

# SEATTLE INSTITUTE FOR BIOMEDICAL AND CLINICAL RESEARCH

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**Position Title:** Postdoctoral Researcher- in vitro blood-brain barrier dysfunction

**Job Class:**

**Reports To:** Dr. Michelle (Shelly) A. Erickson/Dr. William A. Banks

**PI:** Dr. Erickson/Banks

## POSITION DESCRIPTION

**Summary:** This posting is for a postdoctoral position in the labs of Drs. Michelle A. Erickson and William A. Banks at the Seattle VA Medical Center and University of Washington. The scientific focus of the labs comprises many aspects of blood-brain barrier physiology that include peptide and protein transport, neuroimmune communication, and effects of disease states on blood-brain barrier functions. The candidate would be expected to support a project which aims to determine how circulating factors contribute to blood-brain barrier dysfunction in aging and Alzheimer's disease. The candidate would also be encouraged to participate on other projects that align with their goals for career development. This position is supported by strong funding from the VA and NIH. The VA Medical Center and University of Washington offer a tremendous training environment for postdoctoral researchers interested in the fields of neuroscience, stem cell biology, aging, and Alzheimer's disease.

### Responsibilities:

- Carry out technical aspects of research projects, which include designing and conducting experiments, recording and analyzing data, and communicating results to supervisors and the research group at least weekly
- Maintain inventory of human induced pluripotent stem cell (iPSC) lines and human primary glial cells
- Conduct routine differentiations of iPSCs into brain endothelial-like cells to support ongoing projects in the lab
- Complete and stay current on all training required by the VA and affiliated institutions, adhere to all rules and regulations
- Assist in the writing and submission of regulatory documents
- Supervise junior investigators at undergraduate level or above
- Apply for postdoctoral fellowships and/or career development awards such as those supported by the VA or NIH
- Present data at scientific conferences
- Prepare manuscripts on original research and write literature reviews
- More detailed aspects of technical duties:
  - Maintain cell cultures, including iPSC lines and in vitro models of the blood-brain barrier, primary glia, etc.
  - Conduct pharmacokinetic studies of peptide and protein transport across the blood-brain barrier in vitro and in vivo
  - Dissect tissues and process tissue samples for analysis

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- Quantify levels of proteins and mRNA in tissues using procedures such as immunoblotting, ELISA, immunofluorescent analysis and microscopy, qPCR, etc.
- Learn and apply new techniques (including SOPs) to ongoing projects.

## **Position Requirements:**

- **Ph.D., M.D., or other doctoral degree with experience in neuroscience, pharmacology, physiology, immunology, or a related field in the biomedical sciences (degree must be completed by Fall 2020).**
- **Eligible to work in the U.S. and to apply for T32/F32 funding**
- **At least 3 years of cell culture experience, work with primary neuronal and glial cultures and/or iPSCs is preferred**
- **Able to work with mice and radioactive isotopes**
- **Able to work alternating weekends for tissue culture maintenance**
- **Must work well with others, maintain meticulous records, be pro-active about seeking help when needed, and treat all lab members with respect**
- **Experience with techniques such as RNAseq, proteomics, metabolomics, flow cytometry, 3D tissue culture, etc. is beneficial, but not strictly required.**

**Applicants fulfilling all requirements who are well-equipped to carry out the responsibilities of this position should submit 1) a cover letter that describes your background, your areas of interest, and what you would like to accomplish during your postdoctoral training, 2) a CV that includes your educational background and publications, and 3) a reference letter from your thesis advisor to [jobs@SIBCR.org](mailto:jobs@SIBCR.org). Candidates with incomplete applications will not be considered.**