8 Helping Patients Molecule by Molecule: Researcher on the Path to New Discoveries
10 Burdick Endowment for International Medicine Builds Hope
12 Scientific Inquiry Endeavors to Verify Cranial Motion
14 Taking the Lead in Research: The Institute for Healthcare Innovation
16 Helping to Adapt When There Is No Cure
Mission
Midwestern University’s historical and sustaining philosophy dedicates the institution and its resources to the highest standards of academic excellence to meet the educational needs of the healthcare community.
3 President’s Message
Kathleen H. Goeppinger, Ph.D.
President and Chief Executive Officer
Midwestern University

Features

8 Helping Patients Molecule by Molecule: Researcher on the Path to New Discoveries

10 Burdick Endowment for International Medicine Builds Hope

12 Scientific Inquiry Endeavors to Verify Cranial Motion

14 Taking the Lead in Research: The Institute for Healthcare Innovation

16 Helping to Adapt When There Is No Cure

18 Arizona Regional Brain Bee Spurs Youth Interest in Neuroscience

19 Faculty Member’s E-Book Sparks Learning, Showcases Anatomy Lab

Departments

4 Midwestern Minute

20 Clinic Updates
Downers Grove, Illinois
Glendale, Arizona

22 Alumni in Focus
Mark Alan Dobbertien, D.O., FACS, CDR MC USN
Adrian Harvey, D.O.

24 From the Archives
Postal Stamp Honors Osteopathic Medicine
Dear Friends of Midwestern University,

The busy holiday season is upon us as we all prepare for special time with family and friends, celebrating all of the best of 2015 and ushering in a new year, once again, filled with hope and joy.

Midwestern University takes great pride in giving back to our communities in Downers Grove, Illinois and in Glendale, Arizona. In this edition of the Midwestern University Magazine, I hope that you will take note of the wonderful service programs and community events that have become one of the cornerstones of our students’ experience. We work hard to instill a sense of giving back to the community through special service programs and organizations, whether it be working with teens to inspire them to become healthcare professionals or by participating in our annual international medical mission in Guatemala.

Another cornerstone is our dedication to research and instilling in our students, the sense of curiosity and inquiry. Midwestern has a long and proud history as that of a teaching institution, but our commitment to research is linked to inspiring our students to look beyond known cures and seek new knowledge, and instilling in them a sense of discovery, while providing them with the tools they need to accomplish their goals. I take pride in the work done by our faculty in the area of research. I hope you enjoy reading of the works of Dr. Shridhar Andurkar, Dr. Kurt Heinking and Dr. Kyle Henderson. Just as Dr. Paula Handford and Dr. Vladimir Yevseyenkov are making a difference in the rehabilitation of our patients with Parkinson’s disease, all of these faculty members are inspiring our students and others to look beyond today’s medicine and focus on new data and cures. I hope you enjoy reading about our new Institute for Healthcare Innovation, which is positioning itself to become a new multidisciplinary research training resource for all of the faculty and students on both campuses.

I thank you for being part of the Midwestern University family of friends, donors and alumni. We are careful stewards of all of our gifts while caring deeply about filling our mission of excellence for all of our 6,500 students. As this holiday approaches, thank you for your support of our students and mission. May the holidays bring you peace and joy, and may your new year be blessed with good health and happiness.

Sincerely,

Kathleen H. Goeppinger, Ph.D.
President and Chief Executive Officer
Midwestern University

From the President
Midwestern University is pleased to announce that Steven R. Chanen, President and Chief Executive Officer of Chanen Construction Company, Inc., has been named to the University’s Board of Trustees.

Mr. Chanen’s philanthropic ideals have led him and his company to contribute to many local organizations, including the Heard Museum, the Arizona Science Center, the Arizona Humane Society, and the United Way of Phoenix, as well as Midwestern University’s own Scholarship Fund. He is a previous winner of the Arizona Humane Society’s Herberger Humanitarian of the Year Award. In 2013, Mr. Chanen was recognized at Midwestern University’s annual Bright Lights, Shining Stars gala, where he received the COMET (Community Outreach: Motivating Excellence for Tomorrow) Award, recognizing outstanding individuals who have shown exemplary commitment to the community.

Mr. Chanen is a current or past trustee of organizations such as the Phoenix Children’s Hospital Foundation; The Arizona Science Center; The Arizona Motion Picture and Television Advisory Board (President); Heard Museum; Phoenix Community Council; and the Greater Phoenix Economic Council.

“Mr. Chanen has contributed greatly to the continued success of the University through his commitment to quality work and superior delivery. He and his family have been very important partners with Midwestern and Mr. Chanen is a welcome addition to our Board of Trustees,” said Kathleen H. Goeppinger, Ph.D., President and Chief Executive Officer of Midwestern University.

New Administrator, Deans Appointed

Kathleen H. Goeppinger, Ph.D., President and CEO of Midwestern University, is pleased to announce the following new hires and promotions:

Barbara L. McCloud, Esq., was appointed Vice President and General Counsel for Midwestern University.

P. Bradford Smith, D.D.S., was promoted to Dean for the College of Dental Medicine-Arizona (CDMA), succeeding Russell Gilpatrick, D.D.S., who retired on July 1, 2015.

Len Koh, O.D., M.B.A., Ph.D., FAAO, was named Assistant Dean of Clinical Affairs for the Arizona College of Optometry (AZCOPT).

Harold Haering, D.M.D., was named Associate Dean for Clinical Education for the College of Dental Medicine-Arizona (CDMA).

Sean Reeder, D.O., was promoted to Medical Director for the Midwestern University Multispecialty Clinic in Glendale and to Assistant Dean of the Arizona College of Osteopathic Medicine (AZCOM).

CCOM Students Spearhead Integrate Chicago Conference

Students from the Chicago College of Osteopathic Medicine (CCOM) of Midwestern University coordinated the 8th annual Integrate Chicago conference, which is organized by students from several Chicago-area medical and health science schools. David Brown, MS-IV (CCOM), and Sarah Tarnowski, MS-IV (CCOM), were the chief organizers of the one-day conference.

Integrate Chicago aims to increase awareness and understanding of integrative medicine and unites healthcare professionals and students from Chicago-area schools of medicine, both M.D. and D.O. programs. At the conference, a distinguished and dynamic group of speakers share their latest research and experiences in various modalities of integrative, complementary, and alternative medicine.
MWU/OPTI Receives Initial Accreditation as Sponsoring Institution by ACGME

Midwestern University is pleased to announce that the Midwestern University Osteopathic Postdoctoral Training Institute (MWU/OPTI) has been granted Initial Accreditation as a Sponsoring Institution by the Accreditation Council for Graduate Medical Education (ACGME) under the ACGME’s Single Accreditation System for graduate medical education and training in the United States.

MWU/OPTI currently sponsors 14 osteopathic residency and fellowship programs in the Southwestern United States. Now that it has received ACGME Initial Accreditation, MWU/OPTI will be permitted to sponsor AOA-accredited internships, residencies, and fellowships as they make the transition to ACGME accreditation. In the future, MWU/OPTI also plans to develop new graduate medical education training programs that will be approved to accept Osteopathic (D.O.) and Allopathic (M.D.) medical school graduates into its sponsored programs.

Inaugural Class Graduates from College of Dental Medicine-Illinois

Midwestern University’s College of Dental Medicine-Illinois (CDMI) celebrated the achievements and hard work of their first class of graduates at a commencement ceremony on the Downers Grove Campus. Of the 127 graduates, 14 will pursue an advanced dental residency, 10 accepted military assignments, and four will enter the public health sector as part of the National Health Services Corps (NHSC). The remaining graduates have already begun the process of investigating various general practice opportunities.

This CDMI graduating class played a critical role in establishing a tradition of community service, collectively accruing thousands of service hours providing oral healthcare education and treatments for underserved populations, adults, and children both locally and abroad. They were also the first dental students to provide care to the community at Midwestern University’s Dental Institute, which opened in 2013, where they provided a wide range of dental treatments under the guidance of faculty mentors.

AZCOM Faculty Offer Anatomy-based “Spring Training” for Los Angeles Dodgers Trainers

Prior to the start of the 2015 Major League Baseball season, the Los Angeles Dodgers’ training staff assembled at Sahuaro Hall on the Glendale Campus to brush up on their anatomy. It was the third spring training workshop conducted at the University by the team.

Fifteen trainers from within the Dodgers’ Major League and Minor League systems joined Arizona College of Osteopathic Medicine faculty Randall Nydam, Ph.D., Professor, Anatomy, and Heather F. Smith, Ph.D., Associate Professor, Anatomy, at Midwestern University’s gross anatomy lab to have the chance to work with cadaver specimens in use by AZCOM students. The trainers’ specific focus was to get detailed inspections and assessments of joints and limbs — the anatomical areas most commonly injured among professional baseball players.

Led by Nick Conte, PT, D.P.T., ATC, CSCS, the Dodgers’ Medical and Rehab Coordinator, the trainers spent two hours working with the cadavers and interacting with Dr. Nydam and Dr. Smith to prepare themselves for treating Dodgers players’ injuries over the season.
Midwestern University's College of Pharmacy-Glendale hosted the President and Vice President of Membership of the American Society of Health-System Pharmacists (ASHP), Dr. Christine Jolowsky and Dr. Hannah Vanderpool. The visit was significant in that it was the first time a president of a national pharmacy organization has visited the Glendale Campus.

During the visit, Dr. Jolowsky and Dr. Vanderpool addressed the current state of pharmacy, highlighting the profession's push for recognition as providers in the Social Security Act via bills H.R. 592/S. 314, also known as The Pharmacy and Medically Underserved Areas Enhancement Act, and issued a call for action to increase student advocacy. The presentation continued with a discussion of initiatives more specific to ASHP, such as the Pharmacy Practice Model Initiative (PPMI), an ASHP initiative aimed at maximizing pharmacists' impact on patient care in health-system pharmacies.

More than 60 Midwestern University students, faculty members, and their families from the Downers Grove Campus spent time volunteering to help feed malnourished children throughout the world. Volunteers from the Biomedical Science Program and the Physician Assistant Program packed food on two separate occasions at the Feed My Starving Children organization, a non-profit Christian mission located in Aurora, IL, and committed to feeding children hungry in body and spirit.

The volunteers from the Biomedical Science Program packed 21,384 meals of specifically formulated food that will feed 58 malnourished children for an entire year, and the volunteers from the PA Class of 2016 packed 156 boxes of food to sustain 93 children in underdeveloped nations for a year.

### Volunteers Pack Food for Malnourished Children

More than 60 Midwestern University students, faculty members, and their families from the Downers Grove Campus spent time volunteering to help feed malnourished children throughout the world. Volunteers from the Biomedical Science Program and the Physician Assistant Program packed food on two separate occasions at the Feed My Starving Children organization, a non-profit Christian mission located in Aurora, IL, and committed to feeding children hungry in body and spirit.

The volunteers from the Biomedical Science Program packed 21,384 meals of specifically formulated food that will feed 58 malnourished children for an entire year, and the volunteers from the PA Class of 2016 packed 156 boxes of food to sustain 93 children in underdeveloped nations for a year.

### ASHP Leaders Address Students

Midwestern University’s College of Pharmacy-Glendale hosted the President and Vice President of Membership of the American Society of Health-System Pharmacists (ASHP), Dr. Christine Jolowsky and Dr. Hannah Vanderpool. The visit was significant in that it was the first time a president of a national pharmacy organization has visited the Glendale Campus.

During the visit, Dr. Jolowsky and Dr. Vanderpool addressed the current state of pharmacy, highlighting the profession’s push for recognition as providers in the Social Security Act via bills H.R., S. 592/S. 314, also known as The Pharmacy and Medically Underserved Areas Enhancement Act, and issued a call for action to increase student advocacy. The presentation continued with a discussion of initiatives more specific to ASHP, such as the Pharmacy Practice Model Initiative (PPMI), an ASHP initiative aimed at maximizing pharmacists’ impact on patient care in health-system pharmacies.

### Cuts for Kids Celebrates 16 Years

Cuts for Kids, celebrating its 16th year and organized by the Midwestern University Pediatrics Club, offered haircuts from professional stylists to benefit children with special health and social needs in a fun carnival-style atmosphere. More than 1,800 inches of hair were collected and donated to Locks of Love to make wigs for kids with long-term hair loss. Monies raised during the event supported the March of Dimes’ March for Babies initiative.

The 16th Annual Cuts for Kids event turns the Stagecoach Dining Hall into a hair salon.
Campuses Invite Teens to Sample Healthcare Careers

Midwestern University opened its campuses in Arizona and Illinois to curious high-school students to showcase the possibilities offered by healthcare careers.

The Downers Grove Campus provided hands-on learning experiences for more than 120 high school students from four area schools including Downers Grove North and Downers Grove South High Schools as part of an annual Health Sciences Day. Meanwhile, almost 700 students from schools as far away as Kingman, AZ traveled to the Glendale Campus for Health Sciences Career Day.

The events are important community education activities for the University and help to build interest among science-minded youngsters who are contemplating future careers in the healthcare industry. While on campus for the event, high school students interacted with Midwestern faculty and student volunteers and participated in interactive presentations that included an anatomy lab, pharmacy compounding class, dental simulation, veterinary medicine, and more.

Residency, Fellowship Programs Offer Opportunities at Chicago College of Pharmacy

Midwestern University’s pharmacy postgraduate educational programs provide numerous benefits to students and the University. On the Downers Grove Campus, the Chicago College of Pharmacy (CCP) offers residency and fellowship programs intended to attract pharmacists looking to expand their clinical and educational knowledge and skills sets.

This year, CCP offered a new multi-site Postgraduate Year Two (PGY-2) Ambulatory Care Pharmacy Residency Program, which is designed to develop residents’ skills in managing chronic diseases states often seen in the ambulatory/outpatient environment. Other postgraduate programs include a PGY-2 Critical Care Pharmacy Residency, PGY-2 Infectious Diseases Pharmacy Residency, PGY-1 Community Pharmacy Residency with Jewel-Osco, and a two-year Infectious Diseases Pharmacotherapy Fellowship. More than 90 pharmacists have completed a postgraduate program at Midwestern University’s Chicago College of Pharmacy.

Foundation Launches Cost-Saving Private Loan Program

The Midwestern University Foundation has launched a new loan program for its graduate health professions students, which will reduce costs to borrowers and help them better manage their educational debt.

Through the Glendale Industrial Development Authority and the Illinois Finance Authority, the Midwestern University Foundation has issued $30 million in tax-exempt revenue bonds to create this innovative program. The loans will be available exclusively to third- and fourth-year students in the University’s graduate programs of dental medicine, pharmacy, optometry, veterinary medicine, and the health sciences. These loans will have no origination fees for the students and offer a lower fixed interest rate (currently 6%) than that available to students who borrow funds from the Federal Direct Student Loan Grad Plus Program.

Standard & Poor’s has rated the Foundation’s Senior bonds for this program as ‘AAA,’ based on the Foundation’s strong track record in the student loan business. The Foundation has backed up its lending performance by contracting with MeasureOne, an independent firm, to analyze the loans of students who attended Midwestern University between 1995 and 2015. The historic low default rate of Midwestern graduates has resulted in the favorable bond ratings for the Foundation. This private student loan program is one important way that Midwestern University is working with its students to reduce their debt burden. The University’s Office of Financial Aid provides a series of programs to educate students about strategies to limit their borrowing while they are in school.

Local high-school students get the chance to try their hand at intubating a simulated patient.
Helping Patients Molecule by Molecule:
Researcher on the Path to New Discoveries

Millions of Americans suffer daily from epilepsy and chronic pain, two different central nervous system disorders. In an effort to help these patients, Shridhar V. Andurkar, Ph.D., Department Chair, Pharmaceutical Sciences, Chicago College of Pharmacy, spends time in his lab on the Downers Grove Campus creating new compounds working on the molecular level to close the gap between existing drug therapies and patients’ needs.

“In a normal human system, the brain and central nervous system (CNS) are very well protected by what is known as the blood-brain barrier that restricts access to the CNS. When you design any drug, you have to make it so it is able to cross this barrier. If it doesn’t make it to the brain, it’s not going to treat any disorder of the brain. That’s the magic,” Dr. Andurkar explained. “The compounds I develop and the mechanisms I am researching all are intended to work in the brain.”

An estimated three million Americans currently live with epilepsy and each year an additional 200,000 people are diagnosed with the disorder. Several of those patients are children who can experience hundreds of seizures a day. These seizures can have a devastating effect on the developing brain. In addition, healthcare professionals are noticing an increase in the occurrence of epilepsy in the aging population as a result of strokes, brain tumors, Alzheimer’s disease, and traumatic brain injury.

“The statistics are that about 30 percent of the patients who suffer from epilepsy don’t benefit from the current drugs. Existing drugs are either ineffective or patients respond to the drug treatment initially, and then they stop responding to it,” said Dr. Andurkar. “That leaves us a huge population of patients who suffer and we need to find better treatments for them. That’s what really drives my work.”

Dr. Andurkar has witnessed the satisfaction of creating a new anticonvulsant drug that is currently in use treating patients’ seizures. During his post-doctoral studies, he was part of a group that designed VIMPA T®, a drug that received U.S. Food and Drug Administration (FDA) approval in 2008. “The simple knowledge that something I worked on is today curing at least one patient’s seizures is very rewarding. Even if it is only one person, that’s one less person suffering.”
While the end results are gratifying, Dr. Andurkar says that the drug discovery process is often slow and filled with false starts, roadblocks, and unexpected discoveries. “You have to have a lot of patience and a big heart to take those failures and realize that they are teaching you how to do it better the next time,” he said.

Dr. Andurkar begins the process of designing a new molecule by reviewing the molecules currently in existence, determining which structural changes to make to impart desirable properties, and drawing out the new molecule on paper. “In the lab, I do all the chemical synthesis of the new molecules I am designing,” he said. “Some molecules are easy to make, some are more challenging to make, but that’s part of the fun – figuring out how to make things.”

Once successfully synthesized, the new molecule must be purified, tested, and examined for proper structural identification using various analytic tools. As part of an ongoing 20-year collaboration with the National Institute for Neurological Disorders and Stroke, Dr. Andurkar then sends the purified compound to their lab for testing in animal models of epilepsy. He uses the results from the testing to make further improvements to the chemical structure. “You need to keep refining the chemical structure. That is how you get a good compound that has the potential to become a drug someday,” he explained.

Dr. Andurkar follows a similar procedure to design new compounds as potential analgesics, drugs designed to treat pain. Most of the drugs, such as morphine, currently used to treat severe pain are part of a family of drugs called opioids. However, opioids have a host of undesirable side effects including constipation, tolerance, psychological dependence, and respiratory depression where the respiration rate falls and the patient is unable to breathe because of the action of the opioids.

“The goal is to design analgesics that have fewer side effects and do not cause tolerance or at least have a lower incidence of tolerance,” said Dr. Andurkar. “The design, chemical synthesis, purification, and identification are the same steps as with the anticonvulsants, but we are talking about a completely new field of chemistry.”

Dr. Andurkar collaborates with Anil Gulati, M.D., Ph.D., Associate Dean, Chicago College of Pharmacy, and Shaifali Bhalla, Ph.D., Associate Professor, Pharmaceutical Science, to test the new analgesic compounds at Midwestern University.

“Here at Midwestern, I have made maybe 10 to 15 (analgesic) compounds so far, and we continue to make more and test them here. It is a loop: I synthesize a new compound, get the animal testing results, and, use this data to design better compounds, make them, purify them, test them, and so forth. Until one day, you have a fine molecule that you can carry forward into more advanced testing and eventually human trials. That’s my ambition, to have our own Midwestern University molecule that could lead to a drug that one day may be used to treat patients,” he said.

A final area of research interest involves the study of how opioids produce tolerance. By gaining a better understanding of how opioids interact with different receptor systems in the brain and the central nervous system, researchers can mitigate the chances of patients developing a resistance to the medication or the need to increase the dose to get the same level of effect.

“If we know the mechanism of tolerance, maybe we can design strategies to prevent it. What I learn through this process will guide my drug design,” Dr. Andurkar said. “The steps are slow and deliberate and sometimes progress is very slow. But, it’s my inherent curiosity and the potential to help patients who are suffering that motivates me.”

This effort to discover new drug therapies also enriches the learning experience for pharmacy students at Midwestern University. “I routinely ask CCP students to work with me in the lab. I want to show them how drug discovery works. It’s a tough process,” Dr. Andurkar said. “I hope students gain a greater appreciation of the effort needed to create a new drug. This may also inspire them to use their knowledge to discover new drugs that can help their patients.”
If you have ever had the privilege of participating in one of Midwestern University’s DOCARE medical mission trips to Guatemala, you are likely to have a few universal memories: riding on the chicken bus; waiting at the coffee shop outside of La Sin Ventura; the colorful dresses of the Mayan women; the sheets separating treatment areas; the organized chaos of triage; the plastic baggies in the pharmacy; a meal with the sisters at the convent; the smiles on the faces of the children; and Dr. John Burdick.

For 17 years, John R. Burdick, Ph.D., has been a leader of these missions, which have left an indelible impression on the many students, alumni, and volunteers who have been part of the experience. After serving 26 years as a Lieutenant Colonel in the U.S. Army Medical Services Corps, Dr. Burdick understood how to coordinate logistics, organize materials, and, most importantly, motivate people to serve. Working alongside his wife, Jan Burdick, Pharm.D., Ph.D. (CPG ’05), as well as other MWU medical leaders, including James W. Cole, D.O., inaugural Dean of the Arizona College of Osteopathic Medicine, and Alan G. Schalscha, D.O. (AZCOM ’03), Medical Director of the NOAH Clinics at Scottsdale Healthcare, Dr. Burdick had an unwavering commitment to treating people in need. He also appreciated the educational benefits of giving health professions students the opportunity to learn medicine in an international context. His passion for his students, the patients, and the country kept him coming back year after year.

Last year, after 37 years as a faculty member, academic dean, and clinic administrator, Dr. Burdick concluded his career at Midwestern University. To honor his leadership in international medicine, the University launched a special campaign to establish the John R. Burdick Endowment for International Medicine. A group of more than 75 colleagues, alumni, and friends contributed to this fund, which was endowed with more than $30,000 in donations. Through this program, students from all of Midwestern University’s programs at both campuses can receive financial support for travel costs while completing an international rotation. The first awards will be made later this academic year.

Through his long career at Midwestern University and the generosity of colleagues and friends, the Burdick Endowment for International Medicine will be part of the legacy of Dr. John Burdick. Through the countless students he taught, faculty he mentored, and people he served, his impact will be felt for many generations to come.
Midwestern University is grateful to the many faculty, staff, alumni, and volunteers who made a contribution to the Burdick Endowment.

Participants in the February 2015 MWU/DOCARE medical mission trip to Guatemala. (Photos courtesy of Bryan R. Kuhn, Pharm.D., CCP '00)
Scientific Inquiry Endeavors to Verify Cranial Motion

In order to tackle one of the more controversial topics in osteopathic medicine, two faculty members on the Downers Grove Campus initiated a cross-departmental collaboration, designed their own scientific instrumentation, and spent countless hours investigating the mechanisms responsible for the cranial rhythmic impulse.

Kurt Heinking, D.O. (CCOM 1994), Department Chair, Osteopathic Manipulative Medicine, and Kyle K. Henderson, Ph.D., Assistant Professor, Physiology, decided to form an interdisciplinary collaboration to examine biological mechanisms and understand how the hands-on techniques used by osteopathic physicians can change human physiology.

The cranial rhythmic impulse (CRI) is a concept that the rhythmic movement or cadence of fluids and tissues in the body can be detected by trained osteopathic physicians as they palpate the head. It is based on the theory that the central nervous system, including the brain and spinal cord, has rhythmic pulsations that are crucial to overall health. Osteopathic physicians use what is commonly known as cranial osteopathic manipulative medicine (COMM) which stimulates healing by using gentle pressure to manipulate the skull and sacrum. This is one of many osteopathic manipulative therapies that can be used to address a wide range of problems for both children and adults including seizures, migraine headaches, asthma, sinus infections, and other complaints associated with neck or head trauma.

Osteopathic physicians, who utilize cranial manipulative medicine, believe that the head is not one hard shell, but rather the sutures in the skull allow for subtle movement of the bones in the cranium that can be gently guided and aligned for better health. They contend that this treatment has clinical usefulness for a variety of medical conditions.

History of Cranial Osteopathic Medicine

One of the pioneering researchers in osteopathic medicine, William G. Sutherland, D.O., first discussed the idea that a subtle palpable rhythmic motion could be felt throughout the body and skull in the 1930s.

Other researchers recorded cranial motion using a differential transformer in the 1960s and 70s and determined that these cranial oscillations were independent of heart rate and respiratory rate. Further research using MRIs and ultrasound technology advanced the concept of a detectable movement in the cranium.

“The cranial concept goes back a long time and is based on the belief that osteopathic physicians can treat certain medical conditions by using specific osteopathic techniques on the head and skull,” Dr. Heinking explained. “Even so, certain scientists and physicians have tried to debunk it, saying there’s no mechanism for this (cranial rhythmic impulse).”
Two investigative avenues they are currently exploring involve the use of Eulerian Video Magnification (EVM) and a laser interferometer. “This is technology that has never been used before for this purpose,” said Dr. Henderson.

The Eulerian Video Magnification is a software program developed by the Massachusetts Institute of Technology (MIT) which is able to detect very subtle changes in the environment. It analyzes videos frame by frame and amplifies subtle variations between frames. This technology has been used to visualize the flow of blood as it fills the face and also to amplify and reveal small motions undetectable to the naked eye such as the amount of sway in a large building.

“We filmed videos of several people with the goal of determining whether Eulerian Video Magnification can be used to reveal low frequency human physiological oscillations. We wanted to see if those movements correlate to palpated rates of the cranial rhythmic impulse,” Dr. Henderson said. “We are detecting a low-frequency signal but haven’t been able to determine yet if that’s what the osteopathic physicians are feeling (when they palpate for the CRI).”

The second research approach involved building an interferometer to measure cranial motion with a high degree of accuracy. The researchers designed a two-sided interferometer and used it to measure cranial expansion and contraction at the temporal bones.

“We’re in the very early stages of our research. Our proposal is to look at a healthy population of students, elderly, younger children, and people who have had recent concussions to see if we can detect movement at the temporal bones,” Dr. Henderson said.

The preliminary data for cranial motion is promising and the team has institutional approval for further testing to identify each mechanism contributing to the different phases of cranial motion. Future studies will obtain directionality, total distance, frequency, and mechanisms for cranial motion.

While the debate regarding the cranial rhythmic impulse will likely continue, both Dr. Heinking and Dr. Henderson appreciate the opportunity to collaborate and add to the body of scientific evidence regarding the phenomena. The researchers have a robust catalog of ideas for future inquiry and envision working together to investigate the cranial rhythmic impulse and other osteopathic mechanisms for years to come. As Dr. Heinking says, “our ultimate goal is to find scientific evidence to support the ideas behind osteopathic traditions and theories and improve how we teach our students.”
Taking the Lead in Research: The Institute for Healthcare Innovation

The campaign to understand and treat neurodegenerative diseases such as Alzheimer’s disease will be fortified by the upcoming Institute for Healthcare Innovation (IHI), a new multidisciplinary research training resource spanning both Midwestern University campuses. The IHI is planned to be an important component in Midwestern University’s commitment to the One Health Initiative. At Clinical Research Centers in Glendale and Downers Grove, professional personnel specializing in clinical operations, biostatistics, data management, regulatory affairs, quality assurance, subject recruiting, and veterinary technology will focus on areas of oncology, neuroscience, and behavior with an emphasis on neurodegenerative diseases such as Alzheimer’s and the human-animal bond.

“One of the goals of the IHI is to focus on neurological disease states, which include Alzheimer’s disease,” says Chad VanDenBerg, Pharm.D., M.S., BCPP, Associate Director of the IHI and Associate Research Professor. “We are looking forward to partnering with other researchers here at Midwestern University and in the Phoenix area to get involved with and conduct clinical studies in Alzheimer’s patient populations.”

Dr. VanDenBerg spent eight years as a primary investigator on large-scale, double-blind, randomized controlled trials of potential candidate Alzheimer’s drugs. As yet, no treatment is available to reverse the disease, so current research is targeted towards preventing the disease’s progression. “Once patients start losing function or losing cognition, it is hard to reverse,” he says. “What is lost is not recoverable; once you lose brain cells, you cannot get them back. So currently most of the treatments are in the hopes of preventing further decline.”

With the establishment of the IHI, Midwestern University is poised to take a significant step forward in the battle against Alzheimer’s and similar disease states. The Institute’s integrated approach to human and animal patient
care will leverage the multidisciplinary strengths of the University’s healthcare experts, creating the potential to extrapolate human treatment models from animal cases.

IHI faculty and students will perform clinical work in animals with naturally-occurring disease states. Pet owners who come to Midwestern’s Animal Health Institute for their companion animals’ treatments may become partners in understanding the human side of these diseases. “These are disease states that both humans and animals get,” Dr. VanDenBerg says, “and if we can successfully study it in an animal, it makes sense that it might also work in a human. The question then becomes, how can we transition between the two to the best of our ability? There are some conditions, especially in aged canines, that are identifiable as cognitive disorders and may correlate with cognitive dysfunction in humans. There are some similarities and there are some differences, so it is not a precise replica, but if experimental treatments in those animals work, it will be great for those pets’ owners and it might also transition into humans who are also trying to treat a similar dysfunction.”

An advantage to researching animal diseases, Dr. VanDenBerg explains, is that, because of animals’ shorter lifespans, researchers can study generations and examine disease processes far more rapidly than in humans. “One of the difficulties of studying Alzheimer’s disease is that it is a progressive disease that takes years to show its symptoms and how bad it will get. At a minimum, a drug study in a human could take four to five years to prove efficacy. So if you find a suitable model in a canine, not only can you help the canines or the animals that we’re studying, but it can also help in determining which of these treatments might be good candidates for transition into people and be done much more expeditiously.”

As it is established and developed, the IHI will be a unique and impactful research resource for students and faculty from all Midwestern University programs across both campuses. Moreover, it will be available to Midwestern alumni and residents who need research support. “Residents or alumni who are trying to develop research protocols, find funding for a study, or figure out something with good research potential are welcome,” says Dr. VanDenBerg. “They can come to us, and we can help them figure out how to put it into a project that is meaningful for healthcare outcomes.”

Midwestern University’s Alzheimer’s Advisory Committee encourages research from every discipline

In recent years, Midwestern University faculty with Alzheimer’s research experience who had ties to the Arizona Alzheimer’s Consortium (AAC) began encouraging the University to establish a relationship with the Consortium in the hopes of engaging the widely varied and eminently skilled faculty research resources the institution could provide.

In 2013, Midwestern was informed that it would be able to receive an institutional award from the AAC. Faculty researchers and the Office of Research and Sponsored Programs, with the support of Midwestern deans and program directors, established the Midwestern University Alzheimer’s Advisory Committee (MAAC). With the University matching the AAC funding, the MAAC created an intramural peer-reviewed research funding competition open to any faculty member who has a possibility of contributing to the Consortium effort through basic research, clinical research, clinical intervention, outreach, or education efforts.

The response from the Midwestern University community has been extraordinary, according to the MAAC committee members. The University’s push towards a one health model has encouraged wider interdisciplinary interest in MAAC participation. As it stands, however, there is already a diverse specialty representation among committee members in the areas of anatomy, pharmacology, and biochemistry, and other groups from the University’s veterinary, physical therapy, pharmacy, podiatry, and clinical psychology programs are joining in the effort as well.
With eye drops, charts, and complicated machinery taking the place of wrenches, hammers, and screwdrivers, optometrists are often looked upon as mechanics who ensure that a person’s eyes are functional and perform to their expected capability.

“When people think about optometrists, they think of us like computer technicians,” says Paula Handford, O.D., FAAO, Clinical Care Coordinator and vision therapy specialist at the Midwestern University Eye Institute in Glendale. “If the hardware is intact, then everything should be running fine.”

In other cases, however, the mechanisms by which sensory information is transmitted to the brain are affected. For patients with acquired brain injuries or neurodegenerative diseases, the disruption in visual information processing is often permanent. For those impacted by concussions, strokes, and tumors, and degenerative conditions stemming from viral encephalitis, drug use, or Parkinson’s disease, the focus of care switches to adaptation.

“What ends up happening is that they essentially are sent back to square one when it comes to vision and vision processing,” Dr. Handford says. “Patients go through physical therapy and occupational therapy in the hopes that as they use their skills, they can find adaptations or ways to work around what’s affecting them. When I present it to patients, I let them know that we’re unable to make it better. What we’re trying to do is help them deal with what they have.”

Dr. Handford and her colleague, Vladimir Yevseyenkov, O.D., Ph.D., Associate Professor and specialist in low vision and vision rehabilitation at Midwestern University’s Arizona College of Optometry, are collaborating on a capstone research project regarding the assessment and treatment of vision issues brought about by Parkinson’s disease. Parkinson’s, a progressive and incurable nervous system disorder, manifests itself in tremors and increasing difficulty in initiating movement. While Parkinson’s disease is in the public eye due to prominent sufferers such as Muhammad Ali and Michael J. Fox, the specific effects the disease has on vision – as well as the ability to help patients deal with those effects – are less publicized.

“Parkinson’s disease affects a patient’s binocular vision and tracking,” explains Dr. Handford. “Whenever we move our eyes to look anywhere, it is not a conscious effort. But for someone with Parkinson’s, because the initiation of movement is so challenging, it becomes an effort for them. Sometimes one side is affected more than the other and the eyes do not coordinate quite perfectly together, resulting in double vision.”
Dr. Handford and Dr. Yevseyenkov embarked on their Parkinson’s project after giving a presentation at the Morris K. Udall Educational Symposium at the Barrow Neurological Institute in Phoenix in 2014. “We did some research together because this was an area that we knew a little bit about,” Dr. Handford says, “but then we started realizing that there really is not a whole lot of Parkinson’s-related research regarding vision.”

Dr. Yevseyenkov recalls that they were unprepared for the overwhelming response from the community. “We had over a hundred people on the first day and a larger group afterwards,” he says. “People were shocked. They did not know that there was a vision component to Parkinson’s treatments. When we delved into the research, we realized what a tremendous effect the disease has on vision and that we can actually do something about it.”

The two optometrists set about creating an assessment of existing Parkinson’s-related research. “It is not a huge groundbreaking thing,” Dr. Yevseyenkov says. “We are trying to simplify the approach to treating patients with Parkinson’s disease by finding which tests and predictors are the most effective. Even doing this research and data analysis increases awareness. We have read dozens of articles, and there is new research coming out every month.”

Because Parkinson’s disease is a degenerative condition, there is no question about finding a way to reverse the deleterious effects on a patient’s vision. Rather, the therapies and adaptations offered by Drs. Handford and Yevseyenkov and their colleagues consist of regular activities to engage neuromuscular activity to keep the disease’s effects from getting worse too quickly. Prism lenses to deal with double vision, filter lenses that block specific spectra and light wavelengths, and even switching a patient from bifocals to two separate pairs of glasses give patients the means to adapt to their condition as best as possible.

“When I present it to patients, I let them know that we’re unable to make it better. What we’re trying to do is help them deal with what they have.”

Paula Handford, O.D., FAAO, Clinical Care Coordinator and vision therapy specialist at the Midwestern University Eye Institute, Glendale

Drs. Handford and Yevseyenkov consider their collaboration a complimentary one. Each doctor jokingly describes the other’s specialty as “complicated.” They have found, however, that partnering with faculty and students in other specialties and disciplines – such as working with pharmacology faculty to examine how Parkinson’s medications such as L-dopa affect patients’ vision and eye movement over the course of a day – is easy at Midwestern University because of the shared commitment to patient care.

“Going forward in medicine, it is not a single-doctor approach anymore – it is multidisciplinary,” says Dr. Handford. “The collaboration and the discussion between different practitioners is vital. I feel like it is important for our students to see that, because that is the future of medicine. We are all very excited about it because now we realize we have help. The missing pieces we sometimes look for, we discover that we have them next door.”

“People were shocked. They did not know that there was a vision component to Parkinson’s treatments. When we delved into the research, we realized what a tremendous effect the disease has on vision and that we can actually do something about it.”

Vladimir Yevseyenkov, O.D., Ph.D., Associate Professor and specialist in low vision and vision rehabilitation at Midwestern University’s Arizona College of Optometry
Arizona Regional Brain Bee Spurs Youth Interest in Neuroscience

The next generation of neuroscientists may already have set foot on the Midwestern University campus, even if they are still not in college.

Every February, the Glendale Campus hosts the Arizona Regional Brain Bee, a neuroscience competition which draws dozens of the top high school students in the state from as far away as Kingman and Tucson. The winner of the event receives a $2,000 scholarship towards tuition in any Midwestern University program at either the University’s Glendale Campus or the campus in Downers Grove, Illinois, as well as travel expenses to assist in competing at the National Brain Bee in Baltimore, Maryland. Recent winners from Midwestern’s Brain Bee event have consistently placed in the top 10 nationwide in the National event.

Brain Bee contest questions are taken from the book *Brain Facts*, published by the Society for Neuroscience, and include information about many aspects of the brain: memory, emotions, learning, sensations, aging, brain disorders, stroke, and more.

“The Brain Bee is probably the one event that I enjoy the most the whole year,” says T. Bucky Jones, Ph.D., Associate Professor, Anatomy, who has been involved as a coordinator for the Brain Bee since 2008. “The enthusiasm that those kids bring for neuroscience is just tremendous. We actually ran out of questions this year in our bank because they had answered all of them!”

Getting youngsters to think about neuroscience and brain diseases is surprisingly easy, according to Dr. Jones. “I think the Bee is a fabulous, fun way to get the next generation of students interested in science. What I have found out is that these high-schoolers are so motivated and interested, just like any undergraduate or even graduate student – they just do not have the background yet. There is no age limit in being able to understand what we do in the lab; it just takes motivation. They can perform like any student does.”

That motivation and interest was illustrated this year when the 2015 Brain Bee winner, Vijay Nambi, later contacted Midwestern University faculty to report discrepancies in naming conventions and locations of brain structures between his textbooks and other neuroscience sources. Dr. Jones was pleased, but not entirely surprised, at Mr. Nambi’s initiative and insight, as Brain Bee winners routinely return to the University for tutoring with Midwestern faculty.

Dr. Jones, herself a neuroscientist by training, believes that this experience is crucial for their future. “You cannot help but let that excitement be contagious,” she says. “It is such a joy to see because it gives them a head start on college and knowing how to operate in the laboratory. When they get to graduate school, they are ahead of the game and well-educated on what choices they want to make in their career. That is a huge gain for neuroscience and neurological disease research.”
Why did you decide to create this e-book?
I was motivated to produce materials that could help students learn about the brain, especially what they need to know for clinical practice.

How did you get started on this project?
I started teaching neuroscience to Speech-Language Pathology students in 2005 (before coming to Midwestern) and I was having a hard time finding neuroscience materials that were appropriate. It seemed every resource about the brain had too many labels, too many pictures – it was neuroscience for the neurologists; not for the speech-language pathologist.
At conferences, I often walked by the Blue Tree Publishing table and noticed the beauty and simplicity of their medical drawings. I talked to the representative (who turned out to be the owner of the company) and told him that what we really needed was a book on the brain. He asked, “Do you want to write it?”
In 2009, I worked with Blue Tree Publishing to produce an interactive software program about the brain that incorporated most of my neuroscience course. When I came to Midwestern, I started talking with the publisher about turning this material into a series of five e-books.

What are some unique aspects of the e-book?
This book is very interactive and takes the idea of an e-book to the next level. While most e-books are just PDFs of printed books, this book was carefully designed to engage students and encourage interaction. In addition to highlighted glossary words in the text and quiz questions at the end of each chapter, there are interactive illustrations drawn to my specifications that can be enlarged and labeled with a touch of a finger. Another special feature is a series of embedded videos of brain dissections. I narrate what I am doing as I dissect the brain and point out the cranial nerves and other structures in the brain that are important for healthcare providers to understand.

What kind of help did you receive at MWU?
I was able to use our gross anatomy lab on the Downers Grove Campus and film myself doing several brain dissections, which are interspersed throughout the book. It was amazing to be at Midwestern University when I did this project because I had full access to the gross anatomy lab and the expertise of the anatomy faculty and lab staff. I’ve never worked anywhere where people are so willing to help with whatever project you have.

How will this help students?
Our speech-language students at Midwestern are very fortunate because they are able to spend about 20 hours dissecting the human brain in the gross anatomy lab. Most speech-language students never get that opportunity.
The e-book can help our students learn more about the brain, but it is really designed for students who don’t have the opportunities we have here at Midwestern.

What are the names of the other planned e-books?
- Exploring the Brain – Surface anatomy
- Exploring the Brain – Internal anatomy
- Protection and Nourishment of the Brain
- Motor and Sensory Pathways

Weighing in at just three pounds, the brain is a complex organ that controls our senses, initiates body movement, controls behavior, is the seat of intelligence, and is responsible for the body’s automatic systems.

The vast complexity of the brain can make it a daunting subject for students to study. In an effort to help students gain a better understanding of this vital organ, Tina K. Veale, Ph.D., CCC-SLP, Program Director, Speech-Language Pathology, decided to work with Blue Tree Publishing, Inc., to author a series of interactive e-books. Her first e-book Exploring the Brain: The Cranial Nerves was published in 2014.
Clinical Faculty Treat Patients at Physical Therapy Institute

A new Physical Therapy Institute at the Downers Grove Multispecialty Clinic provides comprehensive outpatient physical therapy and offers a variety of evidence-based treatments to community members. At the Institute, licensed clinical faculty members evaluate each patient to determine their individual needs and develop unique treatment plans designed to restore health and function back into the lives of patients.

The Institute can address many types of general orthopedic conditions, including back and neck pain, joint pain and dysfunction, movement difficulties, post-surgical orthopedic conditions, and sports injuries. The Institute also offers a variety of specialty services.

Eye Institute Opens in Downers Grove

The Eye Institute is the most recent addition to the Multispecialty Clinic in Downers Grove. The Eye Institute provides comprehensive family eye care for the community and a wide range of glasses and contacts. Licensed optometrists and certified opticians offer primary vision care and specialty services for contact lenses, ocular prosthetics, low-vision, vision therapy, and pediatric vision care.

The Eye Institute houses exam rooms, classrooms, specialty care areas, and optical retail services offering a wide selection of eyeglasses and contact lenses at competitive prices. As a full-service eye and vision clinic, the Eye Institute provides comprehensive eye exams and eye disease diagnosis and treatment.

Speech-Language Institute Hosts Let’s Talk Camp

The Speech-Language Institute hosted their second annual Let’s Talk Camp, a one-week, intensive therapy camp for young children with severe speech impairments. Speech-Language Pathology faculty members and graduate student clinicians developed a dynamic therapy experience for the campers who range in age from four to nine years.

The camp offered daily large and small group therapy, in addition to two individual therapy sessions for each camper. The camp was provided in cooperation with The Apraxia Connection, a local advocacy group for children with apraxia of speech.
In April, faculty and students from Midwestern University’s College of Dental Medicine-Arizona and the Midwestern University Dental Institute offered free oral cancer screenings at the Arrowhead Mall in Glendale. Third- and fourth-year dental students conducted the screenings, supervised by Theodore Zislis, D.D.S., Assistant Professor, who has over 40 years of oral pathology experience.

Oral cancer kills one person every hour of every day in the United States, with 115 new individuals diagnosed each day. The most commonly described appearances of oral cancer can begin as red or white patches in the soft tissues of the mouth, oral sores or abnormalities which do not heal or resolve within 14 days, and prolonged hoarseness. When found early, oral cancers have an 80 percent survival rate.

In June, Midwestern University opened the doors of its Companion Animal Clinic, the 111,800-square-foot teaching clinic that is part of the Animal Health Institute, to allow the public an up-close-and-personal look at the new facility’s extensive veterinary care resources. Close to 500 pet owners and interested community members had the opportunity to see first-hand one of the nation’s largest state-of-the-art small animal clinics and meet the veterinarians from the College of Veterinary Medicine. Pet-themed giveaways and raffle items contributed to the engaging tours and technology demonstrations.

The new Clinic offers affordable high-quality primary and specialty care for small animals, including preventive medicine/wellness, dental care, surgery, diagnostic imaging, senior pet care, and other specialties. The Clinic has also received accreditation from the American Animal Hospital Association (AAHA), a distinction enjoyed by only 15 percent of veterinary practices nationwide.

Initial pet care appointments are being managed by the Clinic’s experienced veterinary faculty. In spring 2017, students from Midwestern University’s College of Veterinary Medicine, the state’s only four-year Doctor of Veterinary Medicine (D.V.M.) program, will begin supervised rotations as part of their training. The University has committed over $180 million toward the College’s physical facilities, including the Companion Animal Clinic, Bovine and Equine Center (70,000 square feet), and a necropsy/pathology center currently completing construction.

More than 300 optometrists, optometry students, pre-optometry students, and guests attended the third annual Residents’ Day: an Ocular Symposium on the Glendale Campus. From Tuba City to Tucson, and Sierra Vista to Shiprock, NM, 19 optometry residents came from across Arizona, New Mexico, and Nevada to present the latest case studies and research. A total of 97 local optometrists attended the event, which offered continuing education credits. The Symposium was organized by the Arizona College of Optometry Continuing Education Planning Committee, including several faculty from the Eye Institute. Next year’s program is set for April 30, 2016.
Mark Alan Dobbertien D.O., FACS, CDR MC USN

Name: Mark Alan Dobbertien, D.O., FACS, CDR MC USN (CCOM 1987)
Title/Work Organization Name: Director, Clinical Support Services, Naval Hospital Jacksonville, Florida, Minimally Invasive Surgeon, Naval Hospital, Jacksonville, Florida
Education: Undergraduate, University of Notre Dame, Doctor of Osteopathic Medicine, Chicago College of Osteopathic Medicine (CCOM 1987)
General Surgery Residency, University of Illinois Metropolitan Group Hospitals
Minimally Invasive Surgery Fellowship, University of Florida, Jacksonville, Florida
Residence: Orange Park, Florida
Professional memberships: Fellow, American College of Surgeons, FOMA, FMA, DCMs, SJCMS, SAGES, AMA, AMOPS, Fellow, Southeastern Surgical Society
Family: Married to fellow graduate of CCOM, four children

Describe what you do: I am a Minimally Invasive Surgeon and Director of Clinical Support Services at the Naval Hospital in Jacksonville, Florida.

Why did you decide to go into this field? Surgery is an art form. Having the ability to repair mechanical issues in the body and curing disease with my hands is very rewarding. I am blessed to be a surgeon and enjoy the ability to quickly correct potentially life-threatening health conditions.

What is the hardest thing about your job? Training was arduous and the day-to-day life of a surgeon is difficult. Your time is not your own. Balancing family with surgery is difficult. Worry about patients is difficult to compartmentalize.

What is the most rewarding thing about your job? I enjoy being with the patients and serve as their advocate. I also enjoy the ability to cure disease quickly in the operating room.

Notable Achievements/Major Accomplishments: Valedictorian, CCOM

Favorite quote: “My fellow Americans, ask not what your country can do for you, ask what you can do for your country.” – John F. Kennedy
“The most important thing a father can do for his children is to love their mother.” – Theodore Hesburgh

Philosophy: My basic philosophy is that you don’t make decisions because they are easy; you don’t make them because they are cheap; you don’t make them because they’re popular; you make them because they’re right.

Favorite hobbies: All sports, travel

What’s the best advice you ever received? Find a way to say yes to things.

Favorite travel destination: Lake Hauto, Pennsylvania

What do you listen to in the car? NPR

Who do you admire the most? My mother and father, sister, wife, kids, in-laws, JFK, RFK, MLK, Ronald Reagan, Theodore Hesburgh

If you weren’t in your current field, what would you be doing? Politics, policy, advocacy, sports, finance
Adrian Harvey, D.O.

Name: Adrian Harvey, D.O.

Title/Work Organization Name: Neurosurgeon, Maricopa Medical Center, Phoenix, Arizona, Banner M.D. Anderson Cancer Center, Gilbert, Arizona

Education: Undergraduate, Brigham Young University
Doctor of Osteopathic Medicine, AZCOM, Midwestern University, 2006
Neurosurgery residency, Advocate BroMenn Medical Center, Bloomington, Illinois
Complex spine fellowship, University of Illinois-Peoria
Neurosurgical oncology fellowship, University of Texas M.D. Anderson Cancer Center

Residence: Queen Creek, Arizona

Professional Memberships: American College of Osteopathic Surgeons,
American Osteopathic Association, Society for Neuro-Oncology, U.S. Army Reserve Medical Corps

Family: Married with four children

Describe what you do: A typical day would involve caring for patients with brain or spine trauma, tumors, or infection. I also see a fair amount of patients with degenerative spine problems. I oversee residents and medical students on our service as well.

Why did you decide to go into this field? I liked surgery but also liked the opportunity to use cutting-edge technology in care of patients. Mostly, neurosurgery presented a frontier in knowledge. For example, some of the most common types of brain tumors have a grave prognosis of survival, a little over one year with full treatment regimens. I believe we can find a cure for this disease and I want to be part of that effort.

What is the hardest thing about your job? As good as we are at treating many neurological diseases, there are still cases where we are limited in what we can offer. Particularly in trauma, patients often suffer devastating injuries, and telling families that their loved one will not survive or be the same person they were is never easy. I’m still not very good at it.

What is the most rewarding thing about your job? My field is quite polarized in outcomes. Tumors or trauma can lead to terrible outcomes. In contrast, I’ve seen patients come back from horrific accidents or diseases where their life was threatened or they were paralyzed and go on to lead fairly normal lives because we intervened.

Notable Achievements/Major Accomplishments: Setting and achieving seemingly near impossible goals in many aspects of my life. I’m still working on that!

Favorite quote: “I want to know God’s thoughts, the rest are details.” – Albert Einstein

Philosophy: Try to see the best in anyone I might encounter and treat them accordingly.

Favorite Hobbies: Long-distance running, triathlons, skiing, surfing, and hanging out with my family.

Favorite travel destination: So far, Hawaii.

What do you listen to in the car? A variety of things from audiobooks to music, to sermons. My most recent was “An Astronaut’s Guide to Life on Earth” by Chris Hadfield. Music includes anything from classical to Jack Johnson.

Who do you admire the most? Aside from Jesus Christ, people who overcome their challenges and are kind to others at the same time.

If you weren’t in your current field, what would you be doing? A fighter pilot!
Postal Stamp Honors Osteopathic Medicine

From the Archives

In 1972, the U.S. Postal Service issued an 8-cent Osteopathic Medicine commemorative stamp, which was the cost to mail a first-class letter from 1971 to 1973.

The stamp commemorates the 75th anniversary of the American Osteopathic Association (AOA) and honors the study and practice of osteopathic medicine. Founded in 1897 by a group of students at the American School of Osteopathy in Kirksville, Missouri, the AOA’s fundamental mission was to unite the efforts of individual physicians and colleges to advance the osteopathic medical profession.

V. Jack Ruther, a long-time designer for the Bureau of Engraving and Printing, created the Osteopathic Medicine commemorative stamp as part of a series of healthcare-related stamps. First placed on sale in Miami, Florida, on October 9, 1972, the stamp was issued in sheets of 50, with an initial printing of 140 million.
As alumni and friends of the colleges of Midwestern University, you are a valued part of our healthcare community. With your support, we can continue to recruit quality students, retain and attract exceptional faculty, and prepare tomorrow’s healthcare team.

Please carefully consider making a gift to the Midwestern Annual Fund and help us continue the tradition and promise that makes the MWU experience so special. Every gift you make will impact Midwestern University.

WAYS TO GIVE:

- **Cash Gifts and Pledges**
  Cash gifts may be made with a personal or cashier’s check. You may also make a pledge payable in installments. Please make checks payable to Midwestern University.

- **Online**
  Visit www.midwestern.edu to give online.

- **Mail or Phone**
  Contact the Office of Development & Alumni Relations:
  
  555 31st Street  
  Downers Grove, IL 60515  
  19555 North 59th Avenue  
  Glendale, AZ 85308  

  800-962-3053  
  development@midwestern.edu

- **Matching Gift Program**
  Many organizations offer a matching gift program. Please check with your human resources department to determine whether your employer will match gifts to charitable institutions.

- **Planned Gifts**
  Please consider naming Midwestern University as a gift recipient in your estate plan.
Midwestern University welcomes the community to the Companion Animal Clinic — page 21