

Postdoctoral Position



Pioneering the Interface of Synthetic Biology & Stem Cells



The Galloway Lab in the Department of Chemical Engineering at MIT is looking for an exceptional and energetic postdoctoral fellow to join a rapidly growing, multidisciplinary research program focused on developing and applying molecular tools to understand the connection between genome structure, function, and cell fate. The Galloway Lab focuses on **designing and constructing integrated synthetic circuits to probe and actuate changes in DNA topology that drive changes in cell fate**. Taking a molecular systems biology approach to the field of cellular engineering, our lab utilizes synthetic circuits as sensors to probe the transcriptional and topological dynamics of cell fate transitions. The ultimate goal is to transform how we understand cellular transitions and engineer cellular therapies by designing circuits to leverage their three-dimensional context.

We are seeking applications from highly motivated, talented, and collegial candidates with a Ph.D. in a relevant area. This position provides opportunities to collaborate with labs across MIT and the greater Boston area **examining the three-dimensional landscape of the genome and explore how topological forces introduced through transcription remodel the epigenome and impact gene expression**. We are committed to career development and training. Working at MIT offers an environment, a culture, opportunities – and benefits – that aren't found together anywhere else. If you're curious, motivated, want to be part of a unique community, and shape the future – then please apply. Additional information is available at <https://www.kateegalloway.com/>.

APPLICATION

Applicants should submit a cover letter stating their motivation and career goals, a CV with 3 references (or directly arrange for letters to be emailed to Katie), 1-3 representative papers to katiegal@mit.edu with subject line "Postdoctoral Position".

QUALIFICATIONS

- PhD in physical/biological science, chemical engineering, bioengineering or related disciplines
- Self-motivated, creative, persistent, responsible, detail-oriented, with strong analytical and problem-solving skills, fast learner

PREFERRED EXPERTISE

Candidates with expertise in ONE or MORE of the following areas will be given priority.

- Hands-on experience with microscopy, molecular biology, animal models, and gene delivery vectors
- Characterization of chromatin and three-dimensional genome (e.g. ChIPseq, ATACseq, HiC)
- Design and generation viral vectors (e.g. AAV, lentivirus, retro) for the expression of transgenes
- Expertise in bioinformatic analysis (HiC, RNAseq, ATACseq, ChIPseq)
- Design, characterization, and engineering of gene circuits