TAKING RESEARCH TO THE NEXT SIX LEVELS
MSU GRAND RAPIDS RESEARCH CENTER
The opening of the Michigan State University Grand Rapids Research Center is a major step toward creating a special blend of learning and discovery that will have a positive impact on the lives of the people we serve.

Yet, as modern and well-equipped as the research center is, it’s really just a tool to do great things. It allows us to continue recruiting many of the country’s leading biomedical researchers in neuroscience, cancer, pediatrics, women’s health and precision medicine.

Thanks to our partnerships with Spectrum Health, Van Andel Institute, Mercy Health Saint Mary’s, Grand Valley State University and others, our researchers will work closely with physicians and other clinical practitioners so that patients can benefit from their discoveries.

And they will collaborate and share ideas with scientists throughout MSU, where we talk about ands rather than ors. So it encompasses Grand Rapids and East Lansing and now Flint, where we have established our public health research and education programs. It’s Traverse City, Midland, Southeast Michigan and the Upper Peninsula—MSU partnering with communities across the state.

Great advances can be made when all the pieces work together. We expect this culture of innovation and discovery to lead to new partnerships, generating knowledge economy jobs as well as life-saving therapies.

Many people deserve credit for bringing us to this point, including Provost June Pierce Youatt, former medical school dean Marsha Rappley, former interim dean and current senior associate dean Aron Sousa, and our new dean, Norman J. Beauchamp Jr. They understand the power of collaboration, big ideas and disruptive innovation, which forces us to break out of old ways of thinking.

This university was founded in 1855 as a disruptive innovator in higher education and a model for other land-grant universities. The College of Human Medicine itself was a disruptive innovator when it was founded 53 years ago as one of the country’s first community-based medical schools.

The Grand Rapids Research Center is part of that tradition. We will continue to be that kind of innovator, always searching for new and better ways of caring for the people of Michigan, the country and the world.

Lou Anna K. Simon
President, Michigan State University
"For he who has health has hope; and he who has hope has everything."

-Owen Arthur

In the nearly one year since I joined the College of Human Medicine, I have watched as our new Grand Rapids Research Center neared completion, a symbol of our commitment to health and hope. We can and must find new ways to overcome the health challenges that face our communities, our nation and the world. This facility is allowing us to expand our team of transformative researchers, recruiting the best and the brightest. Their areas of focus are of great impact: neurodegenerative disorders, including Parkinson’s and Alzheimer’s diseases; autism and other neurodevelopmental disorders; women’s health, including cancer, endometriosis and infertility; and pediatric cancer and other childhood diseases.

We also are developing new areas of emphasis in precision medicine. By expanding our research into precision medicine, based on each patient’s genetic profile and other individual characteristics, we will help physicians tailor the therapies most likely to be effective in treating each patient. We will combine that with “predictive analytics” and “machine learning,” allowing us to tap into vast databases of medical information that will help us assess each patient’s risk of developing various illnesses. Our goal is not only to treat the disease, but to prevent it.

The center is built around collaboration, not only to promote the sharing of ideas and information among the scientists within, but with the researchers and physicians at Spectrum Health, Van Andel Institute, Mercy Health Saint Mary’s and other partners.

Seven years ago, we opened the Secchia Center, our college’s headquarters in Grand Rapids, and we have expanded our educational and research programs in East Lansing and statewide. We have built a Division of Public Health based in Flint that is a model for the nation. This new Grand Rapids Research Center and, more importantly, the people who will occupy it, is one more piece that will help us lead the nation in the transformation of health care.

Norman J. Beauchamp Jr., MD, MHS
Dean, Michigan State University College of Human Medicine
AN INTRODUCTION TO THE GRAND RAPIDS RESEARCH CENTER.

Countless people—construction workers, architects, electricians and plumbers—built the new Grand Rapids Research Center, but it took the leadership and vision of three College of Human Medicine deans to see it through.

Planning for the facility began under former College of Human Medicine Dean Marsha D. Rappley, MD, who also led the medical school’s expansion and construction of the Secchia Center, its headquarters.

“There’s been unprecedented growth in our research portfolio, so the need for space is critical,” she said a few years ago, noting that MSU’s researchers already were filling all available space in Grand Rapids.

So plans were drawn, the budget approved, and on June 18, 2015, ground was broken a block west of the Secchia Center.

“We have the critical mass to warrant a new research center that will benefit not only MSU, but our partnering institutions in collaborative medical research,” Rappley said at the groundbreaking ceremony. “It’s a wonderful advantage to have a research center of this quality and researchers of this caliber in close proximity to the building where medical students attend daily.”

In August 2015, Aron Sousa, MD, senior associate dean, was appointed interim dean of the medical school when Rappley took on a new role as vice president for health sciences at Virginia Commonwealth University and CEO of its health system. Three months later, as the last beam of the research center was lifted into place, Sousa called the topping off “a great milestone. The work that will be done in this building will change the lives of people around the world and here in Grand Rapids,” he said.

Now that the research center is opening, Sousa said that “it’s transforming the college to a full-blown player in medical research.”

He declined to accept too much credit for himself, giving it instead to project manager Richard Temple and Liz Lawrence, senior associate dean for finance and strategy.

“That building was built with speed and efficiency we hadn’t seen before,” Sousa said, adding that it was finished ahead of schedule.

Norman J. Beauchamp Jr., who became dean in October 2016, nearly a year before the research center was completed, credited his two predecessors with guiding the project through the planning and construction phases.

“So many people deserve credit for our new research building,” he said, adding that “the leadership of Aron and Marsha was pivotal. The amazing people we have recruited will have the room they need to grow their programs. We can do the best science here. It raises the bar for the quality of care in a very significant way.”

It’s a wonderful advantage to have a research center of this quality and researchers of this caliber in close proximity to the building where medical students attend daily.

- Marsha D. Rappley, MD, Former Dean, MSU College of Human Medicine

ARON SOUSA, MD
Former Interim Dean
Senior Associate Dean for Academic Affairs

Building I 5
MSU COLLEGE OF HUMAN MEDICINE:
SETTING THE LANDSCAPE.

EARLY
2000s
After nearly 40 years of educating third and fourth year medical students in Grand Rapids, MSU administrators and Grand Rapids medical and business leaders begin informal talks about expanding the College of Human Medicine in the city.

2003
A study commissioned by the Right Place, a West Michigan economic development organization, identifies a medical school as an important component if Grand Rapids is to become a life sciences center.

2004
A Blue Ribbon Committee on Physician Workforce recommends Michigan make systemic changes to its medical education system to train and retain enough physicians for future needs of Michigan’s citizens; the Michigan State University College of Human Medicine develops plans to increase the number of students it will graduate and determines that Grand Rapids is a viable site for expansion.

Jan. 2006
MSU Board of Trustees announces selection of a medical school site (Grand Action and MSU announce a joint $40 million fundraising campaign).

Jan. 2007
A lead gift is announced. MSU Board of Trustees approves naming of the Secchia Center in recognition of MSU alumni Ambassador Peter F. and Joan Secchia.

Apr. 2008
The College of Human Medicine holds a “beam raising event” to launch construction for its medical education building on Michigan Street in downtown Grand Rapids, a neighborhood now known as the Medical Mile.

June 1, 2008
Spectrum Health and MSU form an alliance to jointly fund medical studies and recruit researchers.

Oct. 2007
MSU Board of Trustees authorizes construction of a new medical education building with a project budget of $90 million. Spectrum Health commits $55 million, including principal and interest payments on the building for 25 years and $30 million to support research. Private donations cover the remaining building costs. The college begins increasing the number of first-year students toward a goal of doubling enrollment.

Sept. 2010
The College of Human Medicine opens the Secchia Center, a state-of-the-art facility designed for medical education but not for research. The college leases laboratory space for its growing number of scientists in Van Andel Institute and Grand Valley State University’s Cook-DeVos Center for Health Sciences. As the newly recruited scientists begin filling all available space, the need for a new research facility becomes apparent.

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MSU GRAND RAPIDS RESEARCH CENTER:
A NEW HOME FOR RESEARCH.

Sept. 5, 2013
Faculty and students of the MSU School of Planning, Design and Construction conduct research to explore creating a biomedical research center in Grand Rapids.

Feb. 6, 2015
The Board of Trustees approves a budget of $85.1 million and authorizes construction of a biomedical research facility on the site of the former Grand Rapids Press building.

Apr. 28, 2015
The Michigan Strategic Fund approves $28,880,350 in Brownfield Tax Increment Financing for possible future commercial development of land adjacent to the Grand Rapids Research Center.

June 18, 2015
MSU breaks ground for the Grand Rapids Research Center on Michigan Street and Monroe Avenue. “We envision the MSU research building and Grand Rapids Innovation Park to be a gateway to the Medical Mile and a magnet attracting business in life sciences and growth in the biotechnology sectors,” MSU President Lou Anna K. Simon said.

Nov. 19, 2015
MSU researchers, administrators and construction workers watch as the last beam is lifted into place for the “topping off” of the Grand Rapids Research Center. Venkie Gore, MSU’s vice president for auxiliary enterprises, calls it “a great day to be a Spartan.”

Sept. 20, 2017
MSU and the College of Human Medicine hold a ribbon cutting ceremony to celebrate the opening of the new MSU Grand Rapids Research Center.

Late Fall 2017
The College of Human Medicine begins opening laboratories and offices for a growing number of medical researchers studying women’s health, adult and pediatric cancers, neurodegenerative diseases, such as Parkinson’s and Alzheimer’s, and neurodevelopmental disorders, such as autism.

Jan. 27, 2012
MSU Board of Trustees approves the $12 million purchase of approximately 7.85 acres of property in downtown Grand Rapids for future expansion. The project is part of the university’s “Bolder by Design” initiative, drawing upon MSU’s research capacity, intellectual resources and outreach mission to serve the state, the nation and the world.

June 24, 2014
MSU requests proposals for a possible public-private partnership (P3) to build its biomedical research center in Grand Rapids.

Oct. 24, 2014
MSU engages Jones Lang LaSalle and KMG/Plante Moran to assess three developer-financed proposals and compare them to MSU’s conventional delivery approach for laboratory and research facilities. The findings do not yield a compelling value-added benefit for the university to pursue a developer-financed delivery.

Dec. 12, 2014
MSU Board of Trustees supports MSU’s recommendation for a traditional university-financed delivery of the proposed research center and authorizes $3 million for demolition of the former Grand Rapids Press building.

June 18, 2015
MSU breaks ground for the Grand Rapids Research Center on Michigan Street and Monroe Avenue. “We envision the MSU research building and Grand Rapids Innovation Park to be a gateway to the Medical Mile and a magnet attracting business in life sciences and growth in the biotechnology sectors,” MSU President Lou Anna K. Simon said.

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Late Fall 2017
The College of Human Medicine begins opening laboratories and offices for a growing number of medical researchers studying women’s health, adult and pediatric cancers, neurodegenerative diseases, such as Parkinson’s and Alzheimer’s, and neurodevelopmental disorders, such as autism.
The six-story, 162,800-square-foot facility is built-out for 33 principal investigators and their research teams, with space eventually to house 44 research teams. By the end of 2017, 25 principal investigators and their research teams and support staff—a total of nearly 150 employees—will move in.

Ellenzweig, a Cambridge, Mass., architectural firm specializing in medical education and laboratory planning, was Design and Lab Planning Lead. Ellenzweig also designed the Secchia Center, the college’s headquarters. SmithGroupJJR of Detroit was Architect/Engineer of Record and provided site and interior design. Clark Construction Co. of Lansing and Rockford Construction of Grand Rapids co-managed the construction, as Construction Manager. Clark Rockford Joint Venture. Representing Michigan State University was Kramer Management Group and MSU Infrastructure Planning and Facilities. The total budget for constructing the new building, including demolition of the former Grand Rapids Press building, was $88.1 million.
EXTERIOR.

Located at Michigan Street and Monroe Avenue, the Grand Rapids Research Center is a gateway to the city’s Medical Mile. It is a block west of the Secchia Center and close to Van Andel Institute, Spectrum Health, Grand Valley State University’s Cook-DeVos Center for Health Sciences and other medical buildings. Mercy Health Saint Mary’s and the Mary Free Bed Rehabilitation Hospital are a few blocks away, and Pine Rest Christian Mental Health Services is 10 minutes away.

The exterior is designed with a modern look that complements the appearance of the Secchia Center. The exterior is clad with insulated metal panels similar in color to the Secchia Center’s stone exterior. The entrance on Michigan Street and Monroe Avenue features a plaza, a rain garden and low seating walls.

The structure covers less than half the site, leaving room for development compatible with the work of the researchers.

INTERIOR.

An atrium rises four stories from the lobby, tying the laboratories on the building’s north side with offices on the south side. The lobby includes an interior garden and copper sheeting recycled from the roof of the former Grand Rapids Press building covering one wall near a first-floor atrium. Floor-to-ceiling windows provide natural light for offices and open areas, where researchers can meet and write. A large meeting room, conference rooms and break-out spaces are designed to encourage scientists to meet informally and share ideas.

The laboratories were designed with input from the scientists who will work in them. Laboratory areas have an open, modular design and movable benches to meet changing needs and include a nearby equipment corridor for specialized refrigerators and freezers and floor drains for defrosting them.

The building is reinforced to minimize vibration, which could interfere with sensitive equipment, such as highly-advanced microscopes. Air in the labs will turn over four times every hour to carry away fumes and reduce the risk of contamination.
Although the purpose of the MSU Grand Rapids Research Center is to advance medical science and improve patient care, it also is expected to have a significant impact on the West Michigan economy. The center is expected to generate additional economic activity by attracting research and development firms and start-up companies to commercialize discoveries by MSU’s scientists.

ECONOMIC IMPACT.

In 2008, when the National Institutes of Health (NIH) funded researchers arrived in Grand Rapids, the College of Human Medicine had no funded research programs in the city. Cumulative awards from January 2008 through July 2017 equaled $49 million for all externally-sponsored research in Grand Rapids.

Source: Economic Impact of the MSU Grand Rapids Research Center, Anderson Economic Group, June 18, 2015.

Upon completion, the MSU Grand Rapids Research Center has built-out capacity for 33 principal investigators and their teams, with future capacity of up to 44 teams.

FUNDED RESEARCH.

In 2008, when the National Institutes of Health (NIH) funded researchers arrived in Grand Rapids, the College of Human Medicine had no funded research programs in the city. Cumulative awards from January 2008 through July 2017 equaled $49 million for all externally-sponsored research in Grand Rapids.

Source: Economic Impact of the MSU Grand Rapids Research Center, Anderson Economic Group, June 18, 2015.

COSTS.

At $95 million, the project’s total economic impact during construction includes 728 jobs created during construction (a job year is one job for one year), including 166 directly and 562 indirectly. More than 400 new jobs will be created due to circulation of operations spending in the region. Total economic impact annually during operation is $28 million.

Michigan State University president Lou Anna K. Simon at the groundbreaking for the MSU Grand Rapids Research Center on June 18, 2015.

Building 15
Without the community’s support, the College of Human Medicine’s Secchia Center would not be standing in the heart of Grand Rapids’ Medical Mile, the Grand Rapids Research Center would not be opening a block west, and much of the research into many diseases would not be underway.

Philanthropy is “what built this,” Ambassador Peter Secchia said, referring to the research center. He and his wife, Joan, both MSU graduates, were lead donors for the medical school’s headquarters building, which bears their name and opened in 2010. In May 2016, they made another $5 million donation for construction of the Grand Rapids Research Center, while Rich and Helen DeVos gave $10 million as part of MSU’s Empower Extraordinary campaign, launched in 2014.

“This is really helping Grand Rapids, because the Medical Mile is becoming a national force,” Secchia said. “We now have the most state-of-the-art research center in the country.”

Secchia’s support has taken many forms. A tailgate party he helped organize before the Sept. 23 Michigan State/Notre Dame football game, featuring Kirk Gibson, a two-sport Spartan athlete and Major League Baseball star recently diagnosed with Parkinson’s disease, has raised $1.2 million for the college’s Parkinson’s research.

By lending their names and financial support, contributors often attract more donations. “That’s how it leapfrogs,” Secchia said.

This is really helping Grand Rapids, because the Medical Mile is becoming a national force.

- Peter Secchia

Jim and Sue Williams were longtime fans and financial supporters of MSU’s athletics. Nearly a decade ago, when MSU announced it would expand its medical school in Grand Rapids, “that was another level of support we wanted to get involved in,” said Jim Williams, an MSU graduate and Grand Rapids businessman.

“We thought it would be fantastic to have the medical school here, and it’s proven to be that.”

A few years later, when the college announced plans to build the Grand Rapids Research Center, the couple again gave their support, pledging multi-year donations to be used for scholarships.

The college’s growing research portfolio is “going to be a big engine of our economic growth,” Williams said. “I’m very supportive of what they do and their impact on our community.”

College of Human Medicine Dean Norman Beauchamp Jr. said philanthropy is “essential,” not only to building the Secchia Center and the Grand Rapids Research Center, but in supporting the college’s cutting-edge research and in educating physicians who will provide world-class care.

“I have found when I meet with so many people in the community who have accumulated assets, they want to make a difference in the world,” Beauchamp said.

“Ultimately,” he said, “people want to raise their families where they know they will get the best care. At the same time, they get excited because they’re helping their community.”
PHILANTHROPIC INVESTORS

These are gift commitments of $10,000 or more received on or before August 31, 2017.
THE MEDICAL MILE
JUST GOT A LITTLE LONGER.
Well before Michigan State University broke ground for the Secchia Center and before it began planning the Grand Rapids Research Center, Spectrum Health and MSU formalized their partnership in an alliance to jointly fund medical research and recruit top-notch scientists.

The Spectrum Health-Michigan State University Alliance was born of complementary goals: in order to become a world-class medical center, Spectrum Health needed a relationship with a medical school; the College of Human Medicine needed an association with a leading medical center to translate its research quickly for the benefit of patients.

“The alliance provides a forum for us to work together on transformative ideas that improve the community,” said Steve Heacock, Spectrum Health’s senior vice president of public affairs, noted.

On July 1, 2006, Spectrum Health and MSU signed an agreement creating the alliance and committing funding for research.

“We have used alliance grants very successfully to obtain government funding,” said Walter Esselman, PhD, the college’s senior associate dean for research. “What has really impressed me is the drive of individual researchers to have the alliance.”

The alliance not only provides seed money for research, but encourages cooperation between MSU’s scientists and Spectrum Health’s clinicians, Christopher Chambers, MD, PhD, Spectrum Health’s vice president for research, said.

“Because of the alliance, we are able to look at each other’s focus and complement it,” he said. “For me, it’s an exciting time to do what we’re doing right now. I think the opportunities are limitless.”

The alliance has created an additional incentive for world-class physicians and researchers to apply for work in Grand Rapids.

“It’s all about synergy,” College of Human Medicine Dean Norman Beauchamp Jr., said. “We came here to bring value to the community. I believe we are in a unique position to transform health care that many other places aren’t.”

Since 2009, the Spectrum Health-MSU Alliance has recruited eight senior researchers (known as principal investigators).

The alliance has awarded those researchers $7 million in grants.

The eight researchers were awarded more than $37 million in additional grants from government agencies and other outside organizations.

Asgi Fazleabas, PhD, University Distinguished Professor and associate chair of research in the Department of Obstetrics, Gynecology and Reproductive Biology, was the first researcher recruited by the alliance.

With $876,000 in funding from the alliance, Fazleabas attracted $10.4 million in outside grants for his research in infertility and endometriosis.

Giselle Saulnier Sholler, MD, associate professor in the Department of Pediatrics and Human Development and director of pediatric oncology research at Helen DeVos Children’s Hospital, received $937,000 from the alliance and nearly $17 million in external funding for her pediatric cancer research.

Grand Rapids-area businesses, philanthropists and nonprofit organizations have a history of collaboration to improve the community, Steve Heacock, Spectrum Health’s senior vice president of public affairs, noted.

“The alliance provides a forum for us to work together on transformative ideas that improve the services both organizations offer to our community members,” said Christina Freese Decker, Spectrum Health’s executive vice president and chief operating officer. “We are extremely proud of the work being done to improve health and are grateful to partner with MSU.”

“Because of the alliance, we are able to look at each other’s focus and complement it.”

- Christopher Chambers, MD, PhD

"That’s been the hallmark of this community,” he said. “The reality is this community plays above its weight class. The alliance is part of that, so we formalized it to embody that spirit of collaboration."
SPECTRUM HEALTH.

Impressive as Michigan State University’s new Grand Rapids Research Center is, the steel, glass and concrete represent more than just a building. “It’s a physical embodiment of a commitment to advance patient care and science together,” College of Human Medicine Dean Norman J. Beauchamp Jr. said.

By “together” he meant in collaboration with Spectrum Health, represented by two of the hospital group’s senior executives sharing a table with him in the Secchia Center, the college’s Grand Rapids headquarters, which would not exist without Spectrum Health’s support. Over the past decade, Steve Heacock, Spectrum Health’s senior administrative officer and general counsel for Van Andel Institute, has watched the partnership evolve from a vague idea to a full-fledged partnership in providing world-class research and patient care.

“The initial stage is done,” Heacock said. “Now we’re ready for stage two.”

Already well along, stage two is a deeper commitment, strengthening the relationship of the scientists doing basic research with the clinicians—all sharing ideas and finding innovative and better ways to care for patients.

“When I think about this collaboration, I think about the benefit it brings to the patient,” including access to the latest treatments through clinical trials, said Christopher Chambers, MD, PhD, FACS, Spectrum Health vice president for research. “We wouldn’t have clinical trials without basic research.”

Walter Esselman, PhD, the college’s senior associate dean for research, added: “I see this as really critical to developing translational research,” the kind that quickly takes discoveries from the bench to the bedside.

Leaders of both institutions believe that by working together they are creating a critical mass that will make Grand Rapids a center for medical research and patient care.

“So far, we’re ready for stage two,” Heacock said. “The initial stage is done.”

Spectrum Health pledged $85 million to strengthen the medical school’s presence in Grand Rapids—$55 million to help pay for the Secchia Center and $30 million for research.

The partnership has made Grand Rapids a more-attractive place for physicians and researchers to work, and a growing number of recent medical school graduates are applying for residency programs in Grand Rapids, Chambers said.

“This is all about how we serve patients and families,” Beauchamp said. “I see us being the leading academic health center in five years.”

On June 18, 2015, MSU broke ground for the Grand Rapids Research Center on Michigan Street and Monroe Avenue, the former Grand Rapids Press site and a gateway to the city’s Medical Mile. By the fall of 2017, construction was completed, and the building was ready for the researchers to move in.

The center will allow basic scientists and clinical physicians to work even more closely, Esselman said.

“I would say this kind of integration is absolutely critical to the kinds of scientists we are trying to recruit, that we are recruiting,” he said. “In the new building, we hope to have them working side-by-side.”

Beauchamp said he expects that spirit of cooperation to spread throughout the university, allowing medical researchers to partner with colleagues in such diverse areas as veterinary medicine and engineering. Spectrum Health is encouraging MSU’s researchers to be embedded with the hospital’s medical teams, Chambers said. As a vascular surgeon, he said he often takes certain aspects of his clinical work for granted, but for the researchers, “a clinical context can be very impactful and alter the approach to the basic science questions.”

Such shared knowledge can lead to better and quicker ways of improving patient care—what Beauchamp called the “pathway to impact.”

“This is all about how we serve patients and families,” Beauchamp said. “I see us being the leading academic health center in five years. I think we will be one of the places people across the country come to get the best health care.”

“We’re well on our way,” Heacock added. “We’re poised. We’re really set up for the future.”

“We really need a research center,” Beauchamp said. “We didn’t expect it so soon. As the number of researchers studying adult and pediatric cancers, women’s health, neurological diseases and other disorders grew, the need for the research center became more urgent.”

Those who are the physicians who are going to care for us,” he said.

Heacock added: “When we’re recruiting specialists and subspecialists, there’s an assumption they’re going to have an academic appointment. We can leverage that to get better people to serve our community.”

A decade ago, when the MSU Board of Trustees approved plans for the Secchia Center, the medical school’s leaders knew they eventually would need a research center, although they didn’t expect it so soon. As the number of researchers studying adult and pediatric cancers, women’s health, neurological diseases and other disorders grew, the need for the research center became more urgent.

“The center will allow basic scientists and clinical physicians to work even more closely,” Esselman said.

“It’s a physical embodiment of a commitment to advance patient care and science together,” College of Human Medicine Dean Norman J. Beauchamp Jr. said.

“We're well on our way,” Heacock said. “We’re poised. We’re really set up for the future.”
When Van Andel Institute recruited internationally renowned scientist Peter Jones as its chief scientific officer a few years ago, one factor weighed heavily in his accepting the offer.

“I saw as central to my decision to come here the fact that you have a major university,” he said, specifically the Michigan State University College of Human Medicine.

Jones, PhD, DSc, expects the collaboration between Van Andel Institute and the college will help attract more researchers. When he talks to scientists about joining Van Andel Institute, “the first thing they ask is, ‘Where is the nearest university?’” Jones said.

He can tell them the college’s Secchia Center is right across Michigan Street, and its new Grand Rapids Research Center is just down the hill.

“It’s going to be a mega-asset in our ability to recruit scientists,” Jones said.

Scientific research relies heavily on collaboration and the sharing of information, which makes the partnership between the college and Van Andel Institute all the more important, said Walter Esselman, PhD, the College of Human Medicine’s senior associate dean for research.

“The way the scientists work together will only help us grow and expand,” he said.

When the college opened the Secchia Center seven years ago, it did not include wet laboratory space, and, at the time, the college employed no researchers in Grand Rapids. As it began adding space, and, at the time, the college employed no researchers, the college leased them space for a few years until it had enough to move into its own facility. The shortage of space made it all the more urgent.

“We really appreciate Van Andel Institute’s willingness to let us share their space while we were growing our own research teams,” Esselman said, adding that it is unlikely MSU’s researchers would be moving into their own facility now, had they not had that support.

Much of the work at Van Andel Institute, such as in cancer, complements the college’s areas of research, Van Andel Institute’s emphasis on epigenetics—the study of how genes are expressed rather than changes in the genetic code itself—could be relevant for many of the diseases under study at MSU.

As the numbers of researchers at both institutions grow, the scientific community in Grand Rapids will reach a critical mass, attracting the attention of more researchers who want to work there, Jones and Esselman agreed.

“It becomes a self-fulfilling prophecy,” Jones said. Between MSU and Van Andel Institute, “we’ll be doubling the number of scientists in Grand Rapids,” he said.

With the opening of the Grand Rapids Research Center this fall, the college and Van Andel Institute both will have more room to grow. The new research center is designed for as many as 44 research teams. As the college’s researchers move into their new facility, space for about 15 more teams will become available in Van Andel Institute, Jones said.

Van Andel Institute needed all the lab space in its building for its growing number of scientists. MSU had long-range plans to build its own research center. The shortage of space made it all the more urgent.

“I saw as central to my decision to come here the fact that you have a major university,” he said, specifically the Michigan State University College of Human Medicine.

Jones, PhD, DSc, expects the collaboration between Van Andel Institute and the college will help attract more researchers. When he talks to scientists about joining Van Andel Institute, “the first thing they ask is, ‘Where is the nearest university?’” Jones said.

He can tell them the college’s Secchia Center is right across Michigan Street, and its new Grand Rapids Research Center is just down the hill.

“It’s going to be a mega-asset in our ability to recruit scientists,” Jones said.

Scientific research relies heavily on collaboration and the sharing of information, which makes the partnership between the college and Van Andel Institute all the more important, said Walter Esselman, PhD, the College of Human Medicine’s senior associate dean for research.

“The way the scientists work together will only help us grow and expand,” he said.

When the college opened the Secchia Center seven years ago, it did not include wet laboratory space, and, at the time, the college employed no researchers in Grand Rapids. As it began adding biomedical research teams, the college leased laboratories in Van Andel Institute and quickly outgrew all available space. At the same time, scientists working with the college needed more space to continue their work.

“I think our relationship will really blossom and grow from here on because of the critical mass,” said Philip B. Gorelick, MD, medical director of the Mercy Health Saint Mary’s Hauenstein Neuroscience Center. “We’re working toward a common goal with our partners at MSU. They create the basic science; we carry out the clinical translational part of the basic science.”

To help develop a workforce to support clinical trials, GVSU and MSU jointly created a program offering a graduate certificate in clinical research trials management.

Such partnerships are a key to the continuing growth of scientific research in Grand Rapids and the rest of Michigan, the leaders of the many cooperating organizations say.

“Our collaboration with Michigan State University is advancing Van Andel’s vision to create a world-class research institute and transform Grand Rapids into a hub for scientific discovery and human health,” Jones said. “We would not be in the same position without it.”

“I think the same thing goes for us,” Esselman said. “I’m not so sure we would be here if Van Andel Institute hadn’t been here. I believe we have a shared vision of what could really happen here.”

From left to right: Peter Jones, PhD, chief scientific officer, Van Andel Institute; Walter Esselman, PhD, senior associate dean for research, Michigan State University College of Human Medicine.
A HEALTHY FORMULA FOR BIOMEDICAL RESEARCH.
The combination of experienced faculty members and young researchers who have “new ideas and a fire in the belly” creates a synergy that likely will produce better treatments for many diseases, said Jack Lipton, PhD, chair of the Department of Translational Science and Molecular Medicine. “That’s where new ideas get spun out and new treatments emerge.”

The college is determined “to be the leader in the clinical translation of cutting edge research,” said Richard Leach, MD, chair of the Department of Obstetrics, Gynecology and Reproductive Biology. “We are focused on ensuring that our research is translated to meet the health care needs” of the communities the college serves.

One goal that transcends all areas of research is to develop precision medical care customized to each patient’s specific genetic characteristics and disease, a departure from the traditional approach of prescribing the same treatment for every patient with the same disease.

“I call it ‘the new biology,’” said B. Keith English, MD, chair of the Department of Pediatrics and Human Development. “The whole basis of precision medicine is that not everyone needs the same treatment. It’s also about avoiding the wrong treatment. That’s where precision medicine is going.”

“Twenty years ago, we’d treat all lymphoma cases the same,” Beauchamp said. The purpose of precision medicine, he said, is to “individualize care for patients to give them the best outcomes in the gentlest fashion, and often at the lowest cost.”

“That’s one of the benefits of having this research center connected to institutions that are doing the best clinical care,” he said. “This is all about how we work together.”

“By creating an environment of excellence in research and connecting it with medical practices, we can out-recruit anybody.”

- Dean Norman J. Beauchamp Jr.

By creating an environment of excellence in research and connecting it with medical practices, we can out-recruit anybody.

Years before the new Grand Rapids Research Center opened, the scientists who soon will fill its laboratories were deep into studies of many complex diseases, and well along the road toward establishing the College of Human Medicine as a medical research leader.

The opening of the new facility is a major step in the college’s goal of bringing patients the latest and best treatments, while training the physicians and researchers of tomorrow. In 2016, 84.1 percent of College of Human Medicine students engaged in research compared with an average of 74.1 percent of medical students nationwide.

“Research is how we make tomorrow better than today,” said Stephen Hsu, PhD, MSU’s vice president for research and graduate studies. “Yes, it’s the quest for knowledge, but, practically, research is about improving quality of life.”

Research teams have published countless papers and are digging deeper into the causes and possible treatments for neurodegenerative diseases (such as Parkinson’s and Alzheimer’s), pediatric cancers, autism, infertility, endometriosis and other illnesses. Much of the work is in collaboration with the college’s West Michigan health care partners, as well as with scientists on the East Lansing campus and elsewhere around the state.

Two years ago, MSU developed a program called the Global Impact Initiative, a university strategy to recruit 100 new research faculty in new areas of research, including many in the College of Human Medicine. At the Institute for Quantitative Health Science and Engineering, the College of Human Medicine is collaborating with the Colleges of Engineering and Natural Science on biomedical engineering projects, such as targeted therapies for cancer and wearable sensors that track health statistics.

“The College of Human Medicine is poised to take health research to new heights,” Hsu said. “With the infrastructure now being provided both in East Lansing and Grand Rapids, we can attract even more of the leading minds in medical research.”

Several top researchers and their teams already have been recruited, and many more have applied, drawn by the opportunity to engage in translational studies, connecting basic science with patient care.

Working with Spectrum Health, Van Andel Institute and others is “a tremendous opportunity,” Hsu said. “From a business perspective, it only makes sense to share knowledge and resources.”

The new research center is “built around collaboration,” encouraging the college’s scientists and those at other institutions to share information and work on projects together, College of Human Medicine Dean Norman J. Beauchamp Jr. said. “It’s absolutely essential that we maintain our collaboration.”

The building’s location in the city’s growing Medical Mile makes it convenient for the college’s scientists to work with researchers and physicians at Van Andel Institute, Spectrum Health, Mercy Health Saint Mary’s, Grand Valley State University, Mary Free Bed Rehabilitation Hospital and Pine Rest Christian Mental Health Services.

That opportunity is “a key part of our effort to recruit the best and the brightest to Michigan State,” Beauchamp said. “By creating an environment of excellence in research and connecting it with medical practices, we can out-recruit anybody.”

The college already has hired many top researchers and is recruiting more, said Walter Esselman, PhD, the college’s senior associate dean for research. “I see a lot of growth,” he said. “I think we will be the go-to place” for researchers, as well as for patients seeking medical care.

RECRUITING THE NATION’S LEADERS IN RESEARCH.
As professor and chair of the Department of Obstetrics, Gynecology and Reproductive Biology, Richard Leach, MD, is building a team of researchers and physicians dedicated to improving the health of women and their babies. The department has formed partnerships with researchers in South Korea and earned international recognition for its studies of endometriosis, infertility, uterine and ovarian cancers and other disorders affecting women's health.

Leach’s own research focuses on early implantation during pregnancy.
Here is a brief summary of our OB-GYN researchers and the groundbreaking projects they’re bringing to the GRRC:

**UNIVERSITY DISTINGUISHED PROFESSOR ASGI FAZLEABAS, PhD**, associate chair of research, is internationally recognized and honored for his work in infertility and endometriosis, a painful condition suffered by an estimated 176 million women worldwide.

**PROFESSOR JAE-WOOK JEONG, PhD**, searches for genetic targets to treat and prevent endometrial cancer.

**PROFESSOR JEFF MACKEIGAN, PhD**, looks for molecular targets involved in many diseases—including cancers and neurological disorders—and then seeks more effective ways of treating them.

**PROFESSOR STACEY MISSMER, ScD**, focuses on identifying risk factors for infertility and endometriosis.

**PROFESSOR JOHN RISINGER, PhD**, the department’s director of gynecologic oncology research, leads a team studying the molecular and genetic characteristics that cause ovarian and endometrial cancers and make some forms more resistant to treatment.

**ASSOCIATE PROFESSOR SASCHA DREWLO, PhD**, works with a team of researchers and health care providers looking for ways to reduce socio-economic and ethnic health disparities and improve health care for women and their children.

**PROFESSOR LEE ANNE ROMAN, PhD**, works with a team of researchers and health care providers looking for ways to reduce socio-economic and ethnic health disparities and improve health care for women and their children.

**PROFESSOR JOSÉ TEIXEIRA, PhD**, studies the causes and seeks more effective treatments for endometrial and ovarian cancer, as well as for benign fibroid tumors, which often cause extreme discomfort and infertility.

**ASSOCIATE PROFESSOR SASCHA DREWLO, PhD**, is seeking ways to identify women most at risk of developing preeclampsia, a disorder during pregnancy that can cause organ failure and even death of the mother and her unborn baby.

**ASSISTANT PROFESSOR RONALD CHANDLER, PhD**, studies a gene called ARID1A, which normally protects against cancer, but, when it mutates, can lead to several kinds of cancer, including ovarian, endometrial, bladder, stomach, kidney and lung.

**ASSISTANT PROFESSOR TAE HOON KIM, PhD**, studies how a gene called MIG-6 appears to protect women from endometriosis and uterine cancer, as well as from other forms of cancer.

**ASSISTANT PROFESSOR KAREN RACICOT, PhD**, is studying whether relatively common viral infections during pregnancy, including influenza, can lead to premature birth and indirectly cause a lifetime of health problems for the child.

**ASSISTANT PROFESSOR KELLY STRUTZ, PhD**, researches how chronic stress during pregnancy—including from domestic violence, poverty, drug use and legal problems—can adversely affect the health of the child.

**RESEARCH ASSISTANT PROFESSOR NIRAJ JOSHI, PhD**, recently received a grant from the Endometriosis Foundation of America to study the molecular and genetic processes that cause many women to suffer with endometriosis.

We are focused on ensuring that our research is translated to the health care needs of women across their life spans and in the diverse communities we serve.

-Richard Leach, MD
In the eight years since joining the College of Human Medicine, a team of researchers led by Professor Jack Lipton, PhD, chair of the Department of Translational Science and Molecular Medicine, has made great strides in understanding Parkinson’s, Alzheimer’s and other neurodegenerative diseases.

In addition to overseeing the department, Lipton performs his own research seeking new targets to promote the survival and regeneration of brain cells in Parkinson’s patients.
Here is a brief summary of our TSMM researchers and the groundbreaking projects they’re bringing to the Grand Rapids Research Center:

PROFESSOR TIM COLLIER, PhD, the Edwin A. Brophy Endowed Chair in Central Nervous System Disorders, hopes to begin clinical trials soon with a drug that could be the first to slow the deterioration of Parkinson’s.

PROFESSOR MARCIA GORDON, PhD, believes the body’s immune system contributes to Alzheimer’s disease by triggering inflammation in the brain in response to the buildup of beta amyloid and tau, two proteins in the brain.

PROFESSOR DAVID MORGAN, PhD, looks for ways to intervene early in Alzheimer’s disease, a pursuit that already has led to several clinical trials of treatments he believes could prevent it from becoming the full-blown disease.

PROFESSOR CARYL SORTWELL, PhD, the department’s associate chair, looks for ways to personalize care by identifying genetic differences that determine the most effective treatment for each Parkinson’s patient.

PROFESSOR KATHY STEECE-COLLIER, PhD, conducts studies to improve the effectiveness of Parkinson’s drugs while minimizing the side effects.

ASSOCIATE PROFESSOR SCOTT COUNTS, PhD, is seeking new therapies to target molecular pathways involved in Alzheimer’s disease, and he is leading a plan to create a “brain bank” of tissue samples for researchers to study neurodegenerative diseases.

ASSOCIATE PROFESSOR NICHOLAS KANAAH, PhD, is developing a form of immunotherapy to hunt down and destroy the toxic forms of tau, a protein in the brain that appears to be a factor in many neurodegenerative diseases.

ASSOCIATE PROFESSOR IRVING VEGA, PhD, is searching for early indicators of Alzheimer’s disease so that new treatments can be administered to slow and possibly halt its progress before symptoms appear.

ASSISTANT PROFESSOR ALISON BERNSTEIN, PhD, is researching the interaction of genetics and environmental exposure, specifically how some pesticides alter neurons in the brain that produce dopamine, a chemical that declines in Parkinson’s patients.

ASSISTANT PROFESSOR FREDRIC MANFREDSSON, PhD, is altering the genetic material in a virus, which could be introduced in patients to battle many diseases that have genetic components, including Parkinson’s and other neurodegenerative disorders.

RESEARCH ASSISTANT PROFESSOR MATTHEW BENSKY, PhD, is experimenting with modified viruses to treat some of the lesser-known Parkinson’s symptoms, including constipation and difficulty swallowing.

RESEARCH ASSISTANT PROFESSOR BENJAMIN COMBS, PhD, is studying whether a protein in the brain called tau becomes defective earlier than previously thought, killing neurons and causing Alzheimer’s disease.

RESEARCH ASSISTANT PROFESSOR IVETTE SANDOVAL, PhD, is studying why aging is the most significant risk factor for developing Parkinson’s disease.

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I aspire to use my skills on behalf of my peers to help them become the best scientists they can be.

- Jack Lipton, PhD
Here is a brief summary of our Pediatrics and Human Development researchers and the groundbreaking projects they’re bringing to the GRRC:

PROFESSOR ANDRÉ BACHMANN, PhD, the department’s associate chair for research, seeks old drugs and naturally occurring substances that can be adapted to fight childhood diseases, including cancer. One of those drugs, DFMO, originally was developed to treat African sleeping sickness, but now is in clinical trials as a treatment for neuroblastoma, a childhood cancer that often is fatal.

ASSOCIATE PROFESSOR GISELLE SAULNIER SHOLLER, MD, who also is director of Pediatric Oncology Research at Helen DeVos Children’s Hospital, is conducting a precision medicine study that shows promise of improving outcomes for pediatric cancer patients. She also oversees multiple clinical trials of a drug called DFMO for treating neuroblastoma, a highly aggressive tumor that forms on the nerve cells of young children.

ASSISTANT PROFESSOR DANIEL CAMPBELL, PhD, has published studies on the causes of autism, including one that was the first to show that an interaction between a gene called MET and exposure to high levels of air pollution increases the risk of developing autism spectrum disorder.

ASSISTANT PROFESSOR DANIEL VOGT, PhD, is studying several genes linked to cancer and other diseases that also are associated with autism. Understanding how mutations in those genes create a predisposition to autism could lead to treatments that prevent or mitigate the disorder.

As chair of the Department of Pediatrics and Human Development, Professor B. Keith English, MD, is building teams of physicians and researchers seeking earlier diagnoses and new treatments for many pediatric diseases, including cancers and brain development disorders, such as autism.

One area the researchers will focus on is precision medicine—the development of individualized treatments tailored to each patient, English said.

Before joining MSU in 2013, English received numerous honors for his leadership in pediatric infectious diseases.

“It’s been great to see patients graduating from hospice.”

-Giselle Saulnier Sholler, MD
LEAD RESEARCHERS.

The Grand Rapids Research Center will be home to some of the nation’s most skilled researchers in Translational Science, Molecular Medicine, Obstetrics, Gynecology, Reproductive Biology, Pediatrics, Human Development and Cancer. Visit humanmedicine.msu.edu/researcher-bios for more information.

MATTHEW BENSKEY PhD
ALISON BERNSTEIN PhD
TIM COLLIER PhD
BENJAMIN COMBS PhD
KATHY STEECE-COLLIER PhD
RICHARD LEACH MD
JOHN RISINGER PhD
B. KEITH ENGLISH MD

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DANIEL VOGT PhD

TRANSLATIONAL SCIENCE AND MOLECULAR MEDICINE
OBSTETRICS, GYNECOLOGY AND REPRODUCTIVE BIOLOGY
PEDIATRICS AND HUMAN DEVELOPMENT

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Bob Groves, Vice President for University Advancement, Michigan State University
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