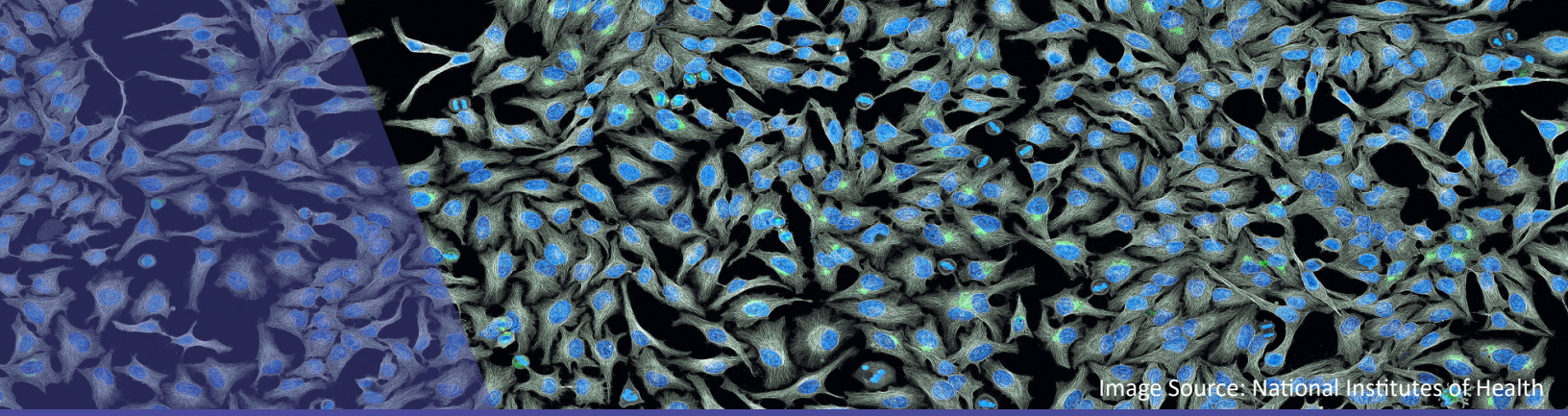

Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Lurie Cancer Center's Basic Research Seminar Series

T2T-Scale Genome Assemblies: Shining a Light on Repeat Biology and Centromere Dynamics

Tuesday, November 14, 2023

11:00 a.m.- 12:00 p.m. CT

Baldwin Auditorium, 1st Floor

Robert H. Lurie Medical Research Center
303 E. Superior St., Chicago, IL

Host: Daniel Foltz, PhD

Mobile elements and highly repetitive regions are potent sources of lineage-specific genomic innovation and are integral to the structure and function of eukaryotic cells. Employing long-read sequencing to build gapless (i.e. telomere to telomere, T2T) genome assemblies for humans and non-human primates, we aim to define key genetic, transcriptional and epigenetic features that define centromere maintenance and de novo centromere formation. Using comparative genomics, these studies provide insight into the diversity, distribution and evolution of repetitive regions that not only shape the human genome, but that influence chromosome structure and evolution in species groups experiencing rapid karyotypic change.

Rachel O'Neill, PhD
Board of Trustees Distinguished Professor
Molecular and Cell Biology/Genetics and Genomics
University of Connecticut

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