Washington University in St.Louis

SCHOOL OF MEDICINE

Department of Obstetrics & Gynecology Center for Reproductive Health Sciences

CRepHS Newsletter

May 2022

BLOSSOMING PRODUCTIVITY

Dear CRepHS personnel and associates,

Merriam-Webster defines "blossom" as a state or time of great activity, thriving, or achievement. I find this to be an apt depiction of what's happening this spring and summer in our labs, offices and homes.

These are rejuvenating times, from flowering greenery and outdoor sporting events, to graduation celebrations and family vacations. Let's feed and grow our research and support efforts with the renewed energy emanating from our springtime activities, thriving networks and plentiful achievements.

In the meantime, I hope you enjoy catching up on the latest news of CRepHS.



Sarah K. England, PhD Alan A. and Edith L. Wolff Professor of Medicine

Vice Chair of Research and Professor of Medicine Department of Obstetrics and Gynecology

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PERSONNEL UPDATE

(from previous fiscal quarter and current)

NEW TEAM MEMBERS



Melissa Gibson Undergraduate Researcher *Frolova Lab*



Erin Reinl, PhD Instructor *England Lab*



Kaci Martin DBBS Pre-doc Trainee *Frolova Lab*



Kellie Thompson, MSW Senior Grant Specialist *Ob/Gyn*

PROMOTIONS



Xiaofeng Ma, PhD Senior Scientist *England Lab*

FAREWELL EVENT

Save the date for Friday, June 3rd, to wish **Katherine Fuh**, **MD**, **PhD**, Associate Professor, much happiness and fulfillment with her new role at UCSF. The farewell party will be held on the 10th floor of the BJC-IH building from 3:00-5:00 p.m.

Event contact: Kirsten Wilson, <u>kirstenw@wustl.edu</u>.



PERSONNEL UPDATE

JOB OPPORTUNITIES

- <u>Research Assistant</u> Frolova Lab
- Find more information and other jobs at https://jobs.wustl.edu/

PERSONNEL Spotlight

Magdalena Nelson, MS Division Administrator CRepHS



D are we ask what CRepHS would be like without the attentiveness and competency of its Division Administrator, Magdalena Nelson? Magdalena is our first of many Personnel Spotlight stories for this newsletter and, so, without further ado:

While Magdalena has worked at Washington University for nearly six years, her interest in research started at Johns Hopkins University in 2008. Magdalena had joined a grant management team heavily focused on work in low- and middle-income countries, and she aimed to combine her education in international business with an opportunity to help improve health conditions in impoverished regions of the world. While fascinated by the "tremendous wealth of knowledge that goes into running a research group," she also was humbled by the stories and wisdom PIs would share after their trips to Nepal, Bangladesh, Peru, Zambia, and more.

When asked what she likes best about her current role as Division Administrator, many may find common ground in her response: "I like solving puzzles and working in research administration gives me plenty of

puzzles to figure out." She is happy to work with what she calls some of the "best people, both professionally and personally," and likes to learn and grow from the unique talents each person on a team brings to the table.

"With the help of our wonderful administrative and grant management team, I oversee a variety of activities spanning from basic tasks like calendar assistance, procurement, event organization, to more complex areas such as HR, payroll supervision, account reconciliation, and grant and contract management." "I'm not a researcher, but I'm intricately connected to research because my role is to support our research groups in their day-to-day work." -Magdalena

Outside of work, Magdalena's two children keep her busy through sports activities, classroom volunteering, and running an annual Easter egg hunt in their neighborhood. Her happiest place is at home, in the backyard and with her family. Her second happiest place is in the hills above her hometown in Slovakia – taking long walks, enjoying nature and breathing fresh air.

UPCOMING EVENTS

Friday, May 13th

9:00 a.m. CRepHS Seminar Series

Friday, May 20th

9:00 a.m. Commencement Ceremony

Friday, May 27th

9:00 a.m. CRepHS Seminar Series

Friday, June 3rd

9:00 a.m. CRepHS Seminar Series

3:00 p.m. Going Away Party for Dr. Fuh/ CRepHS Social Hour

Thursday, July 7th

4:00 p.m. CRepHS Social Hour

Thursday, August 4th

4:00 p.m. CRepHS Social Hour





A reproduction-focused journal club hosted by the England and Frolova labs.

When: Fridays, 9:00-10:00 a.m. (June 10-Sept. 2)

Where: Zoom and in-person

All are welcome. Contact Lindsey Kent or Kumar Saurabh to learn more.

SCIENTIFIC ACCOMPLISHMENTS

(from previous fiscal quarter and current)

AWARDS & APPOINTMENTS

- **Dr. Maggie Mullen's** research collaboration with **Alexandra Rutz**, **PhD**, McKelvey School of Engineering, titled "In Vitro Bioelectronic Monitoring of Therapy Response in 3D, Patient-Derived Ovarian Cancer Models," was selected in March to receive a Collaboration Initiation Grant (CIG) in Women's Health Technologies with co-funding from the McKelvey School of Engineering and Obstetrics and Gynecology.
- At the 69th annual meeting of the <u>Society for Reproductive Investigation</u> (SRI) in March 2022:
 - OBGYN Vice-Chair for Research, **Sarah England**, **PhD**, received the DeCherney Society Lifetime Distinguished Service Award. This award recognizes an individual who has "made outstanding contributions to the Society for Reproductive Investigation and significant contributions to the field of reproductive medicine and women's health."
 - OBGYN Chair, **Dineo Khabele**, **MD**, won the President's Achievement Award. This award is bestowed upon "a member of the society whose record in scientific investigation is outstanding and assures a continued productive career in research."
- Kevin Prifti, senior research assistant in the Frolova Lab, was accepted to graduate school in <u>Molecular Cellular Biology</u> at Washington University. Prifti will begin the program in Fall 2022.
- <u>Blue Ridge Institute for Medical Research</u> recently released its 2021 rankings for top NIH funding to US medical schools, based on specialty. Washington University's **Department of Obstetrics & Gynecology** is ranked 8th, as per reported data of NIH awards granted from October 2020 through September 2021.



Photo credit: Matt Miller/Washington University School of Medicine

PRESENTATIONS

• At the annual Society for Reproductive Investigation (SRI) meeting in March 2022, **Bisiayo Fashemi**, **PhD**, of the **Khabele Lab**, presented on ovarian organoids, and **Maggie Mullen**, **MD**, presented on AXL expression and ovarian cancer metastasis.

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SCIENTIFIC ACCOMPLISHMENTS

(from previous fiscal quarter and current)

PRESENTATIONS ...continued

- Sarah England, PhD, presented "Revisiting the role of sodium channels in regulating uterine activity" at the Medical College of Wisconsin, Dept. of Pharmacology and Toxicology, Kathryn M. Gauthier Endowed Lecture via Zoom on February 21st. England also spoke on "Excitability changes at the molecular level and impacts on maternal outcomes" at the College's Graduate Student Research Symposium on March 31st.
- On April 6th, Sarah England, PhD, presented on • "Chronodisruption – A Potential Risk for Adverse Pregnancy Outcomes" at the University of Pittsburgh, Magee-Womens Research Institute.
- Max Lyon's abstract for the NIH "2022 Contraception • and Development Meeting" was selected for oral presentation in addition to a poster presentation. A panel of judges selected only three abstracts for the oral presentation based on quality, impact and innovation. Lyon, a graduate student in the **Santi Lab**, provided a 10-minute talk at the meeting's trainee session. Lyon also was awarded the 2022 Center for Reproductive Health Sciences Travel Award, WUSM.



Lyon in Boston, April 6, 2022.

PUBLICATIONS*

- Pharmacological chaperones for the oxytocin receptor increase oxytocin responsiveness in myometrial cells. Malik M, Fang Y, Wakle-Prabagaran M, Roh M, Prifti K, Frolova AI, Imoukhuede PI, England SK. J Biol Chem. 2022 Jan 28;298(3):101646. doi: 10.1016/ j.jbc.2022.101646. Online ahead of print. PMID: 35093385.
- A Soft Sponge Sensor for Multimodal Sensing and Distinguishing of Pressure, Strain, and • Temperature, Lo LW, Zhao J, Wan H, Wang Y, Chakrabartty S, Wang C. ACS Appl Mater Interfaces. 2022 Feb 23;14(7):9570-9578. doi: 10.1021/acsami.1c21003. Epub 2022 Feb 14. PMID: 35156792.
- Sex-Specific Patterns of Body Mass Index Relationship with White Matter Connectivity. Rahmani F, Wang Q, McKay NS, Keefe S, Hantler N, Hornbeck R, Wang Y, Hassenstab J, Schindler S, Xiong C, Morris JC, Benzinger TLS, Raji CA. J Alzheimers Dis. 2022 Feb 17. doi: 10.3233/JAD-215329. Epub ahead of print. PMID: 35180116.

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*Labs in bold.

SCIENTIFIC ACCOMPLISHMENTS

(from previous fiscal quarter and current)

PUBLICATIONS* ...continued

- Labor induction with oxytocin in pregnant rats is not associated with oxidative stress in the fetal brain. Giri T, Jiang J, Xu Z, McCarthy R, Halabi CM, Tycksen E, Cahill AG, **England SK**, Palanisamy A. Sci Rep. 2022 Feb 24;12(1):3143. doi: 10.1038/s41598-022-07236-x. PMID: 35210555.
- <u>Blocking the BKCa channel induces NF-κB nuclear</u> <u>translocation by increasing nuclear calcium concen-</u> <u>tration†.</u> Kent LN, Li Y, Wakle-Prabagaran M, Naqvi MZ, Weil SG, **England SK**. Biol Reprod. 2022 Mar 19;106(3):441-448. doi: 10.1093/biolre/ioab211. PMID: 34791046; PMCID: PMC8934693.
- Accuracy and reliability of diffusion imaging models. Seider NA, Adeyemo B, Miller R, Newbold DJ, Hampton JM, Scheidter KM, Rutlin J, Laumann TO, Roland JL, Montez DF, Van AN, Zheng A, Marek S, Kay BP, Bretthorst GL, Schlaggar BL, Greene DJ,
 Wang Y, Petersen SE, Barch DM, Gordon EM, Snyder AZ, Shimony JS, Dosenbach NUF. Neuroimage. 2022 Mar 23;254:119138. doi: 10.1016/ j.neuroimage.2022.119138. Epub ahead of print. PMID: 35339687.



- Examination of Intersectionality and the Pipeline for Black Academic Surgeons. Keshinro A, Butler P, Fayanju O, Khabele D, Newman E, Greene W, Ude Welcome A, Joseph KA, Stallion A, Backhus L, Frangos S, DiMaggio C, Berman R, Hasson R, Rodriguez LM, Stain S, Bukur M, Klein MJ, Henry-Tillman R, Barry L, Oseni T, Martin C, Johnson-Mann C, Smith R, Karpeh M, White C, Turner P, Pugh C, Hayes-Jordan A, Berry C. JAMA Surg. 2022 Apr 1;157(4):327-334. doi: 10.1001/jamasurg.2021.7430. PMID: 35138327; PMCID: PMC8829744.
- <u>Estrogen metabolites increase nociceptor hyperactivity in a mouse model of uterine pain.</u> Xie Z, Feng J, Cai T, McCarthy R, Eschbach Ii MD, Wang Y, Zhao Y, Yi Z, Zang K, Yuan Y, Hu X, Li F, Liu Q, Das A, **England SK**, Hu H. JCI Insight. 2022 Apr 14:e149107. doi: 10.1172/ jci.insight.149107. Epub ahead of print. PMID: 35420999.

*Labs in bold.

From our *Engineering* collaborator Christine O'Brien, PhD: <u>In vivo Raman spectroscopy</u> <u>monitors cervical change during labor</u>. Masson LE, O'Brien CM, Gautam R, Thomas G, Slaughter JC, Goldberg M, Bennett K, Herington J, Reese J, Elsamadicy E, Newton JM, Mahadevan-Jansen A. Am J Obstet Gynecol. 2022 Feb 19:S0002-9378(22)00121-1. doi: 10.1016/j.ajog.2022.02.019. Epub ahead of print. PMID: 35189092.

SOCIAL CONNECTIONS

Twitter

@DKhabeleMD @Englandsk785 @Fuh_Lab @MaggieMullenLab @santi_lab @WashU_OBGYN @yongwangwashu



Instagram

<u>@england.sk</u> <u>@washu</u> <u>@washumedicine</u> <u>@washuobgyn</u>

SUBMIT YOUR NEWS

News for consideration is always welcome! Email <u>ejulie@wustl.edu</u> by July 22, 2022, to have your news and information considered for the next edition of the CRepHS Newsletter.

CONTACT CRepHS

Visit our website at <u>https://reproductivesciences.wustl.edu/</u> or email questions and feedback related to CRepHS to <u>audreyj@wustl.edu</u>.

About CRepHS

he <u>Center for Reproductive Health Sciences</u> (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 <u>Department of Obstetrics and Gynecology</u>, 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.