



NEWS AND NOTES

ISSUE 13 2015 - 2016

LETTER FROM THE CHAIR

Academic Rigor, Mentorship, & Compassion Pave the Way to Clinical Excellence

Within the Department of Neurosurgery, we have always had as our motto that we focus on, "Our patients...past, present, and future." With this patient-centered approach, we have been fortunate to see excellence in many areas.

Under the leadership of Dr. Greg Thompson, Program Director, our residents have continued to demonstrate the true meaning of accomplishment. They have been chosen for outstanding fellowships and positions in academic neurosurgery and practices throughout the country. Publications from both our residents and faculty have grown consistently in recent years. Our alumni have gone on to become esteemed members at a variety of institutions with now six sitting Chairs of neurosurgical departments counted among the graduates of our neurosurgical residency. In recent years, we have seen a blossoming of not only publications but academic output from our faculty, residents, mid-level providers, as well as our administrative staff.

Mentorship has played an important role in our growth; its importance has been demonstrated not only by our faculty and residents, but in all areas of the Department. Professional growth and development have been key elements to success at all levels within the Department. I personally was fortunate enough to have a delightful session with Dr. Sanjay Gupta, in which he spoke to the importance of mentorship for himself and for others and particularly how his time here at the University of Michigan helped shape his own practice.

Within our Department, individual leadership has led to team efforts to provide food, clothing, and school supplies for a variety of organizations that provide for those in need. These efforts have all been organized by our administrative staff. Additionally, Project Shunt, our outreach program to Guatemala, has now been part of the Department for nineteen years.

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THE PERSON WHO CHANGED MY LIFE

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Our compassion for our patients and for each other is reflected in not only the quantity of our efforts but also in the emphasis we place on patients' quality of life. We have begun a functional wellness initiative which is highlighted in the *Department Features* section. This initiative emphasizes whole body wellness. Compassion for others has been demonstrated through our community benefit activities as well as a variety of our educational activities. We have learned over the years that local control of complex problems plays an important role in helping one to develop job satisfaction and, more importantly, to expeditiously address patients' needs. As a result, we have empowered administrative staff members to solve problems for patients at the very entry point into our system, which has integrated them further into the compassionate care that is delivered to our patients.

At the system level, the administrative and governance structure of our entire hospital and medical school has been reorganized. The hospital at all levels is now organized and controlled around a triumvirate which includes physician, nursing, and administrative leadership. The entire theme of this reorganization of "MICHIGAN MEDICINE" is to create a clinical enterprise environment in which the various individuals responsible for care have control over both the financial and the strategic vision of the institution. Neurosurgery is an active member of the medical school, which has recently redesigned its curriculum to incorporate science into the clinical practice of medicine in a more seamless fashion. We are beginning a four-year reorganization process at the medical school, which will ultimately allow our students to experience first-hand how scientific breakthroughs affect patient care in a meaningful way. The ability of our surgeons to communicate effectively with patients and students has been the hallmark of this Department and is now being directly applied to the education of medical students.

It has been a very exciting time in the Department with a series of expansions in our clinical services. The VA has been recognized as a center of functional neurosurgery and is under the leadership of Dr. Emily Levin. Our laboratories have produced important breakthrough therapies for brain tumors. A precision medicine approach to brain tumors has begun with monthly conferences to discuss the epigenetics of tumors both in the pediatric and adult population. This multidisciplinary conference has its origins in the Department of Neurosurgery but has expanded to include a variety of departments and important researchers in the field of brain tumor biology from across the nation. The U-M Department of Neurosurgery ranked 7th in the country in NIH funding for its research efforts in fiscal year 2015. We continue to have significant NIH grants as well as important foundation grants within the Department. Our success in securing grant funding reflects the efforts of not only our faculty, but also our residents and staff.

Background Photo: Neurosurgery Chief Resident Osama Kashlan, M.D. on a medical mission trip in Guatemala with Project Shunt.

We are quickly approaching the 100th Anniversary of the Department of Neurosurgery within the greater medical school in 2018. Although the Department itself was not named until 2001, the first subspecialized, recognized section of neurosurgery occurred within the Department of Surgery in 1918. Dr. Max Peet was the leader of this enterprise and began focusing his practice entirely on neurosurgical needs. Afterward, under the leadership of Dr. Edgar Kahn and subsequently Dr. Richard Schneider, the section continued to grow. Under the leadership of Dr. Julian Hoff, we became established as a department with a variety of subspecialty areas in neurosurgery. Since I became Chair of Neurosurgery in 2005, we have expanded further to include 23 clinical neurosurgeons, four neuro-intensivists, and eight research scientists. We also have 18 residents alternating two or three residents each year and a handful of fellows.

Finally, we have embarked on a journey of creating a new inpatient tower, which will have as its anchor tenant, the Department of Neurosurgery. The development of this new clinical facility, which will likely take four to five years, will allow us to expand our services. As we collectively design this new hospital, we aim to make it a hospital for not only the present but also for the future. The goal will be to integrate clinical research, including aspects of brain machine interface, and quality and outcomes studies into the very backbone of the hospital. It is an exciting time to be a member of the Department of Neurosurgery at the University of Michigan. We have an illustrious past from which we can learn, and a dynamic and exciting future to look forward to. I hope that each of you will come visit us and learn about all we are doing. I hope you will enjoy this newsletter which captures just a few of the highlights from our Department within the last two years.

I wish you all health and happiness in the coming year and I thank you for your continued support for this spectacular Department.

Sincerely,
Karin Muraszko, M.D.
Julian T. Hoff Professor and Chair

**EVERYONE
MATTERS
EQUALLY AND
INFINITELY.**

CNN Chief Medical Correspondent
& U-M Neurosurgery Alumnus
Dr. Sanjay Gupta

MEDICAL EDUCATION UPDATE

Chief Resident Graduates 2015

William Stetler, Jr., M.D. and Jennifer Strahle, M.D.

One of the highlights of each academic year is to gather and celebrate the graduation of the chief residents as they complete their seven-year neurosurgical training program. On Sunday, June 21, 2015, faculty, residents, staff, friends, and family gathered at the Ann Arbor City Club for an evening of recognition and celebration honoring Drs. William Stetler, Jr. and Jennifer Strahle. It was an evening of laughter, tears and, of course, the historical "roasting" of the chiefs by their resident cohorts.

After residency graduation, Dr. Stetler completed an endovascular fellowship at the University of Florida under the tutelage of Dr. Brian Hoh. Following the completion of this fellowship, Dr. Stetler returned to his southern roots, joining the faculty at the University of Alabama as an Assistant Professor. Dr. Strahle completed a pediatric fellowship at Washington University in St. Louis and is currently on their faculty as Assistant Professor of Neurological Surgery, Orthopedic Surgery, and Pediatrics. We wish both of them much success in their neurosurgical careers.



Chief Resident Graduates 2016

Wajd Al-Holou, M.D. and Thomas J. Wilson, M.D.

The 2016 Chief Resident Graduation celebration was held on Saturday, June 18, 2016 at The Polo Fields in Ann Arbor. Guests gathered to honor Drs. Wajd Al-Holou and Thomas J. Wilson and celebrate their completion of the neurosurgical residency training program. Those in attendance bid Drs. Al-Holou and Wilson farewell and celebrated the many accomplishments they each achieved during their residencies at U-M.

Dr. Al-Holou is further enhancing his education at the University of Texas MD Anderson Cancer Center in Houston doing a tumor fellowship under the tutelage of Dr. Jeffrey Weinberg. Dr. Wilson is also engaged in a fellowship program, specifically a peripheral nerve fellowship at the Mayo Clinic in Rochester, Minnesota, training with Dr. Robert Spinner. Dr. Wilson will join the faculty at Stanford upon completion of his fellowship.



New Neurosurgery Residents 2015

In 2015, we were excited to welcome Drs. Amy Bruzek and Siri Sahib Khalsa to our residency training program.



Amy Bruzek, M.D., M.S.

Medical School: Virginia Commonwealth University School of Medicine/Medical College of Virginia
Graduate School: Virginia Commonwealth University
Undergraduate: Carroll College
Hometown: New Prague, MN

Why Neurosurgery?: Seven years ago I stepped foot in a neurosurgery operating room, and ever since then I haven't wanted to stay away. The challenge of the surgeries, the connection to the patients, and the beauty of neuroanatomy quickly drew me to the field. From studying the anatomy of the nervous system to conducting research and learning the newest techniques in the field, every aspect of neurosurgery is fascinating to me. No other career or specialty makes me as excited to go to work every day.

Hobbies or Interests: I am an avid ice hockey player and a hockey fanatic in general. I enjoy anything active, including snowboarding, skiing (water or downhill), kayaking, biking, and hiking. I also love the arts, namely ballets, symphonies, and theater.

Clinical Interests: General neurosurgery, pediatrics, and basic and translational research



Siri Sahib Khalsa, M.D.

Medical School: George Washington University
Undergraduate: University of Virginia
Hometown: I grew up in a few different places, including Los Angeles, Tucson, and Bangalore, India.

Why Neurosurgery?: I was convinced that neurosurgery would be my ideal specialty during a research fellowship sponsored by the American Association of Neurological Surgeons the summer after my first year of medical school. Neurosurgery inspired me because it offered the opportunity to solve complex problems for the direct benefit of other human beings and their families, with the help of novel treatment techniques and technology, and also contribute academically to the forefront of one of the most fascinating and rapidly evolving fields.

Hobbies or Interests: I enjoy scuba diving, water sports, working on cars, racquetball, and trying new foods

Clinical Interests: General and pediatric neurosurgery and computational modeling

2016 Spine Fellow



Dr. Daniel Harwell joined our Neurosurgery Service in July 2016, beginning a one-year clinical fellowship in complex and reconstructive spine surgery focused on sophisticated spinal surgery techniques under the direct supervision of Dr. Frank La Marca with assistant supervision by Dr. Paul Park. He received his Bachelor of Science in Zoology-Biomedical Science from the University of Oklahoma in 2006. He attended medical school at that same institution, receiving his medical degree in May 2010.

He then joined the University of Cincinnati's neurosurgical residency program in July 2010, successfully completing his training in June 2016. Dr. Harwell's hobbies include cycling, golf, and trying to re-learn what hobbies he enjoys post-residency.

New Neurosurgery Residents 2016

In 2016, we were delighted to have Drs. Badih Junior Daou, Timothy Yee, and Catherine Ziats join our residency training program.



Badih Junior Daou, M.D.

Medical School: University of Balamand, Lebanon
Post-Graduate Training: Thomas Jefferson University
Undergraduate: University of Balamand, Lebanon
Hometown: Houmal, Lebanon

Why Neurosurgery?: During my first year of medical school, my brother suffered a stroke due to a traumatic vertebral artery dissection. Ever since that time, my interests in medicine were drastically shifted towards neurological sciences. Another passion emerged during that first year of medical school, that of surgery, as I learned the techniques of dissection during the anatomy course, how meticulous one should be, and as I discovered the satisfaction of working with my hands. In particular, I was captivated by the complexity, intricacy, and delicacy of the human brain. A fascination with dissection then turned into a passion for the surgical field during my clinical years. Following my Neurosurgery sub internships, after experiencing the exciting spectrum of neurosurgery from operative management to post-operative patient care and neuro-critical care, I was certain that the path of neurosurgery was the right one for me.

Hobbies or Interests: Basketball, soccer, movies, and theater

Clinical Interests: Vascular neurosurgery, endovascular neurosurgery, and clinical research



Timothy Yee, M.D.

Medical School: University of Michigan Medical School
Undergraduate: University of Notre Dame
Hometown: Munster, IN

Why Neurosurgery?: During medical school, I took great interest in neuroanatomy and the unique manner in which structure and function correlate in the nervous system. Furthermore, the breadth and intensity of neurosurgical care will serve to stimulate a life-long pursuit of both technical mastery and scientific inquiry.

Hobbies or Interests: Tennis, photography, and gastronomy

Clinical Interests: Spine and vascular neurosurgery



Catherine Ziats, M.D.

Medical School: University of Florida
Undergraduate: University of Florida
Hometown: Coral Gables FL

Why Neurosurgery?: It was the field that best combined my research and clinical interests.

Hobbies or Interests: I enjoy running, playing golf, and any sport involving water. Additionally, I am a huge college football fan and enjoy going to football games.

Clinical Interests: Pediatrics and neurodevelopment

A Word from the Program Director, Dr. Greg Thompson

Michigan Neurosurgery residency alumni have so much to be proud of; 1999 graduate Dr. Nate Selden provides just one example of why this is the case. Dr. Selden returned as our Julian Hoff Visiting Professor and Honored Guest Speaker for the 3rd annual Michigan Neurosurgery Resident Research Symposium in May, 2016. He is now the Professor and Chair of Neurosurgery at the Oregon Health & Science University, as well as the past president of the Congress of Neurological Surgeons. In May, he returned to U-M and presented on his ongoing research endeavors in his keynote address "Neural Stem Cell Transplantation: Safety and Long-term Outcomes."

Our current residents and recent resident graduates are similarly a great source of pride for our faculty and alumni. In fact, our recent graduates have recorded a rather remarkable record of achievement over the last several years. Over the past three years, our 17 residents have averaged 3.3 peer reviewed publications per resident per year. During the same time period, top national resident research awards were garnered by

Dr. Wajd Al-Holou for tumor research (Preuss Award) and by Dr. Luis Savastano for vascular research (Galbraith Award). Additionally, all seven residents who took the primary written board exam for credit in the last three years scored in the top quintile nationally; five of these seven received Academic Achievement Awards for scores in the top 10% nationally (Drs. Kevin Chen, Osama Kashlan, Luis Savastano, Will Stetler, and Thomas "TJ" Wilson).

Furthermore, our last seven consecutive graduates have gone on to academic faculty positions throughout the country: two here at U-M, and one each at Oregon Health & Science University, UCLA, the University of Alabama, Washington University, and Stanford. (See the Alumni Update section for additional details.) The next six of our current or recently graduated residents have matched to or are currently in academic fellowships at the Mayo Clinic, Cleveland Clinic, MD Anderson, Emory, Harvard, and Stanford. I am excited to see the contributions of this group over the next several decades!

Alumni are welcome and encouraged to attend our annual Neurosurgery Resident Research Symposia and Honored Guest Dinner held each year in May. The 4th annual Resident Research Symposium is scheduled for Friday, May 12, 2017. The Honored Guest will be Edward H. Oldfield, M.D., and the Honored Guest Dinner will be Thursday, May 11 in the evening. Alumni may also contribute to the Neurosurgery Resident Research fund by contacting Mark Veich at 734-763-1402 or mveich@umich.edu.

Go Blue!



Medical Education Awards 2015 & 2016

Julian T. Hoff Teaching Award

The Julian T. Hoff Teaching Award is given each year to a junior faculty member within the department with an exemplary record in teaching our residents.

2015 Recipient Lynda Yang, M.D., Ph.D.

2016 Recipient Stephen Sullivan, M.D.

Friend of Neurosurgery Award

The Friend of Neurosurgery Teaching Award is given each year to a faculty member outside of our department who is instrumental in teaching our neurosurgical residents.

2015 Recipient Magnus Teig, MBChB

2016 Recipient Erin McKean, M.D.

Max Peet Resident Teaching Award

The Max Peet Teaching Award is given annually to a resident who has distinguished himself/herself in the arena of teaching other residents and medical students.

2015 Recipient William Stetler, Jr., M.D.

2016 Recipient Luis Savastano, M.D.

McGillicuddy Resident Leadership Award

This award recognizes a resident who exhibits exemplary leadership in maintaining the highest standards of professionalism.

2015 Recipient Osama Kashlan, M.D.

2016 Recipient Thomas J. Wilson, M.D.

Resident Honors & Awards

U-M Neurosurgery residents received many awards and honors in 2015 and 2016. These include but are not limited to those listed below.

Wajd Al-Holou

Received the Preuss Research Award, given annually at the AANS and CNS meetings to the resident who has submitted the best basic science research paper, January, 2015.

Nicole Bentley, M.D.

Received the Best Basic Science Research Poster Award given by the American Society of Stereotactic and Functional Neurosurgery Society, June, 2016.

Todd Hollon, M.D.

Leadership Fellow, Congress of Neurological Surgeons, CNS Quarterly Committee Member

Jacob Joseph, M.D.

AANS/CNS Codman Fellowship in Neurotrauma and Critical Care, 2016-2017

Received the Blue Cross Blue Shield Foundation Physician-Investigator Grant, which will begin in January, 2017.

Was elected by co-residents as resident liaison to the department's Program Evaluation Committee/Education Committee, 2015.

Elyne Kahn, M.D.

Socioeconomic Fellowship, Council of State Neurosurgical Societies, 2015-2015

Leadership Fellow, Congress of Neurological Surgeons, Fellowship Committee Member, 2015-2017

Best Neurosurgery Resident Poster, Neuroscience Day 2016, University of Michigan

Elected by co-residents as resident liaison to the department's Program Evaluation Committee/Education Committee, 2015.

Osama Kashlan, M.D.

Consultant Award by Department of Emergency Medicine, July, 2015

Nomination and selection to AANS Leadership Development Course for Residents, April, 2016

MANS best abstract award, May, 2016

Luis Savastano, M.D.

Galbraith Award for the best cerebrovascular abstract submission by a resident to the CNS Annual Meeting, San Diego, CA., 2016

Project Award for Early Tech Development, Fast Forward Medical Innovation, University of Michigan, 2016

Best Platform Presentation, Neuroscience Day 2016, University of Michigan

Academic Excellence Award for written board score > 90th percentile nationally, Department of Neurosurgery, University of Michigan

Robert J. Dempsey Cerebrovascular Research Award, Joint Section on Cerebrovascular Surgery of the AANS/CNS, 2015

Best Neurosurgery Resident Poster, Neuroscience Day 2015, University of Michigan

Innovation Fellowship Award, Congress of Neurological Surgeons, 2015

Technology Innovation Award, International Meeting on Simulation in Healthcare, 2015

Brandon Smith, M.D.

American Association of Neurological Surgeons Student Group Resident Liaison, University of Michigan, 2015-present

Drew Wilkinson, M.D.

T32 National Institute of Neurological Disorders and Stroke Post-Doctoral Training Grant 2016-2017: \$51,120. PI of training grant Dr. Eva Feldman, PI of project Dr. Guohua Xi for project: Investigation of Early Brain Injury in Experimental Subarachnoid Hemorrhage Using Diffusion-Weighted and T2* MRI

MANS best abstract award, May, 2016

Timothy Yee, M.D.

Received the Edgar Kahn Award for Excellence in Neurosurgery, University of Michigan, March, 2016

The Charles and Phyllis Lowe Scholarship, awarded to the two M4s of highest academic standing, University of Michigan, September, 2015

Clinical Skills Award, awarded to top 10% of graduating class based on performance in M3 clerkships and the M4 Comprehensive Clinical Assessment, University of Michigan, September, 2015

Resident Totals 2011 thru 2016

Operative Cases	Publications	
3,100	52	2011-12
3,145	41	2012-13
3,478	64	2013-14
3,375	54	2014-15
3,677	61	2015-16

U-M Resident Research Symposiums 2015 & 2016

The Department of Neurosurgery held its second and third annual Neurosurgery Resident Research Symposiums in 2015 and 2016, respectively. The Resident Research Symposium was established in 2014 to stimulate and promote the academic productivity of our residents, and to bring together research and clinical colleagues in neurosurgery. This annual symposium supports our educational mission of training exemplary neurosurgeons who have a strong background in both clinical neurosurgery and research. Each year, residents present their research at this gathering and awards are given to those with the best clinical and basic science presentations. Additionally, a nationally-renowned neurosurgeon is invited each year to deliver the keynote address and to help judge the presentations.

The 2015 symposium was held on Friday, May 29. Dr. Dade Lunsford from the University of Pittsburgh was the honored guest, in conjunction with being the 2015 James Taren Visiting Professor. Dr. William Stetler was chosen as the recipient of the Chandler Clinical Research Award, which is awarded for the best clinical research presentation, while Dr. Wajd Al-Holou received the Crosby Basic Science Research Award for the best basic science presentation.

Faculty and residents in attendance at the 2016 symposium, which was held on Friday, May 13, welcomed honored speaker and Michigan Neurosurgery alumnus Dr. Nathan Selden from the Oregon Health & Science University. In addition to being the honored guest at the 2016 Resident Research Symposium,

Dr. Selden was also the 2016 Julian T. Hoff Visiting Professor. The 2016 Chandler Clinical Research Award was given to both Drs. Wajd Al-Holou and TJ Wilson. Dr. Luis Savastano received the Crosby Basic Science Research Award.

The 2017 Neurosurgery Resident Research Symposium will be held on Friday, May 12, 2017 in the Danto Auditorium at the Cardiovascular Center. Dr. Edward Oldfield from the University of Virginia will be our honored guest as well as the Julian T. Hoff Visiting Professor.

Visiting Professors 2015 & 2016

Julian T. Hoff Visiting Professor

2015 Kevin Lillehei, M.D., Professor and Ogsbury-Kindt Chair, Department of Neurosurgery, University of Colorado Denver School of Medicine **Titles:** 1) Craniopharyngioma: a changing paradigm in therapy; 2) Madaktari Africa: Neurosurgery in Tanzania

2016 Nathan Selden, M.D., Ph.D., Professor and Chair, Department of Neurological Surgery, Campagna Chair of Pediatric Neurosurgery, Oregon Health & Science University **Title:** Neural stem cell transplantation: safety and long-term outcomes

Edgar Kahn Visiting Professor

2015 Fredric Meyer, M.D., Enterprise Chair, Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota **Titles:** 1) 16 Rules of Neurosurgery; 2) Triple Threat

2016 Howard Riina, M.D., Professor and Vice Chairman, Director Neurosurgery Residency Program, Department of Neurosurgery, New York University Langone Medical Center **Titles:** 1) Hybrid cerebrovascular neurosurgery and its implications for training cerebrovascular specialists of the future; 2) Medical device innovation

James Taren Visiting Professor

2015 L. Dade Lunsford, M.D., Lars Leksell Professor of Neurological Surgery, Director, Center for Image Guided Neurosurgery, Director, Neurosurgery Residency Program, The University of Pittsburgh **Title:** Radiosurgery for brain vascular malformations: lessons learned over twenty-five years

2016 Jaimie Henderson, M.D., John and June Blume-Robert and Ruth Halperin Professor, Department of Neurosurgery, Director, Stereotactic and Functional Neurosurgery, Stanford University **Titles:** 1) Intracortical brain-machine interfaces for people with paralysis; 2) From space ships to miasma: ups and downs of data visualization

Joan Venes Visiting Professor

2015 Douglas Brockmeyer, M.D., Chief, Division of Pediatric Neurosurgery, University of Utah Primary Children's Hospital **Titles:** Complex Chiari, Complex Spine... and back again; Is the head bone connected to the neck bone?

2016 Jeffrey Ojemann, M.D., Professor of Neurosurgery and Radiology, University of Washington School of Medicine Richard G. Ellenbogen Chair in Pediatric Neurological Surgery, Seattle Children's Hospital **Titles:** 1) Motor plasticity-electrocorticography studies; 2) Toward less invasive epilepsy surgery

Saeed Farhat Visiting Professor

2015 Stephen Ondra, M.D., Senior Vice President and Enterprise Chief Medical Officer, Health Care Service Corporation **Titles:** 1) Understanding sagittal balance to improve spine assessment and treatment; 2) Health reform beyond the affordable care act

2016 Katie Orrico, J.D., Director, Washington Office, American Association of Neurological Surgeons/Congress of Neurological Surgeons **Titles:** 1) Health care paradigm shift: moving from volume to value; 2) Health care reform: is the affordable care act living up to its promises?

Elizabeth Crosby Visiting Professor

2015 Matthew Howard, III, M.D., John C. VanGilder Chair, Department of Neurosurgery, University of Iowa College of Medicine **Titles:** 1) Neurosurgical studies in normal human brain physiology; 2) Medical device inventions and technology transfer

2016 Christopher Shaffrey, M.D., John A. Jane Professor of Neurosurgery, Spine Division Director, University of Virginia School of Medicine **Title:** Why should a neurosurgeon care about spinal deformity?

FACULTY UPDATE

Welcome Faculty



Martin Buckingham, M.D.

Dr. Buckingham was appointed Clinical Instructor in the Department of Neurosurgery in May, 2015. He was born in Oak Park, Illinois, and received his medical degree from the University of Illinois. He completed his residency at the University of Cincinnati in 1990 and became board-certified by the American Board of Neurological Surgery (ABNS) in 1993. He practiced in Rockford, Illinois

for seven years and then moved to the Ann Arbor area where he was a neurosurgeon in private practice at St. Joseph Mercy for the last 16 years.

Since joining the U-M Department of Neurosurgery, Dr. Buckingham has been extremely active with his practice, which is focused on basic cervical and lumbar spine. He also has a strong interest in resident education and has recently developed instructional videos for the residents regarding basic spine procedures.



Mark Oppenlander, M.D.

Dr. Oppenlander was appointed Clinical Assistant Professor in the Department of Neurosurgery in September, 2015. Dr. Oppenlander returns to the University of Michigan, where he completed both his undergraduate studies and medical school, to begin his neurosurgical career. He earned a Bachelor of Science in Cellular and Molecular Biology at U-M in 2004 and then went on to earn

his medical degree in 2008. Dr. Oppenlander then moved to Phoenix, Arizona where he completed his neurosurgical residency in 2015 at Barrow Neurological Institute. He also completed a fellowship training in complex spine surgery at Thomas Jefferson University in Philadelphia. In addition, Dr. Oppenlander was awarded the Royal College of Surgeons of Edinburgh Overseas Training Sponsorship which allowed him to travel to London, England for further fellowship training in complex spine surgery and spinal oncology at the National Hospital for Neurology and Neurosurgery at Queen Square.

Dr. Oppenlander's research is focused on outcomes studies. His neurosurgical spine practice is primarily embedded at St. Joseph Mercy Hospital in Ann Arbor.



Nicholas Szerlip, M.D.

Dr. Szerlip was appointed Clinical Associate Professor in the Department of Neurosurgery with a joint appointment at the Ann Arbor Veterans Administration Medical Center in August, 2015. Dr. Szerlip obtained his medical degree from Tulane University in 2002 and did his post-graduate training at the University of Maryland in Baltimore. He also completed several fellowships

in Neuro-oncology: one at the National Institutes of Health in 2003, and one at Memorial Sloan Kettering Cancer Center in 2011. Following his fellowship at Memorial Sloan Kettering, he began practicing at Wayne State University.

Dr. Szerlip's primary focus is on spine tumors; he examines their molecular fingerprints and also works to develop surgical techniques for reconstruction of patients with spinal disorders. His research is focused on neuro-oncology, having already completed some molecular analysis on brain tumors. He also has a strong interest in resident education and is actively involved in educating both medical students and residents on the basic biomechanics of the spine.



Craig Williamson, M.D.

Dr. Williamson was appointed Clinical Assistant Professor in the Department of Neurosurgery and Clinical Assistant Professor in the Department of Neurology in July, 2015. He performs the duties of a neurointensivist and serves as a member of the neurointensive care team.

Dr. Williamson completed his undergraduate studies at the University of Illinois. He was then chosen as a Truman Fellow and completed a year-long fellowship in the U.S. Department of Health and Human Services, working in the Office of Rural Health Policy in Rockville, Maryland. In 2009, he received his medical degree from the University of California San Francisco and then completed an internship at Alameda County Medical Center in Oakland, California. In 2010 he began his neurology residency at Massachusetts General Hospital and Brigham and Women's Hospital in Boston, after which Dr. Williamson came to the University of Michigan for a neuro-critical care fellowship.

Dr. Williamson's work focuses on the care of neurosurgical patients, neuro-otolaryngology patients, and neurology patients in the Neuro Intensive Care Unit, as well as interventional neuro-vascular patients. His research focuses on various outcomes studies, and he is currently working toward obtaining a master's degree from the U-M School of Public Health.

Faculty News & Notes

Promotions & Appointments

2015 Promotions Effective 9/1/15

Aditya Pandey, M.D., promoted from Assistant Professor to Associate Professor of Neurosurgery, with tenure, and Associate Professor of Radiology, without tenure.

Parag Patil, M.D., Ph.D., promoted from Assistant Professor to Associate Professor of Neurosurgery, with tenure, and Associate Professor of Anesthesiology, Biomedical Engineering and Neurology, without tenure.

2016 Promotions Effective 9/1/16

Ya Hua, M.D., promoted from Research Associate Professor to Research Professor, Department of Neurosurgery

Frank La Marca, M.D., promoted from Clinical Associate Professor to Clinical Professor, Department of Neurosurgery & Department of Orthopaedic Surgery

Cormac Maher, M.D., promoted from Associate Professor to Professor, with tenure, Department of Neurosurgery

Lynda Yang, M.D., Ph.D., promoted from Clinical Associate Professor to Clinical Professor, Department of Neurosurgery

Kelvin Chou, M.D., promoted from Clinical Associate Professor to Clinical Professor, Department of Neurology & Department of Neurosurgery

Laurel Moore, M.D., Associate Professor of Anesthesiology was granted a joint appointment as Associate Professor in Neurosurgery.

Awards & Accomplishments

Maria Castro, Ph.D., R.C. was appointed to the U-M President's Advisory Commission on Women's Issues (PACWI) for a two-year term. The Commission aims to assure that women achieve equal participation in all aspects of leadership at U-M. Dr. Castro was also appointed to the 2015 Editorial Board of Neuro-Oncology in recognition of her continuing support. This journal is the leader in the field of neuro-oncology. In 2016, Dr. Castro received the prestigious Javits Neuroscience Investigator Award from the National Institutes of Health. "The Javits Award recognizes extraordinary research that has the potential to better thousands of lives," said Story C. Landis, Ph.D., NINDS director. Dr. Castro was also awarded the 2016 John

Ohlfest Memorial Lecture Award by the University of Minnesota Comprehensive Cancer Center for excellence in the field of neuro-oncology.

Xing Fan, M.D., Ph.D., Associate Professor, was asked to participate as a grant reviewer for the 2016 Tumor Microenvironment (TME) Study Section meeting at NIH. The TME Study Section reviews grant applications that deal with basic mechanisms of interactions between tumor and host system including stromal cells, extracellular matrix (ECM) and extracellular molecules.

Hugh Garton, M.D., M.H.Sc., Richard C. Schneider Professor of Neurosurgery, was inducted into The League of Clinical Excellence, which was established by the Medical School to honor faculty who have distinguished themselves in providing the finest care to U-M patients and their families.

Shawn Hervey-Jumper, M.D., Assistant Professor, was selected as the Frances and Kenneth Eisenberg Emerging Scholar by the Taubman Institute. The Emerging Scholars Program provides support for clinician-scientists on the U-M faculty who are in the early stages of their research careers.

Teresa Jacobs, M.D., Clinical Associate Professor, was selected as a member of U-M's 2015 League of Educational Excellence. Members are selected based on their contributions to the Medical School research and clinical missions.

Pedro Lowenstein, M.D., Ph.D., Richard Schneider Collegiate Professor of Neurosurgery, received the American Society for Cell Biology Honor Status Award for the presentation, "Streams, swirls, and neurospheres: in vivo self-organization of brain tumors revealed by mathematical and biological modeling," as well as the Society for NeuroOncology Best Oral Presentation Award for his research on the innate immune system in GBM progression.

He and Dr. Castro also received an invitation to the 21st International Conference on Brain Tumor Research and Therapy (ICBTRT). Invitations are based on a scientist's significant contributions to neuro-oncology research and/or clinical practice.

George A. Mashour, M.D., Ph.D., was appointed Associate Dean for Clinical and Translational Research and Director of the Michigan Institute for Clinical & Health Research (MICHR) effective October 1, 2015. Dr. Mashour is the Bert N. La Du Professor and Associate Chair for research in the Department of Anesthesiology, and founding director of the Center for Consciousness Science. He also holds faculty appointments in the Department of Neurosurgery and the Neuroscience Graduate Program.

Karin Muraszko, M.D., Julian T. Hoff Professor and Chair, received the 2015 Congress of Neurological Surgeons Distinguished Service Award, as well as the 2016 American Association of Neurological Surgeons (AANS) Humanitarian Award. One of the highest honors bestowed by the AANS, the Humanitarian Award recognizes the extraordinary work done for those in need, here and abroad, for many years. She also received the 2016 Spina Bifida Association Timothy J. Brei, M.D., Outstanding Medical Profession Award and was an honored guest lecturer for the 2016 NIH "Great Teachers" lecture. Dr. Muraszko was selected as the 2016 UMMS faculty member to receive the American Medical Women's Association Gender Equity Award, which honors faculty members who promote a gender-fair environment for the education and training of physicians, and who assure equal opportunities for women and men to study and practice medicine.

Daniel Orringer, M.D., Assistant Professor, was named to UMMS Office of Research's Fast Forward Medical Innovation (FFMI) group in which he will act as the medical device specialist and will work with the FFMI team to create strategies for driving innovation and commercialization at the Medical School.



CNN spotlights Dr. Karin Muraszko

When CNN's chief medical correspondent had to think of the person who changed his life, Dr. Sanjay Gupta came up with two: his mother and Dr. Karin Muraszko, U-M's Chair of Neurosurgery.

Gupta, a U-M alumnus and practicing neurosurgeon, visited UMHS in the fall of 2015 to interview Dr. Muraszko in preparation for a story that chronicled how both Dr. Muraszko and his mother shaped him into the man and surgeon he is today. The story aired multiple times on CNN's Anderson Cooper 360° in January, 2016. Then, in April, CNN again honored Dr. Muraszko by featuring her on the series "Turning Points," which highlights the stories of people who have overcome obstacles to achieve incredible things. On Turning Points, CNN shared Dr. Muraszko's journey, from a newborn with spina bifida to the first female chair of a neurosurgery department. Below is an excerpt from Dr. Gupta's testimonial about the impact Dr. Muraszko had on his life and his career as a surgeon.

Excerpt from Dr. Sanjay Gupta's CNN article

Dr. Karin Muraszko hates that word [impossible] as well. Born with spina bifida, an abnormality of the spinal cord, Karin had enormous difficulty walking her whole life and is now in a wheelchair. While she couldn't hide her spinal cord abnormality, she never spent a lot of time talking about it. Instead, she came into the hospital earlier, stayed later, and worked harder than everyone else. And that is saying something, because Karin is a pediatric neurosurgeon, a profession that required 100-hour work weeks during her training.

Like my own mother, Karin not only overcame, but flourished — and did it on the conventional playground of men. Neurosurgeons all over the world know Karin is the first woman to ever become a chair of neurosurgery in the United States, at the University of Michigan. What they may not know, however, is that she decided to get her ears pierced on the same day she decided to become a neurosurgeon. No joke. Karin told me she didn't want to lose sight of the fact that she was a woman first, and a neurosurgeon second.

“When people introduce me and say I have overcome so much to be where I am, to do what I do... I am still surprised. Particularly at these moments, it strikes me that I am exceedingly fortunate and very lucky to have been given extraordinary opportunities... rather than emphasizing what I couldn't do, I was encouraged to maximize what I could do.”

— Dr. Karin Muraszko



I know her story so well because I was one of the lucky ones to be trained by her. For seven years, during some of the most formative years of my life, Karin Muraszko was a mentor to me. At the time I dedicated my life training to be a brain surgeon, Karin was right there by my side. For a time, there was likely no one in the world who spent more time with me or knew me better than Karin Muraszko. She was the only one who noticed the subtle signs my blood sugar might be dropping while I was operating -- and opened a Jolly Rancher candy and placed it behind my mask. It was Karin who knew I preferred apple over watermelon.

We operated together for days on end. We saw hundreds of patients together, and all along, she taught me judgment, technique, and compassion. She was the person I called when my confidence had been shattered, and my fortitude dissolved. She had no patience for whining, but she did take the time to remind me what my purpose was — as a surgeon, but also as a human. We all need someone like Karin in our lives — someone who tells you what you need to hear, not just what you want to hear, and with a smile. Like my mother, Karin was always willing to share the lessons she had learned with a healthy dose of humility, while allowing me to earn her trust and feel truly valued. They both inspired simply by being who they were, sincerely and authentically. There is not enough of that in the world today, and yet I was fortunate to be surrounded by it.

Yes, when asked who changed my life, the answer is women — strong, powerful, women. They have shaped me. They have challenged me. They have reminded me that sometimes it takes seemingly insurmountable obstacles to unleash the very best of ourselves. Perhaps most importantly, they have made me a better father to my own three daughters. I now remind my girls every day that there are no rules. There are no molds. Those are both made to be shattered. I tell my girls they can be whatever they want to be. No, nothing is really impossible. It is an audacious message, but achievable as well. And if they want proof, I just pick up the phone and call the women who changed my life.

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<http://www.cnn.com/2016/01/13/health/person-who-changed-my-life-sanjay-gupta/>
<http://www.cnn.com/videos/health/2016/04/26/exp-turning-points-dr-karin-muraszko.cnn>

ALUMNI UPDATE

U-M Neurosurgery Graduates: Where are they now?

U-M Neurosurgery alumni can be found practicing at various institutions throughout the country. Our last seven consecutive graduates have gone on to academic faculty positions at a number of renowned institutions.



Thomas J. Wilson, M.D. 2016
Clinical Assistant Professor, Neurosurgery
Stanford University (July 2017)



Emily Levin, M.D. 2013
Clinical Assistant Professor, Neurological Surgery
University of Michigan



Shawn Hervey Jumper, M.D. 2013
Assistant Professor, Neurological Surgery
University of Michigan



Khoi Than, M.D. 2014
Assistant Professor, Neurological Surgery
Oregon Health & Science University



William Stetler, Jr., M.D. 2015
Associate Professor of Neurological Surgery
University of Alabama



Jennifer Strahle, M.D. 2015
Assistant Professor of Neurological Surgery
Orthopedic Surgery, and Pediatrics,
Washington University (St. Louis)



Anthony Wang, M.D. 2014
Assistant Professor, Department of Neurosurgery
University of California at Los Angeles



IN MEMORIAM



Carl Brinkman, M.D.

U-M Neurosurgery alumnus Dr. Carl Brinkman passed away on July 26, 2014 in Bluffton, South Carolina. Dr. Brinkman completed his internship and neurosurgical residency at the University of Michigan (1960-1963). After training at U-M, Dr. Brinkman practiced at the Maine Medical Center, where he served as the Chief of Neurosurgery from 1980 to 1993. He was also the founder of the Southern Maine Neurosurgical Associates and Maine Magnetic Imaging, as well as a Diplomat of the American Board of Neurosurgeons and a member of the Collier Surgical Society.



Carole Miller, M.D.

Former U-M neurosurgical faculty member Dr. Carole Miller passed away in 2015. Dr. Miller spent three years (1972-1974) as Assistant Professor on the neurosurgical faculty at the University of Michigan; she was the first woman on the surgical faculty at U-M. While here, Dr. Miller worked closely with Dr. Richard Schneider as well as in the laboratory with Dr. Elizabeth Crosby. Dr. Miller paved the way for many other women in neurosurgery, as she was the first woman to chair the joint spine section of the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS). She was also the first female president of the Neurosurgical Society of America.

STAFF UPDATE

Welcome to U-M Neurosurgery

A warm welcome (and a few fun facts) about your new colleagues.

2015



Cathy Butler, Administrative Assistant to Dr. Thompson
Originally from Long Island and has been a soccer referee coordinator for her local soccer club for the past ten years.



Nicole Goguen, Inpatient Nurse Practitioner
Has a set of boy/girl twins who just turned four and is looking forward to teaching them to ski.



Colleen Hall, Inpatient Nurse Practitioner
Played travel hockey while in high school. She is also due with her first baby on her birthday, January 17th, and has a cat named Brianna.



Erika King, Administrative Assistant to Drs. Muraszko, Maher, and Garton
Likes to play one-on-one basketball with her husband and sons.



Kimberly Kittinger, Patient Services Assistant, Pediatric Clinic
Enjoys yard work and has three sons who keep her busy.



Amy McAlister, Clinical Outcomes, Communications, and Projects Manager
Went skydiving with her husband a few months after their wedding to celebrate the start of married life.



Jennifer Reynolds, Inpatient Nurse Practitioner
Traveled to Ireland to study end-of-life care from the European health care perspective for her Capstone project in grad school.



Connie Schuur, Medical Assistant, Pediatric Clinic
Enjoys spending time with her two grandchildren.



Rebecca Spittler, Patient Services Assistant, Referral Office
Known to dress up as Elsa from Disney's Frozen and visit kids at Mott Children's Hospital.



Megan White, Medical Assistant, Pediatric Clinic
Was a patient of Neurology and now feels fortunate to be part of a great team that provides neurological care to kids.

2016



Taylor Bamfield, Patient Services Assistant, Adult Clinic
Has two different colored eyes, one green and one blue.



Jana Barkman, Inpatient Nurse Practitioner
California native and recently returned from her 7th year of medical volunteer work in Rwanda.



Jessica Cary - Patient Services Assistant, Pediatric Clinic
Mom of three; she has two sons and one daughter.



Sara Castillo - Patient Services Assistant, Pediatric Clinic
Enjoys visiting natural science and cultural museums, as well as art galleries.



Angela Collada, Administrative Specialist, Castro-Lowenstein Lab
Has traveled around the world... and then some.



Samantha Emanuel, Administrative Assistant to Drs. Sagher and Heth
Lived in Germany for three years and is fluent in German and American Sign Language.



Kelsey Fearer, Clinical Outcomes Data Specialist
Recently started a record collection; her most recent find was a John Cougar record for \$3.



Kelly Hornbacher, Manager, Clinical and Administrative Operations
Enjoys reading and watching her kids play sports.



Nichole Lindblade, Administrative Assistant to Drs. Muraszko, Maher, and Garton
Coaches her daughter's cheerleading team and is known for her tendency to burst into song.



Nichole Nilsson, Clinical Outcomes Data Specialist
Born in Kentucky at the Ireland Army Hospital while her dad was serving in the army.



Stephanie Roath, Physician Assistant, Adult Clinic
Enjoys U-M football, running, and traveling.



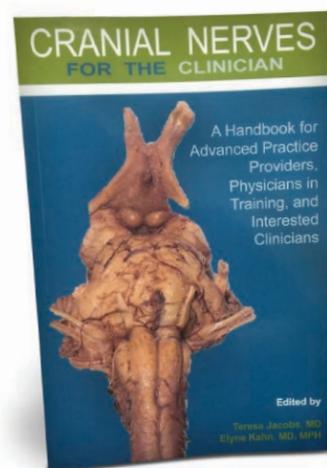
Emily Schmid, Administrative Assistant to Drs. Hervey-Jumper and Levin
Completed her 10th 5K race of 2016 in October; her goal for the year is 12.



Alan Vandenberghe, Medical Assistant, Adult Clinic
Enjoys learning, making new memories, and mixing music.

Neurosurgery's Advanced Practice Providers Write and Publish *Cranial Nerves for the Clinician*

In June 2016, *Cranial Nerves for the Clinician* – a book authored primarily by the advanced practice providers on U-M's inpatient Neurosurgery service – was published. The publication of this book represents the culmination of a year-long collaborative effort among the Department of Neurosurgery's advanced practice professionals, residents, and faculty. The book provides a summary of the 12 cranial nerves, devoting one chapter to each nerve, including its functional anatomy, clinical examination, common pathologies and neurosurgical interventions. It is intended to serve as a portable, ready reference for the clinician interested in a particular cranial nerve, or the clinician who wishes to review all of the cranial nerves in a concise format. A copy of this book is now included in the materials given to all interviewing resident applicants.



Though the mid-level providers on our Neurosurgery service are highly engaged in and often occupied by their clinical responsibilities, Teresa Jacobs, M.D., Director of the Neurosurgical ICU, saw the writing of this book as an opportunity for these providers to channel their academic interests into a scholarly work, and to make a great contribution to the academic mission of the department.

"This text, authored by the hardworking Neurosurgery Advanced Practice Provider group shows how, in addition to their excellent daily bed-side clinical work, they have been able to produce a scholarly work which will enhance medical knowledge and patient care," said Dr. Jacobs. Dr. Jacobs and U-M Neurosurgery resident Elyne Kahn, M.D. served as editors for the book. Many of the photos, images, and diagrams contained within it were provided by other members of the Department of Neurosurgery.

U-M Contributors:

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2. **Aaron D. Smith MSN, RN, AGACNP-BC**
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3. **Danielle M. Jourden, ACNP**
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Physician Assistant, Neurosurgery
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6. **Danielle R. Hulsebus, ACNP-BC**
Nurse Practitioner, Neurosurgery
7. **Amanda C. Romijn, MSN, RN, FNP-C**
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8. **Thomas J. Ferguson, ANP-C**
Nurse Practitioner, Neurosurgery
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10. **Helen C. Bauer, ACNP**
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11. **Carina A. Brake, MSN, AGACNP-BC**
Nurse Practitioner, Neurosurgery
12. **Colleen A. Hall, ACNP**
Nurse Practitioner, Neurosurgery

Steve Napolitan named Chief Department Administrator in 2015

Steve Napolitan was named the Chief Department Administrator for the Department of Neurosurgery in September 2015. Steve joined the department in 2006 and, collectively, has more than 20 years of management experience in the health care industry including health insurance, hospitals, and physician practices. Steve completed his undergraduate studies at Michigan State University and holds a Master in Health Administration (MHA) from Penn State University. In 1995 he received a direct commission into the Medical Service Corp of the United States Air Force where he served for three years at Sheppard AFB Hospital in Texas with a final rank of Captain. Steve began his work for the University of Michigan Health System in 1999 for M-CARE Health Plan. He then became the



Steve Napolitan



Don Tomford

Associate Department Administrator for the Department of Neurosurgery in December of 2006. For over eight years, Steve partnered with the department's former CDA, Don Tomford, to manage departmental operations and strategic planning. Don served as the lead administrator in Neurosurgery for 22 years. In July 2015, Don sought a new opportunity and challenge by becoming the Chief Department Administrator for the Department of Radiation Oncology here at U-M.

The Department of Neurosurgery has a tremendous amount of gratitude for Don's service and accomplishments, as he was integral to the growth and stability of the department during his time here. The department looks forward to continued growth and success under Steve's leadership.

U-M Neurosurgery Staff Give Back

In addition to providing exemplary patient care, the many individuals who comprise the Department of Neurosurgery have shown their heart for giving through their recent participation in various community benefit activities and fundraisers. In 2016, to help organize and orchestrate the department's participation in these activities, Melissa Matthews was named Community Benefit Coordinator. In addition to her role as Administrative Assistant to Dr. Parag Patil, Melissa, who has a background in family counseling, serves as the department's point person for any community benefit-related activities and helps to inform staff about upcoming opportunities to give and to get involved.

"After only a few months as the Community Benefit Coordinator, I have seen an overwhelming response of generosity and joy in supporting our community," said Melissa.

In July 2016, the department participated in a week-long food drive to support Food Gatherers, an organization in Ann Arbor that supports 150 non-profit agencies geared toward providing food assistance in Washtenaw County. Altogether, our department donated more than 145 pounds of food and \$200 in monetary donations. Food Gatherers is able to provide 600 meals from our department's monetary donations alone. In September, school supplies were collected for the Education Project, a joint project of the Washtenaw Intermediate School District and Ozone House, that works to ensure that students experiencing homelessness

and temporary living situations in the ten school districts comprising Washtenaw County enroll, regularly attend, and succeed in school. The Department of Neurosurgery made a large and generous contribution, donating 37 backpacks and an overflowing cart full of school supplies and personal items.

The school supply drive for the Education Project was a hospital-wide effort led by Tony Denton and the entire UMHS Team made a record donation of 745 backpacks and 130 boxes of supplies. They received more than double the amount as compared to last year, which not only provided a record donation to the Education Project, but allowed these items to be disseminated to other local community agencies as well.

Staff members are not only donating money and supplies to important causes, but also their time by volunteering together in the community. At the end of November, a small group went to the Robert J. Delonis Center to help prepare dinner for the homeless, and in early December, a larger group went to the Food Gatherers warehouse to assist with sorting, stocking, and distributing food.

"These opportunities are truly a group effort, not only for those who are volunteering, but also for those team members who keep things running smoothly in the office, allowing others to go out and volunteer," said Melissa.



"I am excited for these ongoing opportunities to give back to the community and want to express my gratitude to everyone for their generous contributions, enthusiasm, and positive attitudes. Not only is it wonderful to see the measurable results of our efforts as a department, but the warmth and positivity that surround these types of projects is unmistakable. Helping with these activities is pure joy!"

— Melissa Matthews

DEPARTMENT FEATURES

The Functional Wellness Initiative: Survival & Beyond

For patients diagnosed with brain tumors and the physicians treating them, survival is the primary goal. For some patients, however, the quest for survival comes at the cost of quality of life. When survival is the sole focus of treatment, patients can be left to grapple with significant functional, cognitive, or psychological impairments, as is the case with about 90 percent of brain tumor patients. Through treating many brain tumor patients, Dr. Shawn Hervey-Jumper realized that, for many patients, it is not only the quantity of life that matters, but also the quality. For some patients, quality can even supersede quantity. Out of this realization, the idea for the Functional Wellness Initiative was born.

The Functional Wellness Initiative is a first-of-its kind clinical model that brings together the latest medical and surgical therapies to improve survival and the portfolio of rehabilitation services patients need to help them maximize the quality of their lives. This model addresses functional and cognitive deficits while treating brain tumors medically and surgically. It also helps to streamline cross-discipline collaboration so that patients have a more seamless, coordinated experience of care. In August 2014, Dr. Hervey-Jumper proposed the Functional Wellness Initiative to the Department of Neurosurgery's Chair, Dr. Karin Muraszko, and the administrative team. The vision was to create a unique, multi-disciplinary clinic that would work to identify and treat adult and pediatric patients with brain tumors affecting language, motor, psychological, and neurocognitive outcomes.

The Functional Wellness Initiative clinic hosted its first clinic in May 2015. The team is anchored by Dr. Hervey-Jumper, whose clinical and research focus is on brain mapping and functional reorganization; Sean Smith, M.D., a physical medicine and rehabilitation physician specializing in improving the quality of life of cancer patients; Nicolette Gabel, Ph.D., a clinical neuro-psychologist who specializes in neurocognitive remediation; and Karen Kluin, M.S., a speech pathologist who specializes in perioperative language testing and rehabilitation.

Thomas Ferguson, N.P. is the program's clinical coordinator. Other faculty of the U-M Brain Tumor Program include Oren Sagher, M.D., Jason Heth, M.D., Daniel Orringer, M.D., and Larry Junck, M.D. "Many patients face a complex mix of challenges as the result of their tumors," says Hervey-Jumper. "In the past, separate evaluations were needed from each discipline before arriving at a treatment strategy. That meant burdening patients with multiple appointments, and making it more challenging for providers to coordinate their efforts. Here at Michigan, we're now able to bring the experts together for the patient right from the start."

During their first appointment, patients interact with a team of clinicians collaborating to provide individualized care plans. The initial visit includes a baseline assessment of neurocognitive and motor functions, social structure, and language capabilities and a review of imaging and prior oncological history. In consultation with a neurosurgeon and/or neuro-oncologist, patients can discuss treatment options including surgery, chemotherapy, radiation therapy, anti-angiogenic options, and clinical trials offered through the U-M Brain Tumor Program. On the same day, experts in a range of rehabilitative therapies will work with the patient to devise strategies to maximize and improve existing motor, language, and cognitive function. Every aspect of the care plan is based on the unique needs of the patient.

Throughout the year and a half that the clinic has been operational, the Functional Wellness Initiative team has provided coordinated care to nearly 100 patients. The clinic meets once a month in the Taubman Center and is currently accepting new patients from within UMHS as well as from outside clinics and providers. For more information, please contact Emily Schmid at 734-647-5434.



PATIENT STORIES

Former boxer gives brain tumor a counterpunch

Retired professional boxer Kat Brauer Rice knew she always had to leave it all in the ring. "Krackin' Kat" never gave up.

Rice, now a wife and mother of two, used those hard-hitting lessons from her boxing career, and her time as a college basketball player, in recent years to battle a brain tumor...twice. For a take-no-prisoners athlete who went 5-1 in the boxing ring, this medical fight was a deeply personal rematch. "The second time, when I came to the University of Michigan, I said: 'We're going the distance,'" says Rice, a former boxer at the legendary Kronk Gym who now lives in metro Detroit. "Round two needed to go down at U-M."

Round one

The trouble started in 2008. Rice was frustrated with the difficulty she was having during a graduate school admissions test but didn't think much of it. By chance, she got an MRI of her head after falling off a ladder. Results showed something far more severe than bruising: a large tumor in the back of her brain. It turned out to be a ganglioglioma (a rare, slow-growing kind of brain tumor). Rice had a successful surgery that same year to remove it. And, always the athlete, she celebrated her five-year checkup by riding her bike to the doctor's office. "I did get hit by a car on the way, but I made it!" she says, noting that the injury was minor.

Round two

Seven years after her initial diagnosis, Rice again felt like something just wasn't right. She was having headaches, and her arm was going numb. Rice asked U-M neurosurgeon Shawn Hervey-Jumper, M.D., and U-M neuro-oncologist Aaron Mammoser, M.D., to take a look. A follow-up MRI confirmed Rice's fears: Her brain tumor was back. "When we found her recurrent tumor, we sat down with Kat to talk about what was important to her and created a plan of action. Kat placed a high priority on family and athletics," says Hervey-Jumper, a neurosurgeon with the Functional Wellness Initiative.

Rice then spent a week in Florida with her kids, 11-year-old son Brian and 9-year-old daughter Kabri; tried out for the television game show Fear Factor (she didn't make the cut); and then, in January, mentally prepared for her second surgery. In a sense, it wasn't much different than psyching herself up for a bout in the boxing ring. "I visualized Dr. Hervey-Jumper and (Nurse Practitioner) Tom Ferguson performing the surgery ahead of time," Rice says. "That's a strategy from sports. I was then ready for a couple of full-court presses to this tumor." The surgery was a success. And just four weeks later, she found herself atop Copper Mountain in Colorado to support her son who was competing in a national snowboarding competition. "I wasn't allowed to ski yet, so I hiked for eight days straight at 12,000 feet," Rice says. "I couldn't miss it, even though it was difficult!"



After the fight

Although an active lifestyle was important to Rice, she was having difficulty adjusting to the changes after surgery. Given the tumor's location, she lost some of her peripheral vision. "She's an athlete used to performing at a high level, and dealing with a chronic health problem can be difficult," Hervey-Jumper says. Rice, meanwhile, took advantage of the many resources provided through the Functional Wellness Initiative, such as neuropsychology appointments with Nicolette Gabel, Ph.D., and physical rehabilitation with Sean Smith, M.D. "This is a woman who is not going to give up," Hervey-Jumper says. "She knows how to fight, persevere and continue her active lifestyle."

The goal, he notes, is to help people like Rice with strategies to maximize what they do well to overcome areas that are not as strong. That is why Rice now focuses on making sure she and her family do everything they can to lead healthy and fulfilled lives. She stays active (a bike ride for charity is one recent adventure) and encourages her family to join her in eating healthy food.

Despite her victory, the fight continues.

"Although gliomas are lifetime diagnoses, Kat is the poster child for somebody who has a diagnosis and should live for many years at a high level," Hervey-Jumper says.

Rice is also committed to furthering medical knowledge. She saw the advances in brain tumor research between her first and second experiences. U-M researchers are currently growing cells from her tumor in the lab so they can learn more about the genetics of low-grade gliomas.

For more patient stories, please visit
michiganhealthblog.org.

PATIENT STORIES

Marathon-running mom faces rare spinal cord tumor

In her third trimester, Aimee Garrison finally became convinced the soreness and tension across her shoulder blades and into her back had to be more than just part of being pregnant. “I had been running and lifting weights all the way up to 26 weeks,” the marathoner from Kalamazoo says, “so I slowed down, but it didn’t get better. Soon I was having trouble sleeping and keeping up with my toddler.”

Eventually, an MRI revealed that Aimee was one of the less than 2,000 adults each year who find out they have a spinal cord ependymoma. A tumor the size of a baby carrot had been slowly growing in Aimee’s spinal cord, pushing her spinal cord against her vertebrae. “It was a really scary moment,” Aimee says. “I was the most worried about the baby,” Aimee and her husband Mark wanted to learn more about what they were dealing with, but quickly grew frustrated about the lack of information available. “I was just trying to learn about what was going on, but there aren’t a lot of resources available about such a rare condition,” Mark says. “It’s a weird feeling to type something into a search engine and get almost no results.”

The Garrisons came to the University of Michigan, where the neurosurgeons see 5-10 cases per year, to figure out what to do next. “One challenging decision was whether to operate while Aimee was still pregnant or whether to wait for the delivery of the baby,” says U-M neurosurgeon Daniel Orringer, M.D. “Operating while pregnant would put the fetus at risk of stress, exposure to toxic medications, and possibly risk of death.” Dr. Orringer gathered a team of neurosurgeons, anesthesiologists and an obstetrician to care for Aimee and her unborn child, a second girl to be named Sloane. They decided it was safe for Aimee to carry her baby to term, have a C-section, and then return for surgery. “Things started to calm down, and a plan developed,” says Aimee’s husband Mark. “We learned it had probably been there forever and just growing slowly, and it was benign, so it would be okay to wait a little longer.”

On Dec. 22, 2015, Aimee delivered baby Sloane at U-M. Two weeks later, Aimee returned for 20 hours of surgeries over two days to remove the tumor, and then walked to her wheelchair when it was over. “What struck me most was her positive attitude during this extremely stressful time,” says Lauryn Rochlen, M.D., a U-M anesthesiologist who was part of the team for Aimee’s tumor removal. “It is hard enough to have just had your second child, but Aimee did extremely well.”

The Garrisons, now a family of four, returned to West Michigan, where Aimee spent three weeks at inpatient rehab. Mark took over full-time parenting for 2 1/2-year-old Vivienne and newborn Sloane. The day she left rehab, Aimee astonished Dr. Orringer with her recovery, celebrating the ease with which she can do the simple things again, like walking down a hallway. She’s only struggling with some weakness in one hand. “Her resilience was a major factor in her outstanding progress,” Dr. Orringer says. “Her recovery was amazingly fast and she has the potential to return to full function – even running marathons again.”

Mark’s goal is to keep taking great care of Aimee and the children so mom can lace up those running shoes as soon as possible. Aimee says first, though, she’s most eager to hold Sloane and Vivienne and take care of them without help, which she’s lucky to have a lot of right now. “It’s crazy how many people reach out to offer help and assistance. Our family and friends are awesome,” Aimee says. Looking back, the mom of two is glad she advocated for herself when she knew something was wrong, so she could start on the path to being well.



For more patient stories, please visit
michiganhealthblog.org.

PATIENT STORIES

Urgent spine surgery spells relief

When his doctors asked Samuel Jones to rate his back and spine pain on a scale from 1 to 10, he said it was 15 to 20. And it’s no surprise. Jones, a retired patent agent from Midland, Michigan, had had an operation to repair a ruptured disc in 1974 with no further problems. Then, when he came back in 2014 from a vacation with his family in Hawaii, everything was different. “I went from a little pain now and then to excruciating pain,” Jones says. He couldn’t walk without help. He couldn’t go up or down stairs. To make matters worse, it was hard to diagnose his problem because his previous quadruple bypass and pacemaker prevented an MRI.

Looking for pain relief

A CT myelogram, which uses dye, revealed that he had very serious spinal stenosis—a condition caused by a narrowing of the space surrounding the spinal cord or nerves. Jones’s primary care physician referred him to a local surgeon who wasn’t available to do the surgery. Instead, that surgeon referred Jones to U-M Department of Neurosurgery’s Dr. Frank La Marca. “I’m so glad he did,” Jones said. “I had been treated by four different specialists without any relief. When Dr. La Marca saw the original myelogram he said, ‘I think there are more problems in the upper back, and I think you need to have another myelogram.’”

Spine surgery was needed to avoid paralysis

Dr. La Marca says, “Mr. Jones was found to have two large anterior masses compressing his spinal cord at two different levels. Although pain was his major complaint, his degree of spinal cord compression and neurological deficit put him at an impending risk for irreversible paralysis. The repeat CT myelogram at U-M allowed us to better assess the extent of his lesions and plan the urgent surgery appropriately.” Jones says, “He took one look at the X-rays, and said, ‘We’ll operate tomorrow.’” “Dr. La Marca realized that the spinal stenosis allowed the discs to rub on my spinal cord. He got in and cleared all that stuff up. After surgery, he told my wife, ‘I’ve gotten rid of his problem.’”

What I love about Dr. La Marca is that he loves challenges, and I gave him one. I have a lot of respect for him and everyone at U-M.



Samuel and Betty Jones

The results

Today, Jones has four vertebrae that are fused together. And he has mobility. “I can do a lot more than I ever thought I would. I walk anywhere. I go up and down stairs. I drive. I do most of the things I used to do, like traveling with my wife of 57 years, visiting with my children and seeing my grandchildren. “What I love about Dr. La Marca is that he loves challenges, and I gave him one. I have a lot of respect for him and everyone at U of M.”

Jones’s rehabilitation entailed about three weeks of physical therapy on site. He also credits U-M with having the Med Inn, an onsite hotel, which enabled his wife and family to be close to him while he was in surgery and during the holidays. After four months of transporting her husband in a wheelchair while he was in pain, Jones’s wife says that Dr. La Marca and the University of Michigan “saved our life!” In December 2015, Samuel Jones and his wife Betty celebrated the one-year anniversary of his surgery and his 80th birthday — pain free.

For more patient stories, please visit
michiganhealthblog.org.

RESEARCH NEWS

News from the Crosby Neurosurgical Laboratories

Dr. Guohua Xi and Dr. Ya Hua continue to focus on innovative methods to target the brain injury induced by red blood cell degradation products after cerebral hemorrhage. Their studies include targeting CD47, a surface protein expressed on erythrocytes as a “don’t eat me signal.” Blocking that signal is a promising method to enhance hematoma resolution. Other studies are focused on a common medication called minocycline, which can act as a chelator to reduce iron overload. Thus, minocycline represents a potential doubled-headed weapon targeting inflammation and iron toxicity after cerebral hemorrhage.

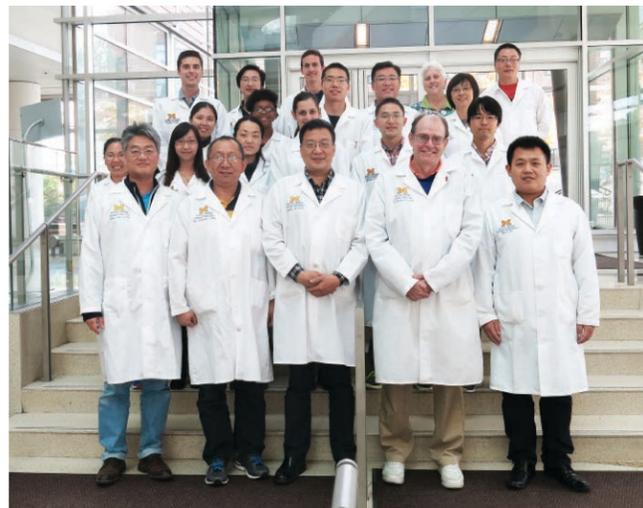
Dr. Richard Keep and Dr. Jianming Xiang continue to examine blood-brain barrier (BBB) function in disease and in preventing brain delivery of potential therapies. Studies have shown that very early BBB dysfunction after stroke is a cause rather than the result of parenchymal injury (with Dr. Jun Chen at the University of Pittsburgh) and elucidating mechanisms of BBB dysfunction in cavernous malformations and diabetic ketoacidosis (with Dr. Anuska Andjelkovic in Pathology). This work also includes studies designed to enhance the delivery therapeutics across the BBB for a variety of neurological conditions.

Dr. Xing Fan continues to address the hypothesis that a small population of cancer stem cells (CSCs) within cancers is responsible for tumor propagation in medulloblastoma and glioblastoma. The CSC hypothesis challenges traditional therapeutic concepts, suggesting that only by removing CSCs within a tumor can the cancer be cured. His group has demonstrated that Notch pathway inhibition by gamma-secretase inhibitor depletes CSCs and blocks engraftment of MB and GBM cells. Their current projects include exploring the translational therapeutic application of Notch pathway blockade into clinic, identifying the mechanism by which Notch, SHH, and Wnt signaling pathways and microRNAs that regulate these brain CSCs, and investigating the interaction between CSCs and their niche.

Clinical Research Updates

Clinical research activities continue to flourish within the Department of Neurosurgery. With 85 approved IRB projects, the clinical research team plays an integral role in the success of the many research studies and trials being led by our faculty and residents. Karen Frisch was recently promoted to Administrative Manager of the Clinical Research Unit. Molly Dahlgren joined the research team in August 2016 as a Grants and Contracts Specialist. Molly assists faculty and residents with securing vital research funding. Ron Ball and Heidi Zayan are invaluable assets to the team as well, bringing experience and knowledge to our research program. Ron became a Certified Clinical Research Professional through the Society of Clinical Research Associates in 2016. His work on the MISTIE III Clinical Trial was recognized by the study’s coordinating center with the “All Star Team” award in 2015.

In 2014, the Medical School Research Board of Directors (RBOD) identified the strategic priority of transforming clinical trials at U-M by 2018. The goal is to improve clinical care, value, and outcomes by executing a diverse portfolio of high-quality clinical trials.



An often unrecognized but important element of research is service on the study sections that help determine grant funding for NIH and various foundations.

- For NIH, Dr. Xi recently rotated off the Acute Neural Injury and Epilepsy (ANIE) study section
- Dr. Oren Sagher is a member of the Neurological Sciences and Disorders (NSD)-K study section
- Dr. Xing Fan has been an ad hoc reviewer for the Tumor Microenvironment (TME) and Cancer Molecular Pathobiology (CAMP) study sections
- Dr. Richard Keep is a member of the Brain Injury and Neurovascular Pathologies (BINP) study section. He also co-chairs the Brain 1 study section for the American Heart Association

A new organizational structure implemented to achieve this goal includes the establishment of a central Clinical Trials Support Office (CTSO) and seven trans-departmental Clinical Trials Support Units (CTSUs) that are aligned around common areas of research. The Department of Neurosurgery will be part of the Neurosciences and Sensory CTSU, which will be a multidisciplinary, multi-departmental CTSU that aims to provide services for investigators with clinical trials related to the skin or nervous system. The CTSU will be open to any faculty within the departments of Neurology, Neurosurgery, and Dermatology, along with participants outside these departments who find a natural fit with the CTSU theme. The goal is to: 1) facilitate the research activities of experienced trialists, 2) provide guidance to new investigators, and 3) ensure that all trials are carried out according to the highest standards to protect patient safety and in complete compliance with all applicable regulations. Dr. Parag Patil has been named Co-Director of the Neuroscience and Sensory CTSU, with primary focus on neurosurgical clinical and translational research. He also leads the Translational Neuroscience and Neuroengineering Laboratory.

News from the Castro-Lowenstein Basic and Translational Neuro-Oncology Research Laboratories

The Castro-Lowenstein team is investigating the mechanisms that mediate brain tumor progression and developing novel therapies for pediatric and adult gliomas (GBMs). The team has developed genetically engineered GBM mouse models, using the Sleeping Beauty (SB) system, which enables the investigation of the role played by specific genetic lesions on tumor development and response to therapies. The model is generated in a mouse with a normal immune system, allowing the testing of immunotherapies. The team also developed a genetic therapy that increases antigen presenting cells in the tumor microenvironment (TME), which has been FDA approved for a phase I clinical trial in adults. This and other novel immunotherapies will be assessed in the pediatric GBM model, including diffuse intrinsic pontine gliomas (DIPG), before translation into the clinic.

The team is studying GBM induced immune suppression, mediated by accumulation of immature myeloid cells, immunosuppressive macrophages, Tregs and immunosuppressive chemokines and cytokines, which hampers the efficacy of immunotherapies. The team is also examining the effect of GBM produced chemokines on the permeability of the blood brain barrier (BBB), in collaboration with Dr. Andjelkovic, Pathology. This work opens the possibility of precision immunotherapies for adult and pediatric GBM.

The team is also studying GBMs structures compatible with self-organization, named “oncostreams,” which mediate tumor invasion. The team hypothesizes that by disrupting oncostreams, novel treatments will be uncovered. Bioinformatics network analysis based on next generation sequencing revealed that a Src tyrosine kinase family member is one of the most connected nodes, suggesting that this is a critical signaling pathway regulating oncostreams’ formation and GBM malignancy. This could represent a novel glioma biomarker for diagnostic, prognostic, and therapeutic development.

The Castro/Lowenstein Lab promotes collaborative research by sharing its plasmids and other resources, which led to its selection as the recipient of the Addgene Blue Flame Award. Addgene, a nonprofit organization dedicated to making it easier for scientists to share plasmids, reports that the Castro-Lowenstein plasmids have been shared many times with researchers worldwide facilitating scientific progress and biomedical discoveries. New federally funded NIH grants awarded include: R37-NS094804 Immune Suppressive Myeloid Cells

MSSIC and QOD Update

The Department of Neurosurgery demonstrates its commitment to providing high quality care through participation in various quality improvement programs, including the Michigan Spine Surgery Improvement Collaborative (MSSIC) – a statewide spine surgery collaborative – and the Quality Outcomes Database (QOD) – a national quality outcomes database. August 2016 marked one year of participation in MSSIC, which aims to improve outcomes for patients who undergo spine surgery. Now in our second year of participation, we are



in the Tumor Microenvironment: Implications for Therapeutics; R01-EB022563 Tuning Biomaterials-Immune-Cell Interactions for the Treatment of GBM (collaboration with Dr. James Moon, School of Pharmacy); and R01-NS096756 Neuroimmunology of Malignant Brain Tumors.

Dr. Castro participated in the grants review process as a member of several NIH Center for Scientific Review Study Sections, including: National Cancer Institute (NCI) Specialized Programs of Cancer Research Excellence and National Cancer Institute (NCI) Provocative Questions Initiative (PQ4 and 8). Recently, Dr. Castro also became a permanent member of the NIH Clinical Neuroimmunology and Brain Tumors Study Section (CNBT).

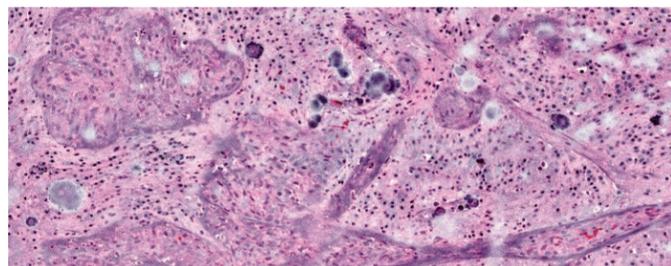
Dr. Pedro Lowenstein also served as a member of several NIH Center for Scientific Review Study Sections, including: Gene and Drug Delivery (GDD) Study Section; NINDS Research Program Award (R35) Study Section; Specialized Program of Research Excellence (SPORE) in Human Cancers Study Section, NCI; and Cancer Diagnostics and Therapeutics (CDT) SBIR/STTR Panel.

approaching the point at which various quality improvement projects, based on registry data, will begin. In May 2016, the Department hit its two-year mark in the Lumbar Module within QOD; we have, more recently, begun participating in the Deformity and Cervical modules as well. QOD serves as a national registry for neurosurgical procedures and practice patterns, with a focus on improving the quality, efficiency, and value of care with an increasing emphasis on risk-calculation and long-term outcomes.

Groundbreaking Brain Tumor Research Made Possible by the Victor's Whole Brain Donation Bank

U-M strives to be the Leader and Best in research and medicine; the Department of Neurosurgery is no exception to this rule. One of the ways we're able to uphold the highest standard of care for patients with rare brain tumors is through the Victor's Brain Donation Bank, which enables patients to continue their legacy through postmortem whole brain donations. Brain donations to this bank enable U-M researchers to carry out ground-breaking research and develop innovative treatments for the rarest of brain tumors.

Fifteen-year-old Laurence Carolin was one of the Victor's Brain Donation Bank's first donations. After a courageous battle with an inoperable brain tumor, Laurence's decision to donate played an instrumental role in building the foundation of the brain bank at U-M. Through his donation, Laurence has contributed greatly to the field of brain tumor research. In an effort to further brain tumor research at U-M, the Department of Neurosurgery and its investigators, led by Dr. Daniel Orringer, have also developed the first stimulated Raman scattering (SRS) microscope, an imaging method that obtains histologic images in the operating room. Our SRS microscope is currently being used to aid in the accurate diagnosis of brain tumors and to detect microscopic brain tumor infiltration during surgery.



An image obtained using SRS microscopy

The U-M Brain Tumor Program would like to honor those patients who have so bravely and selflessly donated to the Victor's Brain Donation Bank and thank them and their families for helping to ensure that we find a cure for the most devastating brain diagnoses.

For more information on the Victor's Brain Donation Bank, please email Kait McMurray at um-braintumorprogram@med.umich.edu.

SAFETY & QUALITY UPDATES

Neuro ICU Receives "365 Days of Safety" Award

Patient safety is paramount at UMHS to ensure that patients receive the highest quality care and obtain the best possible outcomes. The Department of Neurosurgery has been recognized multiple times for its commitment to patient safety.

In 2015, the 4A Neurosurgery/Neurology/Stroke Unit received the "365 Days of Safety Award" for going more than 365 days without a central-line blood stream infection (CLABSI). "The 365 Days of Safety Award recognizes the tremendous efforts made by our teams in decreasing or eliminating hospital acquired infections," said Dr. Jeff Desmond, U-M Chief Medical Officer. "It also provides an opportunity for teams to share improvement practices and opportunities." Also in 2015, the Neurosurgical Intensive Care Unit on 4D received a "365 Days of Safety Award" for going more than a year without a unit acquired pressure ulcer. "Our Neuro ICU is leading the way for all of us to do better in protecting our patients and providing the best care possible," said Dr. Desmond.

In 2016, the Neuro ICU received another 365 Days of Safety Award, this time for going more than 365 days without a CLABSI. By taking steps to prevent common conditions among patients such as pressure ulcers and CLABSIs, the Department of Neurosurgery has helped raise the bar on patient care and safety.



Unit 4D - Neuro ICU receives the 365 Days of Safety Award in April, 2016.

UMHS NEWS

U-M Health System Announces Path Forward

Repositions itself for greater integration and improved patient care

The University of Michigan Health System – which includes three hospitals, the health centers, many basic science research departments and the Medical School – has further integrated under a strategic approach to strengthen its three-part health care mission of patient care, research, and education. The plan was outlined during a 2015 Board of Regents meeting by University President Mark Schlissel, along with the head of UMHS, Dr. Marschall Runge. The president said greater integration will help the university's world-class health system better respond to rapid changes in the health care industry. Schlissel added, "Our ability to stay competitive depends on our ability to attract and retain the best faculty, compete successfully for research funding, and deliver high quality, in-demand medical care in a cost-efficient manner. These factors place an increased premium on our ability to work across our institution in a seamless, integrated, collaborative fashion." Regents approved the leadership changes recommended by Schlissel and Runge. All took effect on January 1, 2016.

Runge, who had been serving as the university's executive vice president for medical affairs (EVPMA), assumed the additional responsibility as dean of the Medical School. Bringing together the EVPMA and dean roles will increase collaboration between faculty and staff in the Medical School and their colleagues in the hospitals and health centers, the president noted. Regents also approved two new positions for the health system. Dr. David Spahlinger was promoted to executive vice dean for clinical affairs and president of the hospitals, health centers, and the U-M Medical Group. T. Anthony Denton was promoted to senior vice president and chief operating officer for hospitals, health centers, and the U-M Medical Group. Runge said that strong leaders are essential for the future as the health system pursues strategic priorities designed to help the system operate seamlessly as a single enterprise.

Dr. Spahlinger described that the clinical enterprise now has three operating units: 1) University Hospital/Cardiovascular Center, 2) Children & Women's Hospital, and 3) U-M Medical Group (including Ambulatory Care). Each operating unit is led by a physician, nurse, and executive administrator and is responsible for its own clinical and financial performance. This new structure will enable local leaders to solve problems on a daily basis for our patients, fostering inter-professional collaboration to improve the quality and safety of our health system.

The three-person leadership team for each operating unit is as follows:

University Hospital/CVC

- Dee Fenner, MD, Chief Clinical Officer
- Shon A. Dwyer, MBA, RN, Executive Director
- Margaret M. Calarco, PhD, RN, Chief Nursing Officer

Children & Women's Hospital

- Chris J. Dickinson, MD, Chief Clinical Officer
- Paul A. King, MHA, Executive Director
- Margay Britton, MSN, RN, NEA-BC, Chief Nursing Officer (interim)

U-M Medical Group (including Ambulatory Care)

- Timothy M. Johnson, MD, Executive Director & Senior Associate Dean for Clinical Affairs
- Connie J. Standiford, MD, Executive Medical Director
- Jeanne Rizzo, MPH, Chief Operating Officer
- Nancy May, MSN, RN-BC, NEA-BC, Chief Nursing Officer

The new clinical enterprise also includes system-level leaders who will work across operating units to support strategic initiatives and leverage strengths to ensure that we operate as effectively as possible.

These system-level leaders include:

- Steven J. Bernstein, MD, Chief Quality Officer
- Margaret M. Calarco, PhD, RN, Chief Nurse Executive
- Thomas Campbell, Associate Vice President, Strategic Planning & Business Development
- T. Anthony Denton, JD, MHA, Senior Vice President & Chief Operating Officer
- Jeffrey S. Desmond, MD, Chief Medical Officer
- David C. Miller MD, MPH, Medical Director, Strategic Planning & Business Development

As the health system continued to further assess priorities, additional leadership positions were identified. Carol R. Bradford, MD, was named executive vice dean for academic affairs in July 2016. The selection of a leader for the position of Executive Vice Dean for Research and Chief Scientific Officer Academic Medical Center is in process.

Runge said that since coming to U-M in March 2015, he has learned "that Michigan is a great institution with exceptional people at all levels of faculty and staff." But he also believes U-M can be better. "We have the energy, resources, and talent to re-establish a performance record that reflects continuous improvement and innovation. Now is the time to do this, by focusing on enterprise-wide collaboration that will strengthen our performance in our hospitals and health centers, Medical School, and research facilities. Doing this should lead to better patient care."

Reference for more information:

<https://umhsheadlines.org/2015/09/u-m-health-system-announces-plans-to-reposition-itself-for-greater-integration-improved-patient-care/>

<https://umhsheadlines.org/2016/03/new-leadership-team-announced-for-clinical-enterprise/>

Partnerships Promote Long-Term Alignment for U-M's Clinical Enterprise

Establishing a statewide network of affiliates that support UMHS's clinical, research, and educational priorities promotes long-term alignment for its clinical enterprise. In today's healthcare environment where new insurance payment models are requiring high-quality care for large populations of people at an appropriate cost, health system affiliations are essential for success. Moreover, academic medical centers are faced with the challenge of maintaining a sufficient patient base that supports all three missions. UMHS continues to create clinical and business relationships that focus on the strategic missions embedded in the clinical enterprise: education, research, and patient care.

In 2013, UMHS and MidMichigan Health entered into an affiliation agreement with the aim of expanding access, quality, and the level of care provided to patients who live in the regional counties served by MidMichigan Health. "Partnering for better care, partnering for Michigan" is the focus of the affiliation, which means better care for patients at MidMichigan Health's locations and better access to specialty care at UMHS locations. Under this new affiliation, the two health systems have a wide range of options for designing new models of care to better serve patients. MidMichigan Health is a non-profit health system, headquartered in Midland, Michigan, and was recently named one of the nation's 15 Top Health Systems by Truven Health Analytics. MidMichigan Health covers a 22-county region with medical centers in Midland, Alma, Clare, Gladwin, and Alpena. The agreement gave UMHS a small minority equity interest in MidMichigan Health and two seats on the MidMichigan Health board of directors.

In September 2016, Metro Health Corporation's board of directors and the regents of the University of Michigan each approved a definitive affiliation agreement setting the stage for Metro Health to join UMHS. This deal was finalized in December. Metro Health and UMHS will create a clinical care network that builds upon the strengths of the world-class U-M academic medical center and a very successful community-based health system. Together the two organizations will focus on bringing increased health care innovation to west Michigan and beyond.

One guiding principle of the U-M clinical enterprise is to "enable local care locally." UMHS remains committed to this principle as it plans for future years. Local care efforts include:

The U-M Northville Health Center was opened in July of 2014. This state-of-the-art health center brought routine and complex specialty health care close to home for patients in the growing communities of western Wayne County. The Northville Health Center has 100,000 square feet of clinical and diagnostic space for adults and children. In addition to primary and specialty care, the center offers a comprehensive musculoskeletal program designed to care for bones, joints, and muscles; eye care for adults and children; sub-specialty pediatrics, radiology services such as diagnostic imaging, bone ultrasound and magnetic resonance imaging; infusion for cancer and non-cancer treatment; and a medical procedures unit used for colonoscopy, capsule endoscopy, spinal injections and other procedures.

UMHS plans to build a new 320,000-square-foot health center to provide expanded primary and specialty care in the Brighton area as well. Similarly, around the end of 2017 the doors will be opening to the new West Ann Arbor Health Center – Parkland Plaza. This new 75,000 square-foot facility will increase ambulatory care capacity and improve access to serve the health care needs of Ann Arbor and surrounding communities.

UMHS has also joined Together Health Network as a referral provider for complex quaternary healthcare services. Quaternary services are those complex inpatient and outpatient services that generally are provided only in select settings such as UMHS. Together Health is a statewide physician-led clinical network of healthcare providers, formed in 2014 by a partnership between the Michigan ministries of Ascension and Trinity Health and thousands of physician partners. The agreement allows for UMHS to provide services that are not generally available in the communities served by Ascension and Trinity Health. This partnership with UMHS helps Together Health round out its clinical integration strategy to provide patients comprehensive care across the continuum. It also paves the way for broader clinical collaboration efforts between UMHS and Together Health.



Metro Health Hospital, Wyoming, MI



MidMichigan Medical Center, Midland, MI



U-M Named a Top Performing Hospital by U.S. News & World Report, #1 in Michigan

U.S. News & World Report names U-M Health System to Honor Roll of top national hospitals

The University of Michigan's hospitals and health centers are among the top 20 hospitals in the nation, according to the 2016-2017 U.S. News & World Report rankings. Today's "Best Hospitals" list names U-M to the Honor Roll, ranking it No. 18 in the U.S. and first in Michigan. The Honor Roll includes 20 hospitals nationwide. "It's an honor to be recognized as one of the leading hospitals in the nation," said Marschall S. Runge, M.D., Ph.D., executive vice president for medical affairs and CEO of UMHS.

U-M is recognized in 15 of the 16 adult specialty areas rated, and ranked in the top 50 nationwide in 12 areas. Only 3 percent, or 153 hospitals out of approximately 5,000, earned even one ranked spot. Nine specialty areas, including Cancer, Cardiology & Heart Surgery, and Neurology and Neurosurgery, improved in rank from last year. Ear, Nose & Throat placed highest at No. 8, with ophthalmology also earning a Top 10 honor at No. 9. Additionally, C.S. Mott Children's Hospital received national rankings in the U.S. News & World Report list of "Best Children's Hospitals." C.S. Mott was ranked in more pediatric specialty areas than any other Michigan children's hospital.



2016-17 **Best Hospitals Rankings**
U-M's Rank by Specialty Category

- #18 United States
- #1 Michigan
- #1 Detroit Metro

Leaders Gather to Launch New UMHS Diversity Initiative

More than 400 leaders across the health system came together in April, 2016 to officially kick off a new Diversity, Equity and Inclusion (DEI) strategic planning process for the health system. The theme of the April DEI summit was "Start where you are. Do what you can. Use what you have." President Mark Schlissel delivered kick-off remarks promising a "bottom up" approach that involves input from team members at all levels and across all departments. "We're empowering everyone to get involved and help shape this process," said President Schlissel. "If we succeed, it's not just UMHS that benefits; it's all academic medical centers nationally. We're creating a model diversity, equity and inclusivity initiative in healthcare across the U.S."

EVPMA and Medical School Dean Marschall Runge set expectations and charged the leaders in attendance to get their own teams involved in developing DEI initiatives tailored to their specific departments and areas of operation. "We're strongest when we work together. When we better understand our patients, we can provide far better healthcare and a much more productive work environment for faculty and staff and our trainees" Dr. Runge said. UMHS faces an increasing array of opportunities and challenges as the landscape of academic healthcare continues to change. In order to realize its vision of performance excellence in all three areas of the mission, a talented and diverse workforce is needed. Six vital strategies were outlined to help leaders integrate diversity, equity and inclusion into operations, ultimately supporting the institution's goal to create an inclusive environment where everyone, including students, patients, faculty and staff, feels valued.



Reference: https://umhsheadlines.org/2016/04/schlissel-runge-and-other-leaders-gather-to-launch-new-umhs-diversity-initiative/?utm_campaign=Newsletter&utm_source=Newsletter_20160413&utm_medium=email

FOCUS ON PHILANTHROPY & OUTREACH

Department of Neurosurgery Co-hosts Neurofibromatosis Conference with NF Michigan

The U-M Department of Neurosurgery co-hosted a conference with the Neurofibromatosis Foundation of Michigan entitled “What’s New in Research and Treatment for Neurofibromatosis?” on April 23, 2016 at the Biomedical Science Research Building. Neurofibromatosis, also known as NF, is a genetic disorder of the nervous system that causes tumors to form on nerves anywhere in the body at any time. It is a progressive disorder that affects all races, all ethnic groups, and both sexes, equally. NF is the single most common genetic disorder of the nervous system, occurring in one in every 2,500 to 3,000 births. Despite its frequency, few people are familiar with NF.

The conference was geared toward NF patients, advocates, and patients’ family members. U-M faculty from several departments, including Dr. Greg Thompson from the Department of Neurosurgery gave educational lectures at this event. Approximately 75 people attended the conference,

with the majority coming from the Detroit and Grand Rapids areas. However, some guests traveled from as far as Gaylord, MI, St. Louis, MO, and Buffalo, NY. The conference was well-received by those in attendance. Said one anonymous conference attendee: “The quality of presentations was superb. I didn’t expect such scientific depth and left the conference with a long list of topics for further reading.” The Department of Neurosurgery was proud to co-host this event and play a small role in the great work that NF Michigan does for the NF community throughout the state.



To learn more about NF Michigan, please visit nfsupport.org.

Paying it Forward for Neurosciences

When Natalie Tallon and John Dohr married in April of 2010, John was a healthy man who was full of life and was ready to enjoy many happy and exciting new experiences with his wife, Natalie. This all came to a screeching halt in July of 2013 when John suffered a seizure that landed him in the emergency room in the Toledo, OH area. It was then that Natalie and John learned that John had a brain tumor. They decided to come to U-M for his care, and they have been extremely grateful about their decision. They say that every physician, nurse, and caregiver has provided them with prompt, compassionate attention when they’ve had questions or concerns, and they have consistently been treated with respect and kindness.

They are forever grateful to the team at UMHS for providing such wonderful care, and as a result Natalie has made a very generous gift to U-M through her estate to further the great work happening here. During her life, Natalie has benefited from others “paying it forward” and because of it, she has become a strong believer in this philosophy. Natalie hopes that this gift will provide seed-funding for physicians and researchers who aspire to find better solutions for complicated medical diagnoses such as brain tumors and epilepsy. Natalie’s gift will establish two endowed, named funds: 1) Natalie L. Tallon and John S. Dohr Brain Tumor Research Fund in Neurosurgery, and 2) Natalie L. Tallon and John S. Dohr Epilepsy Research Fund in Neurology.

Natalie and John are especially grateful to the Department of Neurosurgery’s own Dr. Oren Sagher, as well as Dr. Simon Glynn (neurology) for their humor and kindness during an especially difficult time.



Natalie Tallon and John Dohr on their wedding day in April, 2010

Leah’s Happy Hearts

Leah’s Happy Hearts...
Making little hearts happy!

Leah’s Happy Hearts was founded by Karen & Phil James after their daughter, Leah, passed away at five years old from Diffuse Intrinsic Pontine Glioma (DIPG), a rare pediatric brain cancer. For the last ten years, Karen, Phil, and their daughter, Kylie, along with their dedicated board members have been wonderful friends and supporters of the Department of Neurosurgery to fund pediatric causes in memory of Leah. To date, they’ve donated over \$100,000 to U-M through their fundraising efforts. Following are some of the neat projects that Leah’s Happy Hearts supports:

WINGS OF COURAGE: In May, 2015, the Department of Neurosurgery published a children’s book called “Wings of Courage.” It is a story aimed to inspire and aid children being seen at C.S. Mott Children’s Hospital to find courage in themselves when they’re battling a scary disease or diagnosis. The main character’s name is Leah and this story demonstrates the strength Leah showed when she was battling her brain tumor.

FUNDING RESEARCH FOR PEDIATRIC BRAIN CANCER: For the past several years, Leah’s Happy Hearts has been funding research in the Castro/Lowenstein Lab aimed at finding treatment options for young patients diagnosed with DIPG. Through their support, Drs. Maria Castro and Pedro Lowenstein have created a model which will help them to better understand the disease; their funding also provides scientists with the opportunity to test novel therapies.

MAKING HEARTS HAPPY DURING THE HOLIDAYS: In line with their mission of making little hearts happy, Leah’s Happy Hearts holds a holiday event the Sunday before Christmas each year; they set up gift stations on various floors at Mott so that patients can “shop” for their loved ones. Their goal is to make being in the hospital during the holidays just a little more enjoyable.

To learn more about Leah’s Happy Hearts, please visit their website at leahshappyhearts.org.



Karen and Kylie James, Dr. Maria Castro, and Phil James at the 2016 LHH 9th Annual Family Fun Walk



Drs. Pedro Lowenstein and Maria Castro with Karen, Kylie, and Phil James at the 2014 LHH Holiday Shop



JOIN US! BE A VICTOR!

If you would like to learn how you can make a gift during your lifetime, or how to include the University of Michigan in your estate plan, please contact Mark Veich at 734-763-1402 or mveich@umich.edu to discuss your goals.

MEDICINE NEEDS VICTORS — BECOME A VICTOR.

Today, at the University of Michigan Health System, we are working toward solutions that bring hope to patients with devastating neurosurgical diseases. With your support, we can advance treatments and accelerate health care toward a better future.

For more information on making a gift to the Department of Neurosurgery at the University of Michigan, please contact:
Mark Veich at 734-763-1402 or mveich@umich.edu.



NEUROSURGERY

UNIVERSITY OF MICHIGAN
HEALTH SYSTEM

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Carol R. Bradford, M.D., Executive Vice Dean for Academic Affairs
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