



WESTERN MICHIGAN UNIVERSITY
— Homer Stryker M.D. —
SCHOOL OF MEDICINE

INNOVATION CENTER

ANNUAL REPORT 2017–2018



The Innovation Center on the medical school's Parkview Campus is a 69,000-square-foot, purpose-built incubator and accelerator created to support life science, technology, and engineering ventures of all kinds, from the earliest startups to maturing companies. With access to specialized equipment, flexible lease terms, and the ability to grow or contract as needed in a fully managed facility, you can focus on your business without unexpected hassles or expense.

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WHAT WE DO



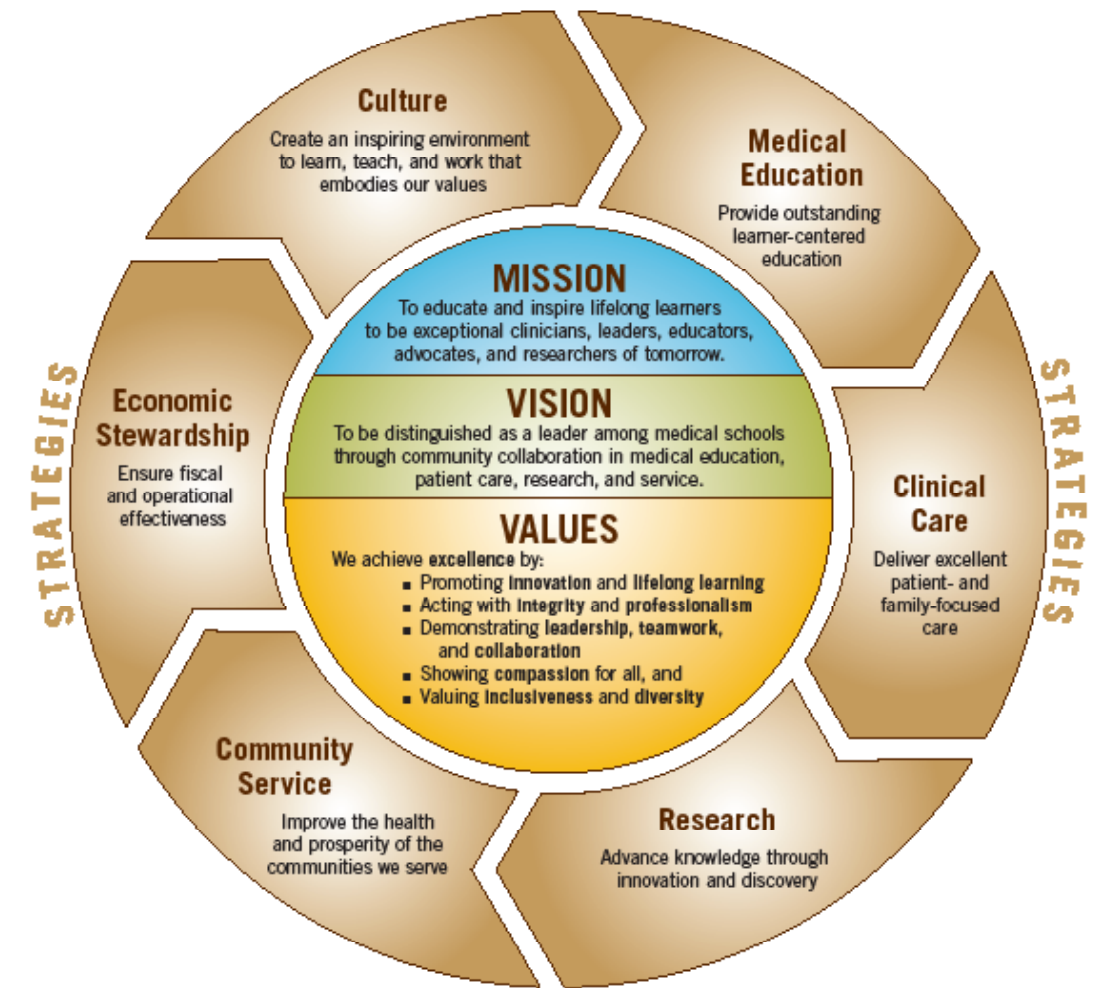
The Western Michigan University Homer Stryker M.D. School of Medicine (WMed) Innovation Center has been an important part of the Kalamazoo area entrepreneurial ecosystem since it first began in 2000. Through the years, the Innovation Center has grown and changed, adding office space, launching three different co-working spaces, and expanding the admission criteria to include many more high-tech endeavors. While life sciences, especially pharmaceuticals, will always be the bedrock of the Innovation Center, firms active in engineering, environmental science, nutraceuticals, agriculture, and IT are finding it a perfect place to grow their businesses.

We are glad you have picked up this annual report and given it a look. In its pages you will learn how we assist the high-tech businesses in the region. You'll read about the many successful startups we have helped grow. You will explore the various programs we offer to our clients and to the broader entrepreneurial community. Because, at the end of the day, creating a community of entrepreneurial innovators is what we do best. We provide a safe place in which to experiment with science and with business. Developing a realistic business model is just as important as solving a technical challenge. Through training programs, coaching sessions, networking events, and more, the residents of the Innovation Center are supported. Together we commercialize.

“The facility is wonderful,
I’m proud to point out it’s where I work.”

WMed Mission, Vision, & Values

The Innovation Center upholds the vision, mission, and values of WMed in all that we do. Our efforts support achievement of the institution’s research strategy to advance knowledge through innovation and discovery.



WMed Values in Action

These principles guide our actions.

TOGETHER WE...

- Seek to understand
- Respect one another
- Serve with empathy
- Speak up to inform
- Strive for excellence
- Act with integrity
- Celebrate effort and achievement

DIRECTOR'S STATEMENT

"WMed Innovation Center is the perfect environment for young and growing start-ups: good mix of clients and their technical fields, excellent facilities."



I love the end of the year! Why? Because my fiscal year ends June 30th. Instead of starting each new year cold, gloomy, and depressed, I get to start each new year with sunshine, warmth, and thriving growth. July 1st in Michigan is typically beautiful with hot sunny days, cool dry nights, field crops and fruit trees reaching to the sky, and wildflowers bursting with color. It's a season of growth and energy, children running through sprinklers, backyard gatherings with friends, lazy days in boats or on beaches, and long road trips to explore new places or revisit ones you love.

The start of each year for me is the embodiment of entrepreneurship. The entrepreneurs I work with are like summer—exuberant, eager, long days filled with exploration and laughter, riotous growth, fruition. Walking through the Innovation Center each day, I hear the sounds of summer in the whirling machines, the rise

and fall of voices in a conference room, the laughter of a group of residents sharing a joke over a cup of coffee, everything full of life and promise and expectation. Yes, entrepreneurship is summer. The cold grip of winter is long gone, the fragile shoots of spring have grown hardy, the cold chill of fall is a distant thought not to be dwelt upon. Summer is in full swing, all energy and growth, eagerly advancing to a culmination of success, straining for the ripeness that marks the end of a successful growing season. The bountiful harvest awaits!

So when the lovely Michigan summer fades and the harsh Midwest winter arrives, I can still hear the echoes of summer. While the parking lot is blanketed in white snow and twilight arrives in the afternoon, inside the Innovation Center ideas are germinating, businesses are growing, entrepreneurs are working long hours bathed in the warmth of innovation and creativity. Each entrepreneur is reaching upward, stretching toward the sunshine of success. And therein lies the secret to what makes the Innovation Center so special, why those who work here day in and day out love it so much—it is always summer inside the Innovation Center.



Sandra and Madelyn at the InBIA conference, March 2017

Our team may be small but we have the entire WMed organization behind us to provide additional support to meet the needs of our client companies.

Our Team



Sandra Cochrane, MBA, Assistant Dean for the Innovation Center

Sandra joined the medical school in January 2017 as the Assistant Dean for the Innovation Center. In her role, Sandra serves as the Innovation Center's Director. She coordinates and oversees all activities at the Innovation Center in support of entrepreneurship and commercialization, including technology transfer for the medical school. Her work at WMed focuses on growing the Innovation Center into a hub for burgeoning life science, technology and engineering companies. A native of Ann Arbor, Sandra and her family have called Van Buren County home for over twenty years. In addition to holding a National Business Incubator Association's Certificate of Incubator Management, Sandra is a graduate of Michigan State University where she earned a bachelor's degree in English Education and a master's degree in Business Administration.



Madelyn Pinder, Business Services Manager

Madelyn has been with the Innovation Center since 2004. As Business Services Manager for the Innovation Center, she serves as the first point of contact for clients and visitors. Madelyn manages the day-to-day business activities of the Innovation Center, receives guests for client companies, and serves as the face of the Innovation Center for everyone who comes to the facility, working to ensure that the Innovation Center is a positive experience for all. Madelyn previously served as Community and Investor Relations Specialist at Southwest Michigan First and participated in the planning and build-out of the Innovation Center. She also gained development experience at Kalamazoo College and as Program Manager for a private foundation. Madelyn completed the National Business Incubator Association's Certificate of Incubator Management in 2010.

CLIENT SUCCESS AND SATISFACTION

The success of the Innovation Center is measured by the success of its clients. In that regards, success abounds! Get to know three of our most recent success stories.

“Incomparable to other university-affiliated research parks. Truly exceptional assistance and great resources/space.”

IONTOX, LLC Embarking Upon Major Collaborative Effort to Study Osteoporosis on Board the International Space Station National Laboratory



November 2017 — Last November, Kalamazoo-based contract research organization, IONTOX LLC, in collaboration with LaunchPad Medical LLC, will commence an investigation that involves sending human osteoblasts, specific cells required for bone healing

and formation, to the International Space Station (ISS). Scientists at IONTOX’s headquarters, located in the Western Michigan University Homer Stryker M.D. School of Medicine Innovation Center, are currently preparing human cells for the studies, which will be done in part to investigate novel approaches in studying bone graft substitutes in osteoporotic environments.

LaunchPad Medical is a developer of synthetic bone adhesives and substitutes, often in conjunction with metallic bone implants, which aid in the regeneration of healthy bone around the implant. The ability for

their technologies to promote regeneration of bone tissue has far-reaching implications as an application for mollifying osteoporosis. The bone cells are being sent to the International Space Station (ISS) National Laboratory because the microgravity environment created in the space station is known to cause loss of bone density in astronauts, mimicking the biological effects of osteoporosis. By taking advantage of this unique environment, it is possible to study the effects of microgravity on bone loss over a shortened timeline. The cells are scheduled to spend 30 to 40 days in space. During that time, astronauts will perform experiments and collect data using protocols developed by IONTOX. While the cells are in space, IONTOX scientists will be performing the same experiments on earth. By comparing data generated in space to those on earth the teams at Launch Pad and IONTOX are hoping to determine whether microgravity impacts bone cells and their compatibility with the bone graft substitutes.

BioServe Space Technologies, based at the University of Colorado, and the Center for the Advancement of Science in Space (CASIS) will be coordinating the transport and handling.

WMed Innovation Center Companies Honored at 2018 Michigan Celebrates Small Business Event

March 2018 — The WMed Innovation Center is pleased to announce that two client companies have been selected as awardees at the 2018 Michigan Celebrates Small Business event. Congratulations to Proteos, the 2018 SmartZone Best Small Business of the Year Award winner, and Tetra Discovery Partners, a Michigan 50 to Watch company. Both companies will be honored on May 3, 2018, at the gala event in Lansing.



Proteos, Inc., is a contract research organization (CRO) specializing in the production of recombinant proteins and antibodies for the life sciences industry. Founded in 2003 by former Pfizer researchers, Proteos has grown into a nine-person company with a global customer base. From its earliest days, the team at Proteos has been deeply involved in the entrepreneurial ecosystem at the Innovation Center. In 2006, Proteos was also recognized as a Michigan 50 to Watch company.

“Proteos is honored to be the recipient of the 2018 SmartZone Best Small Business of the Year award and is proud to be located in a state that promotes and celebrates the achievements of technology-based small businesses such as ours,” said Mary Shuck, president of Proteos. “As we celebrate our 15th year in business, our mission continues to be the delivery of high quality research reagents and data to our clients.” Tetra Discovery Partners Inc., develops therapeutics to treat memory loss and cognitive impairment by improving how the brain processes and stores information. Working with potentially breakthrough technology, Tetra’s goal is to improve the quality of life for patients suffering from Fragile X Syndrome, Alzheimer’s disease, dementia, traumatic brain injury, major psychiatric disease, and neurodevelopmental disorders. With offices in Grand Rapids and laboratory operations at the Innovation Center

in Kalamazoo, Tetra has raised close to \$30 million to date. Tetra recently received FDA clearance to commence a Phase 2 Trial of one of its compounds in adults with the most common inherited form of autism, Fragile X Syndrome. The Innovation Center has provided support to the Tetra research team for the past four years.



“The WMed Innovation Center has been the engine of much of our success by providing high quality laboratory facilities and an entrepreneurial environment of exciting, successful and productive, early-stage biotechnology companies like Tetra,” Tetra CEO Mark Gurney said,

The WMed Innovation Center currently houses 18 companies and provides support services to numerous additional companies through its programs and seminars. This is the second year in a row that a company from the Innovation Center has been recognized as the SmartZone Best Small Business of the Year. Since the inception of the Michigan 50 to Watch program, Innovation Center client companies have made the list 11 times.

“We believe that all our client companies are destined for greatness,” said Sandra Cochrane, assistant dean of the Innovation Center. “However, when they are recognized as exemplary by other organizations, it is very rewarding. When our clients are successful, that means we did our job well.”

HIGHLIGHTS AND PARTNERS

Client Satisfaction Survey Highlights

The Innovation Center strives to provide the most supportive environment possible for the most number of clients. While not perfect, the Innovation Center succeeds in meeting the needs of the vast majority of companies in residence. The annual client satisfaction survey completed in August 2018 revealed....

90%

would most definitely recommend the WMed Innovation Center to another entrepreneur

97%

say the WMed Innovation Center has most definitely made a positive difference in their emerging enterprise

91%

say that the involvement of the Innovation Center's staff with their company is "just right"

Our Partners

The Innovation Center is fortunate to have the support of several organizations from across the state of Michigan. These partners and sponsors provide refreshments and snacks for events, content for educational workshops and seminars, and free and reduced cost services to the clients of the Innovation Center. Partners and sponsors enrich our entrepreneurial community.



NEW PROGRAMS

Over the past year, the Innovation Center has implemented several new programs in response to needs expressed by current and potential clients. In addition to a third co-working program,

The Workbench, the Innovation Center relaunched the Kalamazoo Venture Tuesday meetings, implemented an online entrepreneurial toolkit called GrowthWheel, offered several lunch-and-learn seminars for entrepreneurs, and purchased a 3D printer for client use.



Kalamazoo Venture Tuesday

Kalamazoo Venture Tuesday (KVT) is a program that was popular at the Innovation Center many years ago but fell by the wayside over time. Now, it's back! KVT is a quarterly meeting designed as a training event for entrepreneurs learning to craft an investor pitch. Each meeting features three companies. The companies' CEOs have 10 minutes to pitch their business to a panel of 3 angel/VC investors. After each company pitches for ten minutes, the panel of investors have 5 minutes for Q&A and feedback. Participants have a rare opportunity to see inside the minds of three investors as they reveal what three company presenters did right and wrong. Kalamazoo Venture Tuesday is designed as a teaching opportunity for participating companies and members of the audience.

The Workbench

Designed with designers in mind, The Workbench is an engineering co-working environment for startup companies creating prototypes and minimum viable products (MVPs). The Workbench provides month-to-month access to the resources of the Innovation Center, helping technology companies grow to the point of taking on conventional leases at the Innovation Center or re-locating to existing facilities in the local community. The Workbench provides low-cost physical science workspace and amenities in an entrepreneurial, innovative atmosphere. It provides networking opportunities, as well as access to on-site business tools and resources.



GrowthWheel

Offered at no additional cost to every client at the Innovation Center, GrowthWheel is an online, hands-on, action-oriented toolkit designed to help entrepreneurs at all stages overcome their barriers to growth. All businesses, from pre-venture start-ups to established enterprises, must address four key challenges. They need an attractive business concept, lasting customer relations, profitable operations, and a strong organization. GrowthWheel supports the decision making that entrepreneurs perform every day. It helps companies determine which areas to focus on to strengthen and grow their business by facilitating dialogue, focus, agenda setting, decision making, and action taking. It has been a terrific addition to the Innovation Center benefits package.

LUNCH & LEARNS, WORKSHOPS, AND EVENTS



Lunch and Learns

Lunch-and-learn events are very popular at the Innovation Center. Thanks to various service providers in the community, entrepreneurs from all over the region are able to visit the Innovation Center to learn about an important business concept, to enjoy a free lunch, and to network with other entrepreneurs. The local service provider supplies the educational content and the lunch, the Innovation Center provides the facility and parking. It's a win-win-win for everyone. Some of the lunch-and-learn events this past year included:

- A 6-part series by Warner Norcross + Judd on Numerous Entrepreneurial Legal Matters
- Cayman Chemical (Citrullination, Carbamylation and Autoimmunity)
- E.M.M.A. International (What's Coming in 2018: FDA's Regulatory Agenda for the Medical Device Industry)

The Office of Technology Development

Like the Innovation Center, the Office of Technology Development (OTD) is part of WMed's research infrastructure. The Innovation Center is proud to be the home of the OTD, with Sandra Cochrane leading the effort to get the technology transfer office up and running. The OTD (<http://med.wmich.edu/node/588>) manages the intellectual property of WMed, including marketing and licensing inventions. It assists WMed investigators in transitioning their technologies from compelling research results to a technology that has commercial value. While still in its early stages, the research at WMed is promising and the OTD will be ready to commercialize those discoveries when the time is right.



Workshops and Events

- SBIR/STTR Workshops
- Social Media Basics
- The HIRE Effect
- Crowdfunding Workshop
- Business Model Canvas
- 5 Key Ways to Increase the Value of your Business
- Introduction to Customer Discovery
- Medical Device Development/Meet the USPTO
- Entrepreneurial Mix & Mingle
- WMU Connect
- Coffee & Donuts Open House
- Various SBDC and SCORE workshops

OUR CLIENTS

- **Alteron Therapeutics** is an early stage company researching and developing therapeutic compounds against neurodegenerative diseases and cystic fibrosis.
- **Applied IE** is a leading-edge industrial engineering firm continually developing and implementing new or enhanced industrial engineering methods.
- **Arcadia Supplements, LLC** formulates and distributes fulvic-mineral-based health and wellness products.
- **AureoGen Biosciences, Inc.** is focused on the development of novel chemistry and genetic engineering methodologies for the modification of cyclic peptide-based compounds.
- **Drummond Carpenter, PLLC** is a service-disabled veteran-owned small business that specializes in environmental and water resources technical services and applied research.
- **Hibiskus Biopharma Inc.** is an early stage drug discovery company utilizing proteasome inhibitor technology that may have significant activity in solid tumors; in particular, renal carcinoma.
- **IONTOX, LLC** is a biotechnology company dedicated to providing expertise to the area of in vitro toxicology, with a mission to build improved methods for predicting human adverse effects from chemical exposure.
- **Kalsec** is the leading global producer of natural spice and herb flavor extracts, colors, antioxidants, and advanced hop products for the food and beverage industry.
- **Metabolic Solutions Development Company, LLC** is developing innovative therapeutics to treat and prevent age-related metabolic diseases such as diabetes.
- **Micromyx, LLC** is a microbiology services company specializing in anti-infective discovery and development for the pharmaceutical, biotechnology, and animal health industries.
- **Proteos, Inc.** provides a wide range of expression platforms, purification methods, protein analysis tools and assay services to life science companies and research labs across the world.
- **RealBio Technology, Inc.** provides leading-edge cell and tissue culture technologies that support the growth, expansion, differentiation, and collection of human and non-human cells.
- **SafeSense Technologies LLC** is a sensor technology company providing innovative solutions using flexible hybrid electronics for the Sports Performance, Physical Therapy and Medical Diagnostics markets.
- **Separation Solutions / SepSol Process Solutions** is a manufacturer's representative and distributor of equipment for filtration and separation, powder and bulk processing, dust collection and packaging.
- **Single Source Procurement, Inc.** staffs and stocks an on-site scientific supply storeroom and coordinates ongoing routine procurement for companies, as well as coordinating instrument repair and researching and negotiating one-time purchases.
- **StatLab Medical Products** has been supplying the anatomic pathology laboratory for over 30 years as a leading developer and manufacturer of cost-effective histology, cytology and immunohistochemistry diagnostic supplies.
- **Tetra Discovery Partners LLC** develops therapeutics to treat memory loss and cognitive impairment by improving how the brain processes and stores information, to improve the quality of life for patients suffering from Alzheimer's disease, dementia, traumatic brain injury, major psychiatric disease, and neurodevelopmental disorders.
- **Vestaron Inc.** is a leader in the development and marketing of safe and effective bioinsecticides derived from naturally occurring peptides found in spider venom.

ECONOMIC IMPACT

Nothing speaks to success like the hard numbers. We are proud to report the annual economic impact of the Innovation Center achieved through the efforts of our client companies for the past 12 months.

New Companies Created	5
Number of Companies Expanded	7
Number of Companies Served	100
Jobs Created (Current Number of FTEs)	30
Average Annual Salary of Jobs Created	\$42,750.00
Jobs Retained	120
Average Annual Salary of Jobs Retained	\$76,287.00
MEDC Funds Awarded to Companies	\$607,667.00
SBIR, STTR, & Other Federal Funding	\$0
Venture Capital Raised	\$11,227,266.00
Angel Funds Raised	\$1,195,872.00
Bank/Loan Financing	\$79,999.00
Owner Investment Made	\$184,800.00
New Sales (Increase in Revenue)	\$11,743,146.00
Total dollars invested into companies	\$25,088,751.00
People/Companies Attending Events	1,262
Patents Applied For	3
Issued Patents	8
Licensing agreements	4
Commercialized products	56

Data collected from the annual Innovation Center grant report to the MEDC, April 2018

LOOKING AHEAD TO 2018-2019



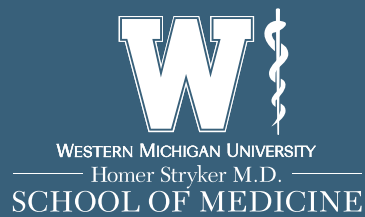
Innovation requires constant introspection and the ability to critically examine what is working, what is not, and how to improve. Looking ahead to the next year, there are many aspects of the Innovation Center that will continue, because you don't mess with success. Some keepers are the regular lunch-and-learn events, networking opportunities, the co-working programs, and Kalamazoo Venture Tuesday. Popular programs are not stagnant, though, so even these tried and true events will undergo some tweaks to make them better.

The new Office of Technology Development is a wonderful addition to the Innovation Center, a perfect link between the world of academic discovery at the medical school and the world of commercialization at the Innovation Center. Transferring innovative technologies developed at the medical school to companies that turn them into products and services is what the phrase "Together We Commercialize" is all about.

Hopefully the coming year will provide some technology transfer opportunities for the medical school, inspiring medical curiosity as well as creative solutions to medical problems.

Other new concepts that are slated to launch include a Medical Entrepreneur Speaker Series designed to showcase successful Michigan medical innovators who have led life science companies from startup to exit. Their inspirational stories will reveal the process of how new products and services actually end up being used by doctors and researchers to improve human life. Another entrepreneurial showcase event, 1 Million Cups, will make its debut in Kalamazoo, hosted at the Innovation Center. Founded by the Kauffman Foundation, 1 Million Cups is based on the notion that entrepreneurs network and discover solutions over a million cups of coffee. The free, weekly gathering helps build startup communities on a grassroots level.

Of course, we anticipate accepting some new clients and graduating some existing clients. Fostering individual companies is the heart and soul of the Innovation Center. No one knows what the future holds, but at the Innovation Center, we're sure the future will be exciting!



INNOVATION CENTER

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