

**Postdoctoral Research Associate**  
**Carl Woese Institute for Genomic Biology**  
**University of Illinois Urbana-Champaign**

The STRONG Kids2 team at the University of Illinois Urbana-Champaign is seeking outstanding candidates for a full-time post-doctoral position. This position involves bioinformatics and data science research at the interfaces of omics (genomics, epigenomic, microbiomics, metabolomics), behavioral, and nutrition profiling, statistics, and machine learning. This position is ideal for candidates wishing to grow their careers in a stimulating environment.

The University of Illinois is an Equal Opportunity, Affirmative Action employer that recruits and hires qualified candidates without regard to race, color, religion, sex, sexual orientation, gender identity, age, national origin, disability or veteran status. For more information, visit <http://go.illinois.edu/EEO>.

The successful candidate will work collaboratively with a range of faculty, research associates, postdocs, and students on collaborative bioinformatics and systems biology research. The ongoing longitudinal STRONG Kids2 cohort study presents an exceptional opportunity in which to integrate genomic and phenomic information and apply discovery tools to uncover early life determinants of childhood obesity risk and to apply systems biology and machine learning to develop novel predictive algorithms that incorporate risk factors. For more information visit: <https://frcprod.web.illinois.edu/strong-kids-2-cells-society-approach-nutrition>

**Duties and Responsibilities:**

- Apply statistical, machine learning, and artificial intelligence-based techniques to integrate genomic, epigenomic, microbiome, nutritional, and behavioral data.
- Conduct comprehensive Genome-Wide Association Studies (GWAS), Genomic Best Linear Unbiased Prediction (GBLUP), Epigenome-Wide Association Studies (EWAS), Microbiome-Wide Association Studies (MWAS), and multidisciplinary analyses.
- Analyze and interpret large-scale, multidimensional datasets using bioinformatics tools and algorithms to identify biomarkers and predict phenotypic outcomes.
- Curate, annotate, and integrate diverse datasets to facilitate meaningful analysis. Participating in the development of software tools.
- Collaborate with a multidisciplinary team of researchers, contributing to project design and ensuring seamless data integration across various study domains.
- Prepare research reports, manuscripts, and presentations, and communicate findings at scientific conferences. Mentoring junior researchers.
- Assisting the team in writing high quality proposals, as well as project management.

**Required Qualifications:**

- PhD in bioinformatics or a related field.
- Strong knowledge and experience with the programming language Python, software routines to implement GWAS, EWAS, MWAS, or GBLUP analyses, machine learning, Graph Neural Networks, or visualization packages. Additional experience in database management would be beneficial.
- Proven initial track record of publications in peer-reviewed journals and external presentations at scientific conferences
- Experience mentoring junior graduate and/or undergraduate student researchers.

**Desired Qualifications:**

- Training in nutritional sciences
- Ability to work in a collaborative team environment; strong interest in interdisciplinary research
- Ability to communicate effectively and influentially both in writing and orally

The Postdoctoral Research Associate is a full-time (100%), benefits-eligible position appointed on a 12-month service basis. The initial appointment is for one year with the possibility of extension based on performance and funding. The anticipated start date is **no later than March 1, 2024** but is negotiable. Applicants may be interviewed before the closing date; however, no hiring decision will be made until after that date. Salary will be commensurate with the NIH stipend based on years of postdoctoral experience.

**Application:** To assure full consideration, applicants should send a cover letter explaining background and interest in working with the research team. Please also include a CV, names of three academic and/or industry personnel who can provide letters of recommendation, and a sample research paper related to this position. Candidates who are interested are encouraged to apply either by email with subject – **“IGB-StrongKidsPostdoc Opportunity\_Your Last Name”** to: Prof. Sharon Donovan ([sdonovan@illinois.edu](mailto:sdonovan@illinois.edu)). Applications will be accepted until the position is filled.

The University of Illinois conducts criminal background checks on all job candidates upon acceptance of a contingent offer. Convictions are not a bar to employment. The University of Illinois System requires candidates selected for hire to disclose any documented finding of sexual misconduct or sexual harassment and to authorize inquiries to current and former employers regarding findings of sexual misconduct or sexual harassment. For more information, visit [“Policy on Consideration of Sexual Misconduct in Prior Employment.”](#)

As a qualifying federal contractor, the University of Illinois System uses E-Verify to verify employment eligibility. The University of Illinois must also comply with applicable federal export control laws and regulations and, as such, reserves the right to employ restricted party screening procedures for applicants.