Genome Stability

human mitotic cells sense DNA damage and coordinate mitotic progression. Techniques such as CRISPR-genome editing, RNA interference, high-resolution microscopy, and live-cell imaging will be used to study the impact of DNA lesions on chromosome segregation in normal and cancerous cells. The goal is to gain a fundamental understanding of DNA replication, cell cycle regulation, and mitosis, advancing knowledge of DDRs and chromosome stability.

Helfrid Hochegger

Exploring New Cancer Targets Using Induced Degradation Approaches to Validate PROTAC Approaches

Cancer is a disease of deregulated cell division, and cell cycle control genes are prime targets in cancer therapy. PROTACs (Proteolysis Targeting Chimeras) offer a promising approach to target oncogenes for degradation. This project aims to develop new induced degradation approaches for setting up prehow recombination at centromeres contributes to genome stability, the project aims to shed light on its implications for cell identity and tumorigenesis.

Aidan Doherty

How Is Stalled DNA Replication Restarted in Human Cells?

DNA damage tolerance pathways enable cells to bypass lesions that block replication, ensuring genomic integrity. This project will investigate the role of PrimPol in restarting

Matthew Neale

Spatiotemporal Dynamics of Meiotic Proteins in Saccharomyces. cerevisiae

Genetic recombination during meiosis is essential for fertility and genetic diversity. This