Cold Spring Harbor Laboratory

POSTDOCTORAL FELLOW
CAREER OPPORTUNITIES

Computational Postdoctoral Fellow – Cowley Lab – 03327-R

We are looking for a computational postdoc broadly interested in using machine learning approaches to answer scientific questions about the brain. We focus on designing closed-loop methods for systems neuroscience as well as building explainable computational models of neural responses and behavior. An important component of our work is to build tight-knit collaborations with experimental neuroscientists—collecting data and building models in tandem. A long-term goal is to identify and understand the step-by-step computations in the brain.

Computational Post Doc – Dobin Lab – 02145-R

Join a team of biological data scientists working on novel statistical methods and computational algorithms for multi-omics processing and integration, and leverage Big Genomic Data to elucidate various problems in precision health, such as genetic and epigenetic mechanisms of cancer development and progression, and the clinical impact of functional variants.

Postdoctoral Fellow – Furukawa Lab – 03088-R

The Furukawa lab has NIH-funded postdoctoral fellow/associate positions available for scientists interested in solving questions in neurobiology and neuro-cancer-immunology by implementing a dynamic range of techniques including structural biology (cryo-EM, x-ray crystallography, molecular dynamics) together with electrophysiology (patch-clamp, slice physiology, lipid bilayer), protein engineering, chemical biology, mouse model, cellular imaging, and cancer mouse model. underlying cognitive functions.

Postdoctoral Fellow – Janowitz Lab – 02988-R

The Janowitz Laboratory at CSHL is seeking a highly motivated, creative, and interactive postdoctoral researcher with strong experimental and analytical skills to contribute to research on the connectivity of the host response to cancer. We employ pre-clinical and clinical research to develop and test new treatment strategies and to discover fundamental biological interactions between tumors and host organ systems.

Joint Postdoctoral Fellow –Borniger Lab Janowitz Lab Lukey Lab
– 03167-R.

Together, the Borniger, Lukey, and Janowitz laboratory at Cold Spring Harbor Laboratory (CSHL) offer a unique opportunity for a highly motivated and creative postdoctoral researcher, with strong experimental and analytical skills, to investigate the reciprocal interaction of sleep and cancer progression. You will become part of a multidisciplinary team of basic researchers and clinicians studying tumor-host interactions, using integrative techniques from neuroscience, endocrinology, metabolomics, and immunology to dissect the mechanisms connecting sleep disruption with aberrant metabolic and immune responses during cancer progression.

[Postdoctoral Fellow](#) – [Joshua-Tor lab](#) – 03123-R

We are currently seeking innovative, inventive, and self-driven **Postdoctoral Associates** within the lab of **Dr. Leemor Joshua-Tor** at Cold Spring Harbor Laboratory. The Joshua-Tor lab studies the structure and mechanism of gene silencing pathways as well as DNA replication. To get a complete understanding of how these processes, the team employs structural, biochemical, biophysical and molecular biology approaches to study how key proteins work at the molecular level. More information can be found on their [website](#).

[Postdoctoral Fellow](#) – [Jackson Lab](#) – 03324-R

A postdoctoral position is available to characterize the role of plasmodesmata in plant development, focusing on cell to cell trafficking of the KNOTTED1/ STM class of homeodomain proteins and associated mRNAs. The position is funded for 3+ years, and the candidate should have experience in arabidopsis molecular genetics and/ or cell biology/ microscopy. Our lab uses state of the art developmental biology, imaging and genomic techniques to understand signaling in plant stem cell (meristem) development, using arabidopsis and maize as model systems.

[Postdoctoral Fellow - Kinney & Krainer Labs](#) – [Kinney Lab](#) – 03307-R

Justin B. Kinney and **Adrian R. Krainer** seek a postdoctoral fellow to spearhead a project focused on *quantitative signal integration in alternative mRNA splicing*. This position is part of an ongoing collaboration between the **Kinney Lab** and **Krainer Lab**, the goal of which is to quantitatively understand the readout of pre-mRNA sequence by snRNPs and RBPs, as well as the effects of splice-modifying drugs. The successful candidate will be expected to help design their project's aims, lead the necessary experimental work, and carry out the primary computational analysis of the resulting data. These studies will primarily focus on splicing in human cell culture and/or in vitro splicing reactions, and will involve a combination of both low-throughput and high-throughput techniques, including **massively parallel reporter assays (MPRAs)**. Novel experimental techniques will be developed as needed.

[Computational Postdoctoral Fellow](#) – [Koo Lab](#) – 03317-R

The **Koo Lab** at the Simons Center for Quantitative Biology at Cold Spring Harbor Laboratory is looking to hire an ambitious and self-directed postdoctoral fellow at the intersection of machine learning and genomics. Potential projects include: 1) **Bridge the conceptual divide between flexible deep neural network models and prior biological knowledge of gene regulation** by advancing the design concepts to provide an inductive bias towards biophysically meaningful interactions. 2) **Develop cutting edge model interpretability tools to distill knowledge learned by high performing deep neural networks**.

[Computational Postdoctoral Fellow](#) – [Koulakov Lab](#) – 03057-R

Cold Spring Harbor Laboratory is looking for outstanding candidates to fill postdoctoral positions in theoretical neuroscience. The position is open under specific projects as well as general research involving the application of methods from theoretical physics, mathematics, and machine learning with the goal to understand the brain function.

[Postdoctoral Fellowships](#) – [Zhang Lab](#) – 03248-R

Dr. Lingbo Zhang's Lab at Cold Spring Harbor Laboratory focuses on both basic science and translational medicine of hematologic malignancies. The research of the Lab centers on normal and malignant stem and progenitor cells in the hematopoietic system and decodes the role of metabolites in the tumor microenvironment in regulating hematologic malignancies. Fully funded postdoctoral fellowships are available to investigate the roles of these critical metabolites and their genetic effectors in hematopoietic malignancies and develop novel therapeutic strategies.

Postdoctoral Fellow – Martienssen Lab – 03249-R

The Martienssen laboratory at Cold Spring Harbor has an opening for a postdoctoral fellow to study the mechanisms of epigenetic inheritance in fission yeast and mammalian cells, recently funded by the National Institutes of Health. RNA interference impacts inheritance and genome stability by silencing of repeats, as well as by non-canonical means, and successful applicants will explore the role of epigenetic modifications, phase separation and transcription-replication conflict in different developmental and cell cycle contexts. State-of-the art equipment and facilities are available both within the lab and in outstanding shared facilities.

Computational Post Doc – McCandlish Lab –02802-R

Research in the McCandlish laboratory is focused on the analysis of high-throughput mutagenesis data, with the goal of accurately predicting the phenotypic, health, and evolutionary consequences of both single and multiple mutations in protein coding and regulatory sequences. The group has a particular emphasis on understanding complex genetic interactions and the structure of the genotype-phenotype map.

Postdoctoral Fellow – Moses Lab –03329-R

CSHL invites applications for a Postdoctoral Research Fellow in Anticancer Drug Discovery. You will work on collaborative projects between the Moses laboratory and cancer biologists at CSHL, focusing on novel strategies for enzymes involved in cancer pathogenesis. You will be a crucial member of the Click Chemistry team based in the new $75 million Center for Therapeutic Research (CTR).

Postdoctoral Fellow – Schorn Lab - 03023-R

We are interested in how small RNAs identify and silence transposable elements when they become active during mammalian development and disease. This is an exciting new field with many opportunities! We believe tRFs are an ancient link between RNAi, transposons and genome stability.

Computational Post Doc – Siepel Lab – 02744-R

A postdoctoral position in COMPUTATIONAL GENOMICS is available in Dr. Adam Siepel's research group at the Simons Center for Quantitative Biology (SCQB), Cold Spring Harbor Laboratory.

The Siepel Group specializes in the development of probabilistic models and algorithms for inference, machine-learning methods, and applications in large-scale genomic data analysis. Of particular interest is research relevant to existing NIH-supported projects in:

1. EVOLUTIONARY GENOMICS of humans and other mammals, including inference of ancestral recombination graphs, detection of selective sweeps, comparative genomics of bats, inference of distributions of fitness effects and quantification of genetic load from linked deleterious alleles; and

2. TRANSCRIPTIONAL REGULATION in mammals, including quantification of initiation and pause-release rates from nascent RNA sequencing data, characterization of elongation rates, and evolutionary analysis of transcriptional regulation across primates and other mammals.

Postdoctoral Fellow – Tollkuhn Lab - 03304-R

The Tollkuhn Lab has an open position for a postdoctoral researcher to develop projects on hormonal regulation of gene expression in the brain. The lab studies the transcriptional mechanisms of nuclear receptors in the context of brain development, behavior, and disease. Gonadal hormones such as estrogen and testosterone are the principal regulators of sex differences in the vertebrate brain, but the regulatory strategies used by hormone receptors in the brain remain largely unexplored. Our lab has recently published the first neural direct targets of estrogen receptor alpha (ERα), and we now seek a colleague with expertise in gene regulation and the epigenome, who can expand on this line of research.

[Postdoctoral Fellow](#) – [Tollkuhn Lab](#) - 03303-R

The Tollkuhn Lab has an open position for a postdoctoral researcher to develop projects on hormonal regulation of brain sexual differentiation. The lab studies how gonadal hormones such as estrogen and testosterone regulate brain development, behavior, and disease. These hormones modulate the wiring of social behavior circuits during developmental sensitive periods to produce sex-variable behaviors in adulthood. Our lab is seeking a colleague with a background in neural development to explore how sex differences in gene expression give rise to sex-typical patterns of neuronal connectivity.

[Postdoctoral Fellow](#) – [Tonks Lab](#) - 03137-R

Protein Tyrosine Phosphatases and the Regulation of Cell Signaling: from Basic Research to New Therapeutics. The protein phosphatases are critical, specific regulators of signaling that serve an essential function, in a coordinated manner with the protein kinases, to determine the response to a physiological stimulus. The Tonks Lab takes a multidisciplinary approach to study the structure, regulation and function of the protein tyrosine phosphatase (PTP) family of enzymes, to illustrate their fundamental importance to the control of signal transduction under normal and pathophysiological conditions. As functional studies have established links to disease, the PTPs have been garnering attention as potential therapeutic targets; however, they remain a largely untapped resource for drug development.

[Postdoctoral Fellow](#) – [Van Aelst Lab](#) – 02796-R

The main focus of research will be to study the roles of genes associated with human diseases in the development and function of neural circuits, using molecular, genetic and viral engineering, optogenetics, imaging, electrophysiology, and behavior analysis.

[Postdoctoral Fellow](#) – [Wigler Lab](#) – 02822-R

The Wigler and Levy research group are seeking a Computational Post Doc that will have a key role in a multi-disciplinary team of wet-bench and computational researchers working to revolutionize cancer detection and treatment by developing novel genomic technologies. We are re-envisioning the tools of genetics research by coupling innovation at the bench with novel computational methods. We have developed methods for inexpensive copy number (SMASH), generating long reads from short-read sequencers (muSeq), encapsulation of cells in acrylamide gel (BAG-seq), sensitive detection of cancer genomes (MASQ), and most recently mutational sequencing for short tandem repeats (muSTR). Applicants may review our most recent publications at http://wigserv2.cshl.edu/doku.php?id=publications.

[Postdoctoral Fellow](#) – [Yeh Lab](#) - 02869-R

The Yeh Laboratory at CSHL Cancer Center (http://yehlab.labsites.cshl.edu) is seeking for a qualified postdoctoral fellow passionate about biotherapeutics discovery and engineering. The Yeh Lab is a highly-collaborative environment with state-of-the-art facilities and expertise in biotherapeutics engineering and chemical biology.

[Postdoctoral Fellow - International Brain Laboratory](#) – [Zador Lab](#) - 03269-R

The Zador lab has an opening for a postdoctoral fellow in neuroscience who will be part of the International Brain Laboratory (IBL). The IBL (**https://www.internationalbrainlab.com/**) is a large-scale international collaboration in brain research, which combines the efforts of approximately 50 scientists in 22 laboratories toward understanding the brain-wide basis of a mouse visual decision-making task. The overall goal of this postdoc's project will be to relate single neuron connectivity, gene expression and neural activity in the context of in the context of the IBL behavior, to better understand the contributions of different neuronal types to the IBL task. Specifically, the project will involve combining electrophysiological and imaging approaches (widefield and two-photon, including a mesoscope) with new approaches for high-throughput circuit/genomic approaches (including BARseq and MAPseq)

To learn more about these positions and others available at CSHL follow us on Twitter @CSHLCareers or to apply, please visit us at https://www.cshl.edu/about-us/careers/postdoc-positions/

Our employees are compensated from a total rewards perspective in many ways for their contributions to our mission, including competitive pay, exceptional health benefits, retirement plans, paid time off, and a range of recognition and wellness programs. Visit our CSHL Benefits & Postdoctoral Landing sites to learn more.