

CRepHS NEWSLETTER

QUARTER 4, FISCAL YEAR 2025

► MESSAGE FROM THE DIRECTOR

Our last fiscal year that ended June 30th certainly had its challenges, but many scientific discoveries within that time are continuing to advance our efforts in the field of reproductive sciences and beyond. With our current personnel and multidisciplinary collaborators in laboratories and offices, we forge ahead together while embracing new undergraduate and graduate researchers, postdocs, fellows, and faculty.

Please join me in welcoming another year of teaching, learning, and research advancement!



Sarah K. England, PhD

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

This newsletter is published quarterly. Look at the last page to see how to submit your news for consideration in the next issue!



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Personnel Update

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PERSONNEL UPDATE

► NEW TEAM MEMBERS (as of date of publication, 9/12/25)

Mahdiyeh Bigham, PhD, Staff Scientist, Gomez-Lopez lab

Jeeya Desai, Undergraduate Researcher, Amargant i Riera lab

Eden Gallup, Research Technician II, Mullen lab

Amelia Giecek, Graduate Student, MSRS program

Hansong Gao, PhD, Postdoctoral Research Associate, Wang lab

Kaylee Green, Graduate Researcher, Mullen lab, & Amargant i Riera lab

Abir Hamdaoui, MS, Graduate Researcher, Amargant i Riera lab

Stephen Lee, Undergraduate Researcher, Gomez-Lopez lab

Audrey Liu, Bioinformatics Research Assistant, Wang lab

Hannah Janzen-Meza, Research Technician II, Frolova lab

Genevieve Larson, Undergraduate Researcher, Khabele lab

Mahima Marichetty, Graduate Student, MSRS program

Sarah Niesen, I2DB Bioinformatics Intern, Gomez-Lopez lab

Claire Park, Undergraduate Researcher, Gomez-Lopez lab

Sivani Ravindran, Pharm D, I2DB Bioinformatics Intern, Gomez-Lopez lab

Ruel Rivera, Undergraduate Researcher, Gomez-Lopez lab

Prasanth Thuthika, MS, Research Assistant, Mullen lab



MSRS Program



Marichetty



Bigham



Desai



Gallup



Gao



Green



Hamdaoui



Lee



Liu



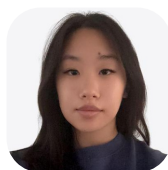
Janzen-Meza



Larson



Niesen



Park



Ravindran



Rivera

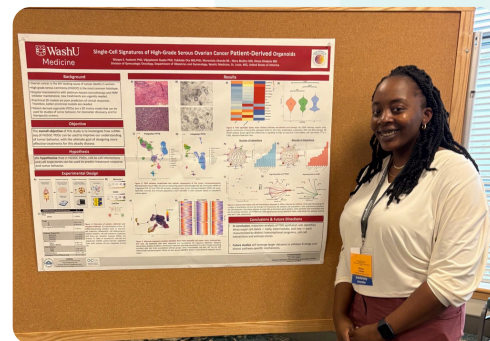


Thuthika



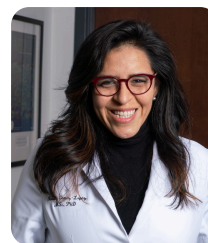
AWARDS & RECOGNITION

- ▶ In April, WashU Medicine OB-GYN Chair, **Dr. Dineo Khabele**, and Postdoctoral Research Associate, **Bisi Fashemi, PhD**, presented at the Keystone Regenerative Biology of the Female Reproductive System meeting. Dr. Fashemi received a travel award to present a poster and talk on the project entitled "Single-Cell Signatures of High-Grade Serous Ovarian Cancer Patient-Derived Organoids." Dr. Khabele sat on a panel about "Regenerative Biology of the Female Reproductive System: Advances and Applications," and also presented a talk titled "Drivers of Chemotherapy-Resistant Ovarian Cancer." [Read more here.](#)



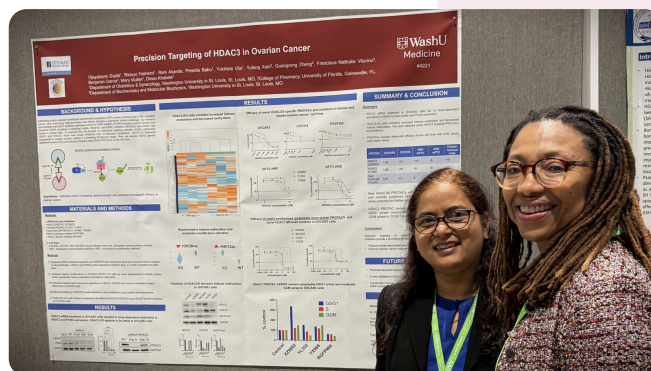
Bisi Fashemi, PhD

- ▶ **Dr. Gomez-Lopez** was invited to present in a session at the International Symposium on Perinatal and Early Life Immunity in Freiburg, Germany. The event took place in April, and combined talks from internationally renowned scientists and early career researchers in expert lectures, highlighted talks and included an interactive poster night.



Nardhy Gomez-Lopez, PhD

- ▶ **Viju Gupta, PhD**, senior scientist in the **Khabele** lab, presented a poster titled "Precision targeting of HDAC3 in ovarian cancer" at the American Association for Cancer Research (AACR) Annual Meeting that was held April 25th-30th in Chicago. Scientists, clinicians, other health care professionals, survivors, patients, and advocates gather at the AACR Annual Meeting to share and discuss the latest breakthroughs. [Read Dr. Gupta's abstract here.](#)



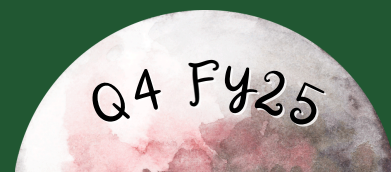
Viju Gupta, PhD (left) and Dineo Khabele, MD



AWARDS & RECOGNITION

- ▶ **Celia Santi, MD, PhD**, James P. Crane Professor, presented on SLO3 potassium channels and was a panelist for the "Female Contraceptive Development (Male Targets in Females)" session at the 2025 National Contraception Meeting that took place April 28th-May 1st in Durham, NC. The National Contraception Meeting is a multidisciplinary meeting about the landscape of contraceptive and multipurpose prevention technology research and development.
- ▶ **Eva Kareus**, DBBS pre-doc trainee in the **Gomez-Lopez** lab, was admitted to the prestigious Lucille P. Markey Special Emphasis Pathway in Human Pathobiology. The Markey Pathway is a 2-year course of study which supplements the PhD programs in the Division of Biology and Biomedical Sciences (DBBS) and helps bridge the gap between foundational and clinical research. Through this program, Eva will receive individualized clinical mentorship and network with trainees and faculty at an annual education retreat.
- ▶ On May 1st, **Toni Frolova, MD, PhD**, and **Nandini Raghuraman, MD, MSCI**, began year two of their NIH NICHD grant titled "Oxytocin for induction of labor: understanding goals and mechanisms." Their clinical and translational study investigates the physiologic and functional response to exogenous oxytocin by placing universal intrauterine pressure catheters in patients undergoing labor induction to determine contraction parameters predictive of success and assessing serial maternal serum oxytocin levels and myometrial oxytocin receptor function in response to oxytocin dosing.
- ▶ **Valeria Garcia-Flores, PhD** (Gomez-Lopez lab), was awarded the CRepHS Biannual Best Paper Award, a friendly competition for first-author trainees within the Center. The next round of voting will be on papers published between April - September 2025. Send a PubMed link of your paper for consideration to Audrey Holland (audreyj@wustl.edu). The winner will receive a gaudy and imposing gold trophy and endless bragging rights!



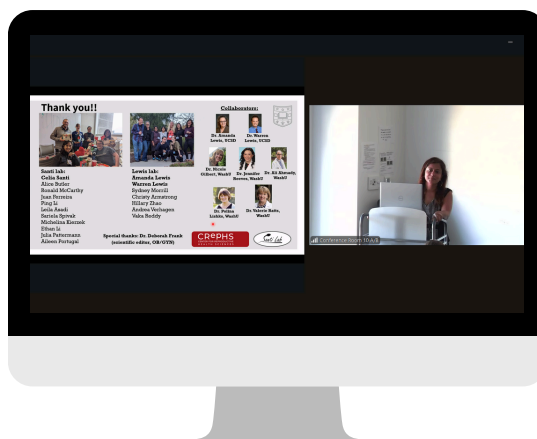


AWARDS & RECOGNITION

- ▶ **Nardhy Gomez-Lopez** submitted a Guest Symposium proposal on behalf of the International Society for Immunology of Reproduction (ISIR) for the annual meeting of the American Association of Immunologists (AAI) 2025, and it was accepted! Dr. Gomez Lopez organized, moderated and presented at the IMMUNOLOGY2025™ meeting in Honolulu in May. The session was titled "Next Gen Reproductive Immunology: Innovations and Insights Shaping the Future."
- ▶ **Kaci Martin**, DBBS Pre Doc Trainee, **Frolova** lab, was awarded the Basic Science Project Award at the 2025 WashU Ob/Gyn Rothman Research Symposium. Her research is titled "Functional effects of oxytocin receptor glycosylation."
- ▶ **Seungbaek Lee, PhD**, PostDoc Research Associate mentored by **Nardhy Gomez-Lopez, PhD**, was a recipient of one of the Department of Ob/Gyn's Lucy, Anarcha, and Betsey (L.A.B.) Awards for 2025. Lee's research is titled "Placental Immune Cell Dysfunction in Preeclampsia."
- ▶ Congratulations to the FY2025 recipients of a CRepHS Travel Award:
 - **Dustyn Levenson**, MD/PhD student, **Gomez-Lopez** lab
 - **Kaci Martin**, DBBS Pre Doc Trainee, **Frolova** lab
 - **Kevin Prifti**, DBBS Graduate Research Assistant, **Frolova** lab
 - **Juan Ferreira, PhD**, Postdoc Research Associate, **Santi** labLevenson, Martin, and Prifti traveled to the Annual Scientific Meeting of the Society for Reproductive Investigation (SRI); Dr. Ferreira traveled to the meeting of the Congress of the American Society of Andrology & International Congress of Andrology. CRepHS Travel Award applications are accepted on a rolling basis. [Click here to learn more.](#)

*CRepHS
SEMINAR
series*

See event info on page 9.





PUBLICATIONS

► Q4 PUBLICATIONS (CRepHS lab members in bold)

Phospho-RPA2 predicts response to platinum and PARP inhibitors in homologous recombination-proficient ovarian cancer.

Schab A, Compadre A, Drexler R, **Loeb M**, **Rodriguez K**, Brill J, Harrington S, Sandoval C, Sanders B, Kuroki L, McCourt C, Hagemann AR, Thaker P, Mutch D, Powell M, Serra V, Hagemann IS, Walts AE, Karlan BY, Orsulic S, Fuh KC, Sun L, Verma P, **Lomonosova E**, **Zhao P**, **Khabele D**, **Mullen MM**. J Clin Invest. 2025 May 20;135(13):e189511. doi: 10.1172/JCI189511. eCollection 2025 Jul 1. PMID: 40392598

Diffusion basis spectrum imaging of white matter in schizophrenia and bipolar disorder.

Mamah D, Patel A, Chen S, **Wang Y**, Wang Q. Brain Imaging Behav. 2025 Jun 6. doi: 10.1007/s11682-025-01021-w. Online ahead of print. PMID: 40478407

The Sphingosine-1-phosphate pathway is differentially activated in human gestational tissues.

Mbadhi MN, Fujiwara H, **Gill R**, Mitchum KT, Lin C, Raghuraman N, **Frolova AI**. bioRxiv [Preprint]. 2025 Jun 5;2025.06.02.657487. doi: 10.1101/2025.06.02.657487. PMID: 40501580

Special Issue on Preeclampsia and Beyond.

Sharma S, **Gomez-Lopez N**, Saade G. Am J Reprod Immunol. 2025 Jun;93(6):e70103. doi: 10.1111/aji.70103. PMID: 40460101

Factors Associated with Positive Toxicology at Delivery: Insights From the University of Maryland Medical System.

Habersham LL, **Woolfolk CL**, Taylor KJ, Terplan M, Mark K. Matern Child Health J. 2025 Jun;29(6):783-790. doi: 10.1007/s10995-025-04107-5. Epub 2025 May 22. PMID: 40402351

Perinatal Outcomes Based on Number of Digital Exams in Patients with Preterm Prelabor Rupture of Membrane.

Burd J, Xie E, Kelly JC, Carter EB, Odibo A, Zofkie A, **Frolova A**, Raghuraman N. Am J Perinatol. 2025 Jun;42(8):965-970. doi: 10.1055/a-2435-0774. Epub 2024 Oct 7. PMID: 39374906

Systemic low-dose anti-fibrotic treatment attenuates ovarian aging in the mouse.

Amargant F, Magalhaes C, Pritchard MT, Duncan FE. Geroscience. 2025 Jun;47(3):3475-3495. doi: 10.1007/s11357-024-01322-w. Epub 2024 Sep 16. PMID: 39285140

Enhancing uterine contraction detection through novel EHG signal processing: a pilot study leveraging the relationship between slow and fast wave components to improve signal quality and noise resilience.

Gao H, **Wen Z**, **Jiang M**, **Nan Y**, **Wang Y**. Front Physiol. 2025 May 27;16:1568919. doi: 10.3389/fphys.2025.1568919. eCollection 2025. PMID: 40496244



PUBLICATIONS

► Q4 PUBLICATIONS (CRepHS lab members in bold)

Intrapartum Doula Support and Cesarean Delivery Rates: A Systematic Review and Meta-analysis.

Dias Y, Achebe NE, Doering MM, Montiel C, Paul R, Lawlor M, Malloy AT, McMillian C, Frazier T, Standard V, Haley S, Urrutia R, Tang JH, Slaughter-Acey J, **Frolova A**, Raghuraman N, Kelly JC, Carter EB. *Obstet Gynecol.* 2025 May 22;146(1):73-84. doi: 10.1097/AOG.0000000000005937. PMID: 40403310

Multi-parametric quantitative evaluation of murine cervical remodeling during pregnancy and postpartum.

Yan Y, Galaz J, Marvald J, Love T, Yellon S, **Gomez-Lopez N**, Mehrmohammadi M. *Sci Rep.* 2025 May 10;15(1):16359. doi: 10.1038/s41598-025-98765-8. PMID: 40348833

Risks Associated with Prolonged Latent Phase of Labor.

Burd J, **Woolfolk C**, Dombrowski M, Carter EB, Kelly JC, **Frolova A**, Odibo A, Cahill AG, Raghuraman N. *Am J Perinatol.* 2025 May;42(7):827-833. doi: 10.1055/a-2419-9283. Epub 2024 Sep 24. PMID: 39317213

The maternal-fetal interface at single-cell resolution: uncovering the cellular anatomy of the placenta and decidua.

Levenson D, Romero R, **Miller D**, Galaz J, **Garcia-Flores V**, Neshek B, Pique-Regi R, **Gomez-Lopez N**. *Am J Obstet Gynecol.* 2025 Apr;232(4S):S55-S79. doi: 10.1016/j.ajog.2024.12.032. PMID: 40253083

SLO2.1/NALCN Functional Complex Activity in Mouse Myometrial Smooth Muscle Cells During Pregnancy.

Ferreira JJ, **Kent LN**, **McCarthy R**, Butler A, **Ma X**, **Peramsetty N**, Amazu C, **Zhang A**, **Whitter GC**, Li E, **England SK**, **Santi CM**. *J Cell Physiol.* 2025 Apr;240(4):e70024. doi: 10.1002/jcp.70024. PMID: 40170408

Increased White Matter Aerobic Glycolysis in Multiple Sclerosis.

Brier MR, Judge B, Ying C, Salter A, An H, Patel A, Wang Q, **Wang Y**, Cross AH, Naismith RT, Benzinger TL, Goyal MS. *Ann Neurol.* 2025 Apr;97(4):766-778. doi: 10.1002/ana.27165. Epub 2024 Dec 23. PMID: 39714123

The association between maternal sleep and circadian rhythms during pregnancy and infant sleep and socioemotional outcomes.

Hoyniak CP, Donohue MR, Luby JL, Barch DM, **Zhao P**, Smyser CD, Warner B, Rogers CE, Herzog ED, **England SK**. *Eur Child Adolesc Psychiatry.* 2025 Apr;34(4):1365-1377. doi: 10.1007/s00787-024-02571-y. Epub 2024 Aug 24. PMID: 39180688



EVENTS & COLLABORATIONS

► ROTHMAN RESEARCH DAY

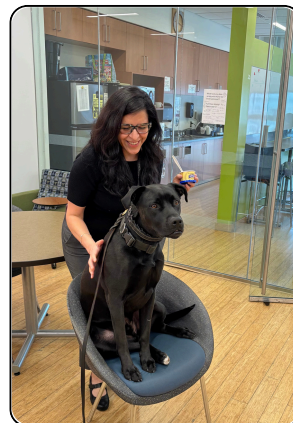
On April 30th, the 39th Annual **Rothman Research Day** event brought our community together to showcase the impactful research being conducted across a wide range of disciplines. Clinical, basic, and translational research presentations took place in the EPNEC Auditorium on the Med School Campus.

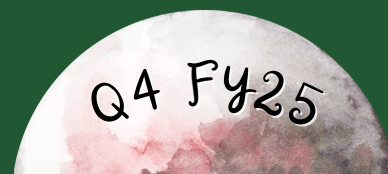
[Read more about the event, including Rothman Awardees, by clicking here.](#)



► ICE CREAM SOCIAL

In June, WashU comfort dogs Bear and Brookie stopped by the **CRepHS Ice Cream Social**, bringing smiles and tail wags to the Medical Campus.





EVENTS & COLLABORATIONS

► UPCOMING EVENTS & COLLABORATIONS

Dr. Jacob Probstein Visiting Professor

Kyle Orwig, PhD, Professor, Department of Obstetrics, Gynecology & Reproductive Sciences, University of Pittsburgh, is the 2025 Dr. Jacob Probstein Visiting Professor. He will lecture on "Gene Therapies for Male Infertility" on Tuesday, Oct. 7th, from 1:00-2:00 p.m. in the FLTC Connor Auditorium, and on "Stem Cell Approaches to Preserve and Restore Male Fertility" at Grand Rounds on Wednesday, Oct. 8th at 8:00 a.m.



Kyle Orwig, PhD

CRepHS Seminar Series

Here are the dates of the **CRepHS Seminars** taking place over the next few months:

- September 19th, 26th
- October 3rd, 24th, 31st
- November 7th, 14th, 21st

All occur on Fridays from 9:00-10:00 a.m. [View additional details here.](#)

CRepHS Collaboration Event

A fun way to collab with us is coming up! A CRepHS "International Potluck" is taking place on Thursday, September 18th. [Email Nami Rutherford](#) if you missed seeing the calendar invite.



Master of Science in Reproductive Sciences

The admissions cycle for the fall 2026 cohort has begun for the **Master of Science in Reproductive Sciences** (MSRS) program. To apply, go to msreproductivesciences.wustl.edu/admissions.



Learn more at
msrs.washu.edu

Writing Accountability Group

The Writing Accountability Group (WAG) is open to 10th floor BJCIH members. Meetings take place Tuesdays, 3:30-5:00 p.m. (10 A/B conference room) to provide protected writing time. Policies include no talking during quiet time and attend at least 60-minutes.



► CRepHS Events

Events for CRepHS and Ob/Gyn can be found online at <https://obgyn.wustl.edu/calendar>.

The CRepHS Seminar Series takes place most Fridays at 9:00 a.m. and is open to all. Attend in-person (BJCIH 10th floor) or [click here to request a Zoom link](#).

► Submit CRepHS News

We want to hear about your scientific accomplishments! [Submit your CRepHS-related news at anytime by using this form.](#)

► 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 WashU 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.

