# Genome Editing Shared Resource



### Aims

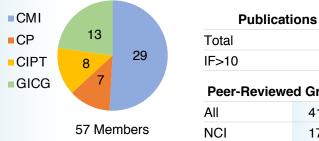
- Co-managed by CINJ and Rutgers Office for Research, the GESR has seen significant growth since the last site visit
- The GESR impact on members' science is best highlighted by the central role of the Managing Director in a new NCI P01 and involvement in two NCI R01s awarded to the GICG and CMI programs
- The GESR produces genetically engineered mouse models using CRISPR-CAS9 gene-editing technology, including the design and validation of CRISPR reagents, and performs custom genome editing of human and mouse cell lines

### Attachments available

- Publications
- Grants
- 5-year user list
- FY23 Advisory Committee Presentation
- FY21 FY23 Advisory Committee Action Items
- FY21 FY23 Advisory Committee Notes

- CY20 CY22 Satisfaction Survey Action Items
- CY22 Usage
- Submitted Research Strategy
- Submitted Aims
- Submitted SRM Research Strategy

### **Research Program Support** (2018–2022)



## 9 Peer-Reviewed Grants 41 (2T)

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### Scientific examples to be shown

- Cell Reports, 2022, 39(6):110794 •
- Blood Cancer Discov, 2021 2(1):92-109
- Cancer Res, 2021, 81(21):5523-5539
- Cancer Res, 2019, 79(16):4099-4112 •

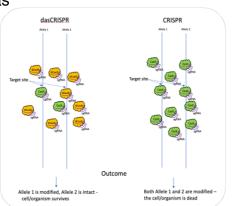
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# Services & Innovation

## New

- Electroporation to introduce CRISPR reagents into mouse embryos, resulting in a more efficient generation of mouse models and the ability to modify embryos generated by IVF
- Developed novel method to allow for modification of a single target allele as shown below



## Continuing

- Cell line editing
- Mouse line cryopreservation
- Mouse line rederivation
- Expression vectors and viral vectors for in vivo gene editing

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# **Utilization & Management**

