Critical Assessment of Genome Interpretation (CAGI)
Lead Scientist

Research Group of Steven Brenner
University of California, Berkeley

Establish the state-of-the-art in genome interpretation

We are seeking a leader for the Critical Assessment of Genome Interpretation (CAGI, \'kā-jē\), a community experiment to evaluate the prediction of phenotypes from genetic variation. CAGI objectively assesses computational methods for predicting the phenotypic impacts of genomic variation. In this experiment, modeled on the Critical Assessment of Structure Prediction (CASP), participants are provided genotypic data and make predictions of resulting molecular, cellular, or organismal phenotype. These predictions are evaluated against experimental and clinical characterizations, and independent assessors perform the evaluations. Community workshops are held to disseminate results, assess our collective ability to make accurate and meaningful phenotypic predictions, and better understand progress in the field. From this experiment, we identify bottlenecks in genome interpretation, inform critical areas of future research, and connect researchers from diverse disciplines whose expertise is essential to methods for genome interpretation. The third CAGI experiment assessed 188 predictions for this year's ten diverse challenges. These predictions were made by 82 predictors who hailed from labs located in 15 different countries.

The CAGI Lead Scientist will be primarily responsible for operating the CAGI experiment, from developing challenges to managing prediction submissions and assessments to dissemination of results. Each new challenge requires extensive interactions with the data set provider to develop the most informative challenge. Supervision of assessment includes interacting with assessors, developing standard and automated assessment protocols, and ensuring that uniform standards are applied and that proposed assessment methods are appropriate, as well as reviewing assessment results and ensuring that the necessary technical support is provided. Prediction management includes engaging a broad and diverse community, providing tutorials, editing necessary web resources, distributing challenges, robustly accepting predictions, providing comprehensive access to results and analysis, and ensuring data security. The CAGI Lead Scientist will organize the CAGI conference culminating each experiment, at which results are initially presented. He or she will work with participants to produce publications about CAGI experiments and make presentations to ensure broad dissemination.

For more information, see http://compbio.berkeley.edu
http://genomeinterpretation.org

Other related positions may be available; inquire with jobs@compbio.berkeley.edu.

The Berkeley academic environment
The Brenner lab is an interdisciplinary research group at the University of California, Berkeley, one of the world's premiere research universities. We are associated with the Department of Plant and Microbial Biology, the Department of Molecular and Cell Biology, the Department of

Bioengineering, Center for Computational Biology, the California Institute for Quantitative Biosciences, as well as the University of California, San Francisco, and Lawrence Berkeley National Lab.

The University of California, Berkeley ranks first nationally in the number of graduate programs in the top 10 in their fields, according to the most recent National Research Council study. Berkeley is committed to diversity in its staff, faculty, and student body, and invites all qualified people to apply, including minorities and women, veterans and individuals with disabilities.

CAGI is jointly run with the Moult lab at the University of Maryland. Collaborators in this project include members of the Berkeley Center for Computational Biology, biologists and engineers at Tata Consulting Services, and clinicians at UCSF. The CAGI experiment engages a vibrant community. In addition to predictors, it includes dataset providers, advisory board and council, and assessors: **Advisory Board**: Russ Altman, George Church, Tim Hubbard, Scott Kahn, Sean Mooney, Pauline Ng, Susanna Repo; **Scientific Council**: Patricia Babbitt, Atul Butte, Garry Cutting, Laura Elnitski, Reece Hart, Ryan Hernandez, Rachel Karchin, Robert Nussbaum, Michael Snyder, Shamil Sunyaev, Joris Veltman, Liping Wei; **Data providers:** Adam P. Arkin, Madeleine Price Ball, Jason Bobe, George Church, Andre Franke, Nina Gonzaludo, Emma D'Andrea, Lisa Elefanti, Joe W. Gray, Linnea Jannson, John P. Kane, Pui-Yan Kwok, Rick Lathrop, Angel C. Y. Mak, Mary J. Malloy, Chiara Menin, John Moult, Robert Nussbaum, Lipika R. Pal, Clive R. Pullinger, Jasper Rine, Maria Chiara Scaini, Jeremy Sanford, Nicole Schmitt, Jay Shendure, Michael Snyder, Tim Sterne-Weiler, Paul L. F. Tang, Sean Tavtigian, Silvio Tosatto; **Assessors**: Rui Chen, Roland Dunbrack, Iddo Friedberg, Gad Getz, Rachel Karchin, Alexander Morgan, Sean Mooney, John Moult, Robert Nussbaum, Jeremy Sanford, David B. Searls, Artem Sokolov, Josh Stuart, Shamil Sunyaev, Sean Tavtigian, Silvio Tosatto. The CAGI Lead Scientist will interact with all CAGI participants

Basic/Minimum Qualifications
The minimum application requirement is the completion of all degree requirements except the dissertation or equivalent in computational biology, human genetics, or related discipline.

Additional Required Qualifications
Ph.D. or M.D. or equivalent in computational biology, human genetics, or related discipline at start of employment.

Preferred Qualifications:
Candidates should have demonstrated ability to work and communicate with an extensive array of collaborators. Candidates will ideally have experience in managing large data sets, developing standard and automated assessment protocols, managing data set QC, performing human genetic data analyses, ethics of human research participants, publishing in high quality journals, event organization, as well as managing multiple and conflicting obligations and deadlines. Strong positive references are essential.

Appointment: The initial appointment is for one year, with renewal based on performance and funding availability. This is a full time appointment. Target start date is November 17, 2014.

Salary and Benefits:
Salary will be commensurate with experience and qualifications. Generous benefits are included (see link: http://ucnet.universityofcalifornia.edu/compensation-and-benefits/index.html).

To Apply:
To apply go to website: https://aprecruit.berkeley.edu/apply/JPF00545

Interested individuals should include a 1-2 page cover letter, along with a current CV, and contact information for at least 3 references. Letters of reference, transcripts, and further information may be requested from finalists.

The position is open until filled. The initial review date for applications is October 29, 2014. To receive full consideration, please apply by this date. Questions regarding this recruitment can be directed to Shannon Schechter at jobs@compbio.berkeley.edu

All letters will be treated as confidential per University of California policy and California state law. Please refer potential referees, including when letters are provided via a third party (i.e., dossier service or career center), to the UC Berkeley statement of confidentiality (http://apo.berkeley.edu/evalltr.html) prior to submitting their letters.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination affirmative action policy see: http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct.