**PROVING FLINT’S WATER CRISIS.**

The data were alarming: an increasing number of Flint children had dangerously high lead levels in their blood, yet Mona Hanna-Attisha, MD, a College of Human Medicine assistant professor, could not persuade state officials that they faced a serious public health crisis.

Her analysis was wrong, some insisted, and the city’s water was safe to drink.

Hanna-Attisha, director of the pediatric residency at Hurley Children’s Hospital, turned to Rick Sadler, PhD, an urban geographer specializing in analyzing how a community’s human-built environment affects health. The two had met months earlier after Sadler joined the college’s Division of Public Health. Could he geocode blood samples from Hurley Children’s Hospital, Hanna-Attisha asked, and determine if she was correct that the children of Flint were being poisoned by the city’s water?

State health and environmental officials had mapped the children’s blood lead levels by ZIP codes, skewing their analysis, since many of those zones overlap neighborhoods far outside the area served by Flint’s water system.

Over a weekend in September 2015, Sadler conducted a more-detailed geospatial analysis, linking the blood tests of children younger than five years to specific addresses. He compared blood samples taken in 2013, when the city was still buying water from Detroit, with those from 2015, after it began drawing from the Flint River. He then compared blood lead levels of 750 children in Flint with those of 750 living outside the city, both before and after the switch.

As a scientist, Sadler isn’t given to overreaction, but “when I put the maps together, it was kind of alarming,” he said. “I had never done research that had such critical and immediate importance to it. I would say I was convinced.”

He called Hanna-Attisha and told her of his findings. The number of Flint children showing elevated blood lead levels had more than doubled to 4.9 percent after the city switched its water source. In some older and poorer neighborhoods, 10.6 percent of the children showed elevated blood lead levels.

As he prepared for publication, Sadler was a whirlwind of activity: meeting with state health and environmental officials, mapping Flint’s water system, and working with children’s blood test data.

On November 16, 2015, the Michigan Department of Environmental Quality announced that lead levels were six times higher than expected in Flint residents, and Sadler’s conclusions were confirmed.

Sadler, now an assistant professor of community health sciences at Michigan State University, was named as the principal investigator for the Flint Water Public Health Study, a multiyear investigation of the impact of the water crisis on Flint residents. He also helped co-found the Flint Water Research Center, which brings together 2,600 scientists from across the country to study the effects of the water crisis on public health and the environment.

Sadler’s research has revealed that Flint’s water crisis has had far-reaching consequences, including increased rates of lead poisoning, high blood pressure, and a higher incidence of certain cancers.

The percentage of children poisoned by lead is much higher, since it disappears from the blood within days of exposure, yet its consequences can last a lifetime.

(Continued on next page)
PROVING FLINT’S WATER CRISIS.
(Continued from page 1)

...IT WAS KIND OF ALARMING...
I HAD NEVER DONE RESEARCH THAT HAD SUCH CRITICAL AND IMMEDIATE IMPORTANCE TO IT.
— Rick Sadler, PhD

Hanna-Attisha asked Sadler to double and triple check his figures. If she was going to convince state and local officials that they must act, there was no room for error.

The American Journal of Public Health published the peer-reviewed study online in December and in its February print edition, lending credibility to the finding that the city’s water was threatening the health of residents, particularly children.

State officials, including Gov. Rick Snyder, were convinced.

Had Sadler not conducted “that precise geocoding, we wouldn’t be where we are today,” Hanna-Attisha said.

In January, she was appointed head of the Pediatric Public Health Initiative, a joint project of MSU and Hurley Children’s Hospital, bringing together specialists in pediatrics, child development, psychology, epidemiology, nutrition, toxicology, geography, education and other areas. The initiative will assess the impact of the lead exposure, monitor the long-term effect on children, and develop evidence-based interventions to mitigate the physical and cognitive decline typically caused by lead.

For Sadler, the Flint water crisis serves as a warning that they must act, there was no room for error.

The Pediatric Public Health Initiative is a long-term commitment to help children overcome those barriers through better nutrition, education and other programs, and it can serve as a model to help disadvantaged children elsewhere, Hanna-Attisha said.

The study by Hanna-Attisha and Sadler (co-authored by Jenny LaChance, MS, and Allison Champney Schnepp, MD) confirmed earlier warnings by Virginia Tech researcher Marc Edwards, PhD, that Flint’s water contained dangerously high lead levels. Lead began leaching into drinking water from old service lines because state and local officials failed to add anti-corrosive chemicals after switching to the Flint River.

The lead exposure is one more barrier.

The college’s commitment to public health is what drew Hanna-Attisha to join the faculty and open her practice in Flint, she said. When the lead exposure was revealed, the college was able to respond quickly, because “the foundation was already laid,” she said.

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When Sadler compared his map where children with high blood lead levels lived with a map of where Edwards found the highest lead levels in water samples, the two matched up almost perfectly.

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“Nothing like this has ever been done before,” she said.

For Sadler, the Flint water crisis serves as a warning that government officials need to change their urban policy and do a better job of maintaining and updating the infrastructure, especially in urban areas.

“This will happen again if we don’t recognize that we are overbuilding our infrastructure through artificially subsidized sprawl and fragmented urban governance,” he said.

PUBLIC HEALTH RESEARCH MAKING LIVES BETTER

A HEALTHIER FUTURE FOR FLINT

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ight years ago, when MSU College of Human Medicine and community leaders in Flint began discussing a medical school expansion and centering the college’s Division of Public Health there, they knew the health problems many residents faced were serious enough. They could not have foreseen just how serious they would become.

“Indeed, none of us could imagine that the timing of this program would be so important a few years later,” said Neal Hegarty, vice president of the Charles Stewart Mott Foundation, which awarded MSU grants totaling $11.8 million to expand medical education and public health research in Flint. “It wasn’t until recently that we realized how important the public health initiative would become.”

He was referring to the Flint water crisis and its effects on a population already compromised by some of the most challenging public health issues.

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He was referring to the Flint water crisis and its effects on a population already compromised by some of the most challenging public health issues. Even before the lead exposure was discovered, the public health researchers were working on reducing health disparities in three areas identified as important to the community through some 80 public meetings and an opinion survey: 1) chronic diseases, such as diabetes; 2) mental and behavioral health, including substance abuse; and 3) healthy behaviors, such as diet and exercise.

Public health research in these three areas “will make a difference in the health of the people of Flint for years to come,” said Dean Sienko, MD, the college’s associate dean for prevention and public health. “It’s important to understand that our

(Continued on next page)
efforts in Flint are rooted in community participation."

The Division of Public Health is the result of "a remarkable community partnership" with Flint area hospitals, government agencies, business groups and non-profit organizations, said Aron Sousa, MD, the college's interim dean, all with the singular goal of improving the health of the city's residents.

"That is our focus," he said, "trying to make the lives of the people of Flint better."

While the goal is to improve the residents' health in general, an immediate and long-term goal is in dealing with the health effects of the Flint water crisis. Several departments throughout the university have joined that effort, MSU Provost June Youatt said, an undertaking consistent with the university's land-grant philosophy.

The College of Veterinary Medicine, for example, is working with pet owners to help them understand how lead exposure affects animals, she said.

"It becomes important at times like this that we are deeply embedded in the community," Youatt said.

RESEARCHERS IN FLINT

(Continued from page 3)

Richard Sadler, PhD, is an assistant professor in the Division of Public Health at Michigan State University College of Human Medicine. He is a graduate of the University of Michigan-Flint and earned his doctorate in geography from the University of Western Ontario. Dr. Sadler is an expert in geographic information science, specifically analyzing neighborhood effects on health including environmental exposure. He is focused on developing and implementing community and municipality-based environmental interventions to address the health effects of the built environment. In 2015, his geospatial analysis linking blood lead tests of Flint children to specific addresses helped prove Flint’s lead water contamination (story pages 1-2); current research explores healthy food access in Flint (story pages 32-33).

THE FOUR NEW PUBLIC HEALTH RESEARCHERS

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Debra Furr-Holden, PhD, is a Charles Stewart Mott Endowed Professor of Public Health at Michigan State University College of Human Medicine. She earned her Bachelor of Arts degree and doctorate in epidemiology at Johns Hopkins University’s Bloomberg School of Public Health. Dr. Furr-Holden is an expert in understanding how the built and social environment shapes and influences health and health behavior. This includes areas such as exposure to violence, alcohol, tobacco and other drugs. She has authored or co-authored more than 20 publications in the last two years on the role of neighborhood environment in childhood, adolescent and young adult psychopathology.

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Harold “Woody” Neighbors, PhD, is a Charles Stewart Mott Endowed Professor of Public Health at Michigan State University College of Human Medicine. He earned his Bachelor of Arts degree in psychology from Haverford College and doctorate in social psychology from the University of Michigan. For the past 30 years, Dr. Neighbors has been a professor at the University of Michigan where he dedicated his career to the investigation of health behavior and mental health among Black Americans. He has a long-standing interest in studying how ethnic differences in health and illness behavior affect major depression, diabetes and oral health in difficult-to-reach population groups. His work promotes a personal empowerment perspective on coping with stress that emphasizes the ability of people, regardless of racial identification or socioeconomic position, to draw upon psychological strengths and social assets to overcome personal and community barriers that degrade mental health.

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If the past decade is any indication, the next one will bring many changes to the College of Human Medicine, interim Dean Aron Sousa, MD said.

“The last 10 years have had more change than at any time since the founding of the college,” said Sousa, “and a lot will change in the next 10 years. There are things we have to do in clinical care, in education and in research.”

Sousa was named interim dean after former Dean Marsha D. Rappley, MD, left in August 2015 to accept a job as vice president for health sciences at Virginia Commonwealth University and chief executive officer of its health system.

Sousa joined the College of Human Medicine in 1999 as an assistant professor of general internal medicine and repeatedly was promoted, eventually to senior associate dean in 2007. In that position, he was a key figure in much of the growth of the last 10 years, including a doubling of the college’s enrollment, the opening of the new Secchia Center headquarters in Grand Rapids, expansion of its public health program in Flint, and leading development of the new Shared Discovery Curriculum for the college.

As the university begins a national search for a new dean, Sousa has assumed overall responsibility for administering the college and working with many different constituents – including students, faculty, patients and community leaders – while maintaining his own clinical practice.

“I’m trying to set the college up so that it’s ready to have a conversation with the new dean about a strategic plan for the college,” he said.

A draft of the strategic plan is in the works, setting out how the college will meet the changing demands of patient care, education and research, he said.

“There are questions about what our research priorities should be,” Sousa said. “The next dean will have to work on filling that new building (the Grand Rapids Research Center) and implementing the new curriculum in the fall.”

The new Shared Discovery Curriculum is designed to be less theoretical and more relevant to patient care, once again making the college a leader in changing how medical students are taught.

“We are building the basic sciences around the clinical experiences of the students,” Sousa said. “It will help students work better in the emerging system of health care. I don’t think anybody has done it the way we are doing it.”

This year the college opened a new Southeast Michigan campus for third- and fourth-year students with Providence Providence Park Hospital, its seventh regional campus statewide.

In Flint, it will continue expanding its Division of Public Health, Sousa said, a move that became all the more critical after the Flint water crisis emerged.

As a result, MSU and Hurley Children’s Hospital in January announced a new Pediatric Public Health Initiative.

“The community isn’t interested in having us monitor the kids to see how it turns out,” Sousa said. “They want us to do research into how to make their lives better.”

That’s consistent with the mission of the college since it was founded more than 50 years ago, he said.

“We are still the Michigan State University College of Human Medicine,” Sousa said. “The college was founded to serve the people of Michigan. We are about this state and helping the people have better lives through better care.
The old model for teaching medical students was two plus two – two years of basic and social science studies followed by two years of clinical experience. Beginning this fall, the College of Human Medicine will introduce its new Shared Discovery Curriculum, which will closely integrate the teaching of science with the care of patients.

“This curriculum has completely changed the traditional two plus two, because students will be in a patient-care setting within the first few weeks of medical school,” said Dianne Wagner, MD, who, as associate dean for Undergraduate Medical Education, is overseeing the implementation.

(Continued on page 10)
The goal, she said, is to make medical education mirror how medicine is practiced and help students understand and retain the connection between what they are learning and the health of their patients. Otherwise, “it’s difficult to learn thousands and thousands of facts and then later apply them to a patient’s experience,” Wagner said.

The Shared Discovery Curriculum is the product of a process that began five years ago and involved many faculty members, administrators and students serving on subcommittees and the main curriculum committee.

In their first year, students will work in outpatient clinics. In their second year, they will be assigned to inpatient hospitals, where they will learn more about chronic and complicated medical conditions, and about functioning as members of the health care team. In their third and fourth years, the students will take traditional clerkships and electives, and have more ability to individualize their educational program.

“One thing that won’t change, Wagner said, is the college’s commitment to diversity and public service.

“We have worked hard to build something that is based on strong pillars,” she said, adding that the new curriculum is the result of extensive research into how students learn.

Beginning with the fall semester of 2016, all first-year students will study under the Shared Discovery Curriculum, Wagner said. Second, third and fourth-year students will continue under the legacy curriculum. After 2018, all students will be learning under the Shared Discovery Curriculum.

“Second, third and fourth-year students will continue under the legacy curriculum. After 2018, all students will be learning under the Shared Discovery Curriculum. Since its founding more than 50 years ago, the College of Human Medicine has been a leader in changing how medicine is taught. As with the legacy curriculum, which was adopted two decades ago, the new curriculum will evolve to meet the changing needs of students and the practice of medicine.

“We are doing things that have not been done before,” Wagner said, adding that “I have no doubt other schools will look to us for leadership in this.”

As with the legacy curriculum, which was adopted two decades ago, the new curriculum will evolve to meet the changing needs of students and the practice of medicine.

“We always change things,” Wagner said. “We’ve never sat still. We will respond to data and to student and faculty feedback.”

**NEW AAMC PILOT PROGRAM INTERCONNECTS SHARED DISCOVERY CURRICULUM**

The College of Human Medicine is participating in a pilot program of the Association of American Medical Colleges to study best practices for teaching and assessment of the basic skills medical students need to master by their first day as resident physicians.

Of the more than 70 medical schools that applied to participate in the pilot program, the College of Human Medicine was among 10 that were chosen. Those medical schools will spend five years studying how to teach and assess 13 key activities – the so-called “Core Entrustable Professional Activities for Entering Residency, or Core EPAs” – identified as important for new residents to be able to perform. The goal is to understand how to help students competently perform those 13 key tasks as they make the transition from medical school to residency training to maximize resident confidence and patient safety.

They include such tasks as writing prescriptions, documenting a patient encounter and interpreting common diagnostic tests.

“The goal is to certify that you can trust a resident to do a particular thing without being supervised,” said Dianne Wagner, MD. The new residents also must be trusted to ask for help when they need it, she added.

The pilot program comes as the College of Human Medicine is preparing to implement its new Shared Discovery Curriculum this fall.

Wagner called the pilot program “an unbelievably lucky nexus of two things coming together. The good news for us at the Michigan State University College of Human Medicine is we have the curricular and assessment elements needed to study Core EPAs in place in the new curriculum.”

**MICHIGAN STATE UNIVERSITY COLLEGE OF HUMAN MEDICINE WAS SELECTED FROM MORE THAN 70 MEDICAL SCHOOLS**
SU College of Human Medicine and Pine Rest Christian Mental Health Services have joined the National Network of Depression Centers, a group of clinical and academic centers of excellence working to improve care and promote research into depressive illnesses and related mood disorders.

“The NNDC offers tremendous opportunities for collaboration with clinical and academic research throughout their national network,” said Dean Sousa. “In addition, this partnership offers our medical students exposure to the newest approaches to treating mood disorders.”

The NNDC’s mission is to promote collaboration that will advance scientific discovery and provide stigma-free, evidence-based care for patients with depressive and bipolar illnesses.

“We believe that, by joining the NNDC, Pine Rest will have an opportunity to tap into cutting-edge advances in depression care, as well as give back to the field of behavioral health...”

—Mark Eastburg, PhD
President and CEO
Pine Rest Christian Mental Health Services.

“There is huge power in collaborations... They are the keys to future breakthroughs... To conquer depressive and bipolar illnesses, we need to develop ‘personalized, precise treatments – those interventions that are most effective for the different underlying causes that lead to mood disorders.”

—John Greden, MD
Executive Director of the University of Michigan Comprehensive Depression Center
It was a largely symbolic ceremony, yet the topping off of the Michigan State University Grand Rapids Research Center held great promise for the expansion of the College of Human Medicine’s research capabilities.

The raising of the last beam was “a great milestone,” College of Human Medicine Interim Dean Aron Sousa, MD, told a crowd of researchers, construction workers and others gathered in the shadow of the emerging structure. “The work that will be done in this building will change the lives of people around the world and here in Grand Rapids.”

The topping off in mid-November was significant, because it meant that the building was on schedule for an opening in late 2017, said Richard Temple, project administrator for the college. It also marked 25 weeks of construction – 1.136 total hours – without an injury.

After all, “as a medical school, we really care about health and safety,” Sousa said, noting that the college includes the Occupational & Environmental Medicine Division, which gathers data and investigates workplace illnesses and injuries for the State of Michigan.

Work on the site had begun eight months earlier with the demolition of the former Grand Rapids Press building on Michigan Street and Monroe Avenue. The new research center a block west of the College of Human Medicine’s Secchia Center will anchor the city’s growing Medical Mile, allowing its researchers to collaborate with physicians and scientists at nearby Spectrum Health, Mercy Health Saint Mary’s, the Van Andel Institute, Grand Valley State University and others.

“It’s the whole environment, as well as this building,” said Walter Esselman, PhD, senior associate dean of research. Creating “a critical mass of researchers in Grand Rapids is important,” he added. “Working together we can do more. It really adds tremendously to the capability of the region.”

Vennie Gore, MSU’s vice president for auxiliary enterprises, called it “a great day to be a Spartan,” eliciting a chorus of “go green,” and “go white.”

Eventually, the building will provide laboratories and office spaces for 44 principal investigators, each leading six to eight team members, or a total of about 400 jobs. Those top scientists will conduct research into autism, Alzheimer’s, Parkinson’s, pediatric neurology, cancer and women’s health, much of it already underway in Grand Rapids.

“The work that will be done in this building will change the lives of people around the world and here in Grand Rapids.”

—Aron Sousa, Interim Dean

(Continued on next page)
CONSTRUCTION OF THIS PROJECT HAS CREATED $55 MILLION IN WAGES AND 728 JOBS, AND HAS HAD IMMEDIATE IMPACT ON OUR ECONOMY...

—Mike VanGessel
CEO of Rockford Construction

MSU RESEARCH CENTER TO OPEN LATE 2017

(Continued from page 15)

Rapids. That’s in addition to a growing body of medical research on the East Lansing and Flint campuses.

Each one of those principal investigators and many of their team members will bring new money into the area in the form of research grants from the National Institutes of Health and other public and private agencies. When it is fully operational, the research center is expected to generate $28 million per year in economic activity.

The project team includes a joint venture of Clark Construction Co. and Rockford Construction; SmithGroupJJR, which handled engineering and is the architect of record; Ellenzeig, which designed laboratory spaces; Kramer Management Group; and MSU Infrastructure Planning and Facilities.

“Construction of this project has created $55 million in wages and 728 jobs, and has had immediate impact on our economy; bringing new long term jobs that allow us to look to a future where we can build projects to meet additional needs,” said Mike VanGessel, CEO of Rockford Construction.

Sam Clark, president of Clark Construction Co., added: “The economic benefits are significant, but pale in comparison to the improvements in human health that will result from the research done in this building.”

The $88.1 million building is six stories tall with a seventh floor for service equipment. Construction is expected to be completed by July of 2017, but the building will not be fully operational until the end of that year, because it takes about six months to move in and calibrate the sophisticated equipment that will be used by the researchers.

When completed, the building is expected to be LEED certified because of its minimal impact on the environment and its use of about 70 percent less energy than the national average for laboratory buildings.

The topping off was one more step in the growing relationship between the College of Human Medicine and its West Michigan partners.

“This topping off ceremony is another milestone, another chapter in that story,” Sousa said.

“And now let’s top-off the MSU Grand Rapids Research Center,” he said, motioning with his hand and signaling a crane operator to raise the last beam.

The crane roared to life, slowly raising the girder decorated with an American flag, the MSU Spartan flag and an evergreen tree, symbolizing good luck and prosperity. Two construction workers in a lift rose to meet it, while another waited six floors up to help secure the beam in place.

The teams working in the research center will develop new and better treatments for many diseases, the kind of care that otherwise might be available only in distant cities.

“That means that people can stay home to get that specialized treatment,” Sousa said, “and it also means that people can come to Grand Rapids for that treatment.”

BIG TEN RESEARCH IN THE HEART OF GRAND RAPIDS.
Four decades ago, when the College of Human Medicine created a program to educate students in the Upper Peninsula to meet the medical needs of patients there, skeptics said it couldn’t be done. How can you prepare future physicians 400 miles from the main campus, they asked, and expect them to succeed?

A recent study published in Academic Medicine, the journal of the Association of American Medical Colleges, shows that the Rural Physician Program has met its goal of increasing the number of doctors practicing in the Upper Peninsula, particularly in primary care.

“It has been a really successful program over time, and it’s made a difference for the state in a really impactful way,” said Andrea Wendling, MD, the study’s lead author and director of the college’s rural health curriculum. “What we found is that those graduates were more likely to work in rural medicine, practice primary care, work in Michigan, and practice in the Upper Peninsula.”

The Rural Physician Program was among the first of its kind in the country when it was founded in 1974, thanks in large part to the visionary leadership of then-Associate Dean Donald Weston, MD. It has since become a model for other programs aimed at increasing the number of primary care doctors in rural areas.

With data from the American Medical Association, Wendling and her colleagues compared the specialty choices and practice locations of those who had graduated from the program between 1978 and 2000 with all other College of Human Medicine graduates from that period. The researchers decided to focus on that period, because later graduates likely are still in residency programs and have not yet chosen where to establish their practices, she said.

A similar study was conducted in 1990. “It was time to confirm the program had weathered all the changes in medical education, the practice of medicine and the demographic changes in our state,” said Brian Mavis, PhD, director of the college’s Office of Medical Education Research and Development, who gathered data for the study.

Before the latest study, college officials believed the program was working. Now they know it is.

“I think we all feel in our heart of hearts that the rural medicine program is something we are proud of,” Mavis said. “We’re not just saying that; we have the data to back it up.”

Thirty-five percent of the physicians practicing in the Upper Peninsula today are College of Human Medicine graduates, and 21.3 percent of the physicians serving that area were graduates of the Rural Physician Program. Most of those doctors are practicing primary care, which includes family medicine, pediatrics and internal medicine.

Many of those primary care physicians work in a federally designated Health Professional Shortage Area, the study found. Many others were practicing high-need specialties in Upper Peninsula rural areas, including obstetrics and gynecology, psychiatry and general surgery.

As the program began producing graduates who set up practices in the Upper Peninsula, early doubts about its potential success faded, said William Short, MD, the college’s community assistant dean for the Upper Peninsula Regional Campus.

“The naysayers were able to see these students were able to get residency positions, were well-qualified and did well in those residencies,” said Short, who assisted with the study. “It became clear to anyone who might be critical that it has been successful.”

The first classes of students studied one semester on the East Lansing campus and then transferred to the Upper Peninsula. That changed in the early 1980s, when those enrolled in the program began spending two years studying in East Lansing or Grand Rapids before transferring to the Upper Peninsula for their last two years.

The program began before the Internet and teleconferencing made it easier to keep the Upper Peninsula students connected with the main campus. Wendling attributed its success to the dedication of the Upper Peninsula physicians who helped train the students and kept them integrated with the rest of the college.

“The practicing physicians in the U.P. still are what make it work,” she said.

Some of the programs early graduates are now training current students. In 2012, the College of Human Medicine created the Rural Community Health Program at the Traverse City campus with sites in Northern Michigan to produce more primary care physicians for other under-served areas of the state. In 2015, the college expanded the program to the Midland campus with sites in mid-Michigan and the Thumb area.

“We hope to replicate the success of the U.P. program,” Wendling said. “The study certainly supports expanding rural medicine education to other areas of the state.”

The biggest predictor of who will practice in a rural area is if the student grew up in a rural area, she said. A second factor is if a physician’s spouse is from a rural area, and a third is if the doctor was trained in a rural area. Those three characteristics accurately describe Wendling and her husband, Mike Harmeling, MD, both of whom practice family medicine in Bayne City.

“I always knew I wanted to be a family doctor,” Wendling said. “I love my job. I love this feeling of caring for a whole community. You really get to know them well over time. I’m also attracted to caring for a population that needs me.”

“IT HAS BEEN A REALLY SUCCESSFUL PROGRAM OVER TIME, AND IT’S MADE A DIFFERENCE FOR THE STATE IN A REALLY IMPACTFUL WAY...”

— Andrea Wendling, MD

**STUDY:** 35% OF UPPER PENINSULA PHYSICIANS ARE SPARTAN MDs
new study headed by a College of Human Medicine researcher is aimed at identifying the early markers of Alzheimer’s disease, which could help delay or prevent its eventual onset.

Hector M. González, PhD, an associate professor of epidemiology and biostatistics, is the principal investigator for the study, which will gather health data from thousands of adults in the Bronx, Chicago, Miami and San Diego. González was awarded a $7.3 million, five-year grant from the National Institute on Aging to study mild cognitive impairment among Latinos, a possible precursor to Alzheimer’s disease.

Although the study will include nearly 7,000 Latinos between 50 and 80 years of age, the findings could hold implications for everyone, González said. Identifying the markers for mild cognitive impairment could help patients and their physicians develop treatments, including diet and lifestyle changes, to prevent it from progressing to Alzheimer’s or other forms of dementia.

“Current thinking is it takes decades for Alzheimer’s disease to develop, so we are turning the clock back,” he said. “The goal is to find signs in your 50s or 60s. We want to know why some people do (develop Alzheimer’s) and some don’t in the hope that we can ultimately prevent or even push back Alzheimer’s disease onset.”

As a clinical neuropsychologist and dementia expert, González has spent much of his career researching neurological and cognitive health. The R01 grant will fund an ancillary study to the work he already is doing as principal investigator for the Neurocognitive Reading Center portion of the landmark Hispanic Community Health Study/Study of Latinos (HCHS/SOL), which is funded by the National Institute on Aging.

Preventing Suicide Among Recent Detainees

College of Human Medicine public health researcher is embarking on a first-of-its-kind study that will look for ways to reduce suicides among recently released jail detainees.

Jennifer Johnson, PhD, a Charles Stewart Mott Endowed Professor of Public Health, has landed a $6.8 million grant from the National Institute of Mental Health and the National Institute of Justice to keep those who served jail time from taking their own lives. An estimated 10 percent of all suicides are by those who are facing legal issues, such as an arrest or jailing, and half of all who commit suicide are receiving no treatment.

“Suicide prevention efforts should be focused on finding those at risk or in need and intervening,” said Johnson. “Right now there’s a critical gap for those who are transitioning back into the community from jail, and we’re looking to fill that void.”

She is conducting the study with co-investigator Lauren Weinstock, associate professor of psychiatry and human behavior at Brown University and psychologist at Butler Hospital. Other researchers involved in the study include Sheryl Kubik, a criminology professor at MSU, Danis Russell, CEO of the Genesee Health System, and Genesee County Undersheriff Chris Swanson.

The four-year study, known as the SPIRIT Trial, or Suicide Prevention Intervention for at-Risk Individuals in Transition, will follow 800 recently released detainees from the Genesee County Jail in Flint and the Department of Corrections in Cranston, Rhode Island. Each participant will be randomly assigned to a group receiving the current standard of care or to a newer intervention method for one year after release. The newer method involves a prioritized list, or safety plan, written by the participant that identifies coping strategies and support mechanisms that can be used before or during suicidal crises.

Researchers will track the mental health of all participants, including any improvements in suicidal behaviors, psychiatric symptoms, hospitalization and overall functioning, and compare the results between the two treatment strategies.

“With almost 12 million admissions a year in jails across the country, facilities have a difficult job, because more than half of people detained have mental health and substance use problems,” Johnson said. “Jail catches people who are at risk.”

The justice system generally provides mental health care only to those while in jail and very little after they are released. “Recently released inmates are four times more likely to attempt suicide than those in jail,” Johnson said.
The many weeks he devoted to researching a possible treatment for a deadly form of brain tumor was personally rewarding, Brett Schroeder said, but he cited a more altruistic reason for spending much of his summer break in a laboratory.

“Being able to do these summer projects is refreshing, knowing that what you do can actually help people,” the second-year College of Human Medicine student said. “It was a fantastic opportunity.”

Several other medical students who spent last summer conducting medical research expressed similar sentiments that their work was more than a way of burnishing their resumes. Ten students on the East Lansing and Grand Rapids campuses, each backed by a scholarship, spent six or more weeks between their first and second years of medical school conducting research. In the fall, they described their projects in a teleconference between the two campuses, a program that has become an annual event.

While that experience can help the students land prime residencies after finishing medical school, most are motivated by the quest for knowledge and the desire to help patients, said Student Research Director Mark Trottier, PhD. The college encourages its students to conduct their own research projects, he said, but he added: “They want to do research on their own. We want to give them that exposure so some will become research scientists with their own labs.”

Some plan to practice clinical medicine and conduct research, a valuable combination as the medical profession is changing rapidly and the pace of new scientific discoveries is growing at an exponential rate, he said.

“Helps open those worlds to them,” Trottier said. “The ability to systematically design a study, to think analytically and to appraise other studies critically – all of those things are valuable in a medical career.”

Their projects sought new treatments for cancers, better ways to train emergency responders, a therapy to help stroke victims overcome motor skill disabilities and other areas of study.

Fatima Barragawi’s research showed an increase in stem cells in a laboratory model of endometriosis, a finding that could result in a test to diagnose the disease and possibly new treatments.

“I have always been drawn to OB/GYN and stem cell research,” she said. “Now that I have been able to contribute to our knowledge base in the reproductive sciences, it is a dream come true to be working on something that I am passionate about. There is fantastic research being done in both of these fields here at MSU, and I am lucky to be a small part of it.”

For Brett Schroeder, research was nothing new. Before enrolling in the College of Human Medicine he spent four years conducting medical research at the Swedish Neuroscience Institute in Seattle, including the search for a vaccine using the patient’s own immune cells to fight glioblastoma, an aggressive brain tumor. His project for the College of Human Medicine built on his earlier research.

“Being around cancer patients was eye-opening,” he said. “It’s humbling. You see these incredibly sick people who are going to die. Just seeing all of that was pretty inspiring, so I decided to go back to school.”

Although medical school already was demanding enough, Schroeder said he was happy to spend much of the summer doing research. “I think this is an opportunity to be part of the real world of science,” he said.

(Continued on next page)
Nathaniel Ellens (top left) received the Neurology Award to study the use of barbiturates to treat glioblastoma patients during surgery. His mentor was Justin Clark, MD, a neurosurgeon and clinical professor of medicine.

Rohit Abraham (second from left) received the Innovation Award to help train emergency responders in India to deal with traumatic injuries. His mentor was Dinesh Vyas, MD, assistant professor of surgery.

Fatima Barragan (third from left) received the Innovation Award to study the role of stem cells in endometriosis. Her mentor was Asgi Fazleabas, PhD, director of the College of Human Medicine's Center for Women's Health Research.

Brett Schroeder (far right) received the Oncology Award to research a vaccine to treat glioblastoma. His mentor was Charles Cobbs, MD, a neurosurgeon at the Swedish Neuroscience Institute in Seattle.

Stephen Downey received the Neurology Award to study a type of therapy to help stroke victims regain motor skills. His mentor was Heidi Schambra, MD, an assistant professor of neurology at Columbia University.

Chad Gier received the Year-Off Scholarship for Oncology Research, funded by the Ruth A. McIlnay Trust and the Helen and Verne Beilfuss Endowment, to study extracelluar pressure on the proliferation of cancer cells and the relationship of the Schlaifer family of proteins to cancer. His mentor was Marc Basson, MD, professor of surgery.

Ashley Parent received the Breast Cancer Research Scholarship to study the role of stem cells in metastatic breast cancer. Her mentor was Kathy Gallo, PhD, professor of physiology.

Kaivalya Deshpande and Archana Balakrishnan received the Oncology Award to research the use of carfilzomib to treat an aggressive form of breast cancer. Their mentor was Dinesh Vyas, MD, assistant professor of surgery.

Amanda Witte received the Oncology Award to study a drug combination for treating neuroblastoma, a cancer that strikes young children. Her mentor was Giselle Sholler, MD, associate professor of pediatrics and a pediatric oncologist at Helen DeVos Children's Hospital.

“Leadership in Medicine for the Underserved Program”

“I essentially served as her right-hand man,” Jacobson said. “A big thing she had me do was work on assessing the overall problem.”

He researched how the lead exposure was likely to affect pregnant women and unborn children, as well as the potential impact on bone fracture healing and osteoporosis, and he studied treatments and interventions that could help offset the physical and cognitive declines typically caused by the toxic metal.

“We know how important early literacy is,” Jacobson said, recalling that his own parents often read to him, so he helped organize a program distributing books to Flint’s children.

None of this was on his radar when he applied to the Leadership in Medicine for the Underserved program, only a general desire to improve medical care for the underserved. The College of Human Medicine created the program in 2004 to help its students acquire the knowledge, skills, and attitudes they would need to address the varied medical needs of urban, rural, and international underserved populations.

In his third year of medical school, Jacobson met weekly with

“Fourth-Year Student Serves Flint”
The man came into the MSU Breslin Cancer Center with a grim diagnosis of metastatic kidney cancer, but his doctor was able to offer him hope in the form of a clinical trial combining two drugs to fight the disease. He is among the first kidney cancer patients enrolled in the first clinical trial launched by the Big Ten Cancer Research Consortium, a new alliance combining the resources of a dozen cancer centers.

Without the partnership among the Big Ten institutions, the clinical trial “probably would not be possible,” said Anas Al-Janadi, MD, medical director of the Breslin Cancer Center and chief of the College of Human Medicine’s Division of Hematology/Oncology. “It’s important for us to show that the Big Ten can do this. It’s also important for the patients in the mid-Michigan area.”

The clinical trial is significant not only for kidney cancer patients, but because, as the consortium’s first clinical trial, it proves that by combining their resources, the Big Ten cancer centers can launch clinical trials much more quickly and efficiently than if each worked alone.

The Big Ten cancer centers agreed to form the consortium in 2012. Less than a year and a half after its founding, it launched the kidney cancer trial in about half the time it typically takes to get a study up and running. “Oh, it’s incredibly significant for us,” said Susan Goodin, PharmD, the consortium’s executive officer and professor of medicine at Rutgers Robert Wood Johnson Medical School. “If we can move that fast, we’re going to answer a lot of questions very rapidly. ”

“Science changes very rapidly,” she added. “We want to make certain that whatever therapies we offer our patients are the best available.”

The consortium brings together some 2,600 researchers at Big Ten medical schools. “I’ll use the words ‘dream team,’” Goodin said. “We’re bringing together all these institutions working together. We’re thrilled to have Michigan State as a part of that.”

Al-Janadi is the College of Human Medicine’s representative on the consortium’s steering committee. He also is overseeing the Breslin Cancer Center’s role in the current kidney cancer trial, which was initiated and is headed by Arkadiusz Dudek, MD, PhD, a professor of medicine in hematology/oncology at the University of Illinois College of Medicine.

The trial combines two drugs to fight kidney cancer. The first one, bevacizumab, which is already approved to treat kidney cancer, targets blood vessel formation in the tumor. The second, pembrolizumab, is part of a new class of drugs that activates the body’s immune system to fight the cancer.

The first phase of the clinical trial, which began in March 2015, was to determine the maximum safe dose of the drug that could be given to patients. The second phase, which began in September, is to determine how effective the drug combination is in fighting the cancer among patients who have not received previous therapies.

“Certainly, the goal is a cure,” Goodin said. “Secondarily, if we can keep the disease at bay so patients can continue to live their lives, that is fantastic as well.”

Kidney cancer does not respond well to traditional treatments, particularly after it has spread to other parts of the body, Al-Janadi said. “This clinical trial will add to the options we have available,” he said.

Both drugs are administered intravenously at three-week intervals and can be given as long as the patient benefits, he said.

By combining their efforts, the Big Ten cancer centers are able to save time and money on clinical trials, Goodin said. In addition, “we’ve created a mentoring process to develop the next generation of researchers” she said, by pairing junior researchers with senior scientists throughout the Big Ten.

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A conversation with Dr. Al-Janadi, medical director of the MSU Breslin Cancer Center, a member of the Big Ten Cancer Research Consortium.

Three days after Phase II of the clinical trial began, Al-Janadi enrolled his first patient, and he said he expects to enroll more as the study continues. By press time he was nearing approval for a clinical trial in treating breast cancer, and other trials to test new treatments against liver, pancreas and bladder cancers, all through the Big Ten Cancer Research Consortium.

“This works well compared with other clinical trials in terms of how rapidly we set it up,” Al-Janadi said. “The message is that collaboration at this level is not only feasible, but it is likely to lead to more success. We can do it.”

We believe strongly that collaboration is the best possible way to conduct cancer research without expanding the cost, particularly at a time when government funding for medical research has remained stagnant. But collaboration offers many other benefits besides saving money. For one, it brings more ideas and more approaches into the lab and the clinic. As a result, we expect our research will produce more meaningful results in a shorter period of time, and that will help our patients more immediately.

A case in point is the current kidney cancer clinical trials initiated by Arkadiusz Dudek, MD, PhD, at the University of Illinois College of Medicine, with whom we are collaborating. That trial was up and running much sooner than studies in the past, and we expect it will be completed by December of this year. In his recent State of the Union address, President Obama called for a “moonshot” to cure cancer. With our partners in the Big Ten Cancer Research Consortium, we expect to play a major role in reaching that goal.

As a pioneer land grant institution, our mission always has been serving the people of our state, nation and world. It is a culture we share with the other members of the BTCRC, a philosophy and set of values that bring us closer in how we design and conduct our research. Our membership in the consortium also helps us develop the next generation of young investigators with mentorships by many of the top cancer researchers in the country. Without this emphasis on collaboration, rather than on competition, this would not be possible.

We are increasing our research on our East Lansing and Grand Rapids campuses. In Grand Rapids, we are building a new biomedical research facility, which we expect to open in 2017, allowing us to recruit more principal investigators and their staffs. This year, we plan to expand our clinical trials statewide through all seven of our community campuses, stretching from Southeast Michigan to Northwest Upper Peninsula.
While much of the talk about the slow post-recession recovery has been in economic terms, Bengt Arnetz offers another explanation. He sees psychological and biological causes. “There are all these discussions about why the economy hasn’t kicked back,” said Arnetz, MD, PhD, chair of the Department of Family Medicine. “No one ever talks about this, but is it because the workforce is so badly managed? The typical manager thinks you can get more out of people if you stress them, and it’s not true. Fatigue and stress are huge in America. If you lower the work tempo by improving work efficiency, you achieve more.”

This is not a new theory for Arnetz. He’s been studying psychophysiology – the relationship between the brain and the body – since 1983 when a hospital in his native Sweden hired him to look into the health of its medical providers. The Swedish telecom company Ericsson later commissioned him to research the cause of physical problems among white collar employees in its research and development department.

Stress, he found, was adversely affecting the health of the workers and contributing to lower productivity. After Ericsson took steps to reduce the stress, the productivity of its workers improved, as did their health.

“In the general workforce, about 10 percent of employees are depressed,” said Arnetz. “In my own profession, it is more like 30 percent, which he attributed to the high stress among health care workers and lack of a systematic strategy to build energy and recover from work stress.

“Burnout is huge in the practice of medicine,” he said, “and burnout affects the quality of care.”

Stress can adversely affect a physician’s decision making, Arnetz and colleagues found in a recent study supported by the Blue Cross Blue Shield of Michigan Foundation. The research team is now planning to apply for a National Institutes of Health grant to expand that study.

Over the years, he has studied how stress affects the work of police officers, emergency room workers, journalists and others, and he found the results are similar, whatever the profession. “We looked at almost everybody,” he said. “The basic needs are very similar.”

“Burnout is huge in the practice of medicine... Burnout affects the quality of care.” —Bengt Arnetz, MD

IN GENERAL WORKERS WANT:
• REALISTIC GOALS
• CONSTRUCTIVE FEEDBACK
• FAIR COMPENSATION
• THE OPPORTUNITY TO DEVELOP THEIR SKILLS
• A FOCUS ON THEIR ACHIEVEMENTS, NOT THE NUMBER OF HOURS THEY WORK
• FLEXIBLE WORKING CONDITIONS AND THE USE OF INFORMATION TECHNOLOGIES
• HEALTHY WORK-LIFE INTEGRATION
• NONJUDGMENTAL APPROACHES TO MENTAL HEALTH CHALLENGES
• SOME SAY IN HOW TO IMPROVE THE EFFICIENCY OF THEIR WORK
• AND STRATEGIC MANAGEMENT TO REDUCE STRESS
The move doubled sales for the market’s vendors, and the Flint Farmers’ Market's move moving forward despite the decline of retail establishments,” Sadler said. “For many low-income people, this is a partial replacement for a supermarket.”

Sadler, who joined the College of Human Medicine in early 2013, is a medical geographer specializing in studying the places where people live, including the human-built environment, affect their health. He can tell you how exposure to junk food matters.

Sadler had surveyed customers at the old location in 2011. In 2015, he conducted a second survey, comparing how the move had changed the market’s customer base.

After the move, the percent of customers from the city’s most distressed neighborhoods doubled to 20 percent, he found. The number arriving by bus increased from less than 1 percent in 2011 to six percent in 2013, a significant boost, since most of the area’s residents drive themselves.

Sadler’s most recent study, 20 percent of the shoppers said that was why they came to the Flint Farmers’ Market compared with 14 percent in 2011.

The Flint Farmers’ Market could be a model for other cities, demonstrating that locating a market in a central location accessible to many residents can make it easier for them to buy healthy food, Sadler said.

“Health is not just a biological mechanism,” he said, but is impacted by many other factors.

Sadler, who at the time was a post-doctoral fellow at the University of Western Ontario, recently was published in the journal Spatial & Spatio-temporal Epidemiology. In a follow-up study, Sadler’s team of researchers recruited nearly 800 students in the London area and asked them to wear GPS devices tracking exactly where they went. The students also kept diaries. Information from the GPS devices and diaries was downloaded to a computer and compared with a database of fast food restaurant and convenience store locations.

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MICHAEL H. ZAROUKIAN, MD, PHD, MACP, FHIMSS (CHM ’80), professor, Department of Medicine, has received the AMIA Leadership Award from the American Medical Informatics Association.

JOHN ADAM OOSTEMA, MD, assistant professor, Department of Emergency Medicine, and MATHEW REEVES, MS, PHD, professor, Department of Epidemiology and Biostatistics, have received the Mentored Clinical & Population Research Award from the American Heart Association.

ELAHE CROCKETT, PHD, associate professor, Department of Medicine, has received an honorable mention for the Building Bridges and Spanning Boundaries Award: Innovations in Research and Research Education award by AAMC.

ADESUWA OLOMU, MD, MS, professor, Department of Medicine, has received the Peter Reizenstein Best Paper Award from the International Journal for Quality in Health Care.

AMY RALSTON, PHD, assistant professor, Department of Biochemistry and Molecular Biology, received a Presidential Early Career Award for Scientists and Engineers (PECASE) from President Obama, the highest honor the US government bestows on emerging faculty.

VED. V. GOSSAIN, MD, FRCP(C), MACP, FACE, Swartz Professor of Medicine (Emeritus), Department of Medicine, has received the Outstanding Clinical Endocrinologist Award from the American Association of Clinical Endocrinologists.

MONA HANNA-ATTISHA, MD, MPH, assistant professor, Department of Pediatrics and Human Development, has received several awards for her research and advocacy during the Flint water crisis, including The Ridenhour Prize for Truth-Telling and the 2016 PEN/Toni and James C. Goodale Freedom of Expression Courage Award.

J. KEVIN DEMARCO, MD, professor, Department of Radiology, recently wrote the book “Plaque Imaging, Neuroimaging Clin N Am.”

JOSEPH C. GARDINER, PHD, professor, Department of Epidemiology and Biostatistics, has received the Michigan State University Distinguished Professor Award.

MAROLEE NEUBERGER, MS, director of the MSU Family Residency Program Network for the Department of Family Medicine, received a 2016 William J. Beal Outstanding Academic Staff Award for her outstanding contributions to education and research.

MINDY NENHOUSE, Office Assistant III, received the Gliozzo Clerical-Technical Recognition Award from Michigan State University Human Resources. Every year a staff member who exemplifies respect and concern for all members of the MSU community, diligence in daily work, public service and innovative thinking is chosen for this award. The award is sponsored by the Thomas and Concentina Gliozzo Endowment Fund.
Francesca Dwamena, MD, recalls the patient who came in complaining of severe abdominal pain. After a series of tests came back negative, she concluded the patient’s symptoms were medically unexplained, but that didn’t mean her suffering wasn’t real.

“I couldn’t see how I was going to help her feel better, but I had to try,” she said.

After assuring the woman that she didn’t have cancer, Dwamena met with her every week and then every month, helping her manage her symptoms. After six months, the patient was able to get on with her life.

As the new chair of the Department of Medicine, Dwamena emphasizes to students and residents that they are not just treating a disease, but a patient.

“Treating a patient involves more than giving a pill or doing surgery,” she said. “What we do is teach a biopsychosocial approach,” recognizing that the biological, psychological and social factors all play a role in their patients’ health.

Physicians must recognize that the stress of work, relationships and financial worries all can affect a patient’s health. Many are depressed or have trouble sleeping. The last thing a patient wants to hear is that the symptoms are all in his or her head, said Dwamena, who has spent much of her career researching medically unexplained symptoms.

“The point is you can help them manage their symptoms and improve,” she said. With her own patient, “it took a long time to get her to that point, but we train doctors to understand that that’s what it takes. At the end of the day, that’s what we have to do.”

Bengt Arnetz has a goal as the College of Human Medicine’s new Department of Family Medicine chair – and, indeed, he has many – it is to integrate environmental health with preventive and primary care.

“Family medicine – primary care – is best positioned to lead that,” said Arnetz, MD, who also has a PhD in psychophysiology. “I look at family medicine as the broker, the bridge between the local community and the hospital.”

Arnetz previously was vice chair of the Department of Family Medicine at Wayne State University, where he also was co-director of the Institute of Environmental Health Sciences. He is board certified in Occupational and Environmental Medicine by the American Board of Preventive Medicine, and he has studied and written extensively on mental health and chronic diseases.

The role of the family physician is rapidly changing, he said, with an increasing emphasis on preventive care and better management of chronic diseases. While essential to improving their patients’ health, those additional responsibilities can contribute to burnout among healthcare workers.

“Burnout is huge among the workforce,” Arnetz said. “A big thing we are doing is looking at the workforce wellbeing, looking at efficiencies, looking at how the workforce is used, and how to improve workflow and processes.”

That, he said, is vital not only for the wellbeing of the physicians, but of their patients.
FACULTY APPOINTMENTS

The Center of Ethics & Humanities in the Life Sciences has appointed LAURA YENISA CABRERA TRUJILLO, PHD, assistant professor, and DEVAN JOY STAHL, PHD, assistant professor.

The Department of Epidemiology and Biostatistics has appointed ANA INES VAZQUEZ, PHD, assistant professor, and GUSTAVO DE LOS CAMPOS, PHD, associate professor.

The Department of Family Medicine has appointed JUDITH ELLEN ARNETZ, MPH, PHD, professor, JENNIFER MARIE EDWARDS-JOHNSON, DO, assistant professor, HIKMET JAMIL, MD, PHD, professor.

The Department of Medicine has appointed RICHA TIKARIA, MBBS, assistant professor.

The Department of Obstetrics, Gynecology and Reproductive Biology has promoted LEE ANNE ROMAN, PHD, to professor and appointed RONALD L CHANDLER, PHD, assistant professor.

The Department of Pharmacology and Toxicology has appointed JAMIE JENNA BERNARD, PhD, has been appointed assistant professor in the Department of Pharmacology and Toxicology.

The Department of Physiology has appointed RUPALI DAS, PhD, assistant professor, and HARIRAHAN SUBRAMANIAN, PhD, assistant professor.

The Department of Psychiatry has appointed RUTH MARIE BAER, DO, assistant professor, and MIKO ROSE, DO, assistant professor.

The Department of Radiology has promoted JAMES DEMARCO, MD, to professor, and JIE HUANG, PHD, to professor.

The Department of Surgery has appointed KHALID M. ALMUTAIRI, MD, has been appointed assistant professor in the Department of Surgery.

The Office of Medical Education Research and Development has appointed JOHANNA MARIA MONICA VAN DE RIDDER, MD, PhD, assistant professor.

The Office of the Dean has appointed ERICH J. PETUSHEK, PhD, assistant professor, and MICHAEL STOOLMILLER, PhD, assistant professor.

The Office of the Dean has appointed RICHARD SADLER, PhD, has been appointed associate professor in the Department of Pharmacology and Toxicology.

The Office of the Dean has appointed SIMONE M CHARLES, PHD, has been appointed associate professor and director of the Master of Public Health Program.

IN MEMORY

JOSEPH BRZEZINSKI, MD (CHM ’91), age 52, of Marquette, passed away from cancer on January 18. A 1991 graduate of the College of Human Medicine Upper Peninsula Region Campus, Dr. Brzezinski was an assistant professor in the Department of Pediatrics and Human Development, serving as the assistant pediatric clerkship director for the Upper Peninsula campus from 1998 until his passing. He received two MSU College of Human Medicine Upper Peninsula Campus Faculty Teaching Awards, in 1996 and 2015. Dr. Brzezinski was also a pediatric preceptor for the Marquette Family Medicine Residency Program and was awarded the 2009 Marquette Family Residency Senior Award. “Joe was not only a terrific teacher, but a great leader and physician role model,” said Aron Sousa, interim dean. “He set high expectations for the students that included accountability, professionalism, excellent patient care and integrity. He was able to get his younger colleagues engaged in teaching through his remarkable example and commitment. Dr. Brzezinski leaves a legacy of grateful students, patients and colleagues.”
JEAN KERVER, MS, PhD, assistant professor, Department of Epidemiology and Biostatistics, and her co-investigators received a $4.7M grant from the U.S. Department of Agriculture to study obesity prevention among families with preschoolers.

JENNIFER JOHNSON, PhD, Charles Stewart Mott Endowed Professor of Public Health, received a $6.8 million grant from the National Institute of Mental Health, the NIH Office of Behavioral and Social Sciences Research, and the National Institute of Justice for her study, “Suicide risk reduction in the year following jail release: the SPIRIT Trial” (story page 21). In addition, she also received a $445,752 grant from the National Institute of Mental Health for her study “Effects of prisoner re-entry context on cognitive ability to manage mental health at re-entry.”

HECTOR M. GONZÁLEZ, PhD, associate professor of epidemiology and biostatistics, was recently awarded a $7.3 million, five-year grant from the National Institute on Aging to study mild cognitive impairment among Latinos, a possible precursor to Alzheimer’s disease. (For more information see the story on page 20.)

J. KEVIN DEMARCO, MD, professor, Department of Radiology, received a grant from the Mayo Clinic (funded by General Electric Company), for his study, “New Technologies to determine Atherosclerotic Plaque Vulnerability: A Pilot Study to Assess Carotid Contrast-Enhanced Ultrasound (CEUS) and Strain Deformation Imaging in Patients Referred to Stress Echo-cardiography for Assessment of known or suspected Coronary Artery Disease.”

LAURA CABRERA TRUJILLO, MS, PhD, assistant professor, Center for Ethics and Humanities in the Life Sciences, and her co-investigators received a grant from the Network of European Funding for Neuroscience Research (NEURON) Consortium for her study, “Media coverage of psychiatric neurosurgery: Cross-national investigations of public reactions and attitudes.”

TIM COLLIER, PHD, associate chair for research, Department of Translational Science and Molecular Medicine, received a $2.5M grant from the National Institute of Neurological Disorders for his study, “Nortriptyline-mediated attenuation of alpha-synuclein pathology in Parkinson’s disease.”

KATHY STEECE-COLLIER, PhD, professor, Department of Translational Science and Molecular Medicine, received a grant from the National Institute of Neurological Disorders and Stroke for her study, “Stribral CAV1.3 Calcium Channels: An Overlooked Antidyskinetic Target for PD.”

ERIK SHAPIRO, PHD, associate chair for research, Department of Radiology, received a $2.1M grant from the National Institutes of Health for his study, “Quanti- tative molecular and cellular MRI of hepatocyte transplantation.”

CLAIRE MARGERISON-ZILKO, PhD, assistant professor, Department of Epidemiology and Biostatistics, received a $664,921 grant from the National Heart, Lung and Blood Institute for her study “Pregnancy and beyond: windows into disparities in women’s cardiovascular health” and a grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development for her study, “Economic conditions during pregnancy and birth outcomes.”

ANDRÉ BACHMANN, PhD, professor and associate chair for research, Department of Pediatrics and Human Development, received a grant from Wipe Out Kids’ Cancer to study drug combinations against neuroblastoma.

REBECCA MALOUIN, PhD, MPH, assistant professor in the Department of Family Medicine, received a grant from American Thrombosis & Hemostasis Network for her study “Evaluation of the National Hemophilia Coordinating Center” and a grant from the Beryl Institute for her study, “Patient engagement in primary care practice: form, function and outcome.”
VED GOSSAIN, MD, Swartz Professor of Medicine, Department of Medicine, retired from Michigan State University after more than 40 years of service. During his tenure Dr. Gossain was program director of the MSU Endocrinology & Metabolism Fellowship Program, chief of the Division of Endocrinology and Metabolism and vice chair of the Department of Medicine. He has an international reputation in the field of endocrinology and served as a visiting professor at Guy's Hospital in London and institutions in India.

KENNETH SCHWARTZ, MD, professor of medicine, Division of Hematology/Oncology, retired from Michigan State University after more than 34 years of service. He served as director of the MSU Hematology/Oncology Fellowship program for nearly 30 years and as interim chief of the Division of Hematology/Oncology. His research interests follow two broad areas including iron and iron overload toxicities and the study of platelets.

GARY STEIN, PHARMD, professor of medicine and pharmacology, Division of Infectious Diseases, retired from Michigan State University after more than 34 years of service. During his tenure, his work specialized in pharmacodynamics of antimicrobials and pharmacoepidemiology. He served as research director of the MSU Infectious Disease Fellowship Program and has authored more than 100 manuscripts and book chapters.

DAVID SOLOMON, PHD, professor, Department of Medicine and the Office of Medical Education Research and Development, retired from Michigan State University after 17 years of service. His area of focus included medical education, specializing in performance assessment, program evaluation, curriculum development and distance learning.

JULIA WIRTH, PHD, assistant professor, Department of Epidemiology and Biostatistics, retired from Michigan State University after more than 34 years of service, joining the College of Human Medicine in 1985 with the Department of Microbiology and Public Health. In 1997, she joined the Department of Epidemiology and Biostatistics, as the project director of the Fishers Family Health Study and later was appointed assistant professor.

Heart, Lung and Blood Institute.

Participants in the new study will be drawn from more than 16,000 Latinos who already are participating in the larger study that will allow Gonzalez and other researchers to tap into a rich source of data already gathered from the participants, including genomic and cardiovascular risk factors, which could help identify the most significant markers of when mild cognitive impairment is likely to become Alzheimer’s or another form of dementia.

Mild cognitive impairment includes problems with memory, language and thinking, but normally isn’t severe enough to interfere with daily activities. A goal of the study is to differentiate cases of mild cognitive impairment that are a normal part of aging from those that are precursors to dementia.

Under Gonzalez’s guidance, scientists at the Albert Einstein College of Medicine in the Bronx, the University of Illinois at Chicago, the University of Miami and San Diego State University will gather data from the study’s participants. The University of North Carolina at Chapel Hill will function as the coordinating center, pulling together the data.

Preventing dementia likely will be cheaper and more effective than treating it once it has developed, Gonzalez said, particularly since currently there is no cure.

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Fourth-Year Student Serves Flint

(Continued from page 25)

students at Flint’s Northwestern High School, giving them career advice, holding ACT workshops and encouraging them to attend college. In his fourth year, while some of the program’s 14 students worked with underserved patients in other Michigan cities, as well as internationally, Jacobson remained in Flint, helping address the barriers to medical care that many of the city’s residents face.

“Too often in the hospital we hear, ‘Oh, the patient couldn’t make it to their appointment,’” he said, adding that “too often we don’t ask the question, ‘well, why couldn’t you come? OK, so you don’t have a car. Is there a community transportation system we can hook you up with?’”

The program helped Jacobson increase his understanding of the social and financial obstacles many underserved patients face, and it reinforced his commitment to helping overcome them. He will carry that lesson with him when he begins a residency in orthopedic surgery and throughout his career.

When she was praised for exposing Flint’s lead crisis, Hanna-Attisha often said she was just doing her job. Jacobson recalled.

“If I’ve learned anything, it’s that we have the ability to change people’s lives,” he said. “Dr. Mona and the Leadership in Medicine for the Underserved program have shown me you can change the world just by doing your job.”

Delivering Alzheimer’s

(Continued from page 20)

“One in 34 people in the United States is currently involved with the justice system,” Johnson said. “So chances are… they may have a family member who is involved with the justice system.

The project is designed to build on the work of the previous study and focus on those who have already been identified as at risk for suicide.

In the new study, participants will be asked to complete surveys and participate in focus groups that will help researchers understand the factors that contribute to suicide risk among individuals involved with the justice system.

“Right now, the three largest mental health treatment providers in the country are jails. The problem is the need for help is much greater than the available budget dollars, and legislators don’t tend to campaign on better health care services for this population.”

This is the National Institute of Mental Health’s first major investment in suicide prevention research within the justice system.

“One in 34 people in the United States is currently involved with the justice system,” Johnson said. “So chances are… they could be your neighbors. Offering them a chance to succeed is important.”

Preventing Suicide

(Continued from page 21)
UPCOMING EVENTS

SAVE THE DATE

MSU College of Human Medicine 2016 Alumni Weekend & MSURx
September 23 & 24
East Lansing, Michigan

For more information or to sponsor events, please contact Marci Muller, assistant director of Alumni Relations, at marci.muller@hc.msu.edu or 616.234.2511

IN MEMORY

STEVE SWISTAK, MD (CHM ’08) passed away on June 11, 2015, from esophageal cancer.

ANOUNCEMENTS

JANET MCGILL, MD (CHM ’79), was inducted into the Michigan State University Gamma Chapter Alpha Omega Alpha Honor Medical Society.

Under the leadership of ANKOOR SONI, MD (CHM ’08), Delonis Medical Center received a $650,000 federal grant to open a clinic in Ypsilanti, Mich.

CHUCK RUSSELL, MD (CHM ’82), recently became board-certified in addiction medicine. Dr. Russell is also board-certified in emergency medicine.

DHAVAL BHANUSALI, MD (CHM ’10), created a medical innovation consulting firm called Health Digital.

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ALUMNI STORIES WANTED!
YOUR ALUMNI OFFICE WANTS TO HEAR FROM YOU...
PLEASE SEND YOUR NEWS AND ANY CHANGES IN CONTACT INFORMATION TO:
Marci Muller
associate director of alumni relations and annual giving
marci.muller@hc.msu.edu

ALUMNI WEEKEND 2016

MSURx
FRIDAY, SEPTEMBER 23
MSURx FEATURING THE ANDREW D. HUNT, MD, ENDOWED LECTURE
A TED-like event at the Wharton Center, in East Lansing, showcasing College of Human Medicine alumni, students, faculty, researchers and community supporters.

SATURDAY, SEPTEMBER 24
TAILGATE & HOMECOMING FOOTBALL GAME
ADVANCED BACCALAUREATE LEARNING EXPERIENCE (A.B.L.E) RECEPTION

College of Human Medicine
MICHIGAN STATE UNIVERSITY
Founded 1855

FOR MORE INFORMATION OR TO SPONSOR THESE EVENTS, PLEASE CONTACT MARCI MULLER AT MARCI.MULLER@HC.MSU.EDU OR 616.234.2511
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