts expertise in science, finance, marketing, and professional services. But this program will provide access to the highly active Silicon Valley network and therefore will be a growth opportunity for our company. Further, as one of only three US companies invited to this program for worldwide startups, we are excited to represent the innovative communities of Medical Alley and the upper Midwest. We intend to learn a lot from, and contribute to, the two-week conference."



Stemonix Named *Red Herring* Top 100

Thanks to a remarkable year, Stemonix has become one of the world's hottest health tech companies! Racking up eleven separate awards, including being named to the Red Herring Top 100, Stemonix isn't just rising to the top of the startup community, they're already taking down global giants like Illumina, which they beat out for most innovative new product at the CONNECT awards in San Diego.



Bright Health Named to *Forbes* “The Next Billion-Dollar Startups 2017”

Bright Health burst into the health insurance market as a startup in 2016 with an \$80 million Series A raise. The consumer-driven company, which aims to provide access to affordable healthcare for people who buy their own insurance, further asserted itself in 2017 by securing the largest single raise in Medical Alley history at \$160 million and being named to Forbes’ Next Billion-Dollar Startup List. They say success breeds success, and Medical Alley proves it by cultivating and sustaining innovative leaders like those found at Bright Health, who came from local companies like UnitedHealthcare, Definity Health, RedBrick Health, Carol Corp, and Luminat.

Medtronic Medtronic’s “Biggest Achievement” Wins Reimbursement

Named one of “2016’s Biggest Achievements in Medicine” by U.S. News & World Report, the Micra Transcatheter Pacing System (TPS), the first and only leadless pacemaker approved for use in the U.S., hit another major milestone in January of 2017. After successful completion of two studies, Medtronic’s miniaturized device gained approval for Medicare reimbursement from CMS.

ECOLAB® Ecolab Solving One of Healthcare’s Biggest Challenges

Ecolab has joined forces with EHCOTM, the Electronic Hand-hygiene Compliance Organization, to combat the spread of healthcare associated infections (HAIs) and create a new standard for preventing the spread of HAIs.

“Ecolab is proud to join an industry organization that is focused on improving hand hygiene compliance. Electronic measurement will change individual behavior, increasing the safety of both patients and healthcare workers, and lead to improvements in hand hygiene compliance across hospitals and other healthcare facilities.” – **Kathleen Burzycki, Senior Marketing Manager, Healthcare, Ecolab**



Thermo Fisher and vidscrip Partner to Revolutionize Asthma Care

When our members talk, we listen. During a member meeting in 2017, Thermo Fisher Scientific described a need in identifying strategic partners to grow the reach of a diagnostic platform to educate patients afflicted with allergies and/or asthma. MAA sprang into action, making an introduction to Medical Alley-based vidscrip, an early-stage digital health company that delivers an app-based platform of doctor-created videos answering common patient questions. The connection produced a seamless opportunity for partnership, extending the value of both companies.



Destination Medical Center Break Ground on Discovery Square

The Destination Medical Center continued its leadership, anchored by the Mayo Clinic, breaking ground on Discovery Square, the first new bioscience building of the DMC. The largest public-private partnership of its kind, DMC serves as a catalyst for research, innovation, care, and commercialization. Discovery Square, a central feature of DMC, is expected to expand Mayo's research and product development space by more than two million square feet, while providing collaboration opportunities for leading practitioners and researchers.

The largest public-private partnership in Minnesota history, the DMC is slated to serve as a catalyst of research, innovation, care and commercialization.



Takeda Launches Biologics Center of Excellence in Medical Alley

Since it made the decision in 2015 to invest in a state-of-the-art biopharmaceutical manufacturing facility in Brooklyn Park, Takeda has added more than 180 employees and continues to grow. Medical Alley will be home to Takeda's first U.S.-based manufacturing facility and will manufacture the world's supply of Entyvio, a product used in the treatment of ulcerative colitis and Crohn's disease.

“We’ve been delighted with the warm reception we’ve received from the entire life sciences community in Minnesota. From the quality of the work performed by contractors to the great partnership we have built with local and state government officials, we feel very welcome in Minnesota.” - **Eric Hahn, Site Head, Takeda**



Coloplast

Coloplast Expands Connections with Health Consumers

To better address the growing need to more directly connect with health consumers, Coloplast acquired French direct-to-consumer distribution company Lilial in December for approximately \$42.8 million. The acquisition bolsters Coloplast’s global position in the incontinence/ostomy market and helps drive its aggressive growth targets.



3M Celebrates 50 Years of Listening

Recognized for superb acoustic performance, consistent high quality, and outstanding value, Littmann stethoscopes are used by millions of medical professionals around the world and continue to be ranked as the top-selling stethoscope brand. For 50 years, 3M™ Littmann® Stethoscopes have been helping clinicians listen and care for their patients. To mark this historic occasion, 3M announced the launch of 50 Years of Listening: a collection of personal stories from medical professionals.



UNIVERSITY
OF MINNESOTA
Driven to Discover™

DISCOVERY
nexus

Launch of Discovery Nexus

The University of Minnesota continued delivering on its mission of being “Driven to Discover” with the launch of Discovery Nexus, an intersection between businesses, entrepreneurs, economic development leaders, and University of Minnesota students and faculty who are leading the exciting research and development of novel inventions and know-how. The brand-new space will allow the University to build upon its position as a top-ten public university for research and technology commercialization.



Fred Law Fosters Next Generation of Healthcare Leaders

“As the firm ‘Where Law and Business Meet’, we’ve always prided ourselves on being more than just legal experts for our clients. We continue to live that motto by providing resources that support emerging healthcare companies in Medical Alley. We give our time, energy, and resources to ensure connectedness, opportunity, expertise, and leadership benefit the Medical Alley community. We continued these efforts in 2017 by collaborating with incubator organizations including TreeHouse Health and the Collider, supporting contests like the Minnesota Cup and Walleye Tank to help foster the early stage ecosystem in Minnesota, and partnering with several local, regional, and national industry organizers to pull together resources for the entrepreneurial community. We are proud of the accomplishments achieved in Medical Alley during 2017, and we’ll continue to find ways to bring people with ideas and talent together with experts and financial support to grow the next great Minnesota companies in the years to come.” – **Ann Ladd, Partner Fredrikson & Byron P.A.**

MEDICAL ALLEY STRENGTHENS GLOBAL HEALTHCARE LEADERSHIP POSITION

The global epicenter of health innovation and care welcomed new leaders in 2017.

In 2017, Abbott Laboratories acquired Medical Alley-founded St. Jude Medical for \$25 billion, bringing new leadership to its thousands of Medical Alley employees. Abbott is a Medical Alley Foundational Member and is served on the Board of Directors by Michael Pederson, Senior Vice President, Cardiac Arrhythmias and Heart Failure.

One of the largest medical device and equipment manufacturing companies in the world, Stryker, completed a

\$662 million

purchase of Plymouth, MN-based ENT medical device company Entellus Medical

Smiths Medical relocated its global headquarters to Plymouth, MN, and takes an active role in the leadership of MAA. The move to a new headquarters symbolized a step change for Smiths Medical and its diverse portfolio of Infusion Systems, Vascular Access, and Vital Care products, as well as the company's increased digital capabilities. Chris Holmes, Smiths Medical President & CEO, serves on the MAA Board of Directors.

Philips, a world leader in healthcare, expanded dramatically in Medical Alley in 2017, acquiring three separate companies. In May, Philips acquired RespirTech, a University of Minnesota spinout delivering solutions for chronic obstructive respiratory diseases. In June, Philips acquired Colorado-based Spectranetics, which has major operations in Maple Grove, expanding its

vascular solutions portfolio. Philips completed the trifecta with the acquisition of Mayo spinout VitalHealth. This final move significantly built up Philips' digital health solutions, making its population and outcome-based options more robust, even after its acquisition of Wellcentive in 2016.

Medical Alley was also excited to welcome one of the largest medical device and equipment manufacturing companies in the world, Stryker. Stryker completed a \$662 million purchase of Plymouth, MN-based ENT medical device company Entellus Medical.

In 2017, two key companies, DoseMe and Collagen Solutions, expanded into Medical Alley from overseas. DoseMe is the first Australian-founded precision dosing software company to establish a presence in the United States. For DoseMe, the attraction to Medical Alley was a flourishing medical community and access to a large pool of seasoned professionals.

“Last year, we decided to focus our service and customer operations in the United States. Minnesota was particularly attractive with its caliber of technical talent and thriving MedTech community, making it an ideal location in addition to an office at Texas Medical Centre in Houston for our expansion,” **said Charles Cornish, Chief Executive Officer, DoseMe.**

Arriving from the United Kingdom, Collagen Solutions also contributed to Medical Alley’s growth, with an expansive portfolio of medical-grade collagen biomaterials that have diverse applications, including regenerative medicine.

In August, Medical Alley played host to the FedEx Healthcare Solutions team and FedEx Vice President of Healthcare Solutions, Jerry Beyl, a member of the MAA Board of Directors. This was a true first in the Minnesota market for FedEx Healthcare Solutions, bringing more than 200 of FedEx’s Healthcare Solutions professionals to Medical Alley to share their knowledge of specialized needs (cold chain solutions, proactive shipment monitoring through programs like Priority Alert), and integration of healthcare customer requirements within the global FedEx Express network.



Biomerics Expands and Adds Jobs in Medical Alley

Biomerics continued its growth since the 2015 acquisition of Access Point Therapeutics, adding 120 employees and 20,000 square feet of space in Medical Alley in 2017.



Recombinetics Featured in *Nature* for Genetic Modeling

Recombinetics chose Tammy Lee Stanoch to head the company, forging forward in research and regenerative medicine. The Medical Alley-based company has been leading the gene editing world for nearly a decade, making contributions to medical research by creating a genetic model of heart disease in pigs. As a result, the company was featured in *Nature*, one of the world's most preeminent scientific journals, for its work in animal models of disease, demonstrating improvement in efficiency and efficacy for medical device companies looking to streamline the innovation process.



Sansoro Health – Hazelden Betty Ford Foundation Alliance Advances Addiction Care

Hazelden Betty Ford Foundation (HBFF), the nation's largest nonprofit addiction treatment provider and Sansoro Health, a game-changing health IT company – both headquartered in Medical Alley – partnered in 2017. This alliance, enabled by Sansoro's software platform, will allow HBFF to seamlessly exchange real-time data for an integrated 360-degree view of patients and members, freeing HBFF to achieve what matters most: being a force of healing and hope for individuals, families, and communities affected by addiction to drugs and alcohol.

THE MEDICAL ALLEY ASSOCIATION DELIVERS **INFLUENTIAL** PUBLIC POLICY

Powering the evolution of healthcare means influencing public policy decision makers. With a focus on healthcare transformation, patient access, innovation, and economic growth, the Medical Alley Association continues to deliver the education, information, proposals, and solutions that drive public policy changes in Minnesota and Washington, DC.

The 2017 session of the Minnesota Legislature produced significant changes for Medical Alley members. Our efforts produced an increase in the 2nd tier of R&D tax credit from 2.5% to 4%, providing significant resources to our companies that invest heavily



in R&D. We were also able to secure the restoration of the Minnesota Investment Fund and the Minnesota Job Creation Fund. MIF was granted an increase of \$3 million for a total of \$25 million in the fund; the Job Creation Fund saw an increase of \$4 million (\$17 million in new funds available). These funds have been critical for company expansions in, and relocations to, Medical Alley.

To keep Minnesota competitive, MAA spearheaded the fair treatment of biosimilars, which was passed and signed into law by Governor Dayton in 2017. The bill, which was a new proposal in Minnesota, came together through a broad coalition that included the Medical Alley Association, the Cancer Action Network (American Cancer Society), the Arthritis Foundation, and the U.S. Pain Foundation.

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Medical Alley took a leadership role in the current opioid epidemic, working with legislators to produce a Pain Management Roundtable at the Minnesota Senate Building. Hosted by Senate Majority Leader Paul Gazelka, the Roundtable featured solutions from Smiths Medical, Boston Scientific, Atricure, and Spinethera.

While the 2017 session produced significant positive changes for our members, the Angel Investment Tax Credit (AITC) was allowed to sunset. Restoring the AITC is MAA's top state agenda item for 2018.

At the Federal level, MAA continued its work to influence public policy during a time of great change. Our extensive work on repealing the Medical Device Excise Tax resulted in another 2-year extension of the previous suspension and we will be working diligently with our Congressional delegation and partners to secure a full repeal of this tax. Medical Alley is home to the Co-Chairs of the Medical Technology Caucus in both the House and the Senate – Congressman Erik Paulsen and Senator Amy Klobuchar. Minnesota leadership has been the driving force behind this legislative success!

Medical Alley Association's work is a major reason the device tax won't take \$500 million a year out of member's innovation budget.





DELIVERING HEALTHCARE INTELLIGENCE

We're about keeping our finger on the pulse of healthcare and delivering the information and insights that help our members to thrive.

The Medical Alley Investment Report has become the go-to resource for investment information and insights into where healthcare is going. MAA's interactive website data allows for companies to research years of investment information. In 2017, Medical Alley companies raised more money than ever before, following consistent increases over the past 5 years. In addition, we saw records and strength in multiple sectors: Medical Alley Biopharmaceutical and Digital Health companies saw record years. Medical device companies had a record Q3 and the third-best year on record, raising a total of \$317 million.

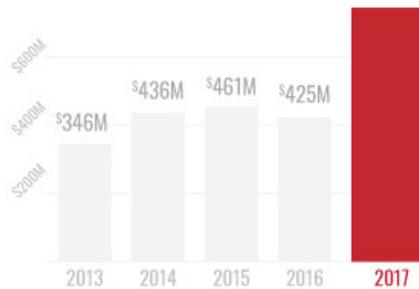
Beyond the investment numbers, there were additional successes of note in 2017:

- Precision Therapeutics (formerly Skyline Medical) went public on NASDAQ
- Osprey Medical announced an offering of CDIs on the Australian Stock Exchange, which raised \$26 million.
- Celcuity capitalized on its IPO, capturing \$23 million.
- POPS! Diabetes Care submitted the company's first 510K in May.
- Medical Alley newcomer Abbott Laboratories received approval of an HDE for its Transcatheter Septal Occluder device produced by AGA Medical (which was acquired by St. Jude Medical prior to Abbott's acquisition of St. Jude).
- MD Biosciences launched Incubology, an incubator for bioscience and healthcare companies

In 2017, MAA launched digitalhealth.mn, a microsite dedicated to information and intelligence on the Medical Alley Digital Health community. Here, visitors can explore all things Digital Health in Medical Alley. Please visit: digitalhealth.mn

2017 was characterized by investments in game-changers: Companies with solutions that tackle the largest disease states, deliver new payment models, define value in cost and outcomes, and change the future of medicine.

RECORD YEAR RECORD INCREASES



\$751M
RAISED BY
85 COMPANIES

SECTOR BREAKDOWN

	 MEDICAL DEVICE	 DIGITAL HEALTH	 BIOPHARMA	 DIAGNOSTICS
RAISE TOTAL	\$317M *	\$225M *	\$65.7M *	\$44.3M *
# OF COMPANIES	44	19	14	6

* ALL-TIME RECORD FOR SECTOR

TOP RAISING COMPANIES OF 2017



MEDICAL ALLEY'S NERVE CENTER

Medical Alley is the global epicenter of health innovation and care; MAA delivers the support and connections that advance the leadership of Medical Alley.

In April of 2017, The Medical Alley Association held its third Annual Meeting, with a sold-out record attendance of 650. The event featured a fireside chat with Mike Guyette, President & CEO of BlueCross and BlueShield of Minnesota. Spirit of the Alley honorees included: Dr. Susan Alpert (SFA Consulting), Mike McBride (Upsher-Smith, LLC), Dr. Eddie Moradian (MD Biosciences & Incubology), Lonny Stormo (POPS! Diabetes Care) and Senator Carla Nelson (MN State Senator, District 26).



In The Alley

In 2017, MAA's Alley Chats brought together more than 1,000 people across events hosted by Medical Alley members. Thank you to our 2017 hosts -NAMSA, Boston Scientific, Bio-Techne, Medtronic, and Upsher-Smith, LLC!

The Women in Health Leadership Series continued to be our most well-attended series in 2017. Now in its sixth year, the series featured these leaders in 2017: Toni Nosbush (Project Leadership Services), Sara Ratner (Red Brick Health), Beth Laboe Edgar (3M), and Cat Jennings (Boston Scientific).

MAA produced the second annual PharmaBio Conference, powered by PhRMA, to highlight the rapidly growing biotech and pharmaceutical leadership in Medical Alley and the more than 150 biopharma companies that call Medical Alley home. The event featured a fireside chat with Andrew Kaplan of Takeda Pharmaceuticals USA, Inc. and Shaye Mandle of the Medical Alley Association with nearly 200 attendees.

Medical Alley produced over 40 events in 2017, including our Small Business Leaders Development series and our 101 Series (including Regulatory, Clinical and Reimbursement). MAA events deliver in-person content and access to healthcare leaders across all sectors.

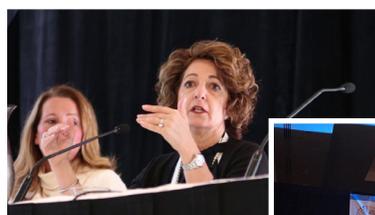


Elevating Through Partnership

Elevating the Global Epicenter of Health Innovation and Care requires national partnerships. MAA has strategically invested in expanding the partnerships that deliver the most value to our members and Medical Alley. Throughout 2017, Medical Alley’s profile was enhanced through partnerships with DeviceTalks, The MedTech Strategist, MedCity Invest, and others.

In 2017, we partnered with The Medtech Strategist to host the Medical Alley Innovation Summit. With more than 250 attendees, half of which traveled from outside of Minnesota, the Summit includes 40 startups from around the world that pitched to investors and extensive content for the audience of medical device executives and investors. We also partnered with MedCity INVEST to deliver the Midwest’s only digital health investor event in Medical Alley. More than 150 people attended MedCity INVEST Twin Cities, with half also coming from outside of Minnesota.

For the 5th year, MAA partnered with DeviceTalks to deliver leadership and content in Medical Alley. This year’s event featured a fireside chat with Cindy Kent, President & General Manager with 3M Infection Prevention Division and a panel of leaders moderated by MAA President & CEO Shaye Mandle that included Sheri Dodd (Medtronic), Martha Shadan (Rotation Medical), and Kathleen Skarvan (Electromed, Inc.).



Showcasing Medical Alley Around The World

Startups, established firms, and investors recognize the leadership of the Medical Alley community and want to be a part of it. This year, Medical Alley hosted international delegations from Germany, the Netherlands, Canada, Thailand, Denmark, and Norway, exposing them to the multitude of resources, expertise, and opportunities they won’t find anywhere outside of Medical Alley.

Additionally, we took these resources abroad, interacting, promoting, and connecting our community’s health innovation and technology to markets including the UK, the Netherlands, Australia, Denmark, and Germany.

These engagements have brought the establishment of global operations to Medical Alley, developed new supplier agreements, attracted new sources of capital, and secured other resources that ensure your continued leadership.