

# CRepHS Newsletter

November 2022

## A WONDERFUL TIME OF YEAR

Dear CRepHS personnel and associates,

Festive generosity, seasonal food, gatherings with friends and family, joyous decorations... of all the varied aspects of the holiday season, our humanitarian efforts continue to be a sight to behold. The CRepHS team is poised to maintain excellence in reproductive health sciences research to help humankind no matter one's holiday penchant.

We have PIs with new and renewed grants, strong and multi-disciplinary collaborations, new trainees, research seminars, scientific papers, and much more taking place as we wrap up 2022.

Wishing everyone a happy and peaceful holiday season!

*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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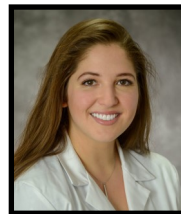
*Next issue: February 2023*

# PERSONNEL UPDATE

## NEW TEAM MEMBERS



**Trinidi Prochaska**  
Undergraduate Researcher  
*England Lab*



**Patti Strutz, MD, MSCI**  
Clinical Fellow  
*England Lab*



## JOB OPPORTUNITIES

**Research positions** are available in CRepHS labs.

- [Staff Scientist—Frolova Lab](#)
- [Research Assistant—Frolova Lab](#)

Find more information and view all job opportunities by visiting <https://jobs.wustl.edu/>.

## FUNDING OPPORTUNITIES

- **Seed Grants** from the Washington University Center of Regenerative Medicine (CRM), partnered with the Center for Women's Health Engineering: <https://regenerativemedicine.wustl.edu/funding-2/seed-grants/seed-grant-rfa/>.
- **Recurrent funding** opportunities: <https://obgyn.wustl.edu/research/resources-funding/>
- **NIH Loan Repayment Programs**: <https://www.lrp.nih.gov/>

# PERSONNEL Spotlight

**Antonina Frolova, MD, PhD**  
*Assistant Professor*  
Ob/Gyn



We are shining the spotlight this quarter on one of our Principal Investigators (PI). Dr. Antonina (Toni) Frolova's connection to Washington University's Department of Obstetrics and Gynecology began more than a decade ago as a medical student. Toni earned her medical degree in 2013 and a graduate degree in Molecular and Cellular Biology in 2017 from Washington University in St. Louis School of Medicine. Her residency in Ob/Gyn and a fellowship in Maternal-Fetal Medicine (MFM) ensued at WashU. Since then, Toni has accumulated nearly 30 months of research within the Department of Ob/Gyn.

As an Assistant Professor and PI, she leads her lab within CRepHS, and also conducts clinic duties within MFM, Ultrasound, and Labor and Delivery. Within the Frolova Lab, you can find studies on the molecular mechanisms of uterine contractility happening. Toni has a strong belief that clinical practice needs to be informed by a mechanistic understanding of the normal and abnormal pathophysiology.

"I love that I am able to inform the direction of my research in the lab by my observations and experiences in clinical practice. I also like that I am able to have so much variety in my day-to-day work life," Toni remarks. "Lastly, I really like all my coworkers and lab members! I'm excited to see my mentees succeed and look forward to more coming on board."

Toni's goals include continuing rigorous research that will allow us to understand how the uterus contracts and why it sometimes does this inefficiently. This research will allow us to develop new, targeted, therapeutics for uterine contraction augmentation in order to decrease the high rates of cesarean delivery and maternal morbidity we see today.

Outside of the lab and clinic, being a productive member of her family is another of her significant roles. "I have a wonderful husband, Diego, who is very supportive of my career, despite the crazy schedule I keep. We have a son, Franklin, and much of our weekend free time is spent going to various youth sports events." She's also a proud chicken momma and has a backyard garden that is her happy place in St. Louis. ■

"I am able to inform the direction of my research in the lab by my observations and experiences in clinical practice."

-Toni Frolova, MD, PhD

## Did you know?

Before earning her medical degree, Toni was a competitive synchronized swimmer.

## UPCOMING EVENTS

**Monday, Dec. 19th, 12:30 p.m.** >>> CRepHS Holiday Party

**Wednesday, Jan. 11th, 12:15 p.m.** >>> OBGYN Town Hall

**Jan. 11-12th, 2023** >>> [WashU Researcher Forum](#)

**Wednesday, Jan. 18th, 12:00 p.m.** >>> Emilee Kotnik's Thesis Defense, Holden Auditorium

**Feb. 1-2, 2023** >>> [Virtual NIH Grants Conference](#)

# CRepHS Seminar Series

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

[Dec. 2nd](#)

[Dec. 9th](#)

Dec. 16th

Jan. 13th

Jan. 20th

Jan. 27th

Feb. 3rd

[Zoom link &  
registration](#)



**Looking for more collaboration?**

**Join us for CRepHS Monthly  
Center Collaboration Meetings.**

Held on the 10th floor of the BJC-IH  
building. Contact Kirsten Biggs and  
Audrey Johnston to learn more.



# SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter one)

## AWARDS & APPOINTMENTS

- This past summer, OBGYN's **Dr. Sarah England**, Vice Chair of Research and Professor, and **Dr. Erin Reinl**, Instructor, received a "Match Grant15 Award" from the [Center for Drug Discovery](#) (CDD) at Washington University. The CDD established this award to advance translational small-molecule drug discovery research at WashU. England and Reinl are studying Oxytocin Receptor Pharmacoperones.
- **Bisiayo Fashemi, PhD**, Post-doc Research Associate in the **Khabele Lab**, recently received a Diversity Supplement award from the National Cancer Institute of the National Institutes of Health (NIH). Through Dr. Khabele's NIH RO1-funded project titled, "Epigenetic Drug Regimens for Homologous Recombination Proficient Ovarian Cancer," this supplement will bolster research in the area of novel combination therapeutic strategies and the identification of surrogate biomarkers to assess treatment efficiency in ovarian cancer.
- From the lab of Associate Professor **Celia Santi, MD, PhD**:
  - ◆ **Juan J. Ferreira, PhD**, Postdoc Research Associate, trained and competed to earn a career development "ExCELS Award" from the WUSTL's Office of Postdoctoral Affairs and English Language Programs in September. The award recognizes outstanding postdoctoral appointees who engage their audience with clear and concise explanations of their research, all while speaking English as an additional language.
  - ◆ **Max Lyon** (DBBS graduate student) received the Translational Prize for his poster titled "First selective inhibitor of SLO3 impairs human sperm function" at WUSTL's Center for Investigation of Membrane Excitability Diseases (CIMED) Research Day in September.
- **Sarah England, PhD**, was named to the [American Society for Reproductive Medicine](#) Advisory Committee as an at-large Member.



Erin Reinl, PhD, and Sarah England, PhD

Continued on next page...

# SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter one)

## AWARDS & APPOINTMENTS *...continued*

- **Sarah England, PhD**, and **Celia Santi, MD, PhD**, received a five-year renewal of their R01 research project in September. Their project is titled “A novel molecular mechanism for stimulating uterine contractility by oxytocin.”

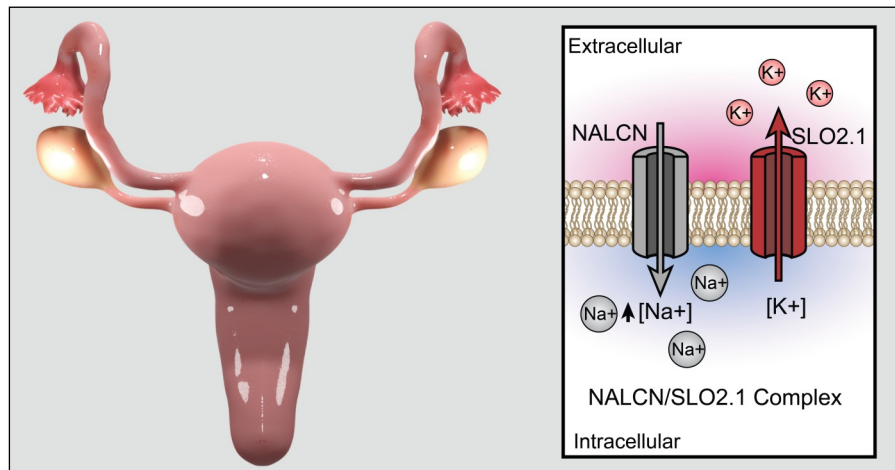
- **Maggie Mullen, MD**, Assistant Professor of Ob/Gyn, recently attained faculty membership in the

[Division of Biology and Biomedical Sciences](#)

(DBBS), part of The Graduate School at Washington

University in St. Louis. With this DBBS faculty standing, Dr. Mullen is able to train and supervise doctoral candidates enrolled in DBBS programs that are seeking gynecologic oncology lab research experience.

- Song Hu, PhD, associate professor of biomedical engineering in the McKelvey School of Engineering at WashU, and **Yong Wang, PhD**, associate professor of Ob/Gyn, were recently awarded a three-year R61 grant from the National Center for Complementary and Integrative Health of the National Institutes of Health. Their project is titled, “Development and identification of magnetic resonance, electrophysiological, and fiber-optic imaging biomarkers of myofascial pain.” Read more [here](#).



Uterine contractility. Image credit: [Anthony Bartley](#)/ Washington University School of Medicine

## PRESENTATIONS

- **Sarah England, PhD**, presented on “Ion channel modulation and its effect on pregnancy outcomes” at the Society of General Physiologists Conference at the Marine Biological Laboratory in September.



Image credit: [Anthony Bartley](#)/Washington University School of Medicine

# SCIENTIFIC ACCOMPLISHMENTS

(from fiscal quarter one)

## PUBLICATIONS\*

- [Etiology and evaluation of stillbirth in patients with obesity](#). Bligard KH, Dicke JM, Stout MJ, Nelson DM, **Frolova AI**, Cahill AG, Raghuraman N. J Matern Fetal Neonatal Med. 2022 Sep 14;1-6. doi: 10.1080/14767058.2022.2122797. Epub ahead of print. PMID: 36102165.
- [High visceral fat to subcutaneous fat ratios portend a poor prognosis in patients with advanced endometrial cancer](#). Buckley E, **Mullen MM**, Nizamuddin RA, Stein JH, Kuroki LM, Fuh KC, Hagemann AR, McCourt CK, Mutch D, **Khabele D**, Powell MA, Ippolito JE, Thaker PH. Gynecol Oncol. 2022 Sep 27:S0090-8258(22)01824-8. doi: 10.1016/j.ygyno.2022.09.011. Epub ahead of print. PMID: 36180305.
- [Magnetic resonance imaging of the supra-cervical fetal membrane detects an increased risk of prelabor rupture of membranes](#). Qi W, Zhao P, Wang W, Wen Z, Sun Z, Wu W, Woodard PK, Wang Q, McKinstry RC, **Wang Y**. Front Endocrinol (Lausanne). 2022 Sep 29;13:1001538. doi: 10.3389/fendo.2022.1001538. PMID: 36246931; PMCID: PMC9559212.

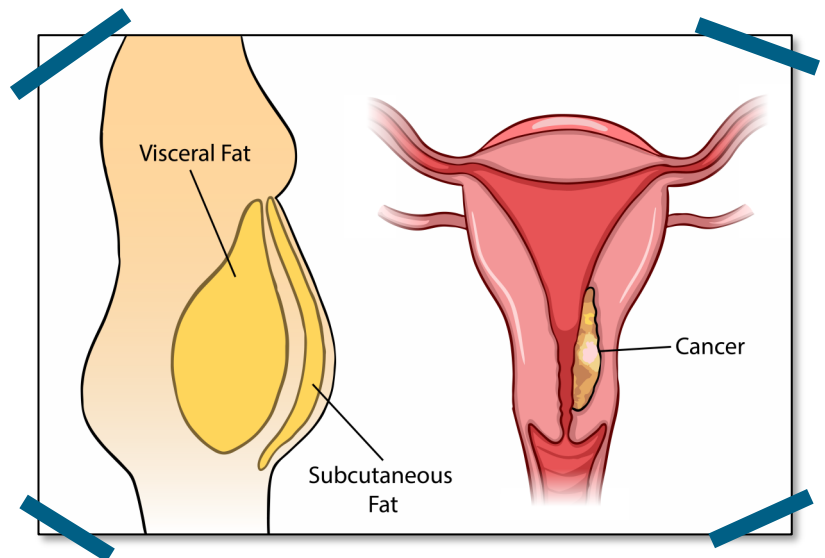
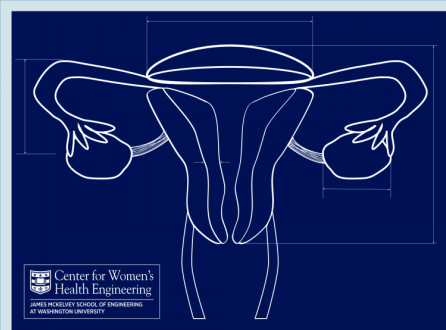


Image credit: [Anthony Bartley/Washington University School of Medicine](#)

\*Labs in bold.



From our collaborator in WUSTL's Department of Biomedical Engineering, Dr. Michelle Oyen: [Biomaterials science and engineering to address unmet needs in women's health](#). **Oyen ML**. MRS Bull. 2022;47(8):864-871. doi: 10.1557/s43577-022-00389-0. Epub 2022 Sep 29. PMID: 36196217; PMCID: PMC9521852.

## SOCIAL CONNECTIONS



### Twitter

[@DKhabeleMD](https://twitter.com/DKhabeleMD)

[@Englandsk785](https://twitter.com/Englandsk785)

[@FrolovaToni](https://twitter.com/FrolovaToni)

[@MaggieMullenLab](https://twitter.com/MaggieMullenLab)

[@santi\\_lab](https://twitter.com/santi_lab)

[@WashU\\_OBGYN](https://twitter.com/WashU_OBGYN)

[@yongwangwashu](https://twitter.com/yongwangwashu)



### Instagram

[@england.sk](https://www.instagram.com/england.sk)

[@washu](https://www.instagram.com/washu)

[@washumedicine](https://www.instagram.com/washumedicine)

[@washuobgyn](https://www.instagram.com/washuobgyn)

## SUBMIT YOUR NEWS

News for consideration is always welcome! Email [ejulie@wustl.edu](mailto:ejulie@wustl.edu) by Jan. 20th, 2023, to have your news and information considered for the next edition of the CRepHS Newsletter.

## CONTACT CRepHS

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