

Practical Approaches to CRISPR Genome Editing to Accelerate Research

Achieving high accuracy and reproducibility through advanced design strategies

This seminar introduces Prime Editing technology as a next-generation genome editing approach that addresses the limitations of conventional SpCas9-based DSB (double-strand break) editing, particularly specificity and cytotoxicity.

Agenda

Principles and Features of Prime Editing

- High-precision editing without DSB or donor DNA
- Integration of targeting and repair information via pegRNA

Design Strategies for Improving Efficiency and Specificity

- Optimization of mRNA-delivered Prime Editor systems
- pegRNA stabilization and chemically modified RNA utilization
- Off-target control using UNA modifications

Practical Implementation

- Case studies in cellular systems
- Key technical considerations

Practical Tips for Implementation in Research Settings

Contact and Registration:

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Date: 2026 June 18th (Thurs)

Time: 16:00 - 17:00 JST

Venue:

Osaka University

CiDER Co-creation deck, 7th–9th Floor
Atrium + Live streaming

Presenter:

Adam Chernick
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Registration form link

<https://forms.cloud.microsoft/r/FRNBDw>

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