Research profile for applicants

Name of DKFZ research division/group:	***Division of regulatory Genomics and cancer evolution B270***
Contact person:	***Duncan Odom: d.odom@dkfz.de***
Group homepage: *Visit this website for further information on current research and recent publications.*	**www.dkfz.de/en/regulatorische-genomik/index.php**
Eligibility:	• ***DKFZ Postdoctoral Fellowships*** • ***Dr. Rurainski Fellowship at DKFZ***

RESEARCH PROFILE AND PROJECT TOPICS

This project will bridge the laboratories of Duncan Odom (B270) and Oliver Stegle (B260). Dr Odom's laboratory studies how sequence information shapes the cell's DNA epigenetic and regulatory landscape and thus the trajectory of cancer genome evolution. Dr Stegle's laboratory develops and applies cutting-edge computational methods to unravel the genotype–phenotype map on a genome-wide scale. Our collaboration includes topics as diverse as the genetic determinants of sperm development (Panten et al 2024a), dissecting novel model systems to understand sex chromosome biology (Panten et al 2024b, Hauth et al 2024c), and stem cell biology (Funk et al 2023).

We are seeking a computational colleague who is ambitious, capable, collegial and curious to co-lead a project designed to understand how aging impacts the transcriptional repression of the inactive X chromosome. A major – and to date unproven – hypothesis is that loss of Xi suppression fidelity underlies the immune system phenotypes often seen in old age, for instance in auto-immune diseases. We have begun to experimentally characterize the mechanisms underlying these phenotypes using high resolution multi-omics analyses.