



Department of Genetics

Nanocourse Announcement

CRISPR-Cas Systems and the Future of Genome Editing

***Session 1: Tuesday October 10th, 2017
9 am–12 pm, HMS Armenise Amphitheater***

***Session 2: Tuesday October 17th, 2017
1–5 pm, Registered participants only***

J. Keith Joung, John Doench, and Morgan Maeder
Second session: Luca Pinello and Becca Cottman

Clustered regularly interspaced short palindromic repeat (CRISPR) RNAs and their CRISPR-associated (Cas) proteins are an important part of adaptive immune systems in many prokaryotes. CRISPR-Cas systems function as RNA-directed endonucleases that can target nucleic acids in a sequence-specific manner and are now widely used as genome editing tools. In this course, we will provide lectures covering: an introduction to genome editing and cutting-edge improvements to CRISPR-Cas systems; a review of bioinformatics tools for guide RNA design and analysis of CRISPR-Cas data; and an overview of ongoing and potential therapeutic applications of genome-editing nucleases. The course will also include a practical lab-based workshop for registered students in which participants will learn how to design guide RNAs and how to quantify nuclease-induced mutations in any cell or organism using sequencing-based assays.

All are welcome to attend the first session.

Register for the second session at nanosandothercourses.hms.harvard.edu/node/430.