Zebrafish Genome Editing
Using a Random Engineering Approach

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"zfishbook, do you have any neuromast lines?"
Protein Trap Gene-breaking Transposon

A Method to Make Reporter-tagged, Cre Revertible, Zebrafish Mutants

Clark et al., Nature Methods, 2011
Diverse GBT Protein Trap Expression Patterns

Data available as collected at zfishbook.org
Strong Gene Knockdown in RP2 Mutants

Clark et al., *Nature Methods*, 2011
Ding et al., *Cir Research*, 2013

99+% knockdown
21/22 lines (95%)

>97% knockdown; 22/22 (ryr1b mutant)
GBTs - First Engineered Revertible Alleles Outside Mouse

550+ Lines To Date

Next need: Good, tissue-specific Cre lines.
Cre Zoo
ZCre
Others?

zfishbook.org (today)
ZIRC (started March 1, 2012)