PRIDE

becoming a pediatrician. Medical school in 1923, graduate Snaith, who became a pioneer Theresa Ora As we celebrate Women’s Day on March 8, 2018, we remember pioneer Theresa Ora Snaith, who became the first woman to graduate from the medical school in 1923, becoming a pediatrician.

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Focus on Women’s Health

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...is the importance of providing a foundation for a successful future, whether it be for our mental or physical health.

What’s on My Mind...

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

The month of March is a special time for our fourth-year medical students because it’s the time in their education when they are matched with residency programs. On Match Day, March 16, 2018, every medical student in the nation will discover where they will go for the next step in their training. It’s an auspicious occasion for students and their families, who have worked for so many years and, in some cases, sacrificed considerably to realize the dream of becoming a physician. Match Day is one more milestone in the incredible trajectory of our students’ bright futures. As a nation, we also celebrate this moment, for it represents a “coming of age” of the next generation of healthcare practitioners, physician-scientists, and biomedical innovators.

However, I believe that the path of success that our exceptional students are traveling along began much earlier than the start of medical school, or even any schooling. As an OB-GYN and perinatologist, I would argue that one’s future begins with the health and wellbeing of one’s mother before, during, and after pregnancy. Indeed, the British epidemiologist David Barker, MD, PhD, CBE, posed a hypothesis in the 1980s, now known as the Barker Hypothesis, which essentially states that a child’s future health is determined in utero. As we reflect on the future, it is vital to recognize the important role of the women who made that future possible — our mothers — and honor them collectively during Women’s History Month.

The School of Medicine has made significant contributions to advances in women’s health over the course of its history. For example, J. Whirridge Williams, MD, (Class of 1888) pioneered research into the formation of the placenta, laying the groundwork for his textbook Obstetrics: A Text-Book for the Use of Students and Practitioners in 1900. Today, Williams Obstetrics, as it is now known, is in its 24th edition and remains a staple of OB-GYN medical education and training, and a reference for healthcare practitioners.

Our School has also had a number of incredible women graduates and faculty, including Eva Dodge, MD, (Class of 1925), Maryland’s first female rotating intern and resident in OB-GYN; Ruth Baldwin, MD, (Class of 1943), who co-discovered the cause of one form of hereditary childhood blindness; Eve Higginbotham, MD, the first woman in the U.S. to chair a Department of Ophthalmology; and the late Angela Brodie, PhD, whose breast cancer research led to the discovery and development of a new class of breast cancer drugs, the aromatase inhibitors.

I am very pleased that we are also offering support for our women faculty. The Office of Research Career Development launched a new program to help junior faculty develop the scientific and professional leadership skills necessary to run successful laboratories. Although open to any faculty member, a key emphasis of this new program is the professional development of our women faculty. The program is intended to foster abilities required of our faculty leaders, including financial management, communications, leadership, negotiation, and mentorship skills. I am delighted that this program has started and look forward to the feedback of its participants and learning of its progress.

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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As we look to the future, we must also be grateful for the past. Our students matching to their residency programs recognize that they have only reached this point in their training because of the support, encouragement, guidance, and love of their families. Each of us also realizes that we would not be here if not for the nurturing care of the women in our lives. We are only made stronger by the diversity of the voices and perspectives in our community. During this Women’s History Month, I hope that each of you will take a moment to thank the women colleagues, leaders, and mentors who have helped make you a stronger, better individual.

In the relentless pursuit of excellence, I am proud to thank the women colleagues, leaders, and mentors who have helped make you a stronger, better individual.
A Safety Net for the Children of Maryland

When I came to this university twelve years ago, we already had a great department,” recalls Steven J. Czinn, MD, Drs. Rouben and Violet Jiji Endowed Professor and Chair of the UMSOM Department of Pediatrics, and Director of the UM Children’s Hospital (UMCH). “It was well-balanced with great clinical care, an excellent training program, and a robust research portfolio.” (Recently, SOM Pediatrics was named one of the top 25 departments in the nation for NIH research funding.)

“But our focus then primarily was West Baltimore,” he continues. “While we continue today to partner with city and state agencies that focus on child health in Baltimore City, we recognized back in 2006 that there was a shortage of pediatric specialists throughout the state.”

More than a decade later, Dr. Czinn and his team have accomplished just that. Today, the department’s pediatrics clinical network includes some 16 locally based practices in Baltimore City and eight Maryland counties. Comprised of three multispecialty “hub” offices and 13 individual specialty sites, the network collectively treated some 47,000 patients in 2017. According to Susan Roberts, the department’s Director of Practice Operations who oversees the network’s management, “This really is what our patients want — a community-based pediatrics specialty practice that has the look and feel of a private office.”

Recognizing the Opportunity

“Our strategy was very simple - we were going to go where the patients were,” notes Dr. Czinn. “Looking at our primary location in Baltimore City, it became clear that we could expand strategically if we developed offices convenient to patients in northeast, southwest, and central Maryland.” Initially taking advantage of small practice offices in Bel Air and in Shipley’s Choice (Anne Arundel Co.) offered through a joint initiative between the University of Maryland Medical Center and Faculty Physicians, Inc., the department began to test the waters in terms of patient reaction.

A Safety Net for the Children of Maryland

DEPARTMENT OF PEDIATRICS

EXPERT CARE ACROSS THE STATE

Achieving Growth

The first locations established were larger “hub” multispecialty practices— in Bel Air on the UM Upper Chesapeake Medical Center campus, in Lutherville near the UM St. Joseph Medical Center, and in Hanover near the UM Baltimore Washington Medical Center. That these pediatrics offices were placed in close proximity to University of Maryland Medical System (UMMS) medical centers was no accident. “We wanted to take advantage of the strengths of UMMS by leveraging the relationships with the pediatrics specialists at those medical centers, in case more extensive patient care is required,” notes Dr. Czinn.

As each of the subsequent specialty offices was planned, the Pediatrics administrative team identified the office spaces, worked closely with architects on layout and decor, and consulted with the physicians on floor plans and patient flow. “Our suburban pediatric-centered offices are bright, cheery, and very child-friendly,” affirms Roberts.

Further momentum in the network’s growth has been achieved through close relationships with a number of community partners, including the UMCH, the comprehensive primary care practice at UM Pediatrics at Midtown, and Mt. Washington Pediatric Hospital with its inpatient rehabilitation and ambulatory outpatient services.

According to Tony Bibbo, the department’s Senior Administrator, the pediatrics clinical network is now poised for additional expansion. “Through UM Capital Region Health (UMCRH), we are currently staffing the Neonatal Intensive Care Unit (NICU) at the UM Prince George’s Hospital Center and have a small presence at the UM Bowie Health Center, where cardiology patients are being seen,” he says. “We see Bowie as the next area of growth for us as a larger multi-specialty practice.” Bibbo also points to the development of the new UMCRH Regional Medical Center in Prince George’s County, slated to open in 2021, as a source of possible alignment.

Their “Secret Sauce” — Commitment

Still, growth doesn’t come without its trials. Dr. Czinn points out that the department’s culture had to change in order to embrace the new vision, especially in initially convincing their physicians to travel to network offices. “Historically, pediatricians didn’t go to where the patients were,” he says. “This was one of our biggest challenges and collectively, one of our greatest successes. At this point, 87 percent of our clinical pediatricians now travel to one or more of our network sites. It’s become not the exception but the rule. Because of that, we’ve had incredible growth.”

In addition, the department’s “re-energized” Practice Management Committee now critically reviews the management of all outpatient operations from the perspectives of both physicians and staff. “In some ways, this committee is our ‘secret sauce’ in learning about doing an even better job in terms of patient advocacy,” says Dr. Czinn. “Working together, our administrators, nurses, and physicians have taken ownership of the care we provide — and they take it personally. It’s amazing to watch.”
Due to this commitment, patient satisfaction throughout the network has become job one. Since coming on board in 2016, Susan Roberts has implemented a number of quality measures designed to accelerate staff teamwork, office efficiencies, and a more pleasing patient experience. These include a certification program to recognize both staff members and physicians for their “wow” behavior with patients. Roberts also is exploring new systems that promote enhanced patient access, such as cross-scheduling at different network sites for more timely appointments, and having a nurse embedded in the scheduling process to assess and accelerate visits for problematic patients. “Everyone in our network cares about seeing patients in the most efficient way possible without lengthy wait-times,” says Roberts. “So, we’re looking to provide our staff with all of the tools and training they need to help that physician in that office. It’s a matter of changing the culture with the belief that we can do this without stressing out the physicians or the patients.”

This approach has paid off. The department now regularly meets or exceeds its patient satisfaction goals, while the Lutherville and Hanover multispecialty offices have won the quarterly Patient Satisfaction Banner (awarded by FPI) nine times in a row. “Patient satisfaction through quality of care is our number-one clinical mission right now,” says Dr. Czinn. “Every time a patient visits one of our locations, we want it to be a great experience.” Roberts agrees. “It’s so important to keep our patients loyal,” she says. “They are the ones who are going out and through word of mouth telling others about our quality service.”

Looking to the future, Dr. Czinn is enthusiastic about the network’s promise, noting this increase in clinical activities also will drive translational research and the training of the next generation of pediatricians. “Personally, one of the things that I’m proudest about is we’ve been able to come up with procedures and protocols to support our faculty in their leadership of our ICU, our medical floor, and our emergency room, our ExpressCare service,” says Dr. Czinn. “In collaboration with the physician leadership of our ICU, our medical floor, and our emergency room, we’ve been able to come up with procedures and protocols to accommodate most of the transfer requests we receive,” notes Dr. Czinn. “We’ve totally transformed the way that we manage the throughput and the availability of beds. Consequently, our market share has grown and our volumes are up.”

SAFELY TRANSPORTING THE MOST FRAGILE

How does the Department of Pediatrics ensure its youngest, sickest patients receive lifesaving care? Since 1997, the Maryland Regional Neonatal Transport Program (MRNTP) has provided safe, effective, and efficient ground and air transportation services for infants and their families. Operated as a joint partnership between the Johns Hopkins Children’s Center and the University of Maryland Medical System, MRNTP provides statewide service, with all transport vehicles staffed by neonatal transport nurses and specially trained medics. Transported neonates arriving at UMMC’s Children’s Hospital are received by the Drs. Rouben and Violet Jiji Neonatal Intensive Care Unit, a 54-bed, Level 4 unit that’s “one of the leading NICUs in the nation,” according to UMCH Director Dr. Steven J. Czinn. “About 60 percent of patients in our NICU arrive via MRNTP. Once there, they receive the best care with excellent outcomes.”

Patients one year and above are transported to UMCH by the Pediatric ExpressCare Transport Service, which is part of UMMC’s Pediatric ExpressCare service. “In collaboration with the physician leadership of our ICU, our medical floor, and our emergency room, we’ve been able to come up with procedures and protocols to accommodate most of the transfer requests we receive,” notes Dr. Czinn. “We’ve totally transformed the way that we manage the throughput and the availability of beds. Consequently, our market share has grown and our volumes are up.”
Focus on Women’s Health

Scientists at the University of Maryland School of Medicine (UMSOM) are producing a wide range of innovative research that focuses on women’s health. Below is an update on some recent projects that are uncovering what causes women to have disrupted sleep and the potential health risks, the impact smoking and other issues can have on the female microbiome and a woman’s reproductive health, and differences in the brain between women and men to better treat certain conditions.

RESEARCHING SLEEP

Chronic sleep issues can lead to a host of health issues such as depression, diabetes, cardiovascular disease and even Alzheimer’s disease. Women and girls are almost twice as likely to experience sleep disruptions and insomnia throughout their lifespans compared to males.

While much is known about the mechanisms that drive sleep, researchers at UMSOM are studying what causes those differences in sleep between males and females. At the heart of this research is understanding the impact female reproductive hormones such as estrogen and progesterone have on the cells in the brain that control sleep.

“Research into how the brain controls sleep suggests that the neuronal pathways controlling sleep may be different between males and females,” according to Jessica Mong, PhD, Professor of Pharmacology. Her research in a rodent model has demonstrated that, in females, estradiol — the major female sex hormone — regulates the sleep circuit. Males, on the other hand, seem insensitive to changes in gonadal steroids (both testosterone and estradiol). Her team has identified that the median preoptic nucleus (MnPN), the main sensory relay station of the nervous system in the brain, is a key regulatory site for estrogenic modulation of sleep in females. However, significant gaps in the understanding of how estradiol regulates sleep remain, such as the cellular and molecular mechanism through which estradiol exerts its regulatory actions.

Mong said that having a better understanding about how sex steroids impact sleep-regulatory neurons will lead to better treatments for women with sleep disorders. Dr. Mong is co-chair of The Society for Women’s Health Research’s Network on Sleep and co-authored a sleep guide Women & Sleep: A Guide for Better Health, which is being distributed to health professionals and other organizations to help educate women about the risks of sleep disorders.

CO-SLEEPING WITH TODDLERS

Separate research conducted by UMSOM and the University of Maryland School of Nursing showed that co-sleeping with toddlers increases stress, depression, and anxiety for mothers. Maureen M. Black, PhD, the John A. Scholl, MD and Mary Louise Scholl, MD Endowed Professor in Pediatrics at UMSOM and director of the Growth and Nutrition Clinic in the Department of Pediatrics at the University of Maryland Children’s Hospital.

The study, which was published in the Journal of Developmental and Behavioral Pediatrics, involved 277 low-income mothers and children ages 12 to 32 months living in Baltimore. Researchers found that toddlers in low-income families often co-sleep with their parents in the same room or in the same bed. Researchers studied whether co-sleeping affects mothers’ sleep and mental health.

The research showed that mothers who co-sleep with...
women's Health

toddlers with perceived sleep problems lost almost one hour of sleep and reported symptoms of stress, depression and anxiety. The mothers of children who did not have perceived sleep problems did not lose sleep or have depressive symptoms, regardless of the sleeping arrangement.

“Mothers who perceive their child as having a sleep problem and then sleep in the same bed or room with the child as a means of comfort are likely to wake up during the night, get less sleep and report symptoms of stress, anxiety, and depression. In principle, these results can be extrapolated to any family with a toddler, as a toddler who awakens and looks for a parent disrupts the parent’s sleep,” said Dr. Black.

WOMEN’S MICROBIOME

The human microbiome contains trillions of microorganisms and plays an important role in overall health. In the gastrointestinal tract, gut bacteria help with digestion, fighting off disease and other critical functions. In a woman’s reproductive tract, the microbiome serves as a first line of defense against infections, and UMSOM researchers are studying what impact changes to the vaginal microbiome can have on reproductive health.

According to the U.S. National Health Interview Survey, 13.9 percent of U.S. women reported that they smoked cigarettes in 2016. A recent UMSOM study found that cigarette smoking was associated with a significantly altered vaginal microbiome, putting female smokers at greater risk for infection and other reproductive health outcomes. With funds from two University of Maryland seed grants (the UM8 and UMCP Research Seed Program as well as the UM Cancer Epidemiology Alliance), the UMSOM research involved 40 women, 20 smokers, and 20 non-smokers. Future research involved 40 women, 20 smokers, and 20 non-smokers. Future work will use this preliminary data to launch bigger studies on how smoking causes disturbances to the microbiome.

“Our data suggest that smokers are less likely to have the protective Lactobacillus species, and these women also tend to have significant differences in important vaginal metabolites. Women who smoke may be more susceptible to urogenital infections and increased symptoms, including malodor,” said Rebecca Brotman, PhD, MPH, Associate Professor at the UMSOM Institute for Genome Sciences and the Department of Epidemiology and Public Health.

Dr. Brotman’s research is focusing on deciphering what the protective features of the vaginal microbiome are and how human behaviors affect the optimal microbiota, with the understanding that women who are deficient in these organisms are at risk for serious and costly reproductive diseases. An altered vaginal microbiome could make women more susceptible to a range of adverse health outcomes, including human immunodeficiency virus (HIV) infections, pre-term delivery, miscarriage, and pelvic inflammatory disease.

While it is known that hormones play a key role in driving the differences between the developing brains of males and females, researchers at UM SOM are looking into gender differentiation that takes place in certain brain cells. They are studying the changes in cells called microglia, which are the brain’s own immune system and broadly distributed throughout the brain and spinal cord.

Margaret M. McCarthy, PhD, Chair of the Department of Pharmacology, notes that understanding the changes in these cells and how and when the brain develops differently in males and females could ultimately lead to better therapies and treatments for diseases that differ in women and men. “We often lack the basic knowledge to identify circumstances in which physiology or diseases differ between the sexes and thereby miss valuable new avenues for developing therapies,” she said. Microglia account for roughly 5-15 percent of all cells in the brain, and they play a critical role in both normal development and the response to injury. They may also be the source of disease by inducing on-going uncontrolled inflammation. In a recent study, McCarthy’s team of researchers studied the changes that take place in the microglia of male and female rats at various stages of brain development. They discovered that during critical stages of brain development, microglia indeed played a role in sex differentiation by being more active and inflammatory in males compared to females. “We now know that microglia differ markedly between the sexes during development and play a larger role in the establishment of sex differences than originally thought,” she said.

CONGRATULATIONS!

Dr. Maureen Black and Dr. Kathleen Neuzil were named among Maryland’s Top 100 Women. Winners are selected by past Top 100 Women and business leaders and recognizes high-achieving Maryland women who are making an impact through their leadership, community service, and mentoring.
In 2016, University of Maryland School of Medicine (UMSOM) medical students formed Creative HeArts, a student-run arts and humanities group that features monthly workshops designed to inspire creativity and encourage reflection for medical and science students. Last fall, the organization published its inaugural issue of The Healer’s Art, an annual medical humanities and literary arts journal, which features a variety of visual and expressive arts including photographs, paintings, drawings, poems, and many other creative arts created by UMSOM students and faculty.

Medical students and co-chairs of Creative HeArts Michael Sikorski and Zahur Fatima Sallman, were the driving force behind the newsletter’s initiation. “Creative HeArts has become my new common ground: a gathering of people who find humanity both in service to others and in shared creative expression,” said Michael. “I hope this journal encourages those on the journey to becoming physicians to never let go of their creativity and helps them find artistic inspiration in medicine,” said Zahur.

The newsletter’s title was coined by Dr. Rachel Naomi Remen, a nationally recognized medical educator and best-known for her groundbreaking curriculum, The Healer’s Art, an innovative discovery model that uses humanistic psychology and creative arts to explore and present human dimensions of medicine rarely discussed in medical training. The course was developed in 1991 and since then has been taught in over 90 medical schools within the United States and seven countries abroad.

Creative HeArts hopes to create an inclusive outlet for expression and space where members of the medical community can use artistic means to reflect and communicate personal experiences. Sandra Quezada, MD, MS, Assistant Dean for Admissions and Faculty Advisor for Creative HeArts said, “Without their invitation to contribute a piece of artwork, I would have continued to ignore my pastels, as I had done for over 20 years.”

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**PHOTOGRAPH**

The Isolation of a Medical Student
by Ankur Vaidya

**DRAWING**

Portrait of a Pancreas
by Leah Schecter

**SCULPTURE**

Blossomed Breath
by Valerie Dawson
Women Take the Lead in Enrollment

UMSOM is at the Forefront

This year, more women than men have enrolled in U.S. medical schools, according to the Association of American Medical Colleges (AAMC). This is the first time this has occurred. The University of Maryland School of Medicine (UMSOM) has long been in the forefront of this trend. Over the past 19 years, it has consistently enrolled between 50 percent and 60 percent women. This year, UMSOM’s number stands at 59 percent.

“This is something to be proud of,” said Sandra M. Quezada, MD, MS, Assistant Dean for Academic and Multicultural Affairs, as well as Assistant Dean for Admissions. “We’re ahead of the curve on this, and have been for a while.” Dr. Quezada is also an assistant professor of gastroenterology and hepatology at UMSOM, as well as course director of the “Medical Spanish” elective.

Nationwide, females represented 50.7 percent of enrollees last year, according to the organization. More than 21,000 students began medical school last year. Over the past two years the number of women entering medical school has risen by nearly 10 percent.

This is an enormous change. Thirty years ago, women made up about a third of medical students. Women have made up nearly half of new students for more than a decade. However, this is the first year they have been a majority.

Dr. Quezada plays a key role in enhancing the diversity and inclusion of the school’s students and faculty. Working with the Office of Admissions, she has assisted with recruitment efforts focused on expanding the number of students admitted from groups traditionally underrepresented in medicine, and is also responsible for streamlining, developing, and implementing diversity initiatives. Dr. Quezada says UMSOM admits students on a rolling basis, and in the process does not track the gender of accepted students, allowing a transparent process where each applicant is considered as an individual in the context of their own background and experiences.

“The School of Medicine is committed to enhancing diversity among our students, and to fostering an inclusive environment. We want all students to have the opportunity to thrive.”
— Sandra M. Quezada, MD, MS
Faculty, Alumni and Students Honored at 11th Annual “Celebrating Diversity” Dinner

The University of Maryland School of Medicine held its 11th annual “Celebrating Diversity” reception and dinner on Feb. 25, 2018 at the Baltimore Marriott Inner Harbor at Camden Yards. The event was attended by nearly 300 guests who gathered to honor diversity at UMSOM, recognize those who have helped increase diversity in the field of medicine, and to raise support for an endowed scholarship in the name of Dean Emeritus Donald E. Wilson, MD, MACP, AGAF.

“The School of Medicine is strongly committed to the recruitment and the retention of talented and ethnically diverse, faculty, staff, trainees, and students,” said Dean E. Albert Reece.

“The reason that diversity is so important is because it works,” said Dean Emeritus Wilson, noting that the field of medicine is still behind in promoting diversity.

Save the Date for the GALA

The School of Medicine is proud to unveil the theme of this year’s annual gala:

IMPASSIONED CARE
INSPIRED DISCOVERIES

The event brings together 1,000+ alumni, donors, faculty, staff, students, and other special friends of the school.

SATURDAY, MAY 5, 2018

The gala coincides annually with the Medical Alumni Association Reunion Weekend and is an opportunity to celebrate the achievements of our community of world-class physicians, biomedical researchers, and allied health professionals. By highlighting the School of Medicine’s vibrant tradition of pioneering research, exceptional medical education, and state-of-the-art patient care, the gala will truly capture the spirit of “Impassioned Care, Inspired Discoveries.”