

West Michigan Science & Technology Initiative



PROOF^{OF} CONCEPT

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Dr. Weiwen Deng,
West Michigan Inventor

Michigan Israel
Business Bridge

Borgess Medical Device
Research Laboratory

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Linda Chamberlain, Ph.D.
Executive Director, West Michigan
Science & Technology Initiative

Friends,

Welcome to the third edition of *Proof of Concept*, the biannual newsletter for the West Michigan Science & Technology Initiative.

Since the purpose of *Proof of Concept* is to highlight the work of the Initiative, as well as that of our members, clients and partner organizations, I am sure you will enjoy the following pages, which are filled with the latest life science news from around West Michigan—and beyond.

This issue highlights a recent trip to Israel with the Michigan Israel Business Bridge, and the feature story sheds some light on Israel's life science industry and what our region can learn from it.

Israel is leading the way in the development of many innovative and emerging technologies. In this issue, we focus on three high-potential Israeli-based technologies that are in development for the emerging technologies section. Be sure to read this article to learn about a breakthrough method for colorectal cancer screening; an injectable, biodegradable new medicine for the treatment of cardiac tissue, post-acute myocardial infarction; and a potential new treatment for small cell lung cancer and age-related macular degeneration.

This month's inventor profile features Weiweng Deng, M.D., Ph.D., a respected Grand Rapids-based researcher who has made many innovative discoveries in his nearly 30-year career. Those of you interested in making your own discoveries or inventions will also learn about a recently launched inventors' organization called GRIN, or the Grand Rapids Inventors Network. We are excited to welcome this new organization to the community.

This issue also features some of the area's life science companies and organizations:

- ClinXus, a West Michigan-based life science collaborative aiming to bring innovative, biomarker-based, clinical trials to West Michigan
- INRAD, a leading West Michigan-based developer, manufacturer and distributor of medical devices serving the radiology and biopsy markets

executive director's note

- Keystone Solutions Group, which provides product development, supply chain management and contract manufacturing services with locations in Grand Rapids and Kalamazoo
- Borgess Medical Device Research Laboratory, a pre-clinical medical research and development laboratory for medical device and pharmaceutical testing affiliated with Borgess Health

Plus, David Van Andel, CEO and chairman of the Van Andel Institute, provides his insight into West Michigan's life science industry, the role the Initiative plays to catalyze its success, and the ongoing need for collaboration.

West Michigan continues to make strides in the life science industry, and I am pleased to be able to share this news with you. Thank you for your interest in the work of the Initiative and for your continued support and dedication to the region's life science success!

Cheers!

west michigan inventor

Dr. Weiwen Deng

Before Weiwen Deng, M.D., Ph.D., ever visited the United States (much less West Michigan), he felt a strong connection to scientific discovery and the benefits those discoveries bring to the world.

His earliest forays into scientific research were inspired by the famous French microbiologist and immunologist Louis Pasteur, and by the time he was earning his Ph.D. at Tulane University in New Orleans he had become well established as a researcher in stem cell therapy and bone marrow. In 2006, when Tulane reduced staff to cope with the devastating effects of Hurricane Katrina, he became research director of the Pediatric Blood & Bone Marrow Transplantation Program at Spectrum Health's Helen DeVos Children's Hospital.

Shortly after joining Helen DeVos Children's Hospital, Dr. Deng felt a strong pull to build on the translational research he had completed at Tulane. After encouragement from the management team at Spectrum Health and West Michigan Science & Technology Initiative Executive Director Linda Chamberlain, he began to expand his thinking in terms of the discoveries he could make building on his past experience. This approach included a broader utilization of West Michigan's unique resources in the medical research field. A team was then assembled to include Aly Mageed, M.D., MBA, the division chief of the Pediatric Blood & Bone Marrow Transplantation Program at Helen DeVos Children's Hospital and Anthony Senagore, M.D., vice president of research and medical education for Spectrum Health, both of whom are national experts in bone marrow stem cells and transplantation.

"For me, research is about the constant discovery of new ways to solve complex problems," said Dr. Deng. "My motivation is the love I feel for making scientific discoveries and advancing modern medicine to the point where many people will benefit from the work we do in our labs today."

During the course of his career, Dr. Deng has conducted important research in the use of stem cells to treat cardiovascular diseases, erectile dysfunction and pulmonary hypertension. In his current position, he is working to find new treatments for complications of bone marrow transplantation, which are frequent in many patients after the procedure.

Dr. Deng's current research has gained national attention with the U.S. Department of Defense and the National Institutes of Health. He and his team are using genetically engineered adult stem cells with antioxidants to develop a treatment candidate for patients exposed to high levels of radiation. The treatment could help protect soldiers exposed to nuclear radiation during duty, and can help first responders in the event of a terrorist attack. It would also have benefits for civilian workers exposed to high levels of radiation in an industrial accident.

"Without the help of the many talented medical researchers in West Michigan, much of my current research could not be completed," said Dr. Deng. "We have shown effectiveness in mice and are now seeking funding to continue our research to determine if this treatment may benefit and help to protect humans."

Continued on page 4.



PHOTO CREDIT: CHUCK HEINEY PHOTOGRAPHY, © 2009

The Grand Rapids Inventors Network

Individuals don't have to have a fully developed life science idea to receive help with their inventions. The Grand Rapids Inventors Network (GRIN) recently celebrated its official launch. A spin-off of the Muskegon Inventors Network (muskegoninventorsnetwork.org), GRIN is a non-profit support group dedicated to helping innovative ideas get off the ground.

"The purpose of GRIN is to help inventors take their ideas to the next level," said Dan Clark, president and founder of the Grand Rapids Inventors Network. "The truth is, the odds are stacked against an inventor. It takes a lot of effort to bring a product to market, and one of the top reasons why most people fail is poor execution. GRIN works to create an environment that provides inventors with necessary information and support to help overcome these challenges."

GRIN is open to anyone with an idea for a product, service or process. Members attend monthly workshops where they are able to network and interact with other "idea-types", hear honest feedback about whether their ideas have real promise, and receive recommendations about what to do next from other experienced inventors, entrepreneurs and business people.

To ensure the protection of intellectual property, members are discouraged from openly discussing their idea or concept during a meeting unless they have filed an intellectual property (patent) claim or are covered by a confidentiality agreement.

"Although we are still in the start-up phase ourselves, GRIN's goal is to be a key community resource," said Clark. "Michigan has a strong history of invention and entrepreneurship, and we look forward to keeping that history alive as our group grows and brings new ideas to the marketplace. We want to avoid having good ideas slip through the cracks."

GRIN is a member of the United Inventors Association, a national organization dedicated to inventor education and support. For more information, visit uiausa.org. •

Visit grinventors.org for meeting locations and to sign up for the GRIN mailing list.

Meetings or workshops are held the second Tuesday of every month.

Dues: \$70 per year.

Dr. Weiwen Deng Continued.

Despite the commercial and financial potential of his work, Deng insists that the same awe and wonder he felt as a child for Louis Pasteur's groundbreaking work in microbiology and immunology inspires his work today. He also credits his mentors at Shanghai Medical University and Tulane for providing him opportunities to conduct foundational research and for encouraging him to pursue new directions in his research.

"Making a discovery that will make a difference in the world and expand our understanding is what science is all about," he says. "Big scientific discoveries are good for

society, and I want to spend the time I have focused on the projects that are likely to have the most impact."

Dr. Deng received his medical degree and his master's degree in microbiology and immunology from Shanghai Medical University, in Shanghai, China. He also holds a doctorate in molecular and cellular biology from Tulane University. •

If you are working on an idea or project in the life sciences, the West Michigan Science & Technology Initiative can help. Contact our offices to learn more or to schedule an appointment.

Medical Device Development in the Middle East:

Lessons Learned

In June, West Michigan Science & Technology Initiative Executive Director Linda Chamberlain and Initiative Board Chair Jerry Callahan joined a coalition of Michigan business and community leaders in Israel during the BioMed Israel 2009 conference in Tel Aviv. The trip was sponsored by the Michigan Israel Business Bridge (MIBB).

There were many reasons for the Initiative's representatives to make this trip, and it presented a unique opportunity for West Michigan to meet with technology companies operating in Israel. Like our own region, Israel has a strong medical device development industry and is on the cutting-edge of medical technology (see page 7). Furthermore,

Israel has a very robust and highly developed technology incubator network. On their trip, Initiative leadership acquired an in-depth understanding of these models and established relationships that may one day result in additional incubation opportunities here at home.

"This was an excellent opportunity to study a successful model for technology development and a strong incubation network," explained Chamberlain. "We sought to benchmark the ideas that are working in Israel and look for ways they can be successfully applied here in West Michigan."

Continued on page 6.



The High-Tech Incubation: Israel Gets Down to Business

Lessons Learned Continued.

The Initiative met with more than 50 Israeli medical device, drug development and diagnostic companies, venture capital firms and other high-technology businesses. The mission was to learn how the country's complex network of entrepreneurs, established companies, incubators and early-stage capital funds help drive the innovation and growth of life sciences.

"Israeli start-up companies seem to have better access to early-stage capital and industry partners than businesses at a similar stage of development in the United States," said Chamberlain. "We were interested to learn how their system streamlines the process for entrepreneurs and start-ups, and provides help to these companies exactly when they need it."

Some of the key findings from the visit:

- It is critical to develop a coordinated infrastructure for entrepreneurs, and foster further development of entrepreneurial skills and talent in the community. Israeli start-ups are supported throughout the early stages of development to enable rapid, thorough and seamless validation of the proposed business value proposition through mentorship, incubation, capital, education and business support services—and the talent pool is integrated.
- Properly applied early-stage seed capital can drive success. Israel has wisely dedicated funding directly to the development "gap" to encourage innovation. West Michigan must find a way to further develop and cultivate seed capital funds that are accessible to those entrepreneurs who have strong, high-growth business plans.
- The life science community in West Michigan should promote the success stories of our developing companies

and share in their victories. Friendly competition is important to improve skills and attract venture capital, but celebrating our mutual success by recognizing and promoting individual company achievements and milestones is essential. We also need to be willing to embrace failure as a natural part of the discovery and development process. Talented entrepreneurs can tell you success is sweet, but their best lessons were delivered through failing.

- West Michigan must reclaim, develop and defend a proprietary product position and commercialize, commercialize, commercialize. If Israel can build a strong, vibrant, technology-based entrepreneurial society, then so can we.

Chamberlain added that many of the companies she encountered displayed a "fearless" mentality and an acceptance that anything is possible. "Technology and entrepreneurship matter in Israel. The country has few natural resources and is forced to rely on the one resource they have in abundance: brain power."

She feels that West Michigan's potential is equally strong: "Here in West Michigan, we can capitalize on our strong problem-solving skills. Our entrepreneurs, start-ups and established companies all have intelligent, inventive and solution-minded people who can help transform our economy by focusing on life sciences, alternative energy, advanced manufacturing and other high-growth industries. The Initiative is working to make resources available to entrepreneurs and companies that can contribute to this end." •

MIBB, a non-profit 501(c)6 organization, was established to facilitate business and investment opportunities between Michigan and Israel for the benefit of both. For more information visit michiganisrael.com.

With a geographical area only about the size of New Jersey and a population of 7.4 million, Israel has become an economic success story by many measures, ranking:

- Second in the world in funds raised by technology start-ups
- Second in issued patents
- First in R&D expenditure as a percentage of GDP (four percent)
- Third in skilled labor availability
- Fourth in quality of research institutions

One of the key drivers behind these statistics is the extensive incubation system available to innovators and entrepreneurs. In the early 1990s, the Israeli government created an incubator program to leverage the talent of approximately 750,000 scientists, engineers and physicians who had just arrived from the former Soviet Union. Israel's Office of the Chief Scientist (OCS), a division of the Ministry of Industry, Trade and Labor, started six incubators designed to integrate newcomers with local talent, and to foster early-stage technology development through entrepreneurship. Today, there are 25 incubators located throughout Israel, and 65 percent of the start-ups housed in these incubators address high-tech problems in the communication, software, pharmaceutical, medical device and diagnostics, alternative energy, clean technology, and military industries.

Israel's incubation system plays a critical role in supporting technology development, and aims to transform ideas into commercial technologies successfully linking inventor to entrepreneur. In practice, the primary goal of the technology business incubators is to promote the development of

technology-based firms by reducing start-up cost, providing coaching for skills development and enhancing access to capital networks. A number of the incubators have close cooperation with universities or research institutes, which provide important support in terms of equipment, libraries, databases and expertise, as well as access to emerging technologies in research and development.

To access incubation in Israel, start-up applicants are screened by incubator management for an evident market need, strong intellectual property position, a clear commercialization roadmap and company management. Typically, only between one and five percent of companies that apply are invited to reside in an incubator. If selected, the OCS will provide 85 percent of \$500,000 in seed capital over a 24-month period. The company must come up with the remaining balance. In return for state funding and incubator support, company ownership is distributed through equity positions held by both the government and the incubator.

On average, an incubator will have between six and eight projects operating simultaneously, with most companies graduating in two or three years. Approximately 60 percent of incubator companies survive post-incubation, and three-quarters of the companies are able to attract external funding (\$435 million in private funds in 2007). Today, the OCS allocates approximately \$1 billion per year to incubators and other programs that encourage technology development, with 30 to 40 percent of this budget derived from royalty payments made by companies that initially received government support through the grant program. This ROI represents an impressive payback for supporting early-stage, high-tech business development. •



Emerging Technology

Life Sciences from Around the World

Companies around the world are pushing the envelope with new and innovative discoveries in life sciences. The following are three emerging technologies from several Israeli-based life science companies that have the potential to change the face of modern medicine.

A breakthrough solution for colorectal cancer screening.

The Check-Cap requires no bowel preparation or invasive procedures, and is expected to detect clinically significant polyps with the same accuracy as a standard colonoscopy. Check-Cap's advanced technology has been proven in animal testing. The tiny sonar-like device, which is shaped like a small capsule and swallowed, creates a 3-D reconstructed image of the colon. No prior bowel cleaning is necessary because the device uses a safe dosage of X-rays to see through intestinal contents. The capsule transmits data to a device worn on the wrist or belt, where it is stored for clinical analysis. If polyps are not detected, then no colonoscopy is required. If imaging reveals polyps, they are removed with a therapeutic colonoscopy. (check-cap.com)

Re-purposed, smaller-dosed, alcoholism drug for small cell lung cancer and age-related macular degeneration (AMD) applications.

Ora Bio is developing products that use the same active ingredient that inhibits angiogenesis, which is the underlying process in both small cell lung cancer and AMD. The resulting products can be used alone, in combination with chemotherapy or with other anti-angiogenesis compounds. They are orally administered; hence they may serve as preventive agents in patients at high risk of recurrence after primary cancer therapy or in patients with early stage AMD. The effective dosage required for inhibiting angiogenesis is much lower than the dosage used for the FDA-approved application. (orabio.com)

A first-in-class injectable, biodegradable polymer for the treatment of cardiac tissue, post-acute myocardial infarction (AMI).

Current therapies focus on re-opening the occluded coronary artery and rapidly re-establishing the blood supply to the affected tissue via percutaneous coronary intervention or the introduction of a stent. While these therapies successfully re-establish blood flow, they do not prevent the irreversible and ongoing damage to the ischemic heart tissue that undergoes remodeling as a result of AMI. As a result, many patients develop congestive heart failure.

This technology represents a breakthrough approach to supporting the damaged cardiac tissue. Administered via intra-coronary injection during standard vessel reopening procedures, the polymer solution undergoes a transition from liquid to gel on contact, and provides mechanical support to the damaged tissue during the crucial healing and repair phases that follow an AMI. Results of animal studies indicate that this mechanical support allows the tissue to heal as a more compact, less dilated and "tighter" scar, resulting in improved long-term cardiac function. The product reabsorbs naturally and is excreted from the body within six weeks of injection. (biolinerx.com) •

Lab Brings Quality, Capabilities to Life Science Community

Borgess Medical Center has always been known for quality patient care. But few know about the unique commitment Borgess has made in research and development for pharmaceuticals and medical devices through the Borgess Research Institute's Medical Device Research Laboratory.

As an integral part of Borgess Health, the laboratory pulls from the Center's rich history in medical device development. In the 1940s, Dr. Homer Stryker developed orthopedic devices in the basement of the hospital, leading to the eventual creation of the Stryker Corporation. More recently, Dr. Tim Fischell developed an innovative device to warn people of an impending heart attack, which led to the creation of Angel Medical Systems, Inc.

The Borgess Medical Device Research Laboratory brings highly specialized expertise and experience to West Michigan's growing medical device and drug development communities and provides surgical expertise in areas such as cardiovascular, neurosurgery and orthopedics for the research studies and trials required for bringing new devices or drugs to market.

"Our laboratory offers the comprehensive services you'd expect to find at more well-known facilities, from protocol development to study reporting. Our laboratories are fully accredited and compliant with the highest standards in the industry, and we can provide services from the earliest stages of product or drug development right on through regulatory approval," said Dr. Amy Shipley, executive director of Borgess Research Institute. "At the same time, we offer the convenience and advantages of a smaller, local facility, with a dedicated quality assurance unit and physician-researchers who are also practicing medicine alongside their peers at Borgess Medical Center."

In a unique arrangement linking practicing clinicians at Borgess Medical Center with highly skilled researchers, Borgess Medical Device Research Laboratory can customize pre-clinical services to support the development and testing of drugs and devices. The lab works closely with physician scientists and study sponsors to develop research protocols. An internal quality assurance audit is conducted for all Good Laboratory Practice trials, and a final report is drafted to aid the sponsor/physician in making the submission to the Food and Drug Administration.

The lab has a team of scientific experts and principal investigators on staff to help develop, direct and carry out the research needed to move product candidates through the required testing. The lab offers animal husbandry, surgical procedures and study reporting services to support cutting-edge research trials. It boasts a broad range of surgical and angiography capabilities and necropsy and histopathology laboratories to meet the needs of customers. It is also one of the few organizations in Michigan that can host cadaver labs for medical device development needs.

"The Borgess Medical Device Research Laboratory has the capacity and flexibility to meet a wide spectrum of client-specified requirements, and our staff is dedicated to meet your needs and provide world-class service," said Dr. Shipley. "As a member of the region's growing life science industry, our goal is the same as yours: the successful development and commercialization of products that can be manufactured here in West Michigan and sold around the world."

The Borgess Medical Device Research Laboratory is yet another testament to West Michigan's strengths and resources in life sciences, and the area's ability to draw and retain skilled workers and researchers. If you are interested in learning more about the Borgess Research Institute or the Borgess Medical Device Research Laboratory, please visit research.borgess.com, or call 269.488.8145. •

Borgess Medical Device Research Laboratory's Histology Capabilities

- The Borgess Medical Device Research Laboratory histology team provides high-quality services to investigators, sponsors, research institutions, pharmaceutical companies, pathologists and veterinarians
- The histology lab, in conjunction with additional study data and reviews, provides the safety and efficacy data necessary for a 510(k) submission
- Devices and surrounding tissues are prepared in the Borgess Research Institute's histopathology laboratory, and microscopically examined by a board-certified pathologist
- Histopathology is offered by the laboratory as a stand-alone service to suit individual business needs or can be performed as a function of a safety and efficacy study

life sciences



PHOTO CREDIT: ANTHONY DUGAL PHOTOGRAPHY, COURTESY BORGESS MEDICAL DEVICE RESEARCH LABORATORY

ClinXus

It is no secret that West Michigan's growing life sciences community has become stronger, more capable and internationally competitive over the past five years. A local clinical research organization is just one example of how the area is helping to develop future medical treatments from which you or a loved one may one day benefit.

ClinXus is a nonprofit collaborative life science alliance that targets innovative, early-stage clinical trials and organizes the required research to fill the needs of those trials. The organization was formed in 2006 to utilize the combined strengths of partner institutions to generate visibility for West Michigan as a center for medical research. The overall goal of ClinXus' facilitated research is to improve patient care through new treatment and diagnostic opportunities based upon biomarker and genomic-guided information. These molecular targeted therapies will use genomic signatures to better match patients to treatment and increase their chance of a successful outcome.

"ClinXus is unique in the medical industry because it is a collaboration of West Michigan's clinical trial resources," said William Baer, M.D., Pharm. D., executive director and chief medical officer at ClinXus. "We are extremely proud of the quality of work performed by our partners and are excited to be involved in developing and validating future medical treatments and diagnostics."

ClinXus plays an essential role in the development of potential therapies as they are tested in the clinical setting. In short, ClinXus' efforts will have emphasis in the pre-clinical to clinical (translational) arenas that build the foundation to enable the safety and efficacy of emerging treatments.

"We are working to establish a 21st-century biomarker and molecular-based clinical trials network to serve medical applications that are of increasing value to advancing individual patient care that is customized based on the patient's genetic profile," explained Baer.

This approach to clinical trials is an important development in clinical research because it enables investigators to utilize information from multiple sources and make relevant clinical

decisions. This helps hasten scientific discovery and advancement while avoiding the redundancies sometimes common in clinical trial recruitment. Put simply, there are more research proposals than there are clinical trial participants, and developing and conducting trials that can leverage existing data with genomic expression and biomarkers can relieve some of that backlog.

This is an exciting time for ClinXus and West Michigan. In 2007, ClinXus joined the Critical Path Institute's Predictive Safety Testing Consortium (C-Path/PSTC). They have aided in the development and implementation of several new biomarker qualification packages for drug discovery and hopeful clinical utility with guidance from the U.S. Food and Drug Administration (FDA) and its European equivalent, the EMEA. The following year, ClinXus was selected to participate in a first-of-its-kind observational trial with the nephrotoxicity (kidney-related) working group within the PSTC. This clinical trial will help establish baseline values of seven novel nephrotoxicity biomarkers. Follow-up studies are planned, including standard-of-care-based trials that will advance to adaptive and eventually outcome-based trials for these new biomarkers.

ClinXus comprises researchers and clinicians from Cancer & Hematology Centers of Western Michigan, Grand Valley Medical Specialists, Grand Valley State University, Innovative Analytics, Jasper Clinical Research & Development, MPI Research, Saint Mary's Health Care, Spectrum Health and Van Andel Institute.

For more information about ClinXus, visit clinxus.org. •

If you are interested in locating your business at the West Michigan Science & Technology Venture Center, please call 616.331.5840, or visit wmsti.org.



virtual company profile

Axios Incorporated

As West Michigan's life science community continues to grow, a number of area companies are making the transition from "small start-up" to mid-size, growth-focused employers. While rapid growth and success are good for business, they can also present new challenges for young organizations.

Enter Axios Incorporated, a leading human resources service company based in West Michigan. Founded in 1988, Axios provides the entire spectrum of human resources services for small- to mid-size companies, from benefits procurement and payroll administration to human resources consulting, including help with employee productivity and retention issues.

The Axios approach can be a good fit for many of the area's expanding life science companies, which typically have less than 20 employees. Axios utilizes a model that pools together multiple small businesses to help maximize the amount and quality of benefits purchased, while passing on a lower cost to each company. This co-op offers affordable benefits to employees beyond what small companies can typically provide on their own.

"By linking businesses together to leverage buying power, Axios is able to provide smaller organizations many of the same benefits that Fortune 500 companies enjoy," said Dan Barcheski, founder and CEO of Axios.

As a Virtual Company ally, Axios works closely with Initiative clients, analyzing an organization's business model as it relates to human resources and other employee-related needs. Axios will help the business develop a human resources plan by providing analysis and counsel. Companies are then able to deliver the nationally competitive human resources package needed to drive continued growth in the region's life science industry.

"Outsourcing the human resource function not only saves the company money on the back end by providing lower administrative costs and benefits, but also on the front end by keeping the management team focused," said Barcheski. "In today's global market, it is very important for business owners to be focused on their core business, not the non-strategic tasks."

Axios recently helped one local business address a hole in that organization's human resources function. The company had grown quickly and needed human resources help, but did not want to

divert internal energy away from business development.

With help from Axios, the company effectively addressed its needs in payroll, benefits and employee recruiting, and realized an annualized savings of more than \$50,000. Most importantly, the management team was able to focus on the continued growth of the business.

"Initially, most of the area's life science companies tend to have a relatively small number of employees, so most of these employers are not able to justify the expense of a full-time human resources department," said Barcheski. "Through Axios, these companies have access to better benefits purchasing and human resource services during the early growth stages."

Axios Incorporated has more than 50 employees, and through its innovative network co-employ more than 5,000 employees region-wide. The company has clients across Michigan and in 12 other states.

For more information about Axios, visit axiosincorporated.com. •

For more information about Virtual Company benefits for Initiative members, please call the Initiative at 616.331.5840.

WMMDC

Three Companies Join the West Michigan Medical Device Consortium

- **Borgess Research Institute's Medical Device Research Laboratory**, a pre-clinical medical research and development laboratory for medical device and pharmaceutical testing. The laboratory is affiliated with Borgess Health, and is located in Kalamazoo, Mich. (research.borgess.com)
- **Flow-Rite Controls**, a Byron Center, Mich.-based company that designs, manufactures and sells fluid-control devices for medical and laboratory use, lead acid batteries and recreational fishing boats. (flow-rite.com)
- **Masters Precision Mold Technology**, is a custom mold builder that specializes in precision two-shot plastic molds for the medical device market. The company is based in Greenville, Mich. (masterprecision.com)

The WMMDC was established in 2007 by the West Michigan Science & Technology Initiative, and is the only organization in the state of Michigan dedicated to medical device design, development, manufacturing and distribution.

The WMMDC is comprised of medical device companies headquartered throughout West Michigan who collaborate together on new business opportunities and promote their specialized expertise in the medical device industry, from concept design through manufacturing and distribution. The group connects through quarterly meetings to discuss new product ideas, industry trends and other revenue-enhancing opportunities.

Visit wmmdc.org for more information or to learn how to join.



MD&M Minneapolis

West Michigan has an active and growing cluster of medical device manufacturers, and the West Michigan Medical Device Consortium (WMMDC) intends to tell the rest of the country (and world) about that capability.

The WMMDC has more than 30 member companies from Grand Rapids, Kalamazoo and other West Michigan communities, representing some of the area's most successful and innovative medical device enterprises.

On October 21 and 22, WMMDC members will join forces to exhibit at the 2009 Medical Device & Manufacturing (MD&M) expo in Minneapolis. This is the second year that the consortium will attend this high-profile industry gathering.

In 2008, 17 members of the WMMDC participated in the expo, which is attended by more than 9,000 medical product development professionals from around the country.

The exhibit is made possible, in part, thanks to funding from the City of Grand Rapids.

Keystone Solutions Group

In 1997, a small product development firm in Kalamazoo, Mich. was formed to focus on the aerospace, automotive and medical device markets. As with many start-ups, its founder identified an unmet need in the market and jumped at the chance to make an impact.

More than 12 years later, that small product development firm has grown to become Keystone Solutions Group, a full-service engineering and manufacturing company that can take an idea through the entire product development life cycle—from concept to market. In addition to product development services, Keystone provides supply chain management and contract manufacturing services for the medical device, aerospace and specialty products industries.

The company has two divisions, Keystone Product Development and Keystone Manufacturing. Keystone Product Development provides engineering services, resource procurement and project management consulting, as it has since the company's founding. The manufacturing arm, launched in 2007, handles manufacturing, assembly, packaging and distribution of products and services.

"We decided to bring manufacturing in-house since we recognized a demand, not only from our customers, but also across the many industries we serve, particularly medical device," said Mike Zamora, principal at Keystone Solutions Group. "With the combined capabilities of both product development and manufacturing, we are able to provide our customers with a complete product solution. Or, as we like to say, complete product solutions 'From Dream to Distribution.'"

Keystone recently opened a new location for its manufacturing operations in Grand Rapids, Mich. With 65,000 square feet of space, this new location offers plenty of room for expanded operations and continued growth on the manufacturing side. It also enhances the company's warehousing and shipping capabilities. The company's corporate offices remain located in Kalamazoo.

"Since opening the Grand Rapids location, we've experienced strong growth," said Jim Medsker, principal at Keystone Solutions Group. "In fact, we are on track to have our best year ever."

The company is also able to provide quality system development and management, warehousing, order fulfillment and product distribution and shipping of their customers' products. Additionally, Keystone has a sales and marketing component that is available to its clients to help establish relationships with key customers, such as group purchasing organizations (GPOs), integrated delivery networks and health systems.

"By offering this complete solution for manufacturing, distribution and sales, we are finding a niche among start-up medical device companies and physician inventors," said Medsker. "And you don't have to be a manufacturing customer to take advantage of our services."

Keystone found that many growth-stage and start-up medical device companies do not have the physical or human resources to address the operational and regulatory demands required to bring a new product to market.

One example is Keystone's work with Ostial Solutions, a Michigan-based medical device company. Keystone worked with Ostial to launch their idea for a new stent-positioning system into an actual product called the Ostial Pro. Keystone was able to provide Ostial Solutions with complete warehousing, quality control, supply chain management, order fulfillment and customer relations services.

"By handling all the regulatory and operational duties related to manufacturing, we allowed the company to focus on sales and business development," said Zamora.

Keystone has been a member of the West Michigan Medical Device Consortium (WMMDC) since 2008. The company joined to take advantage of business development and collaboration opportunities membership offers.

"We wanted to play a role in an organization that brings a variety of medical device business to the same table," said Zamora. "Being a member has been positive for us as far as being able to network with potential business partners, and turning those connections into real business opportunities."

"If it wasn't for the WMMDC and the West Michigan Science & Technology Initiative, we wouldn't have had the same success in cultivating the business partnerships we made over the past year," added Medsker. "As the medical device and life science community continues to grow in our region and across the state, we are excited at the prospect of all the new business partnerships it will bring."

Zamora also noted that when working with a start-up company, Keystone tailors its fee structure to reflect the realities most start-ups face. "Since we were at one point a start-up, we understand the hardships that exist when trying to get a business off the ground. We work closely with our customers and create a fee structure that will work for them because we want them to succeed and become a profitable business."

Keystone Solutions Group is privately held, with offices in Grand Rapids and Kalamazoo, Mich. For more information, visit keystone-pd.com. •

For more information about the West Michigan Medical Device Consortium, please visit wmmdc.org or call 616.331.5840.

INRAD

For more than 25 years, INRAD has developed, manufactured and distributed a wide range of biopsy needles, guides and accessories for use by medical professionals around the world.



INRAD began manufacturing and distributing its products in the early 1980s as a division of DLP, Inc. In 1994, DLP was acquired by Medtronic, Inc. and in 1997, Steve Field purchased INRAD from Medtronic.

"I acquired INRAD because I believe the market is best served by a small, nimble and responsive organization," said Field, INRAD's CEO. "When INRAD divested from Medtronic, we had just six employees. Today, we have grown to nearly 20, with sales across the United States through a network of 55 sales representatives. We also sell in 35 countries worldwide."

INRAD's proprietary products include injection-molded plastics and precision, special-use needles. While the company outsources the needle grinding and

cutting, all other aspects of design, production, packaging and distribution are handled at the company's Kentwood, Mich. headquarters. INRAD is also ISO- and CE-certified.

"The goal for INRAD has never been to be a low-cost manufacturer or giant producer of commodity products," said Field. "We strive to develop innovative, high-quality products that reflect the real-world needs of physicians, radiologists and pathologists."

Most recently, INRAD celebrated the launch of its newest product: the Revolution® Full Core Biopsy Device.

The Revolution is a full-core, 14-gage biopsy needle designed for breast tissue biopsy procedures. The device is able to capture more tissue than

traditional core biopsy devices because it utilizes the full length and diameter of the needle, which rotates to collect the tissue sample. The Revolution protects the tissue and cell walls of the sample. The device is for single-patient use, but can collect multiple tissue samples from that patient.

The Revolution recently received 510(k) clearance from the U.S. Food and Drug Administration, allowing INRAD to begin selling the device to hospitals and health care systems nationwide.

"We developed the Revolution based on a need we saw in the market," explained Field. "We worked with physicians to test prototypes, and made changes based on their feedback." Field said the company expects strong market demand for the Revolution.

In addition to developing products based on ideas generated within the company, INRAD works with physicians and radiologists to develop new products or innovations involving existing instruments.

Field added: "We take great pride in our ability to fast-track the evaluation of a proposed product. We typically provide feedback to physicians within 30 to 45 days of receiving their idea."

During the evaluation period, INRAD assesses the market, availability of similar products and whether the device can be patented or licensed.

"Of course, we can't chase every idea that comes through our doors, but our size gives us important flexibility," said Field. "Most successful products

in the radiology market generate up to \$20 million in sales, but many large companies won't even pursue a new product idea if it isn't likely to generate at least \$100 million."

"Being smaller, more focused and nimble, we have a lot more latitude—a \$1 million-seller is well worth our time and effort."

As a member of the West Michigan Medical Device Consortium, Field said INRAD enjoys actively supporting the development and growth of the regional medical device industry.

"We love being a medical device company in West Michigan," he noted. "Over the years, we've experienced a high level of loyalty from West Michigan doctors and hospitals who not only

choose our products because of our superior quality, but also because they want to keep their dollars in the local economy. And as the medical device industry continues to grow in our region, so will the number of new development ideas from the area."

INRAD is privately held. For more information, visit inrad-inc.com. •

For more information about the West Michigan Medical Device Consortium, please visit wmmdc.org or call 616.331.5840.

Take Advantage of Local Incubator Space

Brand new—and the only—incubator space in Michigan exclusively tailored to the development of medical devices. Conveniently located in downtown Grand Rapids at 1345 Monroe Ave. NW

We offer:

Ideal space for medical device companies that require incubation and will continue operations in Kent County.

- State-of-the-art wet laboratory space ranging from 300 to 1,500 square feet
- Standard lab amenities and options for customization
- Access to analytical instrumentation and engineering tools

For more information contact:

Rich Cook
Venture Center Director
West Michigan Science & Technology Initiative
P: 616.331.5857
cookri@gvsu.edu



Representative labs with biosafety and fume hoods available.

PHOTO CREDIT: CHUCK HEINEY PHOTOGRAPHY, © 2009

Initiative Named Statewide Reviewer

capital

The West Michigan Science & Technology Initiative has been selected to review and adjudicate applications for micro loans from life science companies across the state. The loans are made available through the Michigan Pre-Seed Capital Fund, a program developed to support high-growth start-up companies through early-stage validation of their value proposition. The program covers four technology sectors: advanced automotive, manufacturing and materials; alternative energy; homeland security and defense; and life sciences.

The fund was established by the Michigan SmartZonesSM consortium and the Michigan Economic Development Corporation's Strategic Economic Investment and Commercialization (MEDC/SEIC) board. The goal of the fund is to accelerate company development by providing access to early-stage capital as entrepreneurs are developing their businesses for outside investment and product sales.

Each of Michigan's 15 SmartZones will select life sciences micro loan submissions from their area and send them to the Initiative for review. The funding request will be assessed against established criteria to determine if the applicant has the potential to become a viable, robust, Michigan-based business, and ultimately repay the micro loan.

"This is a great opportunity for entrepreneurs and companies across the state, and will help grow the role of life sciences in Michigan's overall economic health," said Linda Chamberlain, executive director of the Initiative. "It is a privilege to have been selected to review proposals for life science companies at such a critical phase in their development."

Nearly \$1 million is available through the new program with loans available from \$10,000 to \$50,000.

To qualify for the Michigan Pre-Seed Capital Fund Micro Loan program, the applicant must be in one of the four identified technology sectors, have sponsorship from its local SmartZone and meet the Small Business Association's definition of a small business. The loan can be used to further develop a competitive analysis, prepare financial pro formas, develop plans to cross regulatory hurdles, finish a prototype, complete a market study, or address other issues that are typically required by investors before they will invest. •

RESOURCES

The Michigan Technology Collaboration Tax Credit

The Technology Collaboration Tax Credit is an incentive for larger, established businesses to provide funding to smaller, emerging technology companies through a refundable credit against the Michigan Business Tax. The monetary investment must be at least \$350,000, with a tax credit available for up to 30 percent of the investment, or a maximum of \$300,000.

To qualify, the emerging technology company must have less than 50 full-time employees or have gross receipts of less than \$10 million. The company must be engaged in research and development of translational research or activities to develop a commercial application with a high potential to create jobs in Michigan.

The tax credit is available until 2010. For more information, visit michiganadvantage.org or contact the Michigan Economic Development Corporation at 517.373.9808.

Check the following Web sites for a list of upcoming grants and funding opportunities:

Small Business Innovation Research
sbir.gov/solicitations

Michigan Pre-Seed Capital Fund
annarborspark.org/start-ups/pre-seed-fund

Michigan 21st Century Job Fund
themedc.org

A Venture with Rich



Q&A WITH RICH COOK, VENTURE CENTER DIRECTOR

Every day, the Initiative receives requests from inventors, entrepreneurs and small business owners who want to discuss ideas and receive direction about how to turn concepts into commercially valuable products and services. Rich Cook, the Initiative's Venture Center Director, answers questions about the Initiative's incubator space and what it offers young, high-tech businesses.

Q: What is a business incubator? How is it different from a regular office or work space?

A: In addition to standard office space, a business incubator typically includes other types of space needed for industry-specific businesses. For life sciences, this includes the laboratory work space with benches, cabinetry, vent hoods and specialized utilities (such as de-ionized water). Incubators typically also include shared areas that can be used by the different residents within that incubator, such as meeting rooms and dining areas.

Shared space in our Cook-DeVos incubator also includes nearly 100 pieces of instrumentation, including a fume hood, microscopes, a cold and hot room, a photographic darkroom, tissue hoods, hazardous waste disposal, storage and much more. The Initiative offers more than 5,000 square feet of shared instrument space that is available to companies located in both our Cook-DeVos and the Monroe Street incubators.

Q: What are the benefits to having your business located in an incubator, and how does a business qualify to locate in that space?

A: The Initiative provides nearly all the services, including business coaching, that a life science business requires. These services are provided in return for a monthly rental fee. We want to keep it simple for fledgling companies and let them focus on what they do well, not on the administrative support challenges that come with running a complex work space.

To locate in the Initiative's Venture Center, the business must be high-technology, able to create jobs and intend to stay in Kent County. We review several documents with resident companies on a regular basis, including business plans and quarterly objectives.

Q: How did the Initiative's incubator space or Venture Center get started?

A: Starting in 2001, the Michigan Economic Development Corporation, Grand Valley State University and the Local Development Finance Authority made investments to support technological business start-ups within the designated Grand Rapids SmartZoneSM area. These investments included helping to build the Product Development Center of the Cook-DeVos Center for Health Sciences and creating the West Michigan Science & Technology Initiative.

The Cook-DeVos incubator opened in 2003, and today is fully occupied with companies in therapeutic, diagnostic and medical device development. In April, we announced additional incubator space at 1345 Monroe Ave. NW. The total space of the new facility is 6,500 square feet, and when added to the existing space at Cook-DeVos, provides more than 26,000 gross square feet of incubator space dedicated to life science and technology industry growth in Grand Rapids.

Q: The Initiative is designated as the technical resource in the Grand Rapids-area SmartZone. What does this mean for entrepreneurs and small businesses in the area?

A: This designation means that entrepreneurs and small businesses are able to access our business coaching and referral services at no charge. If a company needs room to grow, we are able to provide space in our incubator at a reasonable cost to get them started on their entrepreneurial journey. Their company will also benefit from the other life and health science infrastructure improvements that have been made in the SmartZone. In Grand Rapids, this includes the development on the Medical Mile.

Q: Why should a business choose to locate in the Initiative's Venture Center versus another incubator?

A: Companies that choose the Initiative's incubator space do so primarily because of the quality of the business coaching, services and facilities, and the proximity to a research center, hospitals, and a medical school. Grand Rapids is an ideal location for companies developing medical diagnostics and devices. Residents in our Cook-DeVos Center facility find it useful to be situated among students

and professors who are studying and teaching the professions that will ultimately use their products. Occasionally, some professors and students help test the devices developed in our incubators.

However, we don't necessarily accept every company who applies to be a resident. Some life science companies would be better served at other area incubators, so we make referrals too. If a company is developing pharmaceuticals, we recommend the Southwest Michigan Innovation Center incubator in Kalamazoo. If they are in biomass work or need a high-tech office incubator, then we recommend Lakeshore Advantage in the Holland/Zeeland area. If they are interested in alternative energy, then we recommend MAREC (Michigan Alternative and Renewable Energy Center). Our primary goal is to make sure that each entrepreneur is located in the best possible facility and receives the assistance needed to become a successful, profitable and growing company.

Q: Why are you splitting your time between the Initiative's Venture Center and Grand Valley State University's MAREC?

A: I am spending some of my time at MAREC in Muskegon to help drive awareness and resident companies to that facility. MAREC will play an important role in developing alternative and renewable energy companies in Michigan, and my time at MAREC will improve the services available for all West Michigan entrepreneurs. Right now, I spend two days a week there, generally Tuesday and Thursday. Since I live in the Holland area, this arrangement makes it easy for me to see entrepreneurs where they live, whether that is Grand Rapids, Muskegon, or Holland/Zeeland—a nice advantage for many of the clients we coach.

Rich Cook also serves as the Grand Rapids SmartZoneSM representative. Contact him at cookri@gvsu.edu or 616.331.5840. •

Minding Our Own Businesses

Conceivex, Inc. recently announced that its fertility enhancement product, the Conception Kit, has been recommended for listing among “morally respectable reproductive services” for members of the Catholic Church. In an article published in the National Catholic Bioethics Center’s July 2009 newsletter, *Ethics & Medics*, Stephen Napier, Ph.D., concludes that the Conception Kit is consistent with the fundamental teachings of the Catholic Church.

The Conception Kit is the first and only comprehensive reproductive health care system designed for at-home use, and addresses fertility problems of both men and women. The Conception Kit is available through health care providers, DesignRx pharmacies or for purchase at conceptionkit.com.

Ethics & Medics provides analysis and commentary on matters of current interest in health care, medicine and law to help priests and religious health professionals, students and individuals understand and appreciate the moral teachings of the Catholic Church regarding life and health. For more information, visit ncbcenter.org/em.

InformMed recently released the next generation of its point-of-care medication safety system, ally™. The ally system reduces the risk of medication and dosing errors at

the patient’s bedside. It alerts nurses and other health care providers to potentially unsafe doses, makes smart dose/volume calculations and offers essential drug information.

The ally system offers an improvement on InformMed’s groundbreaking pac2 dosing calculator by combining calculation capabilities with bar-code scanning and access to drug information databases. With these additional layers of protection, ally improves both safety and efficiency.

The system takes health care providers through a series of simple steps to calculate the correct dose of medication. It performs a dose calculation, checks the order against a safe dose range, and provides essential dosing and delivery information to ensure the medication is delivered safely to the patient.

ally is designed to operate on a wide variety of point-of-care devices, facilitating easy access to critical medication information. The system is cost-effective and easy to use, with minimal impact on hospital resources.

According to hospitals’ published data, the InformMed system has been found to reduce reported dosing errors by 95 percent. For more information, visit informmed.com.

Medbio, a contract manufacturer specializing in injection-molded components and assembly, now has the capability to manufacture silicone components for the medical device and biotechnology industries.

Medbio recently purchased an Arburg 270S 44-ton press for liquid silicone molding. They also acquired a liquid silicone dispensing and delivery system, which utilizes two 20-ounce cartridges, instead of the standard five-gallon buckets used by the majority of manufacturers. The smaller cartridges, plus a two-drop cold runner system, help reduce waste during the manufacturing process, and cuts related set-up time. The machine can manufacture components with up to one ounce of silicone.

The silicone molding machine is in a class 10,000-capable cleanroom separate from the company’s thermoplastic injection molding equipment. Machine operators have a separate gowning area, and use a separate entrance.

The company said the addition of silicone molding allows Medbio to better serve their customers, since they are now able to get both silicone and thermoplastics components from a single supplier, saving time and money. Additionally, with the latest machine technology and instrumented molds,

a greater degree of precision and uniformity can be achieved for silicone products.

Founded in 2004, Medbio is ISO 13485:2003 certified with class 10,000-capable cleanrooms for product assembly, a class 100,000-capable cleanroom for thermoplastic injection molding and a class 10,000-capable cleanroom for silicone injection molding. For more information, visit medbioinc.com. •

Be sure to include these upcoming life science events on your calendar:

- **Thursday, Oct. 1, 2009, 3 pm:** Southwest Michigan Innovation Center will host Dr. Jeffery Trent, Research Director at the Van Andel Institute for an afternoon seminar. Visit kzoosmic.com for more information.
- **Tuesday, Nov. 3, 2009 - Wednesday, Nov. 4, 2009:** The Fifth Annual MichBio Expo & Conference takes place at the Radisson Plaza Hotel in Kalamazoo, Mich. For more information, visit michbio.org.



PHOTO CREDIT: CONCEIVEX CONCEPTION KIT, CONCEIVEX

West Michigan's Life Science Infrastructure Drives, Enables Growth

guest column



By David Van Andel, CEO and chairman, Van Andel Institute

David Van Andel is CEO and chairman of Van Andel Institute. The views expressed in this editorial are his own and do not necessarily reflect those of the West Michigan Science & Technology Initiative or Grand Valley State University.

The economic infrastructure and the face of West Michigan have undergone dramatic changes in the past decade. Much of that change has been driven by a combination of philanthropic giving and investment in biomedical research and the life sciences.

Each new life sciences venture that has arisen along the Medical Mile fills a gap, building a continuum of services and capabilities. Those services further enable collaboration, not only among the organizations of the Medical Mile, but also with the businesses, researchers, clinicians and academic institutions of Michigan and the world. The network that is emerging today will provide the framework and strength of the life sciences in West Michigan for the future.

The challenge that we face as a region is the same faced by other regions with emerging, non-traditional life sciences sectors: attracting the long-term, sustainable investment and venture capital that will see us through to our end goal, and creating the small biotech companies that will complement the basic and translational research

and clinical infrastructure already in place. Such a diverse mix of life sciences businesses, organizations and talented workers is the measure of a healthy and strong life sciences industry.

One of the organizations that differentiates West Michigan from other regions pursuing the life science industry as an avenue of economic strength and growth is the West Michigan Science & Technology Initiative. The Initiative performs a critical, if not widely understood, function and in some ways may serve as one of the final pieces of the life sciences continuum in our region. The Initiative provides the product development tools and resources that entrepreneurs and small businesses need to commercialize their ideas, breakthroughs and discoveries. Such resources feed the success of these entities and turn them into larger, profitable and productive companies that will further fuel the industry's growth.

If we, as a community, are to realize the true economic promise of all of the past decade's major developments in the life sciences, commercializing

the discoveries that occur all along the Medical Mile will be a critical component and outcome of our success. The Initiative plays a crucial role in bringing parties together in the collaborative way necessary to take ideas from the lab bench to the marketplace.

From the beginning, the vision of Van Andel Institute and that of our research, clinical and philanthropic partners on the Medical Mile has been one of collaboration. Large and small for-profit and not-for-profit businesses, philanthropic organizations, local government, civic groups and development organizations all have a stake in the success or failure of each venture.

Most businesses understand that the success and failure of ambitious, non-profit, philanthropic ventures can have a profound impact on the profit margins of professional service industries and other commercial ventures.

In the case of Van Andel Institute, we have found local and regional businesses to be willing partners who have stepped forward to support the important

research and education programs at the Institute, as well as the work of other life-changing, non-profit endeavors both on the Medical Mile and throughout the region.

All of us know that the fight against cancer and other catastrophic illnesses is not a fight that can be waged alone—not by a patient, a physician, a single research institute, nor even by a nation. We must rely on an international network of cutting-edge research to provide the most up-to-date treatments. That spirit of collaboration is an important element in life sciences discovery, development and success, and is what helps set West Michigan apart in the quest to develop this important industry.

Given West Michigan's proud entrepreneurial tradition, as stakeholders in a new and evolving economic landscape, it is up to all of us to consider ways that our businesses can capitalize on this change and to anticipate the needs that this growth will most certainly create. Doing so will help secure the future prosperity and growth of the region. •

About Van Andel Institute

Established by Jay and Betty Van Andel in 1996, Van Andel Institute (VAI) is an independent research and educational organization based in Grand Rapids, Mich., dedicated to preserving, enhancing and expanding the frontiers of medical science, and to achieving excellence in education by probing fundamental issues of education and the learning process. VARI, the research arm of VAI, is dedicated to probing the genetic, cellular and molecular origins of cancer, Parkinson and other diseases and working to translate those findings into effective therapies. This is accomplished through the work of over 200 researchers in 18 on-site laboratories, in laboratories in Singapore and Nanjing, and in collaborative partnerships that span the globe.

Life Science Business Showcase 2009



The Initiative hosted the fifth annual Life Science Business Showcase at the Grand Rapids Community College's Ford Fieldhouse on April 23, 2009.

"Since 2003, the Initiative has been bringing together life science companies, area businesses and community leaders for the opportunity to showcase the innovations of the area's life science sector. The event also fosters a better understanding of the depth and strength of the life sciences technical and manufacturing capabilities available in our region," said Linda Chamberlain, executive director of the Initiative.

This year's Life Science Business Showcase brought together nearly 50 innovators in life science, including representation from therapeutic, diagnostic and medical device companies. More than 300 business and community leaders were also on hand for an evening of idea generation, conversation and networking.

"Through the years, the Life Science Business Showcase has evolved into the flagship event for life sciences in the region. As our industry continues to grow and develop, so will the Life Science Business Showcase," said Chamberlain.

For more information about how to participate in next year's Life Science Business Showcase, call 616.331.5840.

Thank you to the following event sponsors: Warner Norcross & Judd, LLP; the Van Andel Institute; Sequenom Center for Molecular Medicine; Grand Rapids Community College; Grand Valley State University; Hopen Therapeutics; Interleukin Genetics; Michigan State University College of Human Medicine; Reagan Marketing + Design; the West Michigan Medical Device Consortium; and Price, Heneveld, Cooper, Dewitt & Litton, LLP. The media sponsor for the event was Business Review. •

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SUM⁰⁹mIT

Drugs | Diagnostics | Devices

September 17, 2009
8 a.m. to 1 p.m.
Luncheon begins at noon

Loosemore Auditorium
Richard M. DeVos Center
Pew Grand Rapids Campus
Grand Valley State University
\$50 per person

SUMmIT is a must-attend event designed to help innovators and entrepreneurs navigate the trends impacting the life sciences industry. Join us to hear experts speak about emerging technology in the drug, diagnostic and device industries, followed by a panel discussion exploring the ever-changing environments of regulatory, insurance and patient care systems.

Speakers include: Daniel H. Farkas, Ph.D., laboratory director for the Sequenom Center for Molecular Medicine; Mike DeVries, managing director with Ann Arbor-based EDF Ventures; and Shawn Shirazi, senior director of formulation research & development for Perrigo.

To learn more about the event contact the West Michigan Science & Technology Initiative by phone at (616) 331-5840 or e-mail wmsti@gvsu.edu. Register online at wmsti.org.