

SCIENCE AT THE EDGE

2017 SEMINAR SERIES

Quantitative Biology Graduate Program | Gene Expression in Development and Disease

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“Genetic Models of Human Evolution”

Uniquely human traits, such as the increased size and complexity of our brain, are encoded within the millions of genetic changes that distinguish us from other primates. Some of these changes, such as those located in Human Accelerated Regions (HARs), have been tentatively linked to human phenotypes. However, the precise role of these human-specific genomic changes in human traits remains elusive. This is because we lack two essential tools: the means to overcome the species barrier and employ the power of experimental genetics to study uniquely human genomic features in model organisms, and the ability to access and compare developmental processes in humans and other great apes. We will describe our recent work combining reverse genetic models of human-specific sequence changes with comparative analyses of primate development to identify the biological pathways, mechanisms, and cell types that were altered in our evolution.

References

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Refreshments at 11:15