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Science Research Conferences

The Mobile DNA Conference: Evolution, Diversity, and Impact

Organizer Bio: Molly Gale Hammell, PhD

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The over-arching goal of Dr. Hammell's lab is to iterate between wet and dry bench approaches to better understand how transposons and endogenous retroviruses in our genome are normally controlled so that we might better understand how transposons contribute to human disease. Lab members use a range of techniques from RNA biology, transposon genomics, and statistical machine learning approaches for genomics data analysis.

The lab specializes in developing novel algorithms for integrative genomics, from bulk to single-cell sequencing data, with a special focus on the probabilistic handling of reads from repetitive regions of the genome (Transposon Genomics). Experimental work in the lab focuses on understanding the connections between retrotransposon de-silencing and neurodegenerative disease in human clinical samples, using a mix of bulk and single-cell genomics approaches from long- and short-reads data. These projects involve a long-standing collaboration with the NYGC ALS Consortium, and participation in the Chan Zuckerberg Initiative's Neurodegeneration Challenge Network.

Dr. Gale Hammell is a Milton Cassel Scholar of the Rita Allen Foundation and a Ben Barres Investigator of the Chan Zuckerberg Initiative.