

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE
Postdoctoral Fellow Job Description

Postdoctoral Fellow
Department of Pediatrics, Section of, School of Medicine
Position Number: **(00600688)**

Nature of Work

The Boyle Lab at the University of Colorado seeks a full-time Postdoctoral Fellow to work in the Department of Pediatrics/Section of Nutrition at the Anschutz Medical Campus in Aurora. In our lab, we are interested in understanding mechanisms for developmental programming in humans. The overall goal of the research is to investigate the effects of maternal exposures (e.g., diabetes, obesity) on the offspring. We use a primary mesenchymal stem cell model, collected from umbilical cords of human infants at birth. In the lab, we can differentiate these cells to metabolically relevant cell types (adipocytes, myocytes). We have discovered that cells from infants born to mothers with obesity have epigenetic and metabolic phenotypes similar to adults with established obesity and associated with offspring adiposity. Using these cells, **the research focus of this open position will be to interrogate epigenetic mechanisms for altered mitochondrial metabolism that are associated with increased risk for developing obesity and diabetes later in life.**

The laboratory of Dr. Boyle is equipped with state-of-the-art metabolic assessment equipment as well as standard cell culture facilities and resources to conduct innovative, high quality research. **We are seeking a talented and enthusiastic postdoctoral fellow interested in molecular metabolism and developmental programming to participate in our NIH-funded research project.** The successful candidate will have a degree in a molecular biology, integrative physiology, or related field. Dr. Boyle is committed to providing training and resources needed for lab members to achieve their goals in a collaborative and inclusive environment.

The University of Colorado Anschutz Medical Campus is committed to recruiting and supporting a diverse student body, faculty, and administrative staff. The University strives to promote a culture of inclusiveness, respect, communication and understanding.

Professional Field

This position will be supporting a research protocols investigating metabolism, insulin resistance, and epigenetics in umbilical cord-derived human stem cells. **The Department of Pediatrics and the Anschutz Medical Campus** boasts an outstanding research and training environment, including specific training for postdoctoral fellows and a dedicated and active Postdoctoral Association. Dr. Boyle holds a primary appointment in Pediatric Nutrition, is a training faculty on the Pediatric Nutrition T32 Postdoctoral Fellowship Program, and is a training faculty in the Cell Biology, Stem Cells, and Development PhD Program. Among these organizations and other collaborations across campus, Dr. Boyle works with experts in all areas of metabolism, developmental biology, and molecular biology to foster a collaborative and productive research environment. Collaborative use equipment within our Department and at core facilities across campus provide a nearly limitless environment for research innovation.

Supervision Received

Kristen Boyle, Associate Professor

Postdoctoral Fellow Mentor (if applicable)

Kristen Boyle, Associate Professor

Supervision Exercised

Potential for joint supervision of interns, students.

Examples of Work Performed/Scope of Research

- *Set-up and perform day-to-day laboratory experiments utilizing techniques that include, but are not limited to:*
 - *Cell culture*
 - *DNA/RNA extraction, quantification*
 - *qPCR, bisulfite conversion, pyrosequencing*
 - *Reporter assays, lentiviral transduction*
 - *Immunoassays and colorimetric assays*
 - *Microscopy*
 - *Western Blotting*
 - *Use of radioactive materials for metabolic assessments (C-14, H-3)*
- *Biospecimen handling and organization of many samples from a large cohort*
- *Analyze experimental results, prepare figures and tables for publication, grant applications, and progress reports*
- *Reporting findings in written (abstracts, manuscripts) and verbal (presentations) formats*
- *Maintaining communication with various core facilities and lab members for coordinating experiments/data generation*
- *Maintain detailed and accurate records of experimental findings*
- *Assist with development of laboratory protocols*
- *General laboratory duties as assigned*
- *Some weekends for cell maintenance, as needed*

Minimum Requirements

- *Doctorate in molecular biology, integrative physiology, or a related field*
- *Experience with metabolic assays*
- *Experience with cell culture*
- *Experience with common molecular biology techniques: e.g., qPCR, DNA extraction, protein quantification*

Condition of Employment:

- **Must successfully pass a drug test through Children’s Hospital Colorado**
- **Must be willing and able to pass a national criminal background check**

Is this position an essential position? Yes or No

**Essential positions require the person to be present even during times of campus closure due to weather and other events and/or during night and weekend shifts.*

Children’s Hospital Colorado Non-Employee Access/Drug Testing

Will this position require any access to Children’s Hospital Colorado? Yes or No

If yes, for what purpose?

Will this position require any access to Children’s Hospital Colorado systems? Yes or No

If yes, for what purpose?

Will this position perform any research within Children's Hospital Colorado? Yes or No

**For questions regarding Children's Hospital drug testing requirements, please contact Children's Human Resources at 720-777-8598. Some positions may require testing if access to Children's Hospital or their systems is needed at any time during employment with the University. If drug testing is required, it will be listed in the job posting.*

Knowledge, Skills, and Abilities

- *The successful candidate will be knowledgeable about experimental design for mechanistic assessments.*

Preferred Qualifications (Must list 3 or more)

- *Knowledge of obesity and related metabolic disease*
- *Experience with viral cloning, transfection, or transduction.*
- *Experience with assessment of epigenetic regulation*

Salary & Benefits: The hiring range for this position has been established at \$52,000 - \$57,000. Salary is commensurate with skills and experience.

The above salary range represents the University's good faith and reasonable estimate of the rate at the time of posting.

The University of Colorado offers a benefits package. Information on University benefits programs, including eligibility, is located at [Employee Services](#). The University of Colorado offers postdocs most employee benefits. Information on University benefits programs, including eligibility, is located at www.cusys.edu/pbs. Postdoc-specific benefits are found here: http://www.ucdenver.edu/faculty_staff/research/postdoctoral/Pages/default.aspx,

Requirements for Hazardous Materials Handling or Exposure

Check all that apply:

Hazardous Chemicals: Yes or No

Radioactive Materials/Ionizing Radiation: Yes or No

Infectious Mats/Human Blood or Bodily: Yes or No

Will this position be working with minors (anyone under 18 including patients or staff)?

Check one box: Yes or No