Dr. Xin Chen
Investigator, Howard Hughes Medical Institute
Professor, Department of Biology, Johns Hopkins University
https://bio.jhu.edu/directory/xin-chen/

“Breaking Symmetry: Asymmetric Histone Inheritance”

Xin Chen is interested in the relationship between epigenomes and cell fate. Chen and her team have discovered an important mechanism, involving preexisting and newly synthesized histones, allowing two daughter cells to each inherit different epigenetic information from a single cell division and have revealed both molecular and cellular mechanisms underlying this phenomenon. Currently, the team is working to better understand how cells maintain their epigenetic memories or reset their epigenome; they are investigating histone inheritance patterns, the role of DNA replication, and models of diseases derived from abnormal epigenetic inheritance. This work has implications for stem cell biology, chromatin biology, developmental biology, and regenerative medicine.