

CRepHS Newsletter

February 2024

MESSAGE FROM THE DIRECTOR

Dear CRepHS personnel and associates,

The hard work and dedication of our Center is evident once again through the updates published in this quarterly newsletter. The accomplishments are a testament to our shared vision in advancing reproductive health research and collaborative efforts toward it.

As we continue moving forward, I encourage each team member to embrace a growth mindset and to challenge ourselves to think innovatively, learn continuously, and adapt to the ever-evolving landscape.

Wishing you all a productive and rewarding quarter ahead!

Sarah



Sarah K. England, PhD
*Alan A. and Edith L. Wolff Professor of Medicine
Vice Chair of Research and Professor,
Department of Obstetrics and Gynecology*

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Next issue: May 2024

PERSONNEL UPDATE

NEW TEAM MEMBERS



Babu



Bolozky



Dave



Guthrie



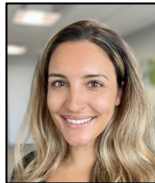
Liu



Loeb



Minett



Murphy

PREEDIA BABU, PHD (she/her)
Postdoctoral Research Associate, Khabele Lab
(team of Dr. Sumegha Mitra)

CAITLYN BOLOZKY (she/her)
Administrative Coordinator II, CRepHS

VERONICA DAVE, PHD (she/her)
Program Manager, Gyn Onc

ANDRE GUTHRIE (he/him)
Clinical Research Specialist, Wang Lab

ANDY LIU (he/him)
Undergraduate Researcher, Amargant i Riera Lab

MEGAN (MAGGIE) LOEB (she/her)
Research Technician I, Mullen Lab

MAGGIE MINETT (she/her)
WU Medical Student, Mullen Lab

COURTNEY MURPHY, MD (she/her)
Clinical Fellow, Amargant i Riera Lab

PORTRAIT UNVEILING



Sarah England, PhD, Alan A. and Edith L. Wolff Professor of Medicine, Vice Chair of Research for the Department of Obstetrics and Gynecology, and Director of the CRepHS, recently received distinctive recognition of her exceptional research accomplishments and service in the field of obstetrics and gynecology. An oil on linen portrait of Dr. England was unveiled and presented by Dineo Khabele, MD, Mitchell and Elaine Yanow Professor and Chair of the Department of Ob/Gyn, at a celebratory reception on October 30, 2023. The reception was attended by more than 50 of Dr. England's associates, team members, friends, and family members.

[Read more about this story here.](#) ■

PERSONNEL Spotlight x2!

We are taking a moment to shine a spotlight on two invaluable members of our team who have dedicated many years of their lives to the pursuit of knowledge and breakthroughs in our research laboratories. Xiaofeng Ma, PhD, and Ronald (Ron) McCarthy, RN, are Senior Scientists in CRepHS — each having recently earned 25 years of service at Washington University. As we celebrate their service milestones and impact to our teams, let's learn a little bit about their journeys.

More than 30 years ago, Ron started as a lab technician in BJC dermatology. He also worked in the transgenic knockout core (pulmonary) at WashU for nearly 20 years. In 2014, he began preterm birth research (March of Dimes) when he joined the lab of Dr. Sarah England at the School of Medicine.

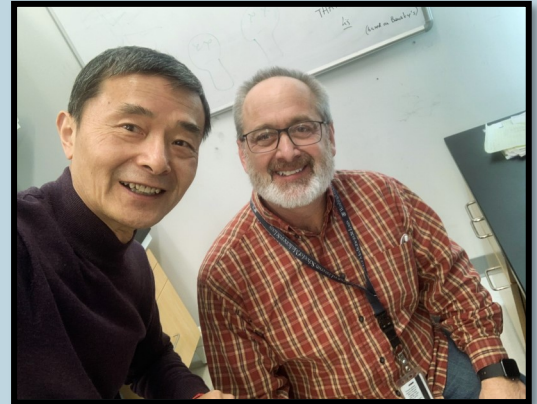
In his current role with CRepHS, Ron enjoys how the team keeps pushing boundaries in women's health research, and being able to help move their science along. This includes bench to bedside research endeavors in male contraceptive and preterm birth.

Xiaofeng's involvement with research is working on ion channels in the uterine smooth muscle cell and studying the link between ion channel activity and preterm birth. He has always enjoyed electrophysiology, and his current role also involves maintaining and fixing lab equipment.

When not tied down to lab work or meetings, you might see our spotlighted duo having a cup of coffee and chat in and around the 10th floor of the BJCIH building. Ron is no stranger to making good conversation with teammates, but while Xiaofeng may be the quieter of the two, plenty of praises are spoken about him by others in Ob/Gyn. This is due in part to his expertise in effectively maintaining laboratories, and also houses and gardens.

Whether you get to work with them in a lab or get to know them out-and-about in St. Louis, the CRepHS team is glad to have Ron and Xiaofeng's wisdom and passion for science amongst us! ■

**Xiaofeng Ma, PhD, &
Ronald McCarthy, RN**
Senior Scientists - CRepHS



**CONGRATULATIONS
ON 50 YEARS OF
COMBINED SERVICE**

Ma & McCarthy



Staff Service
Milestone
Award



UPCOMING OPPORTUNITIES

EVENTS

Thursday, February 29th, 4 p.m.
CRepHS Collaboration Meeting

Wednesday, March 6th, 11 a.m. to 3 p.m.
[Woman and Diverse-Owned Business Marketplace](#) @EPNEC

Wednesday, March 20th, 12:15 p.m.
WashU OBGYN Town Hall

March 21st-25th
Annual meeting of the Society for Reproductive Investigation (SRI)

Wednesday, May 1st
38th Annual Rothman Research Day

Wednesdays, 3:15 p.m.,
Writing Accountability Group, BJCIH 10th floor

CRepHS SEMINAR SERIES [\(Zoom link & registration\)](#)

Held on Fridays, 9-10 a.m., in collaboration with the Center for Women's Infectious Disease Research (cWIDR).

DATE	SPEAKER	AFFILIATION	HOST/LAB
February 23 rd	Emily Feldstein	WashU	Zhao
March 1 st	Arpita Vyas, MD, DCH	WashU	Frolova
March 22 nd	Ripla Arora, PhD	Michigan State University	England
March 29 th	Kiran Mahajan, PhD	WashU	Khabele
April 5 th	Chuan Wang	WashU	Wang
April 12 th	Shweta Bhagwat, PhD, & Juan Ferreira, PhD	WashU	Santi
April 19 th	Jennifer Herington, PhD	Vanderbilt	Frolova
April 26 th	Sarah Adams, MD	University of New Mexico	Khabele
May 10 th	Carmen Sandoval Pacheco, PhD	WashU	Mullen
May 24 th	Frolova Lab TBD	WashU	Frolova
May 31 st	Yukihide Ota, MD, PhD	WashU	Khabele



Photo credit: Matt Miller/Washington University School of Medicine

UPCOMING OPPORTUNITIES

FUNDING

- [The CRepHS Travel Award](#): This award aims to provide support for expenses for conferences where students or trainees are presenting their research. Applications are accepted on a rolling basis.
- [Big Ideas](#) grant funding competition, for all individuals affiliated with BJC HealthCare and/or the Washington University School of Medicine; letter of intent due March 27th.
- Foundation for Women's Wellness (FWW) [Research Awards](#) from and [FFW Fellowship Awards](#); due April 8th.
- View a curated list of funding opportunities relevant to researchers in OBGYN by going to <https://obgyn.wustl.edu/research/resources-funding/>.

JOBS

We seek people from diverse backgrounds to join us in a supportive environment that encourages boldness, inclusion and creativity.

- [Research Technician I – Amargant i Riera Lab](#)
- [Research Technician II – Amargant i Riera Lab](#)
- [Postdoctoral Research Associate – Gomez-Lopez Lab](#)
- [Postdoctoral Research Associate – Wang Lab](#)
- [Clinical Laboratory Technician - Ob/Gyn](#)

Find more information and other jobs at <https://jobs.wustl.edu/>.

38th Annual Rothman Research Day

Research training is incorporated throughout the residency program, and each resident is required to complete one publishable clinical or basic science research project. Working with a member of the full-time faculty, residents select and carry out this project over the course of their residency, culminating with a presentation at the [David Rothman Resident Research Symposium](#) held annually in the spring.

Dates to know: Friday, March 29th - Abstracts due; Wednesday, April 24th - PowerPoint presentations due; Wednesday, May 1st - Rothman Research Day.

Questions? Contact Elizabeth Wanken (ewanken@wustl.edu) and Audrey Johnston (audrej@wustl.edu).

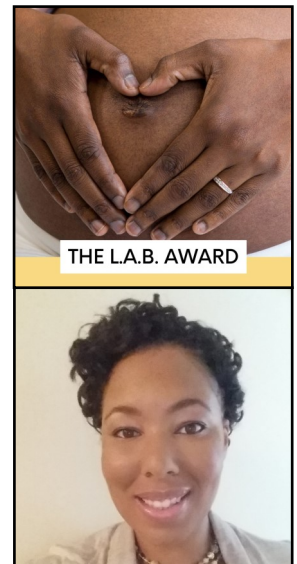
Photo credit: Washington University School of Medicine

SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter two)

AWARDS, APPOINTMENTS, & SPECIAL EVENTS

- In October, **Wenjie (Harry) Wu** (Wang Lab) successfully defended his PhD thesis titled “The Development and Validation of Novel Imaging Biomarkers for Uterine Contraction, Cervix and Placenta in Pregnancy.”
- **Valene Garr Barry, PhD**, postdoctoral research scholar, is a recipient of the Department of OB/GYN’s [Lucy, Anarcha, and Betsey \(L.A.B.\) Award](#). Dr. Garr Barry’s project is titled “Genetic markers of altered triglyceride metabolism & risk for fetal growth restriction.” She is mentored by **Toni Frolova, MD, PhD**.
- **Viju Gupta, PhD**, senior scientist, Khabele Lab, networked with scientists and physicians at the [American Association for Cancer Research](#) (AACR) special conference on ovarian cancer held in Boston in October. The goal of the conference was to further enhance the scientific understanding of ovarian cancer biology and to support the development of better therapeutics.



Valene Garr Barry, PhD

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England elected to National Academy of Medicine

Sarah K. England, PhD, was elected to the [National Academy of Medicine](#), a part of the National Academy of Sciences. Membership in the organization is one of the highest honors in the fields of health and medicine in the United States. [Dr. England](#) was elected for contributions to the basic understanding of processes that underlie aberrant uterine activity leading to parturition and preterm birth.

“I am so incredibly honored to be elected to the National Academy of Medicine,” states Dr. England. “This is an honor to be shared with many who helped me in my career including family, friends, colleagues, and my lab!”

[Read more here.](#) ■



SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter two)

AWARDS, APPOINTMENTS, & SPECIAL EVENTS *...continued*

- In November, **Zhexian Sun** (Wang Lab) successfully defended his PhD thesis titled “Advanced Diffusion MRI Technique and Applications in Placenta and Brain.”
- Congratulations to **Kaci Martin**, DBBS graduate student in the Frolova lab, for passing her thesis proposal in November.
- **Yong Wang, PhD**, Professor of Obstetrics and Gynecology, Electrical and System Engineering, Radiology, and Biomedical Engineering, in collaboration with **Valerie Ratts, MD**, Professor of Reproductive Endocrinology and Infertility, is making strides in discovery related to his project titled “Understanding Uterine Function and How it Relates to Reproductive Health.” This project was recently expanded to investigate the impact of use of different types of intrauterine devices (IUD) and bilateral tubal occlusion on uterine peristalsis patterns using a novel imaging device, “uterine peristalsis imaging” (UPI), invented and developed in the Wang lab. To support this work, the team received a \$1,347,360 two-year supplement and term extension from the Bill & Melinda Gates Foundation in November 2023. As part of this additional foundation funding, the Wang lab will also develop a portable UPI system that can be used in clinics globally. Learn more about the research of Dr. Wang by going to yongwanglab.wustl.edu.
- **Maggie Mullen, MD**, completed a Master of Science in Clinical Investigation (MSCI) with an emphasis on translational medicine from Washington University School of Medicine.
- Congratulations to **Kevin Prifti**, DBBS graduate student in the Frolova lab, for recently passing the qualifying exam (QE) in December.
- **Dineo Khabele, MD**, was appointed to the [Board of Scientific Counselors](#) for the NIEHS/NIH.
- The lab of **Toni Frolova, MD, PhD**, is now platinum-level certified by the “Green Lab Program” at Washington University. Participation in the Green Labs program is initiated through a point-based, self-assessment checklist with which labs can evaluate their current practices, set goals, and be recognized for their sustainable practices. Learn more by going to sustainability.wustl.edu/greenlabs.



Yong Wang, PhD



Maggie Mullen, MD, MSCI



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SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter two)

AWARDS, APPOINTMENTS, & SPECIAL EVENTS ...continued

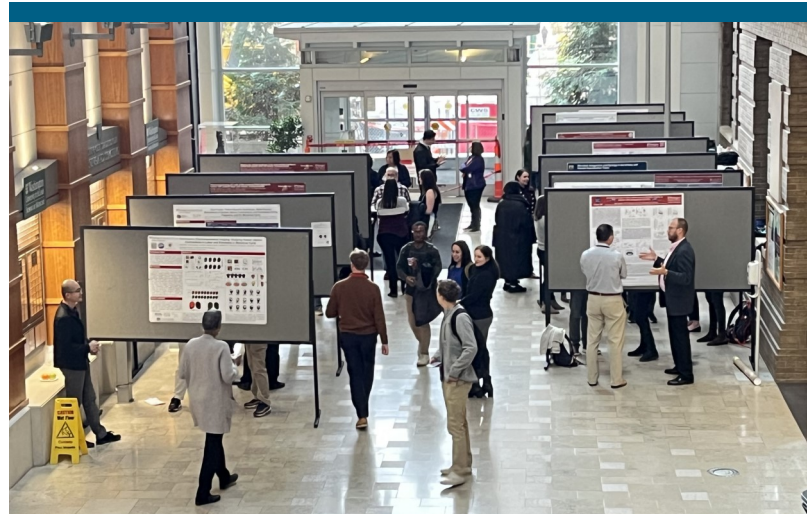
Collaborative Open House a success for CRepHS/CWHE

The [Center for Reproductive Health Sciences](#) (CRepHS) and the [Center for Women's Health Engineering](#) (CWHE) hosted an open house event on December 5, 2023. At this collaborative event held on the Medical Campus, more than 70 attendees from the McKelvey School of Engineering and the School of Medicine were able to network and learn about reproductive health research, education and training.

CRepHS Director, **Sarah England, PhD**, provided the event welcome in Connor Auditorium, followed by CRepHS/CWHE collaborators **Mary (Maggie) Mullen, MD**, Assistant Professor of Ob/Gyn, and **Alexandra Rutz, PhD**, Assistant Professor of Biomedical Engineering, with their feature presentation, "In Vitro Bioelectronic Monitoring of Therapy Response in 3D, Patient-Derived Ovarian Cancer Models." Then, attendees and participants of all career stages headed to the FLTC Atrium for a poster session and refreshments.

"Our centers are excited about the collaborations happening right now between the fields of reproductive health basic research and engineering," states Dr. England. "We look forward to introducing our research teams to even more future collaborators across the university, with the goal of helping inspire new scientific discoveries."

To search for potential collaborators and learn about their research interests, visit the CRepHS/CWHE Open House "LookBook" at <https://reproductivesciences.wustl.edu/open-house-lookbook/>. ■



SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter two)



Santi named the James P. Crane Professor of Obstetrics and Gynecology

Celia Santi, MD, PhD, has been named the James P. Crane Professor of Obstetrics and Gynecology at Washington University School of Medicine in St. Louis. Dr. Santi is one of the leaders in the field of male reproductive biology and sperm ion channels; most notably the Slo3 potassium channels in sperm cells.

“I am truly honored and humbled to hold the title of the James P. Crane Professor of Obstetrics and Gynecology,” states Dr. Santi. “Dr. Crane’s visionary leadership paved the way for Missouri’s inaugural prenatal diagnosis program and was instrumental in establishing the state’s first IVF program, which resulted in the birth of Missouri’s first IVF baby in 1985. It is thanks to his pioneering efforts that my lab is able to conduct research on male fertility today.” [Read more here.](#) ■

PUBLICATIONS*

- [A framework to improve retention of Black surgical trainees: A Society of Black Academic Surgeons white paper.](#) Suraju MO, McElroy L, Moten A, Obeng-Gyasi S, Alimi Y, Carter D, Foretia DA, Stapleton S, Yilma M, Reid VJ, Tetteh HA, **Khabele D**, Rodriguez LM, Campbell A, Newman EA. Am J Surg. 2023 Oct;226(4):438-446. doi: 10.1016/j.amjsurg.2023.07.022. Epub 2023 Jul 16. PMID: 37495467.
- [Immunosequencing and Profiling of T Cells at the Maternal-Fetal Interface of Women with Preterm Labor and Chronic Chorioamnionitis.](#) Miller D, Romero R, Myers L, Xu Y, Arenas-Hernandez M, Galaz J, Soto C, Done B, Quiroz A, Awonuga AO, Bryant DR, Tarca AL, **Gomez-Lopez N**. J Immunol. 2023 Oct 1;211(7):1082-1098. doi: 10.4049/jimmunol.2300201. PMID: 37647360; PMCID: PMC10528178.
- [Host-microbiome interactions in distinct subsets of preterm labor and birth.](#) iScience. Galaz J, Romero R, Greenberg JM, Theis KR, Arenas-Hernandez M, Xu Y, Farias-Jofre M, Miller D, Kanninen T, Garcia-Flores V, **Gomez-Lopez N**. 2023 Oct 28;26(12):108341. doi: 10.1016/j.isci.2023.108341. PMID: 38047079; PMCID: PMC10692673.
- [Attack of the clones: Unveiling subclonal/heterogenous mismatch repair \(MMR\)/microsatellite instability \(MSI\) status in endometrial cancer \(EC\).](#) Grither W, Hageman I, Powell M, **Mullen M**. Cancer. 2023 Oct 30, online ahead of print.

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*Labs in bold.

SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter two)

PUBLICATIONS* *...continued*

- [Sleep and circadian rhythms during pregnancy, social disadvantage, and alterations in brain development in neonates.](#) Hoyniak CP, Whalen DJ, Luby JL, Barch DM, Miller JP, **Zhao P**, Triplett RL, Ju YE, Smyser CD, Warner B, Rogers CE, Herzog ED, **England SK**. Dev Sci. 2023 Oct 30:e13456. doi: 10.1111/desc.13456. Epub ahead of print. PMID: 37902111.
- [TP53 mutation and abnormal p53 expression in endometrial cancer: Associations with race and outcomes.](#) Whelan K, Dillon M, Strickland K, Pothuri B, Bae-Jump P, Borden L, Thaker P, Haight P, Arend R, Ko E, Jackson A, Corr B, Ayoola-Adeola M, Wright J, Podwika S, Smitherman C, Thomas S, Lightfoot M, Newton M, Washington C, **Mullen M**, Cosgrove C, Harsono A, Powell K, Herzog T, Salani R, Secord A. Gynecol Oncol. 2023 Nov;178:44-53. PMID: 37748270.
- [Immune-featured decidual stromal cells: pregnancy's multitasking superstars.](#) **Gomez-Lopez N**. Trends Immunol. 2023 Nov;44(11):862-864. doi: 10.1016/j.it.2023.09.009. Epub 2023 Oct 20. PMID: 37867112.
- [Risk of pre-term birth as a function of sleep quality and obesity: prospective analysis in a large Prematurity Research Cohort.](#) Sutcliffe S, **Zhao P**, Pilz LK, Oakes M, **Frolova AI**, Herzog ED, **England SK**. Sleep Adv. 2023 Nov 2;4(1):zpad043. doi: 10.1093/sleepadvances/zpad043. PMID: 37965625; PMCID: PMC10642756.
- [Diabetes Group Prenatal Care: A Systematic Review and Meta-analysis.](#) Carter EB, Thayer SM, Paul R, Barry VG, Iqbal SN, Ehrenberg S, Doering M, Mazzoni SE, **Frolova AI**, Kelly JC, Raghuraman N, Debbink MP. Obstet Gynecol. 2023 Nov 9. doi: 10.1097/AOG.0000000000005442. Epub ahead of print. PMID: 37944148.
- [The Association between Mode of Transportation Support and Research Study Visit Attendance among Pregnant Patients.](#) Vinson A, Paul R, Chubiz J, Raghuraman N, Kelly JC, **England SK**, Carter EB. Am J Perinatol. 2023 Dec 15. doi: 10.1055/s-0043-1777441. Epub ahead of print. PMID: 38101443.
- [Blockade of IL-6R prevents preterm birth and adverse neonatal outcomes.](#) Farias-Jofre M, Romero R, Galaz J, Xu Y, Miller D, Garcia-Flores V, Arenas-Hernandez M, Winters AD, Berkowitz BA, Podolsky RH, Shen Y, Kanninen T, Panaitescu B, Glazier CR, Pique-Regi R, Theis KR, **Gomez-Lopez N**. EBioMedicine. 2023 Dec;98:104865. doi: 10.1016/j.ebiom.2023.104865. Epub 2023 Nov 7. PMID: 37944273; PMCID: PMC10665693.
- [BKCa channels are involved in spontaneous and LPS-stimulated uterine contraction in late gestation mice.](#) Bao J, Ma X, Kent LN, Wakle-Prabakaran M, McCarthy R, **England SK**. Biol Reprod. 2023 Dec 22:ioad174. doi: 10.1093/biolre/ioad174. Epub ahead of print. PMID: 38134962.

*Labs in bold.

COLLABORATIONS

(from fiscal quarter two)

CRepHS COLLABORATION MEETINGS

As evidenced by the photos below, the CRepHS Collaboration meetings in October and December were full of fun and networking. The next meeting is on Thursday, February 29th, 4 p.m. All are welcome to attend! Contact [Audrey Johnston](#) to learn more.



T32 RESEARCH COLLABORATIONS STAY STEADY

The postdoctoral fellows appointed to our department's T32 training grant (NIH NIDDK) are keeping busy with research in women's health. Fellow **Victoria Leigh Brown, PhD**, has been conducting field research on topics in women's lower urinary tract health, and fellow **Samantha Zambuto, PhD**, recently presented her research on trophoblasts at the CRepHS/CWHE Open House event.

Dr. Brown is mentored by **Siobhan Sutcliffe, PhD**, and **Jerry Lowder, MD, MSc**, both Co-Principal Investigators of the T32. Dr. Zambuto is mentored by Dr. Lowder and **Michelle Oyen, PhD**, Associate Professor of Biomedical Engineering. Watch for Dr. Brown's [research collaboration](#) with previous T32 trainees **Emily Barker, MD**, and **Haidy Morsy, MD**, in the March 2024 edition of *The Journal of Urology*®. ■

SOCIAL CONNECTIONS



X (formerly Twitter)

[@DKhabeleMD](#)

[@Englandsk785](#)

[@FarnersRiera](#)

[@FrolovaToni](#)

[@MaggieMullenLab](#)

[@nardhygomez](#)

[@santi_lab](#)

[@WashU_OBGYN](#)

[@yongwangwashu](#)



Instagram

[@england.sk](#)

[@washu](#)

[@washumedicine](#)

[@washuobgyn](#)

SUBMIT YOUR PUBLICATION

CRepHS is currently soliciting papers for our new quarterly

“**BEST PAPER AWARD!**”

Email audreyj@wustl.edu

for more info.



SUBMIT YOUR NEWS

News for consideration is always welcome!

Send it to ejulie@wustl.edu.

CONTACT CRepHS

Visit our website at

reproductivesciences.wustl.edu

or email questions and feedback related

to CRepHS to audreyj@wustl.edu.

About CRepHS

The [Center for Reproductive Health Sciences](#) (CRepHS) aims to improve the overall health of women and men by making reproductive health a priority in investigative and translational science. As the basic science division of Washington University School of Medicine’s [Department of Obstetrics and Gynecology](#), CRepHS’ research productivity is accomplished through highly collaborative interdisciplinary lab environments.

The Center’s current research emphasis includes basic biology of reproductive health; multiple approaches to developmental biology with concentrations in cell biology, animal models, and genetics; studies of healthy human development; developmental endocrinology; neurosciences; translational imaging; medical device development; reproductive cancers; and population health research.