Milestone:

Dr. Thomas Moore, past Chair, Dean and CEO, retires.

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NEW APPROACHES in DATA SCIENCE
Dr. Audra Meadows (shown here) and Dr. Kathleen Fisch are leading the way forward.

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NICHD AWARD
Lindsey Burnett garnered a prestigious Reproductive Scientist Development Program Award.

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MASTER CLINICIAN PROGRAM : PAGE 7
A new year marks new beginnings, hopes, and dreams for the future. In a similar fashion, our department is undergoing its rebirth in the form of strategic planning. The goals, priorities, and investments for next five years are being mapped out, and the excitement is palpable. However, as we look to the future, it is also time to celebrate our past. As you will see in this edition, Dr. Thomas Moore, former department chair for 18 years and faculty member for decades more, is retiring his full-time service. Dr. Moore has taught numerous students, residents, fellows, and physicians over the years, and his contributions to our field are immeasurable. Fortunately, he will maintain his service to UCSD in a part-time basis and continue to engage in patient care. We also celebrate Dr. Robert Resnik, former department chair from 1983-1995 and faculty member in our department for 44 years. Dr. Resnik’s career was recently celebrated in the American Journal of Obstetrics and Gynecology where he was a part of the “Giants in Obstetrics and Gynecology” series. Dr. Resnik served as the president of the Perinatal Research Society (1985) and the president of the American Gynecologic and Obstetric Society (2009-2010). He also received the Lifetime Achievement Award from the Society for Maternal-Fetal Medicine. His seminal textbook, Creasy & Resnik’s Maternal-Fetal Medicine: Principles and Practice, is the standard reference text for maternal-fetal medicine. He is also known for his work on mediators of uterine blood flow and his work on chorioamnionitis in pregnancy and its effects on neurodevelopment. He has taught and mentored many leaders in our field and has won numerous teaching awards for his efforts. Dr. Resnik’s legacy will always be felt in this department and in the field of OBGYN.

While celebrating the past, we also look towards our future as we continue our commitment to train physician scientists. Dr. Lindsey Burnett was recently awarded the Reproductive Scientist Development Program (RSDP) Award from the NICHD. She is only the second urogynecologist to receive this honor. Soon to complete the WRHR program, Dr. Sarah Averbach was recently asked to join the Editorial Board for the journal Contraception, the top journal in the field of Complex Family Planning.

I would be remiss if I did not mention the current COVID-19 surge, which snuck upon us like a snake in the grass with the speed of a cheetah. As we were preparing for normalcy, in whatever form that would come, omicron had other plans. However, in the spirit of excellence our department is known for, two OBGYN & Repro Sci faculty members launched what is thought to be the largest study to date assessing SARS-CoV-2 antibodies. The Neutralizing Antibody Project for COVID-19 (ZAP) trial (ZAP COVID-19.ucsd.edu), led by Co-PIs Dr. Marni Jacobs, Dr. Louise Laurent, and Dr. Rob Knight (Pediatrics), is a study that assesses antibody responsiveness over time, and is planned to enroll over 20,000 students, faculty and staff from across the UCSD campus. The goal of this study is to inform vaccine booster recommendations. This edition of Fimbria also holds a lot of great content including an advertisement our Vice Chair for Research search, which is going quite well. Please enjoy and see you next time.

Thank you!

Cynthia Gyamfi-Bannerman, MD, MS
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Congratulations to

**Kelly Breen-Church, PhD**
Who was elected to the **Executive Board of the PanAmerican Neuroendocrine Society** and joined the Editorial Board of **Endocrinology**

**Alexander Kauffman, PhD**
Who has received the **Richard E. Weitzman Memorial Award** of the Endocrine Society for outstanding achievement as a Young Investigator. Dr. Kauffman was also appointed the **Chair of the Awards Committee** by the PanAmerican Neuroendocrine Society.

**Pamela Mellon, PhD**
has had a new award named after her. The Pam Mellon Faculty Mentoring Award will honor a department member each year for outstanding contributions to mentoring junior faculty

**Lindsey Burnett, MD, PhD**
has just received one of only 2 awards provided for 2022, from the **Reproductive Scientist Development Program** at NICHD. The award supports a path to independence for outstanding young investigators in gynecology and obstetrics. It provides up to 4 years of individual support and guidance towards establishing an independent research program.

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**Science Beyond COVID**

**Department:**

**Sanjay Agarwal, MD**
Was recently lauded for his manuscript in the American Journal of Obstetrics and Gynecology: **Clinical diagnosis of endometriosis: a call to action**
The paper was among the ten most highly cited works in AJOG for 2021. Notably, it was the only manuscript among the top 10 that was not COVID-related.

**Funding News**

**Sanjay Agarwal, MD** brings in a Research Award from the Krupp Endowment Fund: **A Randomized Controlled Trial of a Nutritional Intervention for Endometriosis.**

**Louise Laurent, MD PhD** garnered a new NCI UH3 award: "Development and application of a scalable workflow for immunomagnetic separation of exRNA carrier subclasses and molecular analysis of their cargo." UH3 CA241687

**Kelly Breen Church, PhD** celebrates several new awards. An R21 award entitled **Transcriptomic and Epigenomic basis for reproductive dysfunction during stress.** R21 HD105103, A UCLA/UCSD Diabetes Research Center Pilot Award: **Neural mechanisms for stress-induced diabetes development,** and UCSD Senate Bridge Funds for the **Regulation of gonadotropin secretion during undernutrition by a brain-stem-hypothalmic neural pathway.**

**Sarah Averbach, MD** garnered a Pilot award from the Center for Perinatal Discovery to augment her recent Senate grant focused on "**Postpartum progestin-only pill use and breastfeeding study:** POPS"
Milestone
Dr. Thomas Moore Retires

For nearly four decades, Dr. Thomas Moore, MD, has been a fixture at UC San Diego Health, delivering thousands of babies, teaching hundreds of medical students, and providing guidance to countless residents and new parents. He has also generously shared his expertise as a leader, serving as chair of the Department of Obstetrics, Gynecology and Reproductive Sciences, CEO of the faculty practice, dean of clinical affairs and most recently as interim chief medical officer, among other positions.

Dr. Moore received his medical degree at Yale in 1979. After performing his residency at Naval Hospital, San Diego, he completed a fellowship in Maternal Fetal Medicine at UCSD in 1985. After his service in the Navy, Dr. Moore was appointed as Assistant Professor and Director, Division of Perinatal Medicine in UCSD’s Department of Reproductive Medicine. He became Chair in 1996, serving in this role for the next 18 years.

During his tenure as Chair, Dr. Moore was instrumental in the expansion of the department. He was able to maintain a robust delivery service during a time of reduction of obstetrical volumes across academic centers, mainly due to his commitment to outreach. He developed the UCSD midwifery service in 1999, which was the first in California. Dr. Moore established a premier “diabetes in pregnancy” program, which has become a go-to service for some of the most challenging patients in San Diego County. His personal practice has been lauded with Top Doc awards at both the local and national level.

In 2014, Dr. Moore was appointed Dean for Clinical Affairs and CEO of the Faculty Practice. In this role, he was instrumental in resource alignment. He also was named Chief Medical Officer, managing the clinical mission of the medical centers.

With respect to scholarly activities, Dr. Moore has 89 peer reviewed articles, 33 invited reviews, 64 book chapters and 134 abstracts. He also has been an editor for 7 seminars and books, including the seminal Creasy and Resnik’s Maternal Fetal Medicine. He has mentored numerous medical students, residents, and fellows in their research and was recognized by the Society for Maternal Fetal Medicine for excellence in clinical research.

As an educator, Dr. Moore brought the concept of ‘evidence-based medicine’ before the term became fashionable. His teaching always was predicated by literature and he constantly demanded justification of medical practice based on data. His didactic and bedside teaching have consistently been regarded as the best of department faculty and his dedication is reflected in the numerous teaching awards he has received.

This snapshot of Dr. Moore’s career at UCSD simply cannot encapsulate his contributions or accolades. He has been the face of this department and of the Health System. He has been critical to the recruitment of many of the faculty that currently serve and to the vision of the department over the last two decades. Dr. Moore has touched the lives of many trainees, patients and international colleagues. His retirement is a celebration of an outstanding career.

And yet, even in retirement, Dr. Moore’s service continues.

We are fortunate that Dr. Moore will return to the department, in limited capacity, to share decades of expertise, and to see patients. Dr. Moore has also agreed to serve as Advisor for the department and for the planned Hillcrest Enhancement project. Having spent a significant portion of his career at the Hillcrest campus, Dr. Moore brings a wealth of knowledge and community relationships to the position that will be key in helping to ensure the success of the project. Dr. Moore will advise on the strategic plan and vision as well as serve as a liaison between UC San Diego Health and the community. Dr. Moore will also partner with facilities and planning to make sure the evolving infrastructure meets the needs of the health system, patients and community.
The New Faces of UCSD Data Science

Whether it is the collection of data in social sciences or biological models, our new faculty are blazing a way forward. This issue of Fimbria Quarterly (FQ) is happy to focus on women pioneering data curation and analysis.

Audra R. Meadows, MD, MPH began her tenure at UCSD last fall, bringing with her an outstanding clinical practice more than two decades old and a keen eye for education. However, Dr. Meadows is also a research leader focused on strategies to optimize infant and maternal health outcomes and to achieve racial equity in birth. She has positioned herself as an equity champion and a birth optimizer, and has been funded by Robert Wood Johnson Foundation and the National Institutes of Health. Over the years, she has served as Medical Director for the BWH Ambulatory Obstetrics Practice, BWH maternal innovation projects, and the City of Boston's maternal child health programs. Her lived experience as both a black woman and a black physician have influenced her past career path, but continue to inform her work today.

Observing racial inequities in birth during her training, she focused on education as a tool to improve, reform, and reimagine maternal care to benefit all women. Black and Native women are three to four times more likely than others to die from pregnancy-related causes and twice as likely to give birth prematurely. In 2019, 754 women died from pregnancy related causes. Given sixty percent of maternal deaths are preventable, over 400 moms who should be with their families today. Moreover, nearly 50,000 women annually suffer life-threatening complications on the path to becoming “Mom.” This number, experts agree, is too high especially in a country with a seemingly “elite” healthcare system.

The CDC has also long reported maternal death, pregnancy-related complication, and preterm birth rates that exceed national goals. Globally, the US fares worse than other high-income countries.

Racial differences among maternal health statistics, with Black women most affected, are as shocking today as they are historically persistent. This issue affects Black women of all education and income levels. Medical experts and professional groups attest the reasons for these racial differences in maternal and infant outcomes are influenced by societal and health system factors, namely structural racism.

To be sure, many would argue the reason to be due to differences in individual behaviors or genetic risk based on race. Though, the American College of Obstetricians and Gynecologists is working to dispel this myth publishing this statement in August 2020, “Recognizing that race is a social construct, not biologically based, is important to understanding that racism, not race, impacts health care, health, and health outcomes.”

Using her experience in clinical practice and statewide maternal-child-health project development, Dr. Meadows applied her distinct view of birth statistics and stories of Black women to research. Central to her investigations is maternal health equity for Black women in the US. Dr. Meadows is co-investigator for a 5-year, research study on maternal safety and birth inequities that is one of six projects funded by the National Institutes of Health (NIH) aimed at eliminating preventable maternal morbidity and mortality. The Black Birth Equity: Maternity Optimization in Massachusetts Study, or the Be A Mom Study, investigates three areas. Mortality is a “blunt” measure of birth complications, and so she is studying a novel dataset to further characterize risk profiles of birthing individuals who may experience morbidity and to identify opportunities to intervene.
Kathleen Fisch, PhD may be a newly minted Assistant Professor in the division of Maternal-Fetal Medicine, but has been in leadership roles at UCSD for five years. Dr. Fisch served, and continues to serve, as the executive director of the Center for Computational Biology and Bioinformatics (CCBB). Her recruitment to the department of obstetrics, gynecology and reproductive sciences comes coincident with the establishment of the new Center for Perinatal Discover (CPD). Dr. Fisch also serves as the Co-Director of the ACTRI Center for Excellence in Translational Immunogenomics (CETI), which provides centralized genomics-focused translational research support broadly in the area of immunology. In these leadership roles, Dr. Fisch spearheads the development of a vibrant, leading edge vision for computational genomics, bioinformatics support and infrastructure at UCSD Health Sciences.

At the simplest level, computational biology the expertise to look at big datasets, and to analyze them for patterns. More frequently, investigators are more interested in patterns of patterns, as they try to establish different patterns of gene and protein expression to disease across different groups. When you hear terms like genomics, proteomics, epigenomics, transcriptomics or systems biology, the CCBB is “the” place for complex analysis.

Is there an easier way to explain this? Bioinformatics is sometimes described as the biological equivalent of looking for a needle in a haystack. However, that’s not quite true. A better example might be looking for 1000 needles in each haystack. Then, looking at 500 different haystacks, to see if the position, size and grouping of each of the needles are the same in all, or some, of the haystacks. Taking that a step further, one can begin to ask questions about whether the position of some of the needles also affects the position of others, how one might be able to identify changes associated with different types of haystacks, and how likely you are to be poked if you sat down in any of them. The key is understanding if there is a linkage between information and outcome.

Dr. Meadows training has perfectly positioned her for these roles. She received her medical education at the University of Texas at San Antonio in 2003 and completed OB/GYN residency training at The Brigham & Women’s Hospital at Harvard Medical School in 2007. She was awarded the Commonwealth Fund Fellowship in Health Equity Leadership, and earned a postgraduate Master of Public Health degree from the TH Chan Harvard School of Public Health in 2008.

From 2008-2020, she practiced in Boston at the Brigham Women’s Hospital (BWH). Her work influenced practice locally and regionally. At BWH, Audra led clinical innovation projects; namely, she instituted group prenatal care into clinical practice leading to reduced cesarean rates among patients in the Ambulatory Obstetric practice. In Boston, she established a quality improvement initiative in community health centers to implement best practices and evidence-based interventions to reduce preterm birth and disparities in birth outcomes. In Massachusetts, she led an initiative to collaborate with state agencies to prevent preterm birth (Collaborative Improvement and Innovation Network to Reduce Infant Mortality). In 2018, Dr. Meadows became co-director the Perinatal Neonatal Quality Improvement Network of Massachusetts (PNQIN), the state PQC for MA. The goal was to determine whether universal implementation and consistent application of best practice; reframing equity through education and care approach; and understanding the quality of the relationship between Black women and care providers could close the Black-White gap in maternal outcomes.

Dr. Meadows has received several prestigious awards during her career, including the the BWH Community Service Pillar Award, 2020 March of Dimes Humanitarian Award, and the 2021 National Coalition for Excellence in MCH Epidemiology Outstanding Leadership Award for her work.
It’s a reasonable example, but the true complexity would require you to imagine that there are different types and sizes of needles and that you would need to also identify the relative iron content and manufacturer of each.

There are different roads to being a data scientist. Katie did her undergraduate degree at Berkeley (Integrative Biology) and followed this with a Ph.D. in Ecology that was focused on population genetics from UC Davis. Dr. Fisch went on to do two postdoctoral fellowships; the first at the San Diego Zoo Institute for Conservation Research and the second at The Scripps Research Institute, honing her skills in population genetics and computational genomics. Dr. Fisch joined CCBB as a data scientist soon after.

As you might guess, these skills are adaptable to a lot of different problems in research. Dr. Fisch has a strong record of collaboration. She is a consortium multi-PI for the Omics Data Generation Center for the NIH Common Fund Acute to Chronic Pain Signatures Program along with Dr. Louise Laurent and Dr. Kristen Jepsen (A2PCS; NIH/NIDA U54DA049115). The A2PCS Consortium aims to develop biosignatures predictive of the transition from acute to chronic pain through the integration of multi-omics data with imaging and functional testing. She is the Project Lead for the Data Analysis Core of the NIH Common Fund Human BioMolecular Atlas Program (HuBMAP) Female Reproductive Tissue Mapping Center led by Louise Laurent. This project focuses on building a molecular atlas of the human placenta leveraging the expertise of UCSD faculty to generate multi-modal data at single cell and spatial resolution of the healthy human term placenta. These data will become publicly available for research use through the HuBMAP Consortium that is developing an open and global platform to map healthy organs and cells in the human body.

Dr. Fisch’s laboratory is currently performing preliminary studies focusing on characterizing the mutational landscape of placental lesions in preeclampsia and placenta accreta. She is also modeling the consequences of placental mutations on trophoblast cell differentiation and has begun exploring the maternal immune microenvironment. Other research interests include the genomic basis for modulation of drug metabolism, in particular for drugs commonly used during pregnancy, with a focus on prenatal exposures and pregnancy outcomes.

Culture and Justice Quorum

This February, the Department of Obstetrics, Gynecology and Reproductive Sciences at UC San Diego Health celebrates Black History Month; the annual celebration of achievements by African Americans. The month serves as a time for recognizing their central role in U.S. history.

Our department created the Culture and Justice Quorum in September 2020 in response to the national realization that, when left unabated, racism will continue to permeate through all facets of society, including healthcare delivery.

The Quorum was initially led by the department chair - at that time, Dr. Linda Brubaker. However, CJQ is now a self-standing established entity within our organizational structure. All department members, including staff, trainees and faculty are invited to participate with full and equal inclusion.

Individuals self-select their levels of voluntary participation. “Ambassadors”, who are fully engaged with regular attendance at Quorum meeting and who take on activities that identify health injustices affecting our patient populations and work to implement systems-based solutions. “Supporters”, pledge their support and are willing to be called on for specific activities. However, their current commitments are not consistent with responsibilities at the Ambassador level. Any member may suggest a new initiative, or relate a challenge that needs to be addressed.

Of the 155 department members, 36 serve the CJQ as Ambassadors and 117 act as Supporters. Examples of initiatives range from mandatory implicit bias training, and structured department-wide anti-racism sessions, to subsidized parking and transportation to rectify disparities in access to care, or community partnership building through grants. The creation of the Culture and Justice Report Card has permitted us to monitor the climate of the department and to track the progress of our initiatives. The department will continue to champion initiatives related to Diversity, Equity and Inclusion.
New master clinicians joining the program in 2022 include Michael Cardenas, Jason Heaton, and Scott Harvey.

The program was conceived by Christopher Cannavino, MD in the pediatrics department at UC San Diego, and adapted for the obstetrics and gynecology curriculum by Julia Cormano, MD. Master clinicians work with 2-3 third year medical students for 4 hour sessions in clinic, and in labor and delivery triage. During these sessions master clinicians are able to focus completely on education. They have no simultaneous clinical responsibility. Master Clinicians will not only evaluate students for their grade, but will give on-going personalized clinical guidance and mentoring over the course of the 6 week rotation. Master Clinicians help students develop a compassionate bedside manner, drawing on the social and cultural backgrounds of patients.

This allows for individualized feedback for students, direct observation of student interaction with patients, and helpful guidance on improving presentations to clinical faculty for patient care. Additionally, students benefit from career mentorship and a close connection with faculty in the department. The mentorship relationship will extend into the student’s 4th year of medical school, when they can re-connect with their master clinician mentors during the ERAS application process, especially if they are pursuing a career in women’s health. We look forward to building on this successful program into 2022 and beyond.
Vice Chair of Research

The Department of Obstetrics, Gynecology, and Reproductive Sciences at the University of California San Diego is committed to academic excellence and diversity within the faculty, staff and student body and is seeking a Vice Chair of Research at the level of Associate or Full Professor.

The Department is interested in candidates who have a commitment to research excellence, demonstrated leadership, and participation in teaching, research, service, and in building an equitable and diverse scholarly environment. We are currently ranked 4th among Ob/Gyn departments in NIH funding and have active research programs in neuroendocrine control of reproduction, circadian rhythm, puberty, placental biology, exRNA biology, PCOS, stress, spermatogenesis, early embryo development, gynecologic cancer, pelvic floor muscle physiology, contraception, and the reproductive microbiome.

The successful candidate will benefit from the highly stimulating and collaborative environment within the department. The Vice Chair of Research reports directly to the department Chair and collaborates with the Vice Chair of Translational Research and other department members to optimize and oversee the research components of our department. The Research Vice Chair will advise the Chair on research matters and meet with the Chair on a regular basis.

Responsibilities include committee participation on the following departmental committees:

- Department Executive Committee
- Department Vice Chairs Committee
- Department Research Advisory Committee
- Chair the Department Space Committee
- Department Search Committees for FTE Faculty

Candidates must have a PhD in Obstetrics, Gynecology and Reproductive Sciences or equivalent degree and a current research program in a discipline relevant to Obstetrics, Gynecology and Reproductive Sciences with a track record of obtaining substantial extramural funding and high productivity with regards to peer-reviewed publications. Appointment will be at the Associate or Full Professor rank.

A link to full description of the series is provided for review: Ladder Rank Professor - see: http://www.ucop.edu/academic-personnel-programs/_files/apm/apm-220.pdf

Salary is commensurate with qualifications and based on the University of California pay scales. As a member of the Health Sciences Compensation Plan, the appointee should be aware that there are limitations on outside professional activities and clinical moonlighting is expressly prohibited. Additional information can be found here: https://www.ucop.edu/academic-personnel-programs/_files/apm/apm-671.pdf

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