



Discovery Science
Emerging Scholars Lecture

“Ordered DNA Writing Enables Lineage Tracing and Analog Recording in Mammalian Cells”



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Studying multicellular developmental processes can require the non-destructive observation of thousands to billions of cells deep within an animal. DNA recorders address this difficult task by converting transient cellular experiences into changes in the genome that can be sequenced later in high throughput. First, I will present a recently-published DNA recorder that acts primarily by writing new DNA, through the repeated insertion of random nucleotides at a single locus in temporal order, rather than by erasing as previous DNA recording technologies have done. Second, I will share the characterization of a new DNA recording architecture that maintains the strengths of CHYRON – ordered, information-dense recording – but (1) drastically reduces the rate of information loss through off-pathway mutations, (2) is in principle compatible with tens of rounds of recording, and (3) can in principle record at least tens of orthogonal inputs.

Thursday
March 10, 2022
12:00 pm CT
202 Light Hall

This lecture series features the most promising young scientists who are making notable discoveries as postdoctoral fellows or early career faculty.

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