



Rodent Model Generation

Pronuclear Injection

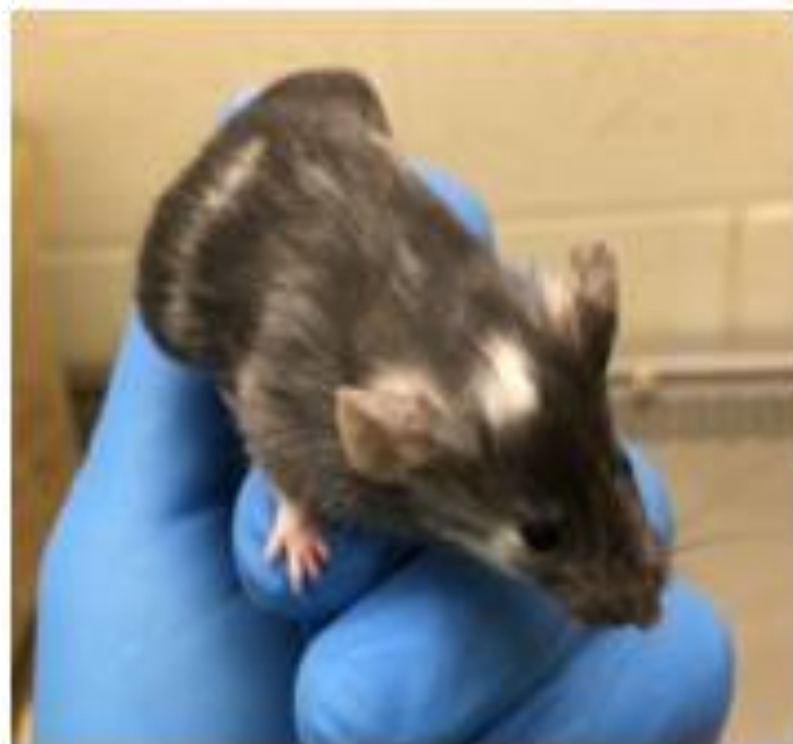
Electroporation

Using CRISPR/Cas9:

- Knockout / indels
- Large genomic deletions
- Hypomorphic alleles
- Patient variants
- Conditional alleles
- ROSA26 insertions
- Reporter tags

Conventional Transgenics:

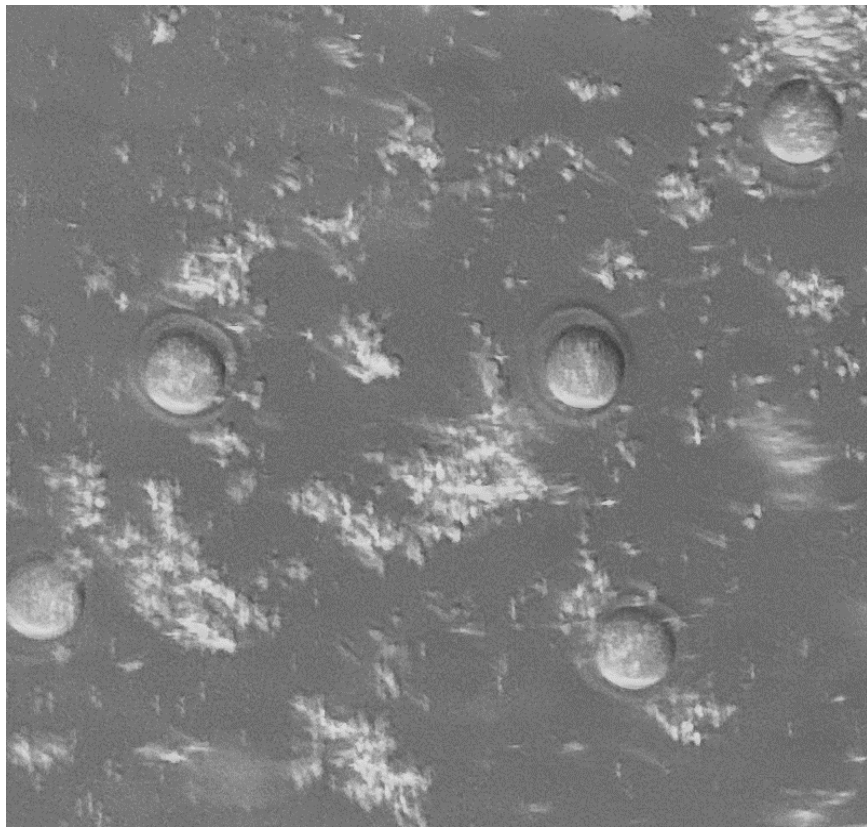
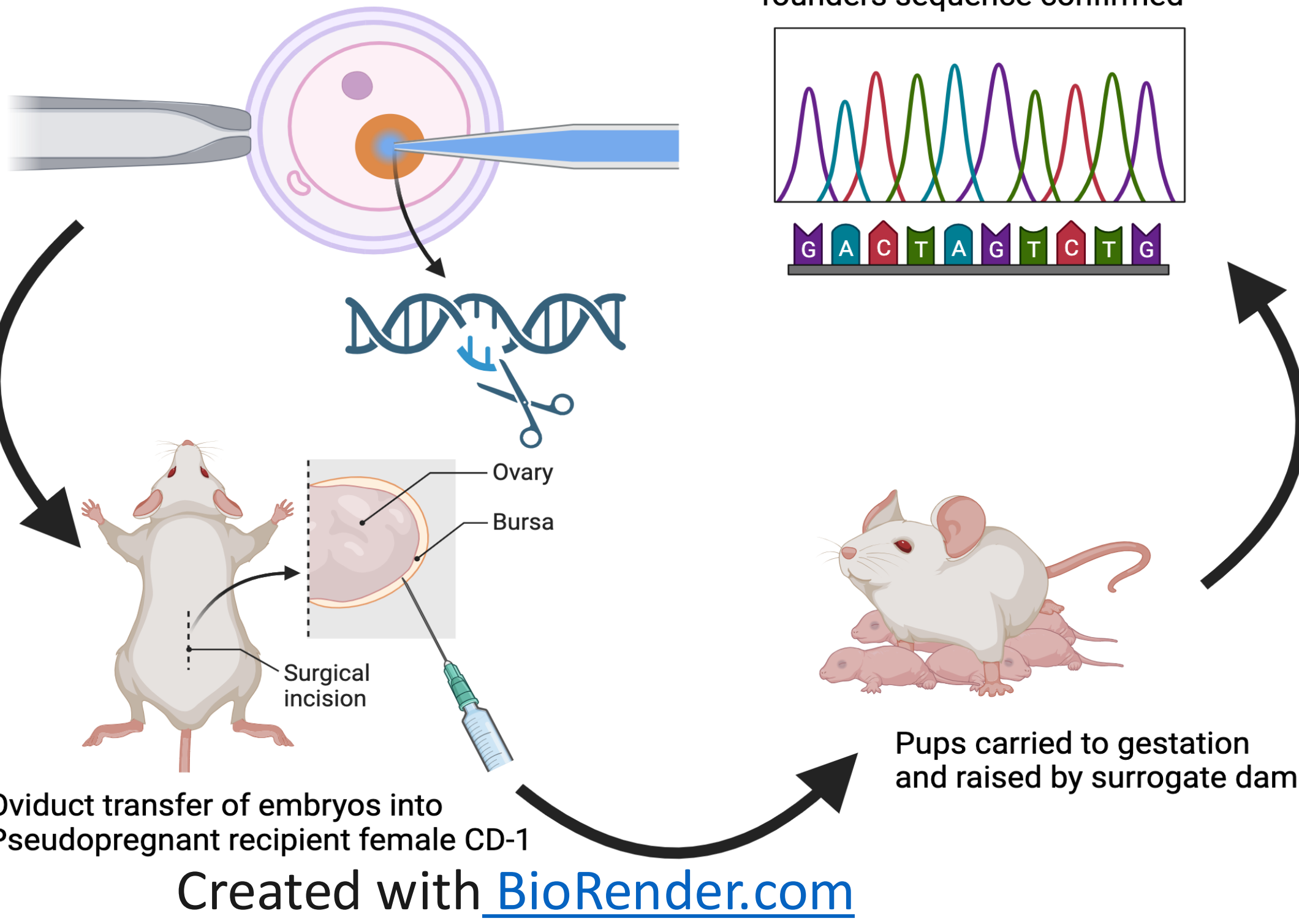
- Reporters
- Overexpression vectors



Generation of a Mouse Model

Microinjection of construct into D0.5 Embryo

Pups genotyped at weaning and founders sequence confirmed



Project Type	Details	Internal Price
CRISPR/Cas9-mediated Model Generation	Design and testing of gRNA and repair template, mouse/rat generation, 150 fertilized oocytes injected	\$10,000 (mouse) \$18,000 (rat) (plus cost of repair template)
Transgenic Model Generation	Pronuclear injection of linearized DNA, mouse/rat generation, 150 fertilized oocytes injected	\$10,000 (mouse) \$18,000 (rat) (plus cost of DNA generation)
ES Cell Microinjection (mouse)	Inject ≥ 40 blastocysts with 1-2 ES clones	\$10,000
Sperm cryopreservation (mouse)	1-2 males per line. Motility of thawed sperm tested	\$1,100
In vitro fertilization (IVF)	Includes transfer of two-cell embryos to up to six recipient females	\$4,000
Embryo Cryopreservation	Up to 10 females superovulated per line.	\$2,500 (mouse) \$5,000 (rat)
Rederivation	Transfer of fertilized oocytes to up to six recipient females	\$2,500 (mouse) \$5,000 (rat)
Sperm/Embryo Storage	Annual fee first 3 lines	\$50
	Annual fee per 3 additional lines	\$25/3 lines
Gene Targeting (ES Cells)	C57BL/6 ES cells (2x96 well plates) No screening (DNA plates to PI)	\$10,000
	With PCR screening	\$12,000
Human IPSC/ES Genome Edit	Electroporation and single cell clone isolation. PCR based identification of positive clones	\$10,000 (plus cost to synthesize targeting vector)

Contact the Director For Consultation:

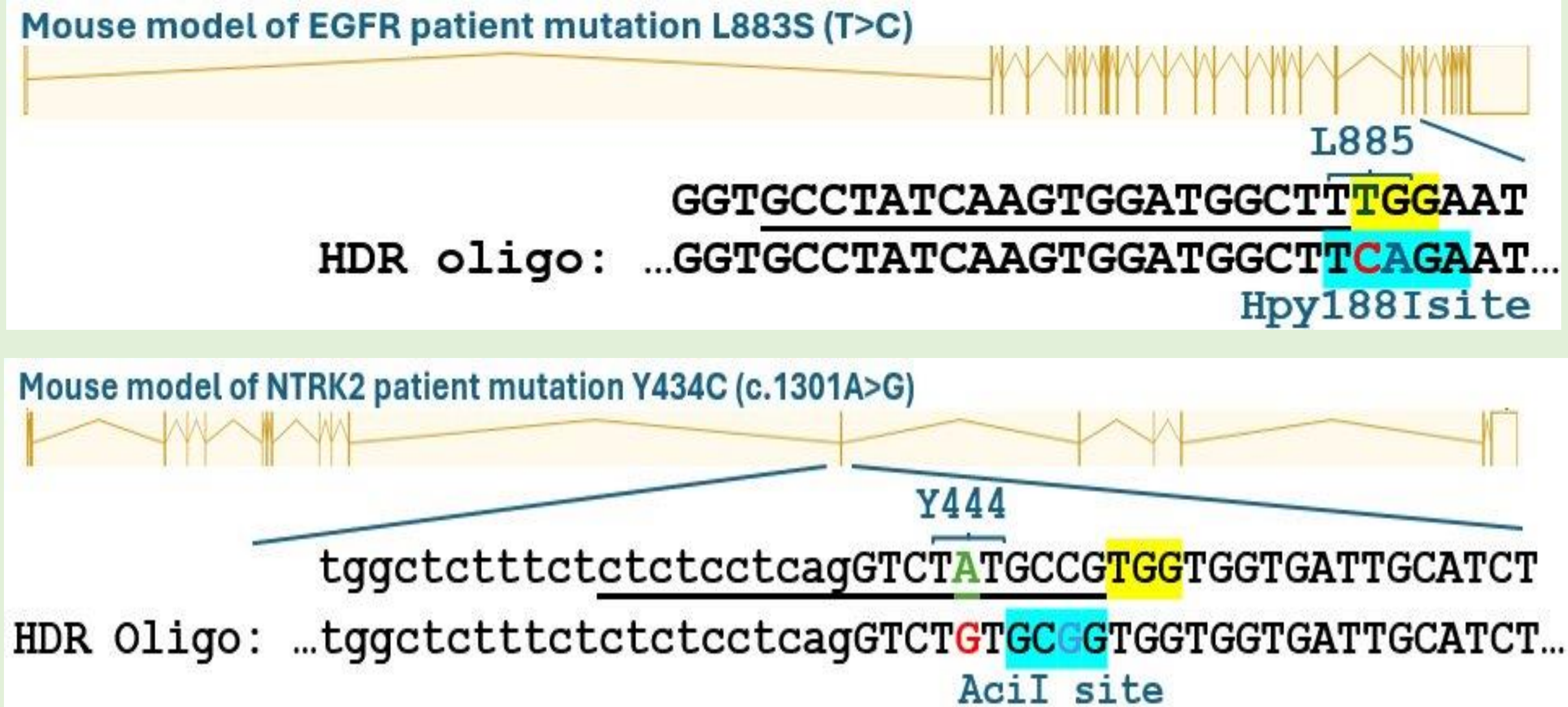
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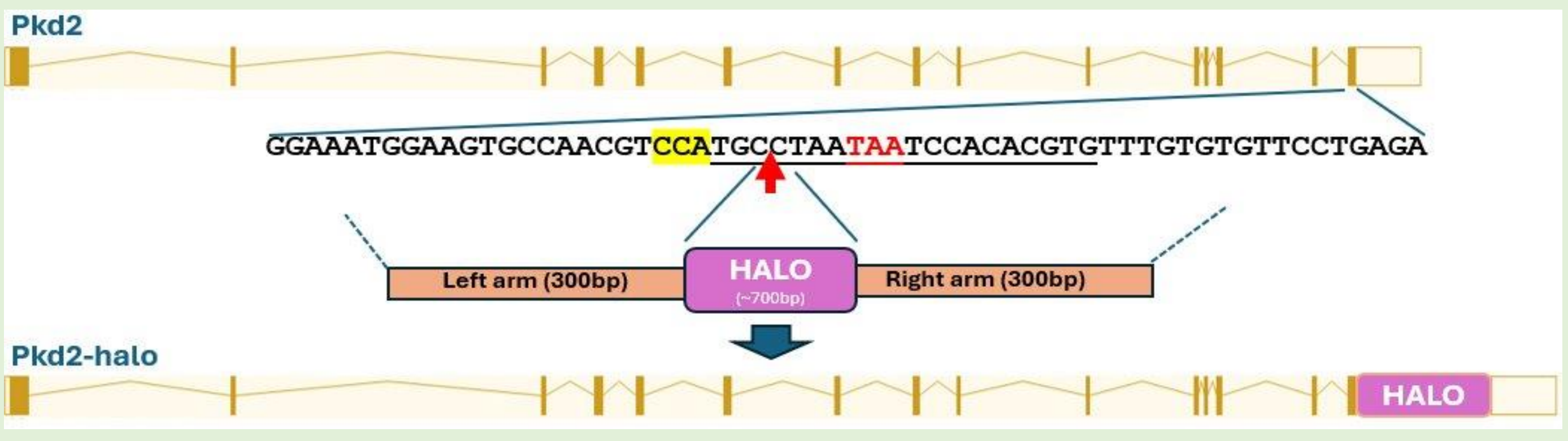
Assisted Reproduction

- Mouse embryo/sperm cryopreservation
- Rat embryo cryopreservation
- In vitro fertilization
- Pathogen-free rederivation
- Transfer of cryopreserved embryos

Recent nucleotide alterations projects



Recent Knock-in project



NIH Support

O'Neal Comprehensive Cancer Center
UAB Center for Precision Animal Modeling
UAB Childhood Cystic Kidney Disease Core Center
UAB Diabetes Center

O'NEAL COMPREHENSIVE
CANCER CENTER



UAB Diabetes
Research Center