



SOM *news*

Point of PRIDE



Melvin Sharoky, MD, a 1976 University of Maryland School of Medicine graduate and current member of the UMSOM Board of Visitors, developed the first transdermal patch to treat depression.



What's New...

SOMnews has now expanded to eight pages, with more information and special sections on Research & Discovery, Clinical Care, Academic Innovations, and Community Impact.

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DEAN'S MESSAGE

At the forefront of 2018 is our dedication to training the next-generation physicians, scientists, and physician-scientists who will make a dramatic impact on the future of biomedicine, and providing the highest-quality, patient-centered care at our state-wide network of premier clinical practices. At the end of last year, our 210th anniversary year, we closed with the Fifth Annual Festival of Science. This event not only highlights a key area of research across the entire School of Medicine, but also focuses on research partnerships among our senior and junior faculty in a particular field. This year's focus was on "Mobility Disability in Aging." The presenters all mentioned the cross-collaborative work they are conducting with their colleagues, not just at the School of Medicine, but across the nation.

I was particularly pleased to see the joint presentation given by W. Jonathan Lederer, MD, PhD, Christopher Ward, PhD, and Joseph Stains, PhD, who not only demonstrated the complementary nature of their individual studies, thereby placing them in a good position to apply for a program project grant, but also the power of actual or virtual proximity to fueling their work together. Although "water cooler conversations" may be a bit of an antiquated notion, the idea that investigators working next to each other end up working with each other is not. This is why the placement of collaborative research teams in the new School of Medicine Research Building, Health Sciences Facility III, is so vital to encouraging interdisciplinary collaboration.

However, not every joint research project benefits from happenstance — i.e., one group is assigned laboratory space next to another group, the two start talking, and "boom," a cooperative research project is born. Sometimes, we need to make a deliberate effort to promote and accelerate innovation and discovery. Simply wishing for that to happen is not enough.

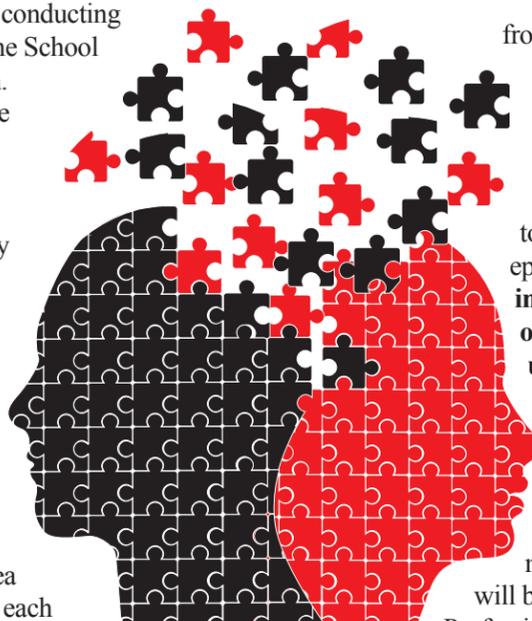
For example, this month we feature the work of the Brain Science Research Consortium Unit (BSRCU), led by Bankole Johnson, DSc, MD, MB, ChB, MPhil. The BSRCU was conceived in 2014 as part of the School's Shared Vision 2020 for UM Medicine. To achieve our Vision 2020 research goals of tackling "big science" questions, we chose to leverage our senior faculty, Chairs, and Directors — the best and brightest that we have — and put them together in a consortia, thereby harnessing their incredible talents more easily.

We started with a research consortium unit focused on the brain because neuroscience is an area of great interest across multiple disciplines. It engages basic, translational, and clinical researchers, and draws upon the unique strengths we have at the School of Medicine,

What's on My Mind...



...as we return to work after a restorative holiday break, is a renewed commitment to conducting collaborative, multi-disciplinary research with a direct impact on improving health.



from the decades-long work of the Maryland Psychiatric Research Center to the cutting-edge research on MRI-guided focused ultrasound to treat essential tremor and the groundbreaking work we are doing to stem the tsunami of the opioid epidemic in this country. We are incredibly fortunate to have a cadre of faculty whose work is dedicated to unraveling the mysteries of our most precious and puzzling organ.

Related to the work of the BSRCU is the School of Medicine's research portfolio on concussion and traumatic brain injury treatment. Next month, the majority of our citizens will be watching the 52nd Super Bowl.

Professional sports, and particularly American football, are only recently acknowledging the real toll that repeated head injuries can have on the longevity and well-being of players and their families. Although injured athletes may get a lot of attention in the media, people with head injuries due to falls, traffic accidents, and violence also face long roads to recovery. The work that our faculty is doing in these areas will become vital, not just in terms of helping patients recovery more quickly and more fully, but also providing greater insights to how the brain functions — or doesn't function — after trauma.

As we look ahead with anticipation and excitement over the promise that this New Year may bring, I strongly encourage us also to look to our left and to our right — our next great collaborative project could entail working with the person conducting research in the laboratory next door.

In the relentless pursuit of excellence, I am
Sincerely yours,

E. Albert Reece, MD, PhD, MBA
University Executive Vice President for Medical Affairs
John Z. and Akiko K. Bowers Distinguished Professor and
Dean, University of Maryland School of Medicine

Promoting Stronger Patient-Provider Relationships — with PEP!

PROGRAM BOOSTS UMSOM SCORES BY 40 PERCENT — TWO YEARS IN A ROW



GOALS

ELICITING THE PATIENT'S STORY

LISTENING REFLECTIVELY	NEGOTIATING AN AGENDA
BUILDING RAPPORT AND RELATIONSHIPS	ACKNOWLEDGING COMMUNICATION BARRIERS
RECOGNIZING PATIENT PERSPECTIVES	ASKING OPEN-ENDED QUESTIONS
RESPONDING WITH EMPATHY	

EXCELLENCE IN PATIENT-CENTERED COMMUNICATION

How important is a physician’s “bedside manner” to patients? According a recent study by the Associated Press-NORC Center for Public Affairs Research, most Americans (59 percent) cite a positive physician-patient relationship as the leading benchmark for determining a high-quality physician. In fact, this factor holds greater weight for patients than even the effectiveness of care provided or the patient’s own health outcomes.

In March 2016, to ensure that faculty physicians at the University of Maryland School of Medicine (UMSOM) meet and even exceed these patient expectations, school leadership introduced the Program for Excellence in Patient-Centered Communication (PEP). The program uses a proven, evidence-based curriculum developed by the American Academy on Communication in Healthcare (AACH).

In the 22 months since its introduction, PEP already is showing remarkable results, based on the ratings of faculty physicians who have completed that training. In a Clinician & Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) survey, the performance of this cohort has increased by more than 40 points for two years in a row, while its overall rankings, based on a survey by consultants Press Ganey, rose from the 20th percentile in 2015 to the 54th percentile in March 2017.

It wasn’t always so. When patient experience surveys in 2013 indicated that UMSOM faculty physicians were falling short of patient expectations, the school’s leadership took immediate action.

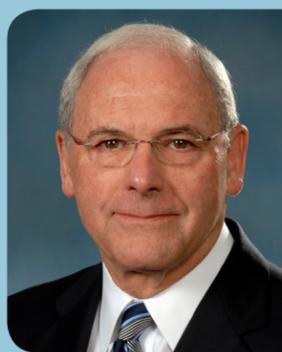


Inc. (FPI), selected PEP. AACH’s programs seek to identify physician communication skills as identified by patient surveys, such as paying more attention to prioritizing the patient’s concerns about their illnesses, addressing the impact of suffering on their personal lives and emotional state, and ensuring patients have a clear understanding about the details of their diagnosis and management planning. *“The training gives physicians additional tools to have more responsive, empathic relationships with their patients and to ensure that patients feel heard and involved in setting the agenda for their treatment plans,”* says **Rukiya Wongus, MHA, CMPE, PMP**, who is FPI’s Associate Director, Patient Experience Improvement and manages the PEP program.

The PEP process involves two stages, beginning with the recruitment of highly respected and experienced faculty physicians to serve as workshop facilitators. *“Dr. Schwartz had strong criteria for the type of faculty he was looking for to serve as facilitators — those who had a level of influence within their departments as leaders, and who also were willing to invest the time required to train and serve as facilitators,”* says Wongus.

Within each small-group PEP workshop, facilitators employ both instruction and role-playing to practice specific communication skills in training physicians to build more effective partnerships with their patients. Nearly 88 percent of faculty physicians who have completed the course have rated it as “good” or “very good,” with 86 percent saying they would recommend it to their colleagues. Just over 82 percent of respondents agreed or strongly agreed that they would change their professional communication strategies as a result of the course. *“In 2018, we are looking to partner with AACH to bring in additional support and resources in terms of doing refresher courses for our ‘graduates’ and even exploring how this training could be added into the medical school curriculum,”* says Wongus. *“We also are considering how we can offer the program to our House staff and other clinical practice providers, like nurse practitioners and physician assistants.”*

As of December 2017, UMSOM’s PEP initiative boasts 16 facilitators who have led 45 PEP workshops and trained nearly 400 of UMSOM’s 1,000 faculty physicians. *“Changing the culture and behaviors of an organization is always challenging and not something that happens quickly,”* notes Dr. Schwartz. *“We have to be realistic that it will take time to do this. However, the results we have seen so far with PEP have been very encouraging.”* 🏛️

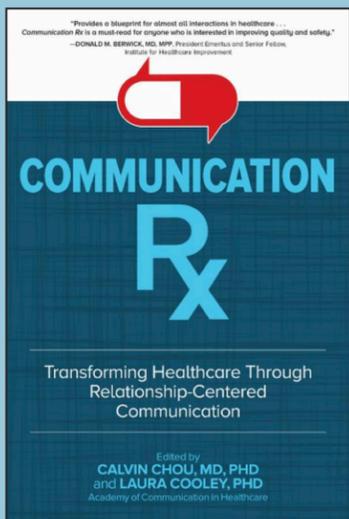


“The objective was to help our faculty enhance their skills in these critical areas.”

— David Schwartz, MD

“Our patients know that we will provide high-quality care here at Maryland, but their other concerns had not been formally addressed.” says **David Schwartz, MD**, Professor in UMSOM’s Department of Obstetrics, Gynecology and Reproductive Sciences, and Director of the Dean’s Clinical Program Initiatives. After reviewing several solutions, Dr. Schwartz, along with colleagues from the Patient Experience and Service Excellence Program at University of Maryland Faculty Physicians,

UMSOM PEP PROGRAM GAINING NATIONAL ATTENTION



< UMSOM’s PEP Program is featured in a new book on Patient Communication.



< UMSOM faculty speakers shared best practices for gaining physician engagement and organizational buy-in through development of the PEP program during a national webinar, created in partnership with Press Ganey and the American Academy on Communication in Healthcare. The webinar had 341 attendees — including senior leaders from Penn Medicine, NYU, and Mayo Clinic.



For more information or to register for a workshop visit the Program for Excellence in Patient-Centered Communication (PEP) website at www.medschool.umaryland.edu/programs/pep.

THE BRAIN: Our Most

Brain Science Research Consortium Unit Continues Its Innovative Work

Since its inception in 2014, the Brain Science Research Consortium Unit (BSRCU) at the University of Maryland School of Medicine (UMSOM) has focused on cutting-edge interdisciplinary research related to the brain. The BSRCU, which is led by **Bankole A. Johnson, MD, DSc**, professor and chair of the Department of Psychiatry, has an exciting range of collaborative research initiatives taking place:

CALCIUM IMAGING

The BSRCU Pain and Addiction Work Group has been using a new technology—calcium imaging. With this tool, researchers actually can see neuronal activity with a high level of detail, and can distinguish one neuron type from another, providing key insights into how large ensembles of neurons work together to produce coordinated behaviors, and how calcium fits into this important process of neuronal communication. In addition, this work group has begun to investigate how individual neurons operate to produce coordinated, goal-directed activity.



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This project includes the following UMSOM faculty:

- 1 • **Joseph F. Cheer, PhD**, Professor in the Department of Anatomy and Neurobiology;
- 2 • **Dennis Sparta, PhD**, Assistant Professor in the Department of Anatomy and Neurobiology;
- 3 • **Mary Kay Lobo, PhD**, Associate Professor in the Department of Anatomy and Neurobiology;
- 4 • **Michael T. Shipley, PhD**, the Donald E. Wilson, MD, MACP Distinguished Professor and Chair of the Department of Anatomy & Neurobiology;
- 5 • **Adam Puche, PhD**, Professor of Anatomy and Neurobiology, and;
- 6 • **Brian Mathur, PhD**, Assistant Professor of Pharmacology.

Their work is already yielding results, including an NIH National Institute of Mental Health R01 grant, several other large grants, and two published manuscripts.

The technique allows researchers to capture data in real time, enabling them to ask and answer a wide range of questions. Researchers are focusing on the role of specific cell circuits in certain types of reward-guided behavior, the role of certain cells in encoding actions and habits, and the role of certain neurons in attention and sensation. The technology is also being used to examine pressing neuropsychiatric disorders, including drug and alcohol use and abuse, and depression. This technique allows for the recording of neuronal activity over weeks or even months. This allows scientists to better understand how the brain changes as a function of disease or trauma.

Puzzling Organ

NEUROINFLAMMATION IN TRAUMATIC BRAIN INJURY

Another BSCRU researcher has been looking at the central role that neuroinflammation may play in certain brain injuries and disorders. **David J. Loane, PhD**, Associate Professor in the Department of Anesthesiology, and member of the Center for Shock, Trauma and Anesthesiology Research (STAR), is studying the central role that neuroinflammation plays in traumatic brain injury (TBI). In particular, he is focusing on microglia, immune cells in the central nervous system that defend the brain from injury and infection. He is finding that these cells may contribute to the problems in TBI and several other neurodegenerative disorders. When microglial cells in the injured brain become over-activated, they release reactive oxygen species and other inflammatory substances that can kill neurons. This process may play a part not only in TBI, but also in Alzheimer's and Parkinson's disease, as well as other neurodegenerative disorders.



“By understanding the molecular mechanisms that regulate microglial cell function, we may be able to engineer better drugs or other advanced treatment strategies that could stimulate neuroprotective functions after brain trauma, even as monumental as tissue repair and regeneration,” said Dr. Loane. *“This would be a game changer for TBI.”*

BIOMARKER BLOOD TESTS DISTINGUISH EPILEPTIC SEIZURES

For the past 20 years, **Peter B. Crino, MD, PhD**, Professor and Chair of the Department of Neurology, has focused on translational research studying mechanisms of altered brain development associated with autism, intellectual disability, and epilepsy. He is an expert in defining developmental disorders associated with intractable epilepsy, including tuberous sclerosis complex (TSC), focal cortical dysplasia, hemimegalencephaly, and autism. As part of his work with the BSCRU, Dr. Crino and his team recently identified new blood-based protein markers that can be identified through biomarker blood tests and that accurately distinguish epileptic seizures from other neurological events.



UMSOM BSCRU EXECUTIVE COMMITTEE:

- 1. Dr. Bankole Johnson
- 2. Dr. Mimi Belcher
- 3. Dr. Margaret McCarthy
- 4. Dr. Alan Faden
- 5. Dr. Robert Buchanan
- 6. Dr. Peter Crino
- 7. Dr. Michael Shipley
- 8. Dr. Scott Thompson
- 9. Dr. Howard Eisenberg
- 10. Dr. Elias Melhem

BSCRU'S NEWEST EXECUTIVE COMMITTEE MEMBER:

Tracy L. Bale, PhD, Professor of Pharmacology and Psychiatry, and the Director of the newly established Center for Brain Development and Maternal Mental Health.

Dr. Bale, who came to UMSOM last year as part of the school's Special Trans-Disciplinary Recruitment Award Program (STRAP), is a leading expert on the links between stress and subsequent risk for neurodevelopmental disorders, including autism and schizophrenia in offspring. Her innovative studies use molecular techniques to determine the mechanisms by which this may occur. Her studies on the placenta have revealed novel sex differences that may predict increased prenatal risk for disease in males. Prior to coming to UMSOM, she was a Professor of Neuroscience at the University of Pennsylvania School of Medicine, and the School of Veterinary Medicine. She is a reviewing editor for the *Journal of Neuroscience*, and serves on the Congressional Committee on Gulf War Veterans Health. She has authored or co-authored more than 90 peer-reviewed papers. Dr. Bale brings nearly \$4.5 million in total research funding from NIH.



11 Dr. Tracy Bale

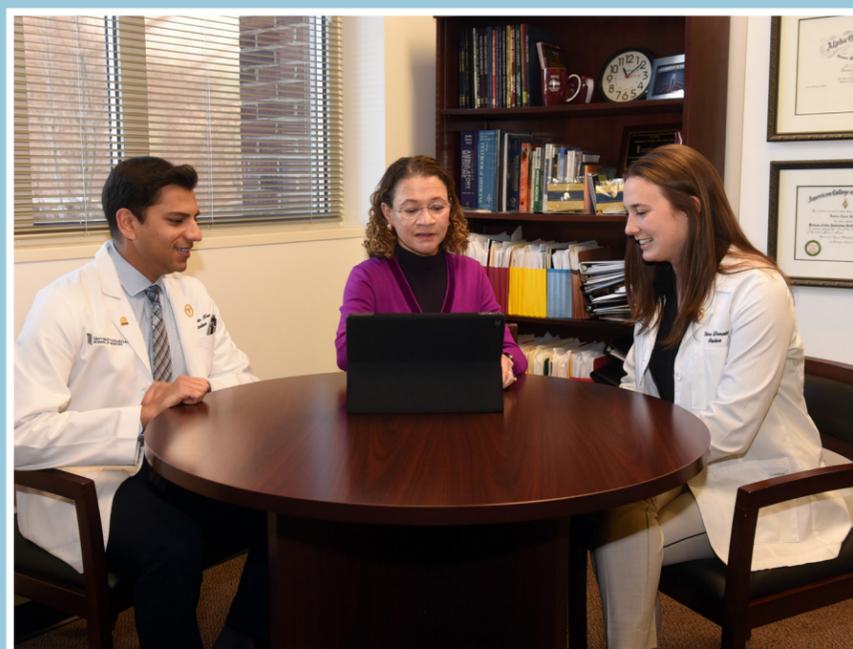
Electronic Application Tracking Tool Boosts UMSOM Residency Results

Officials at the University of Maryland School of Medicine (UMSOM) now use an electronic tool to help fourth-year medical students in their residency application process. With a series of data points, the Office of Student Affairs can log in and can search current and past data by student, specialty, institution, and academic metrics such as class rank and national medical licensing examination scores.

They use this data to help students in real time respond to individual inquiries about interviews with precise information, engage department contacts for support for students at risk, and provide future students with realistic roadmaps of programs to consider.

The tool is designed to help students at a time when residency positions — in fields such as surgical subspecialties — have become extremely competitive. Even in less competitive fields, specific programs may be very difficult to obtain. At the same time, the applications and matching process for residencies has become more complex and competitive.

Nationwide, more than 41,000 U.S. and international students applied for one of the approximately 30,000 first-year residency positions offered in the 2017 Main Residency Match, according to the National Residency Matching Program (NRMP).



The tool, which was created and launched in 2014, has already shown good results, putting match rates among UMSOM students above the national average. Currently, 94 percent of students are participating actively in adding their data to this tool. Each year, more than 3,000 data points have been entered into the tracking tool.

UMSOM's match rate has increased since the tool has been implemented. The match rate among UMSOM's fourth-year medical students increased in 2016 and 2017 at a rate of approximately 3 percent each year. Results show that in 2017 98 percent of our students matched, compared to the national average of 94 percent.

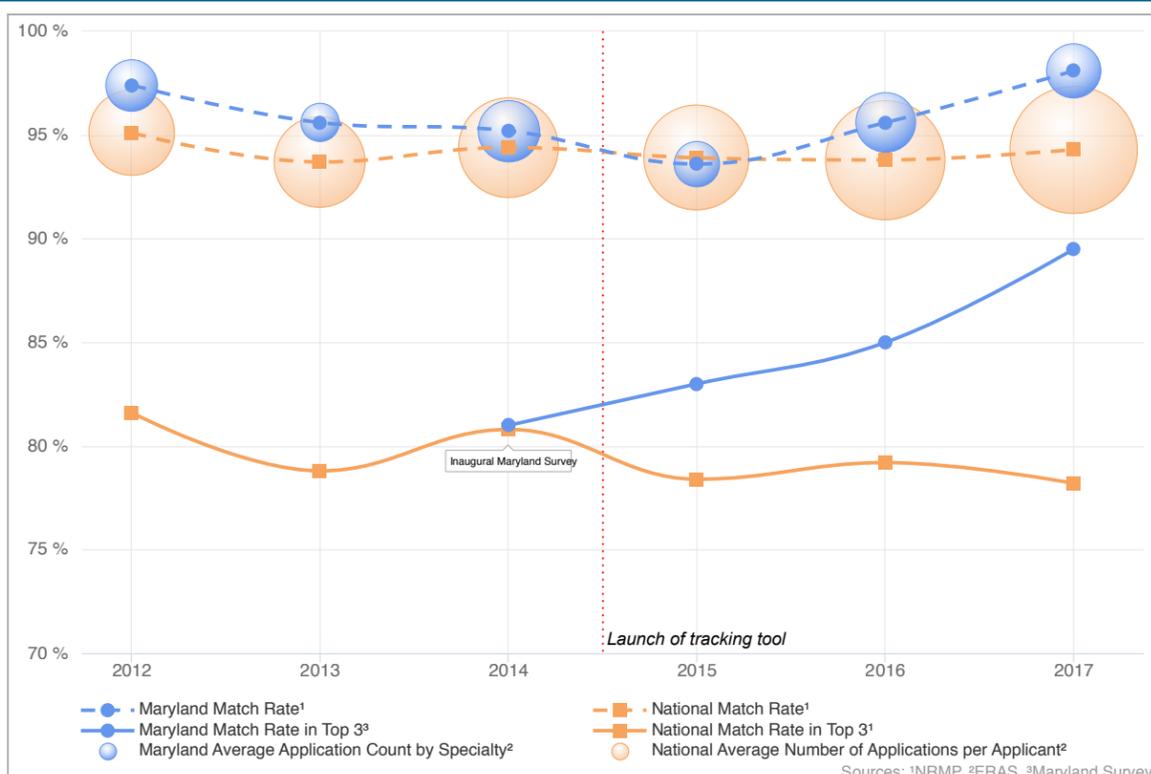
In addition, the percentage of UMSOM students who self-reported their rank in their top three choices increased to 89 percent from 81 percent.

This is far above the national figure, which in 2017 stood at 75 percent, despite an increase in the average number of applications submitted by students.

"We are achieving these results without our students having to apply to more programs. This saves the students time and money and helps the program directors who are being overwhelmed by the volume of applications," said Dr. Parker.



UMSOM'S RESIDENCY MATCH RATE EXCEEDS NATIONAL AVERAGE



CLASS OF 2020



Annual Student Auction Makes Bid to Fight Homelessness

CLASS OF 2020 CHOOSES TO BENEFIT BACK ON MY FEET BALTIMORE

“It’s definitely a team effort,”

says **Sara S. Manetta**, Class of 2020 MD candidate at the University of Maryland School of Medicine (UMSOM). *“We’re all hands on deck all of the time!”* Manetta is speaking about the flurry of activity surrounding preparations for the Annual Second Year Medical Student Auction, which will be held **Thursday, February 22, 2018**, from 5:30 to 7:30 pm at the Southern Management Corporation Campus Center, 621 W. Lombard Street, Baltimore, MD 21201. This event is open to parents, students, faculty, and staff.

An annual event since 2006, this year’s auction is organized by the Class of 2020’s Class Council. Funds raised will benefit class activities, with a portion of the proceeds supporting a local charity selected by members of the class. *“Based upon a class poll, our overwhelming choice was Back on My Feet Baltimore,”* says Manetta. *“A number of our classmates have personal ties to that organization through volunteer work, so it was by far the popular preference.”*

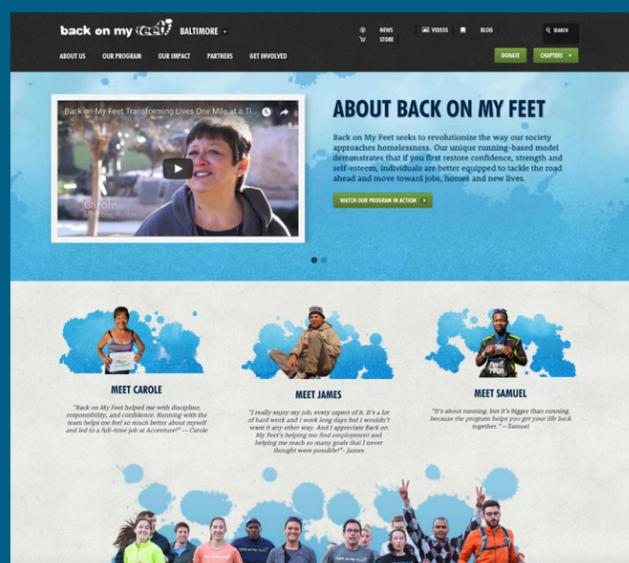
Back on My Feet Baltimore is the local chapter of a national organization that seeks to combat homelessness by promoting confidence and self-esteem through running, while providing community support, educational opportunities, vocational training, and housing resources. The organization notes that every \$1 invested in Back on My Feet returns nearly \$2.50 to the local community through increased economic output from employment and reduction in costs for shelter, medical services, incarceration and addiction treatment.

With the auction’s date just weeks away, Manetta says that her fellow second-year students actively are reaching out to family, friends, faculty, and local businesses for donations of items that will be used at the event’s live and silent auctions. The Class Council also has created a website (<https://sites.google.com/view/class-of-2020-annual-auction/home>) where auction items are listed, and interested donors can sign up to contribute auction items or make charitable monetary gifts. *“We’re definitely still looking for donations,”* states Manetta. *“The more support we receive, the better. we want to raise as much money as we can for Back on My Feet Baltimore.”*

A COMMITMENT TO COMMUNITY ENGAGEMENT

Donna L. Parker, MD, Associate Professor in the UMSOM Department of Medicine and Associate Dean for Student Affairs, believes that the annual auction clearly supports the school’s overall commitment to community engagement. “The second-year medical student auction has grown in both scope and attendance from its small beginnings,” she notes. “It always is wonderful to see students, residents, faculty, family, and friends perusing items during the evening of the auction, socializing, and ultimately bidding with the goal of raising money for the class and most importantly, the chosen local charity of the class.”

To learn more, visit www.backonmyfeet.org



For questions about the 2018 Annual Second Year Medical Student Auction or how to make a donation, please contact the Class of 2020 Class Council at som2020classcouncil@gmail.com

Congratulations to 2017 honoree

STEPHEN N. DAVIS, MBBS, FRCP, MACP

The Dr. Theodore E. Woodward Chair in Medicine
Professor of Physiology
Chair, Department of Medicine
University of Maryland School of Medicine

The Boy Scouts of America honored Dr. Stephen Davis with their 2017 Health Services Leadership Award at the 24th Annual Luncheon held on December 1. Dr. Davis was recognized for his outstanding work in the medical community and support of the Special Needs Scouting in Central Maryland.



Dr. Davis

SOMSpirit...

Stay **warm** and show your UMSOM Pride.

\$39.98



CHAMPION ECO
POWERBLEND
HOOD

Show your School pride by purchasing UMSOM apparel and accessories from the UMB Bookstore at the SMC Campus Center or order online at umb.bncollege.com



"Practices"

New UMSOM policy requires all patient care facilities to be called "practices."

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