

**Graduate Student Position Available in Reproductive Biology:** Graduate Research Assistant (GA) positions are available for Ph.D. students in the laboratory of Dr. Kanako Hayashi.

Research in the Hayashi Lab is focused on understanding the mechanisms of female reproductive diseases (endometriosis and ovarian cancer), and reproductive toxicology (epigenetic regulation of male and female gonads). We are currently developing new therapies for endometriosis patients. Specifically, we are investigating whether an innovative treatment improves the health outcomes of patients with endometriosis through inhibition of inflammatory mechanisms. Furthermore, we focus on transgenerational effects of endocrine-disrupting chemicals on male and female germ cell development and reproductive functions.

<https://ansci.wsu.edu/people/faculty/kanako-hayashi/>

Qualifications: The ideal candidate(s) will be highly motivated and creative with interests in reproductive biology. The successful candidate should have a background in biology, biochemistry, biomedical science, or related field and must meet the admission requirements for graduate students set by the Washington State University Graduate Program (<https://gradschool.wsu.edu/apply/>).

Interested individuals should send a cover letter that includes current and future research interests, CV, and unofficial transcript to Dr. Kanako Hayashi ([k.hayashi@wsu.edu](mailto:k.hayashi@wsu.edu)).

### **Graduate Student Research Position in Developmental Stem Cell Biology**

The Law laboratory in the Department of Animal Sciences at Washington State University is seeking one or more Ph.D. or M.S. level graduate research assistants in developmental stem cell biology and reproductive sciences. Our laboratory is focused on understanding the core mechanisms that direct formation and function of stem cells within the male germline, known as spermatogonial stem cells (SSCs). Current projects involve studying the underlying transcriptional networks that either promote or suppress SSC formation. Further studies are interested in generating novel tools to study the dynamics of the SSC population during development and into adulthood as it relates to genetic and epigenetic inheritance.

We employ a number of cutting-edge technologies to answer the most fundamental and complex questions in stem cell biology and reproductive sciences. These include single-cell technologies to measure gene expression (scRNA-seq) and epigenetic structure (scATAC-seq); the use of transgenic mouse and CRISPR/Cas9 technologies to edit the genome and understand gene function; and transplantation and lineage tracing technologies to study stem cell fate, formation, and function.

Ultimately, the lab is concentrated on fundamental discoveries in basic and applied science to potentially identify underlying causes of male factor infertility, forge new discoveries that may lead to the elusive male contraceptive, understand the factors and mechanisms that contribute to fertility performance in agricultural animals, and enhance the knowledge behind stem cells for future applications in regenerative medicine. For more information please visit <https://ansci.wsu.edu/people/faculty/nate-law/>.

We are seeking highly motivated individuals with either B.S. or M.S. degrees in a related scientific field. Priority will be given to individuals with prior research experience. The position is fully funded through either research or teaching assistantships, including tuition waivers and health insurance. Interested applicants that meet the basic requirements of the Washington State University graduate program should send a cover letter outlining their research experience and a current copy of their CV to Nathan Law ([nathan\\_law@wsu.edu](mailto:nathan_law@wsu.edu)).

### **Graduate Research Position in Aquatic Molecular Physiology**

The Phelps laboratory in the Department of Animal Sciences at Washington State University (WSU) is seeking one or more Ph.D. or M.S. level graduate research assistants in the field of aquatic molecular physiology and functional genomics. The laboratory is interested in understanding the link between genotype and phenotype in fish. A major focus of our work is the functional mapping of genes in aquatic organisms with particular interest in salmonid fishes (salmon and trout). This includes identifying and characterizing genes involved in fish growth, reproduction, health and adaptation to local environmental conditions. Training will include extensive use of molecular technologies (i.e., DNA sequencing and CRISPR genome editing technology) to decode the function of genes in laboratory and wild salmonid populations. The research performed in the laboratory has both basic science and applied applications addressing direct questions in salmonid biology, evolution, ecology, and aquaculture.

The laboratory is located in the new Veterinary and Biomedical Research building on the main Pullman campus of WSU. Washington State University is a tier I land-grant institution located in the Palouse region of southeastern Washington State, USA. Students have direct access to state-of-the-art research and laboratory equipment, a new aquatic genetic engineering facility, and fish hatchery facilities located within the Thorgaard Center for Salmonid Physiology and Genomics. The position is fully funded through research or teaching assistantships, which includes tuition waivers and comprehensive health insurance. We work with state, federal and academic researchers to help tailor graduate training to the career goals of each student. Applicants should be highly motivated and committed to performing advanced biological research in a fast-paced laboratory or field research setting. Students must have a B.S. or M.S. in a biologically relevant field at the time of hire. Candidates with prior aquatic physiology, genomics, molecular or cellular biology experience is a plus but not essential for consideration. Interested applicants should send a cover letter detailing your research background and interests and a CV to Michael Phelps ([michael.phelps1@wsu.edu](mailto:michael.phelps1@wsu.edu)). More information about the Phelps laboratory can be found at <https://ansci.wsu.edu/people/faculty/michael-phelps/>