OBSTETRICS AND GYNECOLOGY

Fellowship in Reproductive Endocrinology and Infertility

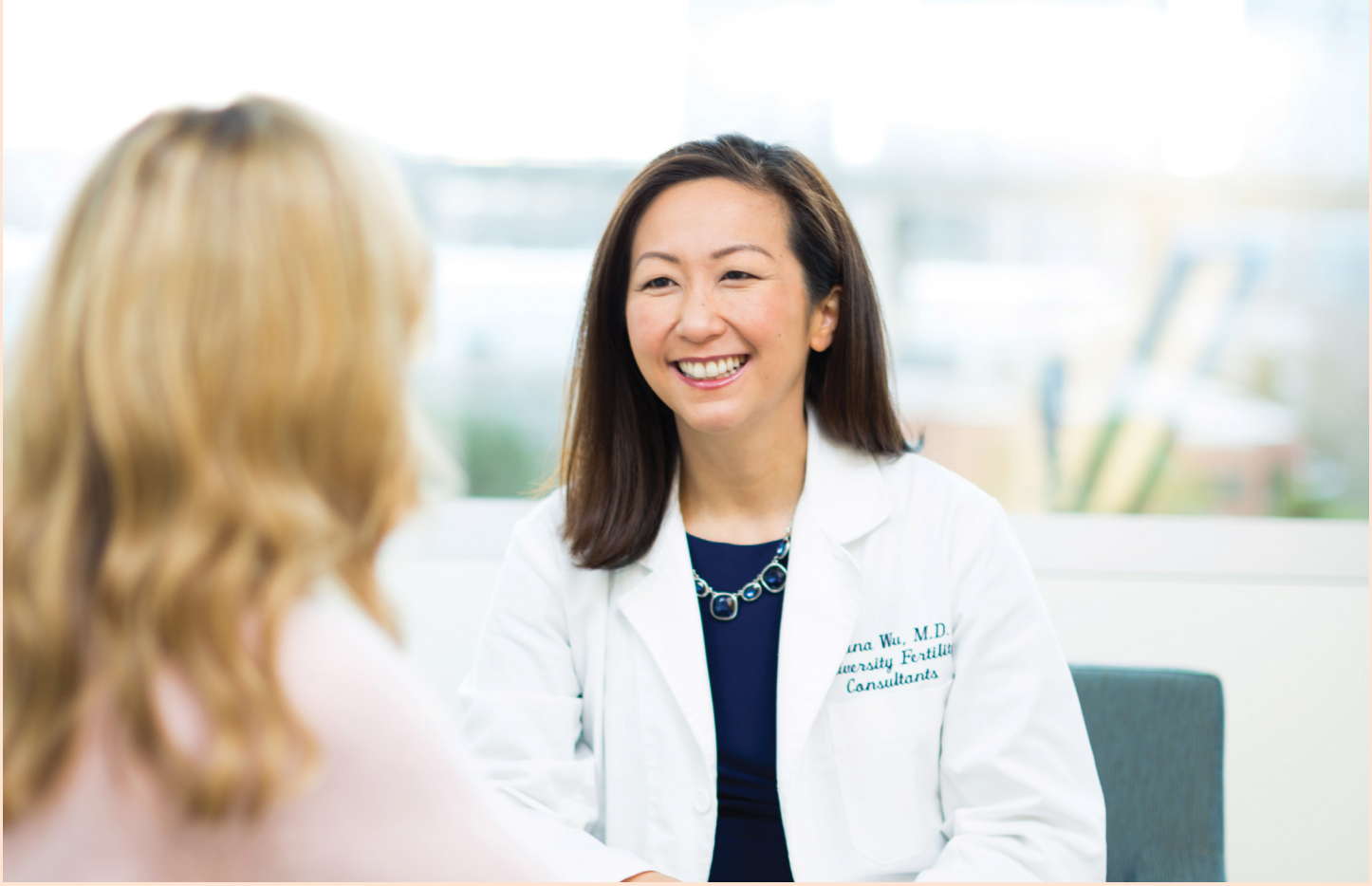
OHSU

Oregon Health & Science University is the state's only academic health center. It offers an uncommon array of services from providing the state's most comprehensive health care, to educating the next generation of clinicians and biomedical researchers, to achieving breakthroughs and innovations.

OHSU has the academic richness and scientific depth to support a successful Reproductive Endocrinology and Infertility (REI) Fellowship. Historically, OHSU has had a large footprint in the reproductive medicine world.

The REI Fellowship program at OHSU started in 2018 after a history of clinical, academic and research advancements. Leon Speroff, M.D., a previous chairman of Ob/Gyn at OHSU, wrote the definitive textbook in Reproductive Endocrinology that residents and fellows have used for the past 30 years. OHSU has also made fundamental advances in basic reproductive science through collaborations with the Oregon National Primate Research Center (ONPRC). Faculty in the Division of Reproductive and Developmental Sciences have performed research over the past several decades leading to discoveries in contraception, ovarian and uterine function, as well as implantation. This research has provided insight into the development of novel treatments for reproductive diseases associated with fertility, such as polycystic ovary syndrome and endometriosis. The first IVF case in Oregon was performed at OHSU in the 1980s. Collectively, faculty focusing on reproductive, developmental, and stem cell biology regularly publish in high-impact journals including *Science*, *Nature*, *and Cell*.

The overall educational objective for the REI Fellowship is to train outstanding leaders in Reproductive Endocrinology and Infertility, capable of contributing to the field and continuing OHSU's legacy. Given the breadth of unique research experiences and robust clinical training at OHSU, upon completion of fellowship we will have trained exceptionally well-rounded REI physicians.



Clinical Training

Fellows will train in an environment that has a rich history in treating patients with reproductive endocrinopathies; those requiring complex reproductive surgeries and treatment of infertility. With our active IVF program, fellows will be exposed to cutting-edge assisted reproductive techniques while having access to a large number of IVF cycles.

IVF Training

During the first year, the REI fellow will be learning IVF related procedures including ultrasound, egg retrievals, and embryo transfers on call with the IVF attending physician of the week.

Surgical Training

REI fellows will participate in sub-specialty specific, complicated surgeries, including laparoscopies, hysteroscopies, laparatomies, and robotics for tubal disease, endometriosis, asherman's syndrome, leiomyoma, polyps, mullerian variants, and pediatric gynecology. Laparoscopic training laboratory and robot-training facilities are also available. The uro-gynecology division also sponsors a gynecologic cadaver surgery lab, which is available to REI faculty.

Subspecialty Care Training

During the third year, fellows will participate in subspecialty care in the following areas:

Pediatric Endocrinology: Exposure to delayed and precocious puberty, premature ovarian dysfunction, PCOS, diabetes, transgender care in the adolescent, and disorders of sexual development

Medical Endocrinology: Exposure to thyroid and adrenal diseases, pan-hypopituitarism, osteoporosis, diabetes, and obesity

Male Fertility: A Fertility Urologist will teach fellows about medical and surgical treatment of male infertility

Genetics: A Genetic Counselor will educate fellows about pre-conception screening and pre-implantation genetic screening and diagnosis

Research Opportunities and Resources

OHSU has a long history of fundamental basic research in reproductive science. There is a collegial relationship with other departments and institutes at OHSU and unique resources to ensure that fellows will complete a clinically professional and defensible thesis.

Stem OHSU Center for Embryonic Cell and Gene Therapy Laboratories

OHSU has invested more than $3 million in establishing the Center for Embryonic Cell and Gene Therapy to study biology of gametes, preimplantation embryos, and totipotent and pluripotent stem cells. The Center provides a unique opportunity to do basic research involving human embryonic stem cells under the tutelage of Dr. Shoukhrat Mitalipov. The Center has state-of-the-art facilities that allow for studies involving stem cell culture, embryo manipulation and culture, molecular biology, epifluorescent microscopy, gamete/embryo cryopreservation, and tissue dissection.

The Women's Health Research Unit (WHRU)

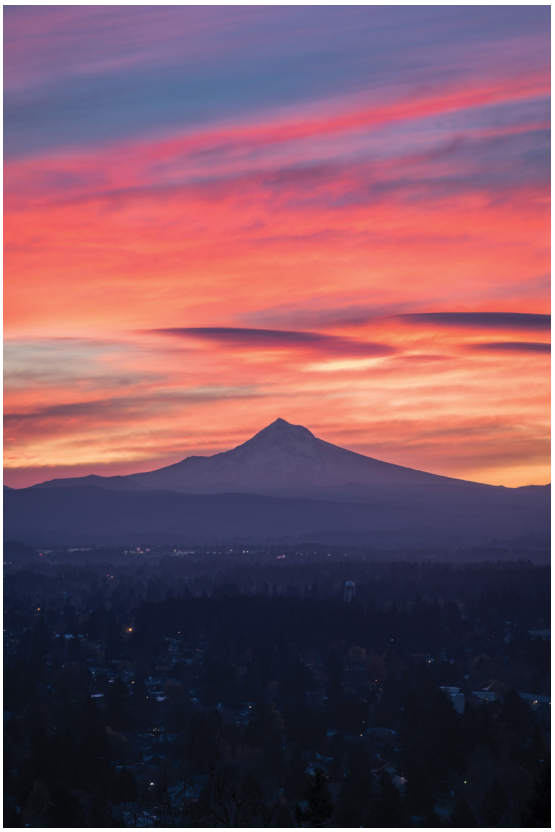
WHRU is a unit within the department of Ob/Gyn that is also available to fellows for clinical research projects. Several WHRU members have both their MD and MPH and can to mentor fellows working on clinical projects.

Oregon National Primate Research Center

The ONPRC is one of seven NIH-supported primate research centers in the United States that conduct basic science and translational research. The ONPRC was founded in 1962 and is an integral unit of OHSU. ONPRC researchers affiliated with the five scientific divisions that include Cardiometabolic Health, Genetics, Neuroscience, Pathobiology and Immunology, and Reproductive & Developmental Sciences have developed models in primates to ask critical questions about the brain, vaccine development, metabolic disease, and reproduction. ONPRC houses over 4,500 non-human primates on a 260-acre campus, with animal care and research support provided by 20 veterinarians and over 200 support staff.

The Division of Reproductive & Developmental Sciences at the ONPRC conducts basic and applied research on aspects of reproductive biology that are particularly relevant to understanding human reproduction and controlling fertility. The Division is the oldest and founding division of ONPRC with ~55 years of NHP experience and is considered one of the premier sites to perform reproductive research. Research projects span the continuum of reproductive processes, from gamete and embryo development, through pregnancy initiation, placental function and maternal-fetal development, to delivery and neonatal health. Researchers are creating and using nonhuman primate models to investigate reproductive and developmental physiology to advance our understanding of the etiology, diagnosis, and treatment of reproductive and developmental pathologies. By combining assisted reproductive technologies with newer genome editing techniques, Division scientists are also involved in creating nonhuman primate models of human diseases to understand their pathophysiology and develop the next generation of precision medicine-based treatments. Research groups utilize macaque species and baboons for whole-animal, cellular and molecular studies directly relevant to women's and child health.

There are 22 scientists comprising the Division. Some have primary appointments in other ONPRC Divisions or Departments within the OHSU School of Medicine but include reproductive and developmental sciences as a major part of their research. While fostering the individuality of the investigator's research, the overarching theme is the formation of interdisciplinary groups performing translational research on critical issues in women's reproductive health. Division faculty members are also committed to training the next generation of reproductive and developmental scientists, particularly those who seek to improve human health by using clinically relevant nonhuman primate models. The Division hosts an Assisted Reproductive Core Laboratory with full capabilities for non-human primate IVF, including incubators and microscopes for micromanipulation. There are four surgical suites available for procedures, and state-of-the-art core laboratories support studies requiring bioinformatics and biostatistics, endocrine assays, imaging and morphology, histology, flow cytometry, molecular biology, virology, and genetics.



Additional Resources

Oregon Clinical and Translational Research Institute

Building Interdisciplinary Research Careers in Women's Health

Women's Reproductive Health Research K12 Program

Curriculum

Research is a significant strength of the fellowship and training should adequately prepare trainees to pursue careers in academic medicine. Eighteen months of protected research time are provided in the beginning of the second year of fellowship. It is expected that during this period of time the fellow will pursue mentorship in a basic science lab and complete a substantial research project that will serve as the basis of their thesis and publication. It is also expected that the fellow will undertake at least one clinical research project or write a clinical review. The fellow will complete a biostatistics course offered through OHSU's Human Investigations Program, with the option to complete either a Certificate of Training in Human Investigations, or a Master of Clinical Research.

Mentorship

Core Faculty

David Lee, M.D.
PROGRAM DIRECTOR
PROFESSOR OF OBSTETRICS AND GYNECOLOGY
DIVISION OF REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY

Sacha Krieg, M.D., Ph.D.
ASSOCIATE DIRECTOR
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY
DIVISION OF REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY

Paula Amato, M.D.
PROFESSOR OF OBSTETRICS AND GYNECOLOGY
DIVISION OF REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY

Diana Wu, M.D.
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY
DIVISION OF REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY

Thomas O'Leary, Ph.D.
DIRECTOR, FERTILITY LABORATORY
ANDROLOGY DIVISION

Additional Faculty and Collaborators

EDUCATION AND RESEARCH

Karen Adams, M.D.
PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU

Jeffrey Jensen, M.D., M.P.H.
PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU

PSYCHOLOGY

Teni Davoudian, Ph.D., ABPP
CLINICAL PSYCHOLOGIST
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU

GENETICS

Elena Burnett, M.S., CGC
GENETIC COUNSELOR

UROLOGY

Jason Hedges, M.D., Ph.D.
ASSOCIATE PROFESSOR OF UROLOGY, OHSU

COMPLEX FAMILY PLANNING

Maureen Baldwin, M.D., M.P.H.
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU

Lisa Bayer, M.D., M.P.H.
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU
ASSISTANT FELLOWSHIP DIRECTOR, FAMILY PLANNING

Alison Edelman, M.D., M.P.H.
PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OHSU FELLOWSHIP DIRECTOR, FAMILY PLANNING

RADIOLOGY

Amy Thurmond, M.D.
CLINICAL ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY

MEDICAL ENDOCRINOLOGY

Robert Klein, M.D.
PROFESSOR OF MEDICINE, OHSU
DIVISION OF ENDOCRINOLOGY, DIABETES AND CLINICAL NUTRITION

Maria Fleseriu, M.D.
PROFESSOR

Mary Samuels, M.D.
PROFESSOR

Chaim Vanek, M.D.
ASSOCIATE PROFESSOR OF MEDICINE, OHSU
DIVISION OF ENDOCRINOLOGY, DIABETES AND CLINICAL NUTRITION

PEDIATRIC ENDOCRINOLOGY

Bruce Boston, M.D.
PROFESSOR OF PEDIATRICS, OHSU
DIVISION OF ENDOCRINOLOGY

Hayley Baines, M.D.
ASSISTANT PROFESSOR

Kara Connelly, M.D.
ASSOCIATE PROFESSOR

Lisa Madison, M.D.
CLINICAL ASSOCIATE PROFESSOR OF PEDIATRICS, OHSU
DIVISION OF ENDOCRINOLOGY

Lindsey Nicol, M.D.
ASSOCIATE PROFESSOR

Katie Woods, M.D.
ASSOCIATE PROFESSOR

Oregon National Primate Research Center Reproductive and Developmental Sciences faculty and affiliates with research interests in reproductive endocrinology and infertility include:

Shawn L. Chavez, Ph.D.
ASSOCIATE PROFESSOR
ADJUNCT ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY

Leo Han, M.D.
AFFILIATE ASSISTANT PROFESSOR
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY

Carol B. Hanna, Ph.D.
RESEARCH ASSISTANT PROFESSOR
DIRECTOR, ASSISTED REPRODUCTIVE TECHNOLOGY (ART) CORE

Jon D. Hennebold, Ph.D.
DIVISION CHIEF
PROFESSOR
ADJUNCT PROFESSOR OF OBSTETRICS AND GYNECOLOGY

Adam J. Krieg, Ph.D.
AFFILIATE ASSOCIATE PROFESSOR
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY

Jamie O. Lo, M.D.
ASSOCIATE PROFESSOR
ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY, SCHOOL OF MEDICINE
ADJUNCT ASSOCIATE PROFESSOR OF UROLOGY

Victoria H. Roberts, Ph.D.
RESEARCH ASSISTANT PROFESSOR

Ov D. Slayden, Ph.D.
PROFESSOR
ADJUNCT PROFESSOR OF OBSTETRICS AND GYNECOLOGY, SCHOOL OF MEDICINE

Lisa Vrooman, Ph.D.
ASSISTANT PROFESSOR

Mary B. Zelinski, Ph.D.
PROFESSOR
ADJUNCT PROFESSOR OF OBSTETRICS AND GYNECOLOGY, SCHOOL OF MEDICINE

Oregon Health & Science University
3181 S.W. Sam Jackson Park Road
Portland, OR 97239