

Job Announcement: Postdoctoral Associate in Biology Education Research

Position Title: Postdoctoral Associate in Biology Education Research

Reports To: Research Division Director

Start Date: June 1st, 2020

FLSA Status: Exempt

Applications are invited for a fulltime post-doctoral associate in biology education research at BSCS Science Learning in Colorado Springs, CO. The successful candidate will work as a researcher, curriculum writer, and teacher educator on genetics education research projects. The associate will serve as a researcher on NSF-funded projects led by Dr. Brian M. Donovan, who will serve as the associate's postdoctoral advisor. The Postdoctoral Associate will be appointed for a two-year period with the possibility of extension for one additional year.

Postdoctoral Associate Appointments at BSCS

A postdoctoral associate position at BSCS is a mentored apprenticeship. Postdoctoral associates play a significant role in research, instructional materials development, and/or professional learning projects and engage in a customized postdoctoral learning program with the mentorship of a BSCS research scientist. BSCS provides postdoctoral associates with a salary, full benefits, and an annual budget for professional development and participation in academic conferences. At the completion of a postdoctoral associate appointment, an individual will have acquired additional understanding and abilities required for a research and/or development career in science education and will have authored additional publications and other scholarly works. In collaboration with their mentor, every postdoctoral associate develops a professional development plan with a set of specific goals for the period of their appointment. BSCS research scientists will also provide postdoctoral associates with mentorship in grant writing, manuscript writing, and presentation skills. Postdoctoral associates often serve as mentors to research assistants and associates.

This Postdoctoral Associate in Biology Education Research position

This postdoctoral associate will work with research scientists to co-design and carry out research studies on genetics education, co-develop and validate research instruments, collect and analyze data, present research findings at conferences, and author manuscripts. They will also have the opportunity to engage in curriculum writing and/or professional development for educators depending on their interests. The postdoctoral associate will have the opportunity to work on two or more projects during their time at BSCS, including the following NSF-funded genetics education research projects:

NSF-IUSE Award # 1914843 - Collaborative Research: Exploring How Undergraduate Learning of Multifactorial Genetics Affects Belief in Genetic Determinism. This project explores how the learning of multifactorial genetics affects belief in genetic determinism among undergraduates. The primary duty of the postdoctoral associate will include co-developing computerized educational interventions that teach undergraduates about complex multifactorial genetics concepts. These interventions will employ inductive learning frameworks to scaffold the interpretation of genetic data, the modeling of genetic data, and argumentation using genetic data. The postdoctoral associate will also work collaboratively with the project team to study how these interventions influence belief in genetic determinism, implicit person theories, and the motivation to study STEM in a series of large randomized control trials carried out across many colleges and

universities. These randomized trials will be implemented through Qualtrics. She/He/They will also assist in conducting cognitive think-alouds with these intervention materials to understand how students apply their prior knowledge of genetics to make sense of multifactorial genetics concepts. This project is part of a collaboration with Dr. Michelle Smith (Associate Professor of Ecology and Evolutionary Biology at Cornell University) and Dr. Gregory Radick (BSCS Research Affiliate and Professor of History and Philosophy of Biology at the University of Leeds).

NSF-CORE Award # 1660985 – Towards a More Humane Genetics Education: Exploring How Knowledge of Genetic Variation and Causation Affects Racial Bias. This project explores if and how the development of genomics literacy protects against the development of racism during adolescence. For more on this project please visit the humane genetics project webpage on the BSCS website (or click [here](#)). The primary duty in this position includes co-teaching professional institutes for middle and high school biology teachers about how to teach about human genetic variation to reduce racism. The postdoctoral associate will also work collaboratively with the project team to conduct a randomized control trial of the humane genetics intervention.

Required Qualifications

- Ph.D. in science education or ABD;
- bachelor's degree in biology or equivalent, with significant understanding of human genetics;

Desirable Qualifications

- knowledge of the relevant educational literature, which includes inductive learning, argumentation, model-based reasoning, contrasting cases, genetic essentialism, implicit person theories, and genetics education research;
- strong skills in two or more of the following areas: curriculum writing, in-service teacher professional development, mixed-methods research.
- coursework in population genetics or multifactorial genetics.

Essential Qualities and Abilities

- a commitment to improving science education;
- a commitment to equity and social justice in education;
- strong internal motivation;
- flexibility and openness to learning;
- ability and desire to work collaboratively, to be mentored, to work independently, and to mentor younger researchers;
- project management, time management, communication, and writing skills

About BSCS Science Learning

BSCS Science Learning is an independent, nonprofit organization that develops, studies, and disseminates powerful approaches to science education. Our mission is to improve science teaching and learning through research-driven innovation. Founded in 1958, BSCS has brought the experience of inquiry learning to millions of students and teachers across the U.S. and around the world. Today, BSCS conducts research on how to improve science teaching and learning,

develops instructional materials, offers professional learning programs for teachers, and conducts leadership development programs. Underlying all this work is our commitment to providing all young people with equitable, inclusive, and just science learning opportunities.

Additional Information

The full-time, annual salary for this position ranges from \$50,000 to \$60,000 depending on experience and qualifications. The position also includes a \$5,000 budget for professional development activities, including conference attendance. This position requires public speaking and travel.

BSCS offers competitive compensation and a generous package of benefits, as well as a flexible and inclusive work environment, with a strong commitment to the professional growth of all staff.

BSCS's offices are in Colorado Springs, the #2 city in *US News & World Report's* 2018 Best Places to Live. Located along the Front Range of the Rockies one hour south of Denver, Colorado Springs is known for a mild climate, a vibrant arts community, and year-round outdoor recreation. Preference will be given to candidates who will relocate to Colorado Springs. For additional information about BSCS and our work, prospective applicants are encouraged to review the BSCS website (bscs.org).

BSCS Commitment to Diversity

BSCS Science Learning is committed to recruitment of a diverse staff so that we can bring the broadest possible range of perspectives to our mission of improving science teaching and learning. We are an equal opportunity employer. All applicants will receive consideration for employment without regard to age, race, sex, color, religion, national origin, disability (physical and/or mental), sexual orientation, gender identity or expression, veteran status, military obligations, marital status, pregnancy, genetic information, or any status protected by federal, state, or local law.

To Apply:

Applicants should send their research statement, teaching statement, diversity statement, curriculum vita and a cover letter describing your interest and qualifications to careers@bscs.org. Please put "Postdoctoral Associate" in the subject line. In your cover letter, please include your interest and qualifications in the position and indicate your willingness to relocate to Colorado Springs, if you currently reside outside the area. We will review complete applications as they are received and will continue to accept and review applications until the positions are filled. Employment could begin as early as April 1, 2020 or as late as June 1st, 2020. In your cover letter, please indicate your earliest available start date.