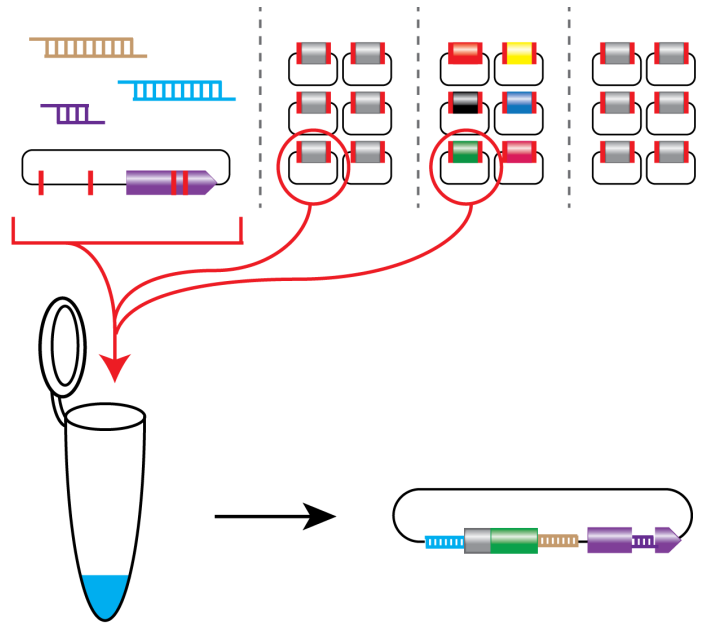


SapTrap, High-Throughput Gene Modification in *C. elegans*

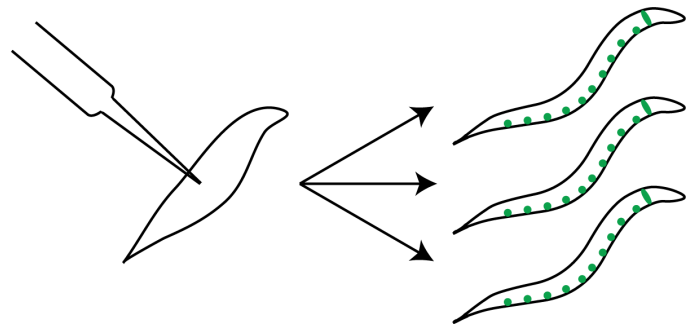
Matt Schwartz
Jorgensen Laboratory
University of Utah

Streamlined tag insertion via CRISPR

**Modular
Plasmid
Assembly**

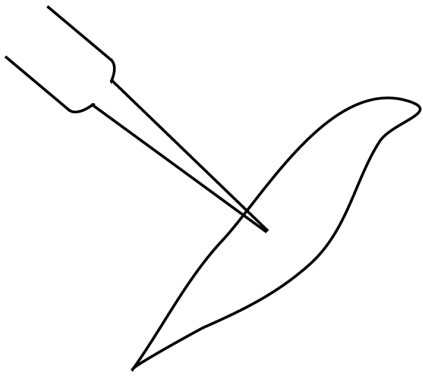


**High
Efficiency
Editing**



Schwartz and Jorgensen, Genetics. 2016 Apr;202(4):1277-88.
Plasmids available from Addgene.

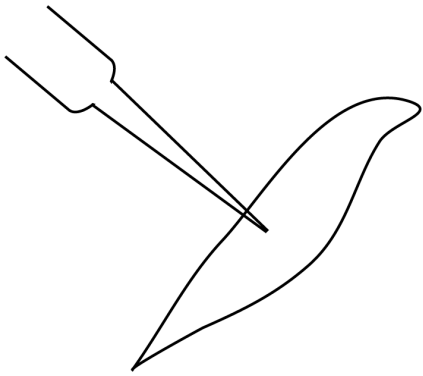
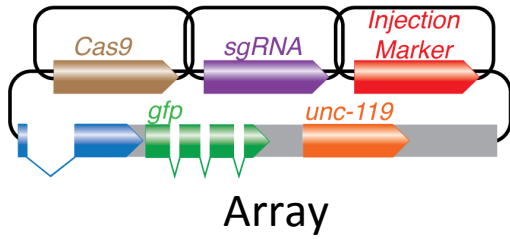
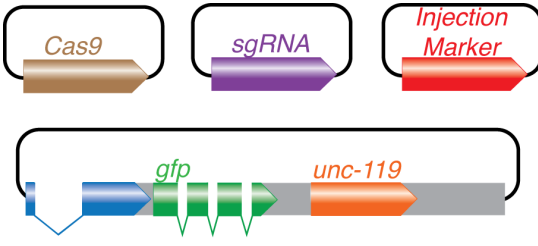
CRISPR by plasmid injection and marker cointegration



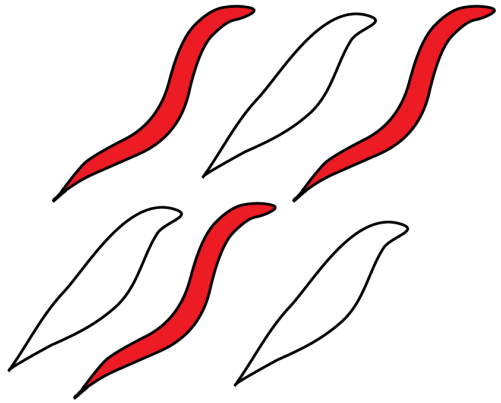
P0: *unc-119*(-)



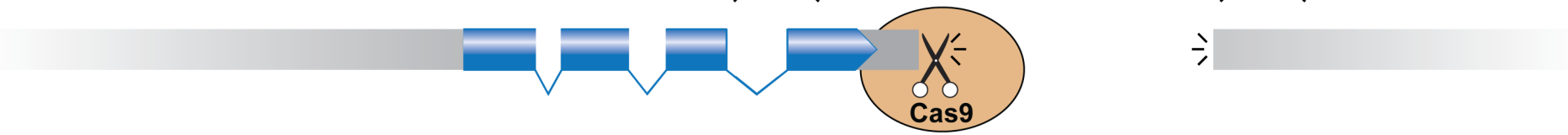
CRISPR by plasmid injection and marker cointegration



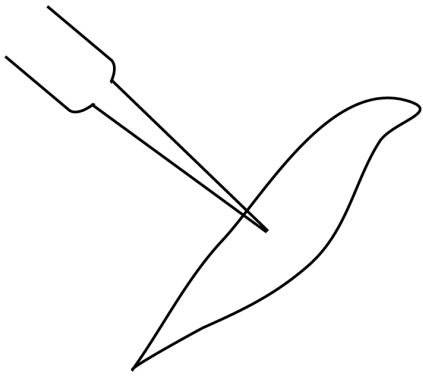
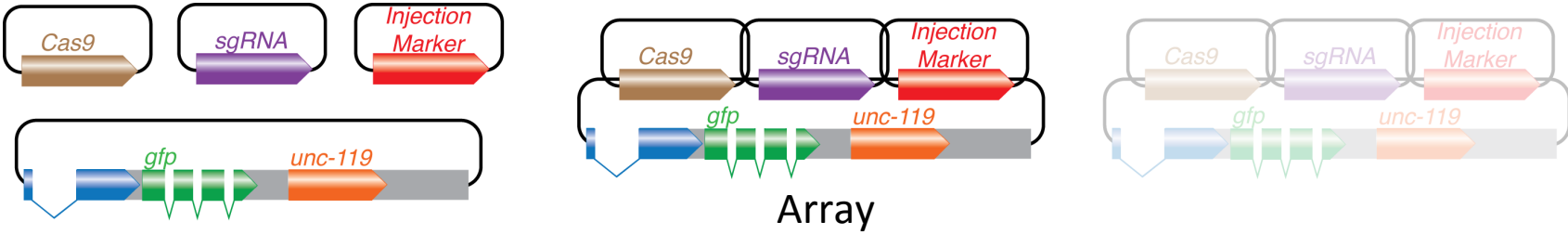
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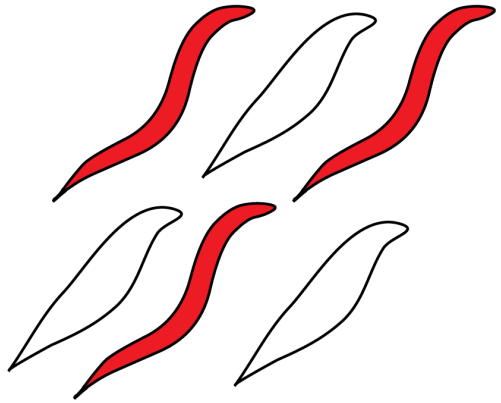
F1: *unc-119*(+)
Array(+)



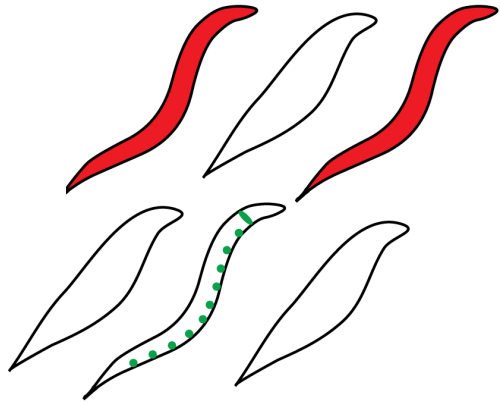
CRISPR by plasmid injection and marker cointegration



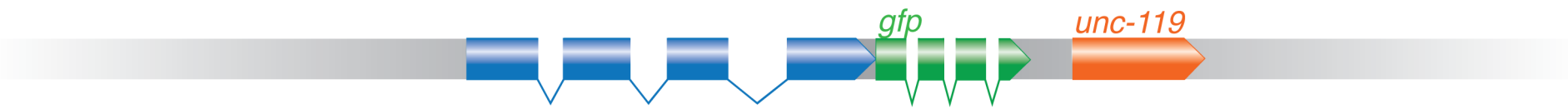
P0: *unc-119*(-)



F1: *unc-119*(+)
Array(+)

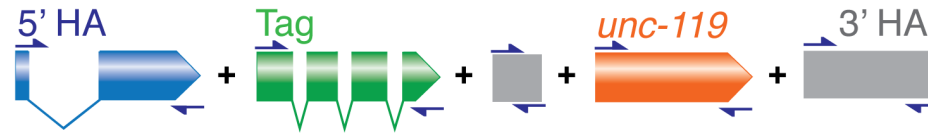


F2-F3: *unc-119*(+)
Array(-)



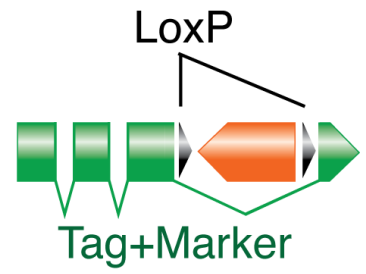
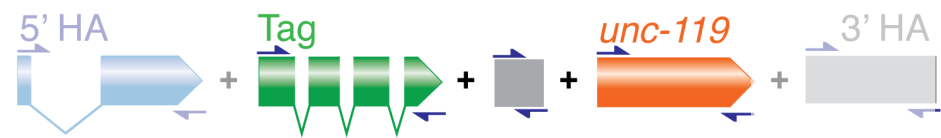
Streamlined repair templates

repair template



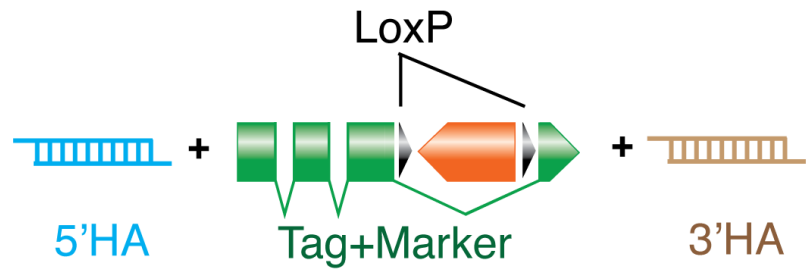
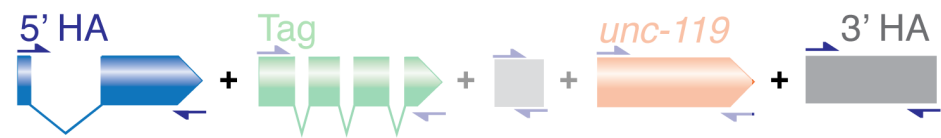
Streamlined repair templates

repair template

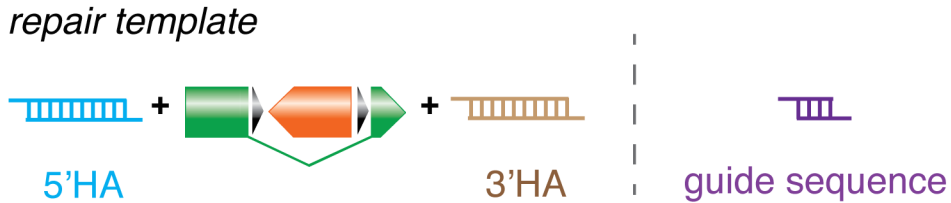


Streamlined repair templates

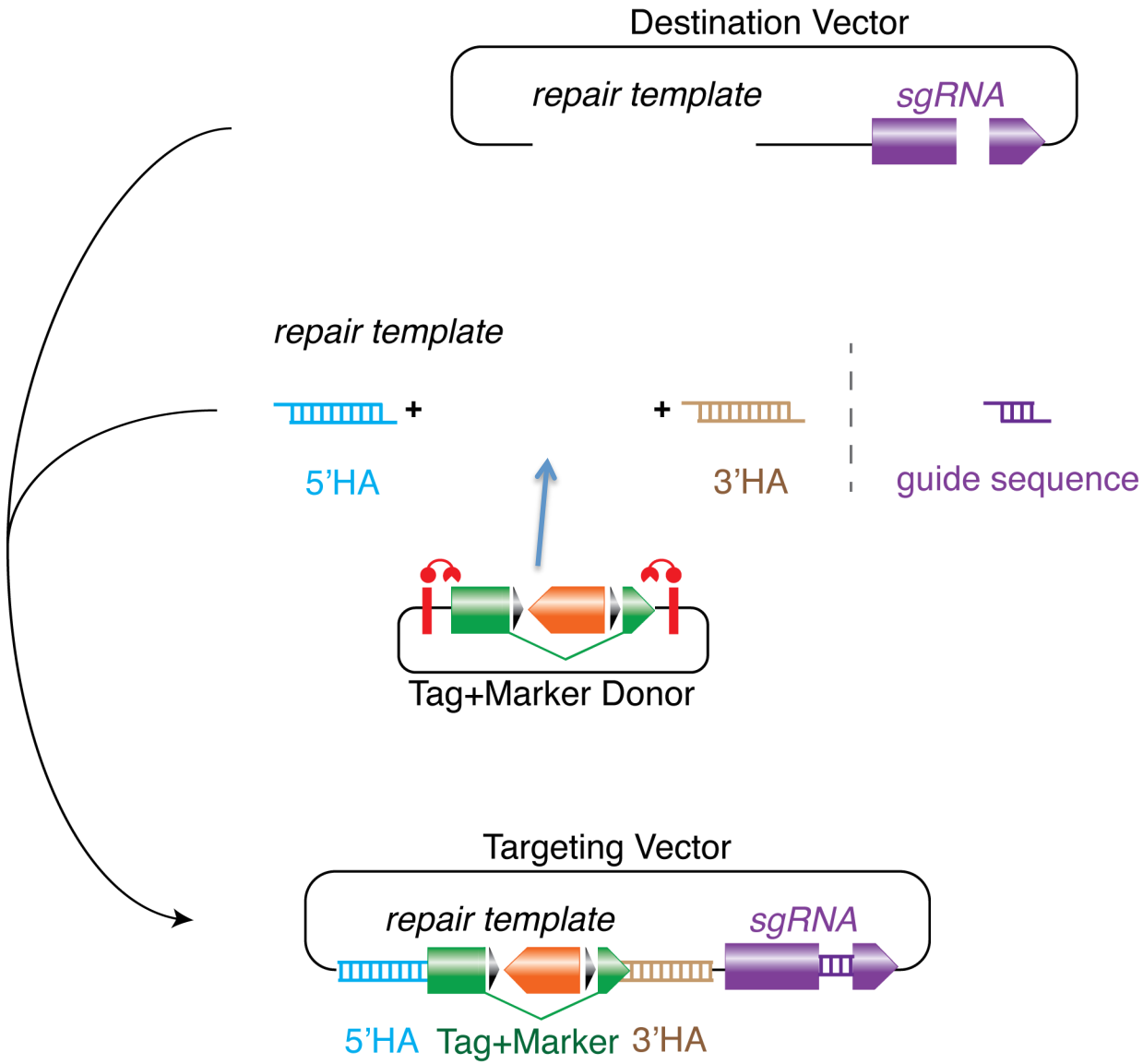
repair template



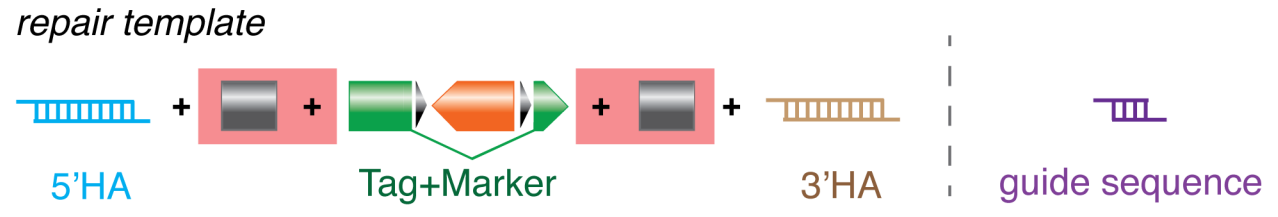
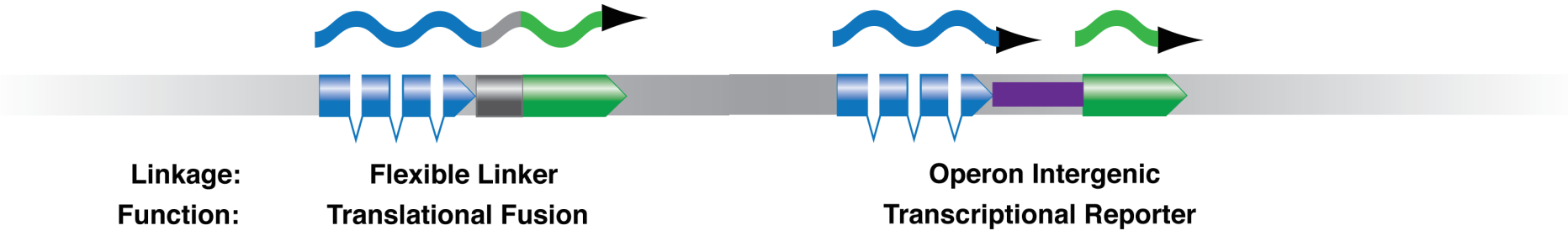
SapTrap: a Golden Gate toolkit for CRISPR



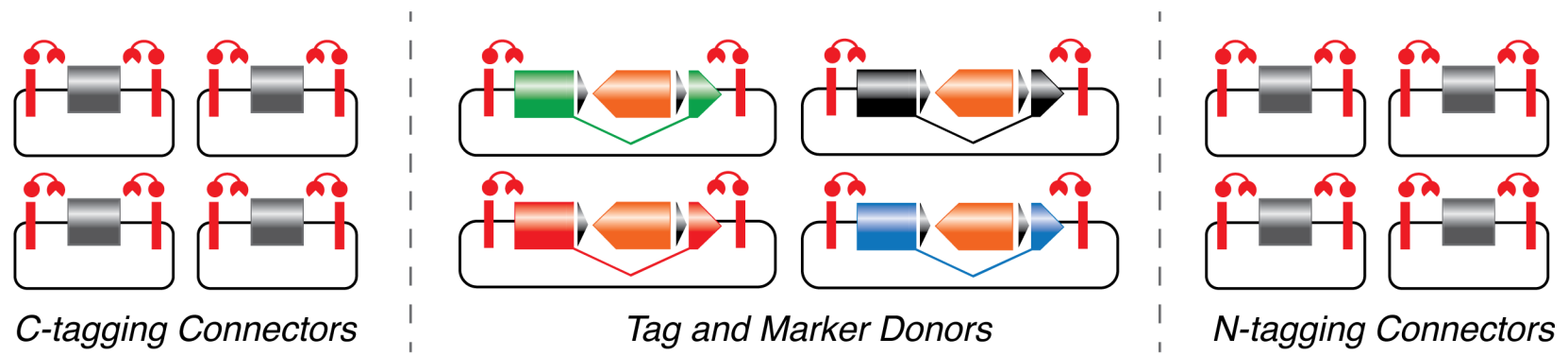
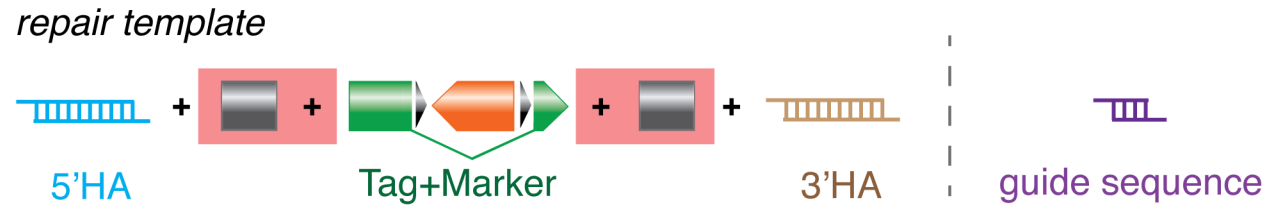
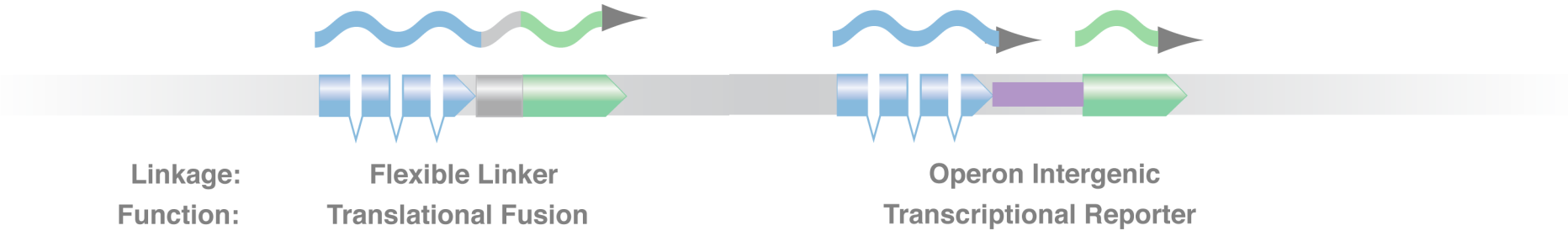
SapTrap: a Golden Gate toolkit for CRISPR



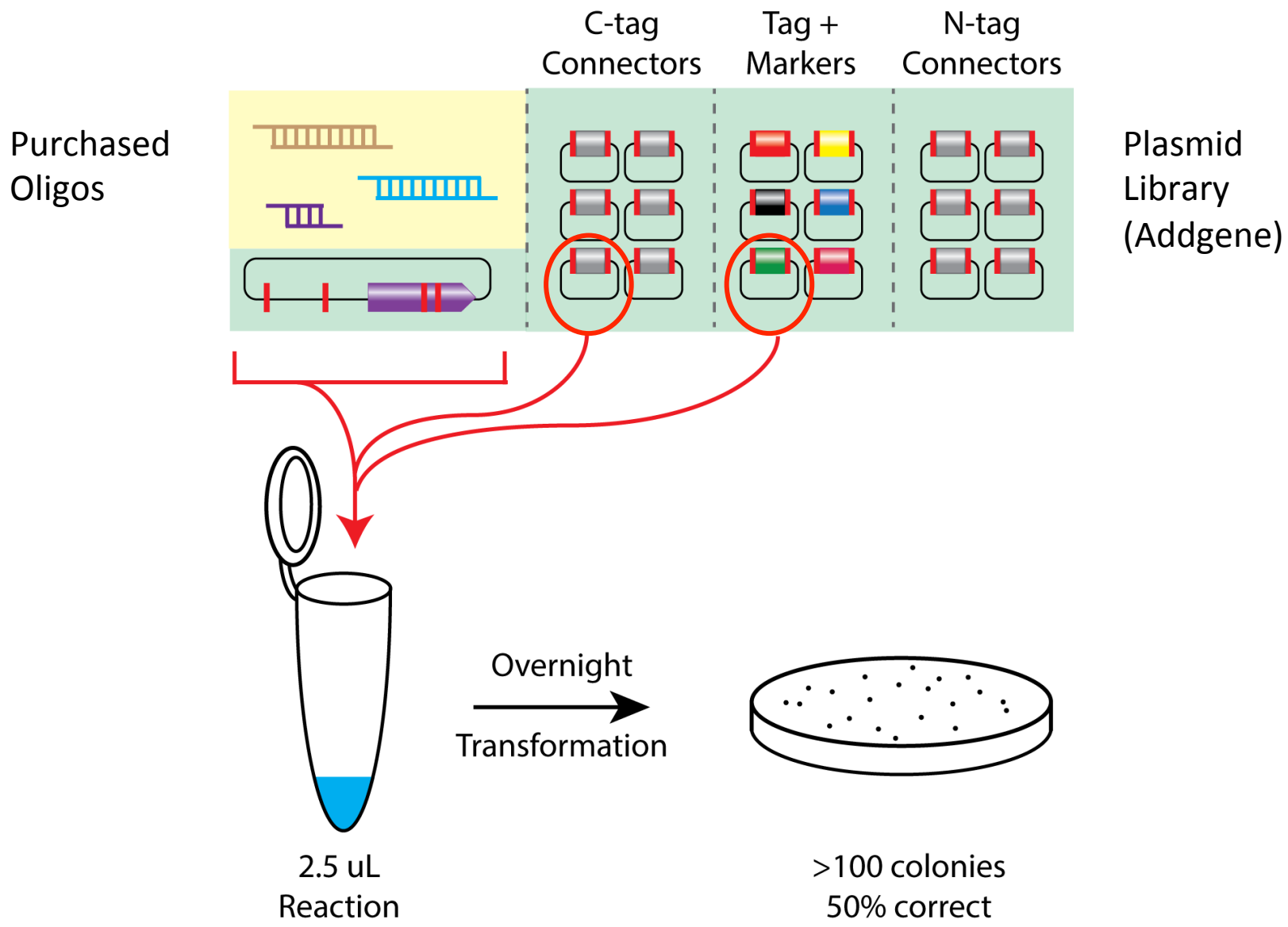
Connectors add functionality



Connectors add functionality

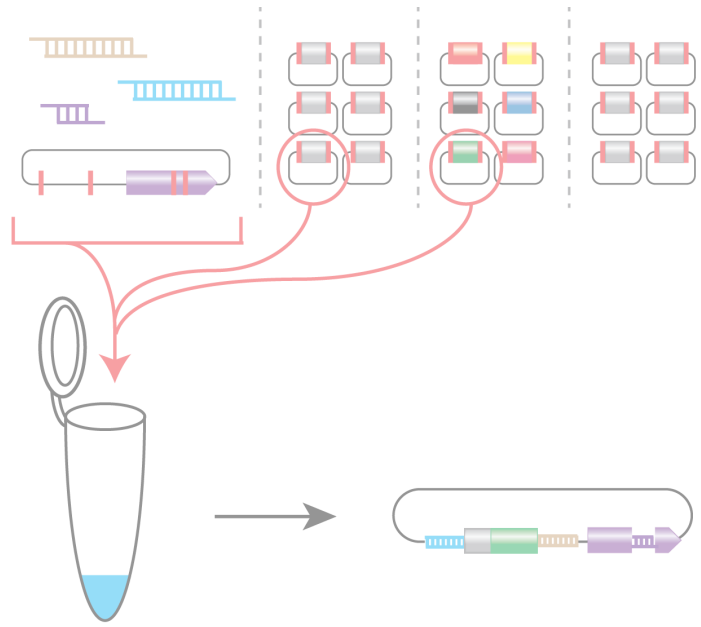


A simple procedure to generate CRISPR plasmids

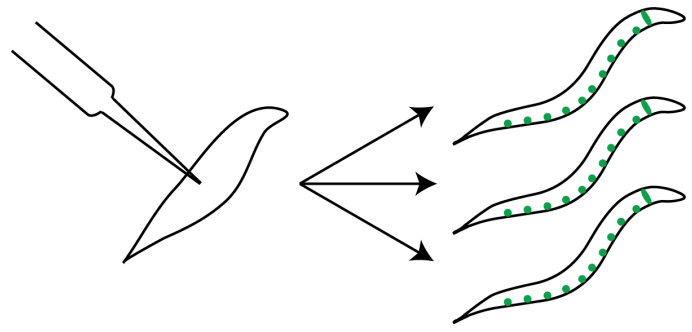


Streamlined tag insertion via CRISPR

Modular
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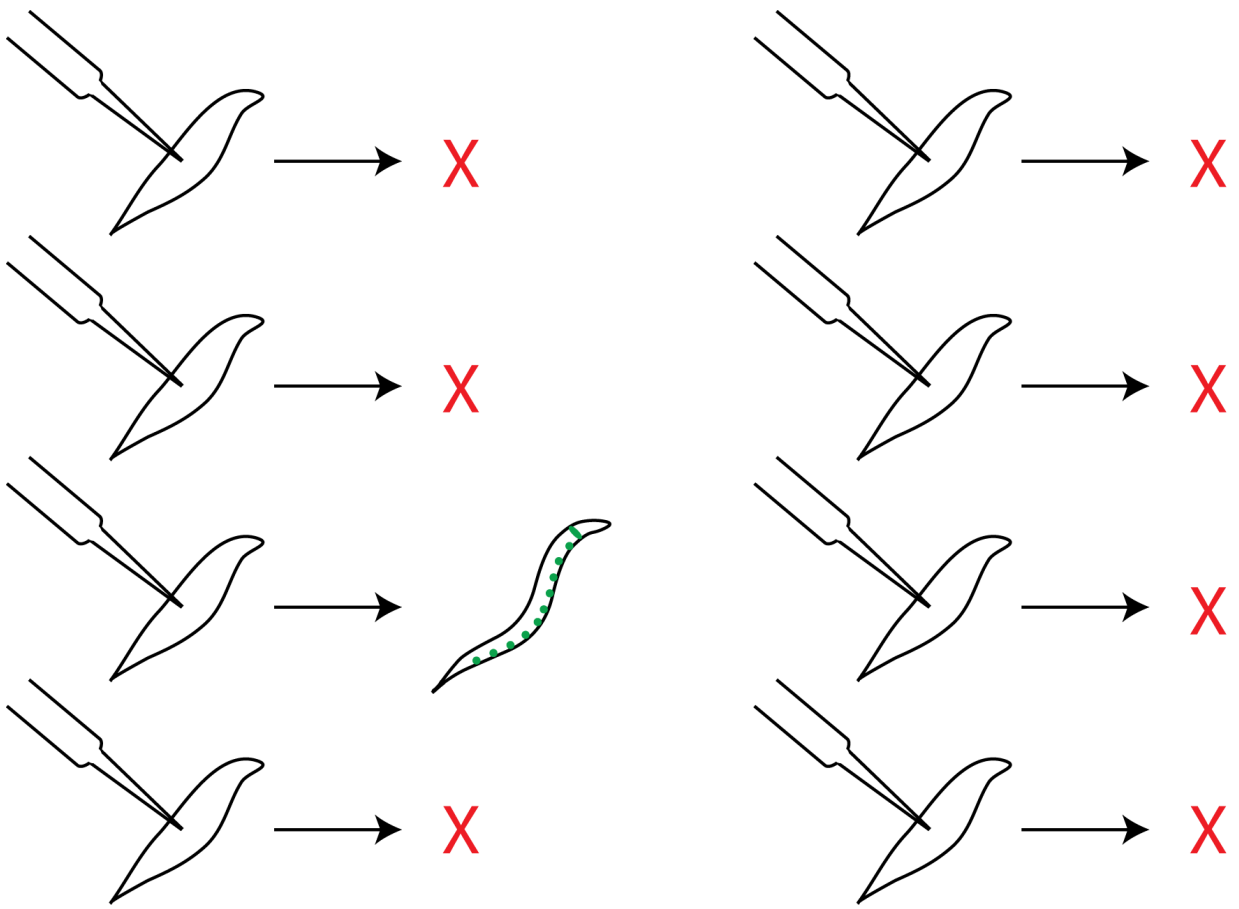


High
Efficiency
Editing

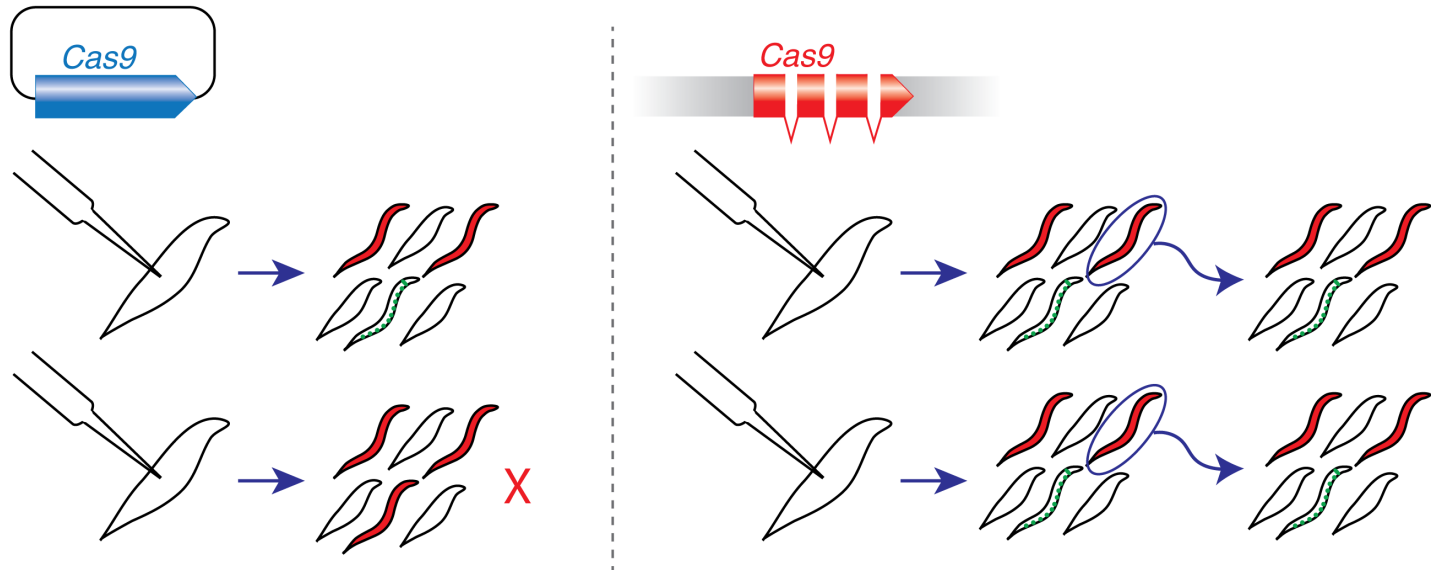
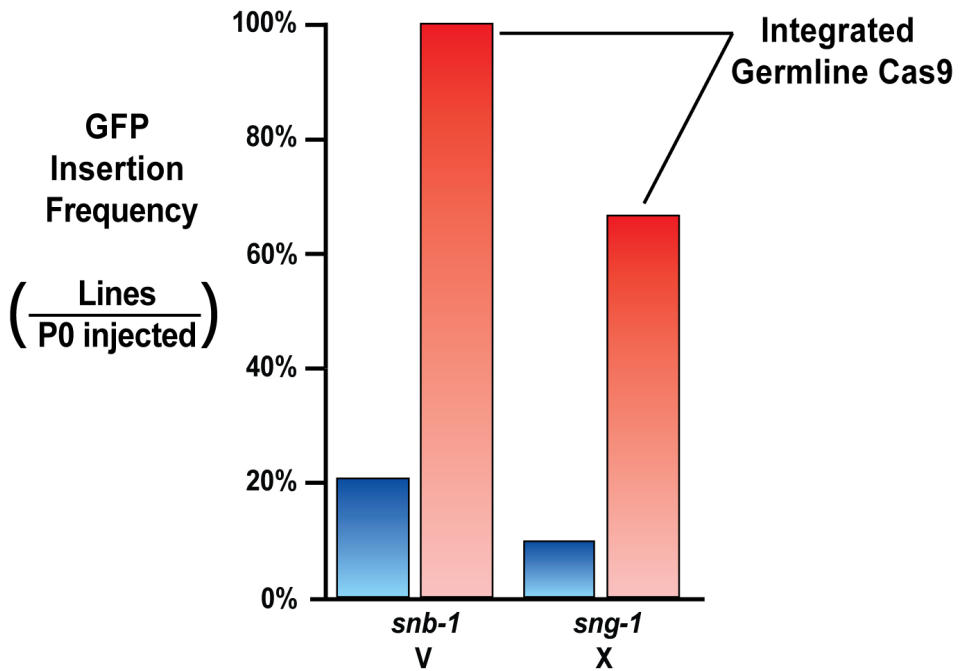


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Plasmids available from Addgene.

Low efficiency tag insertion with plasmids

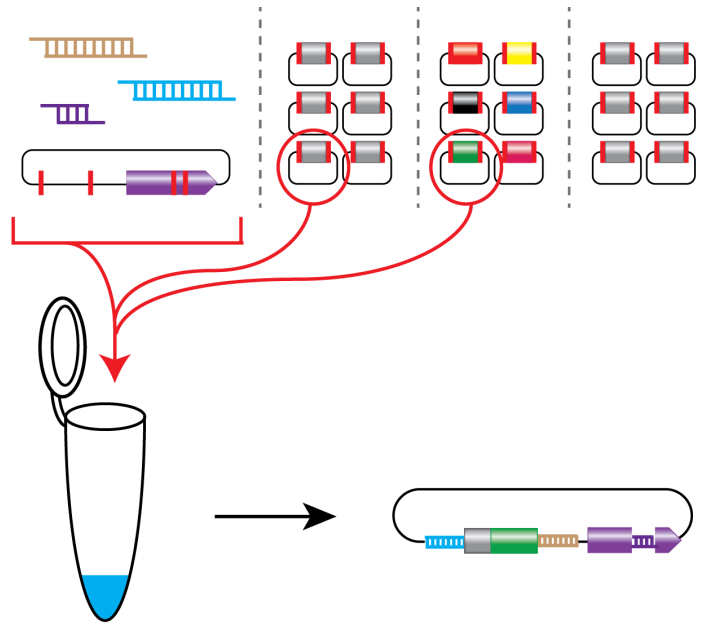


Integrated Cas9 for high-efficiency insertions

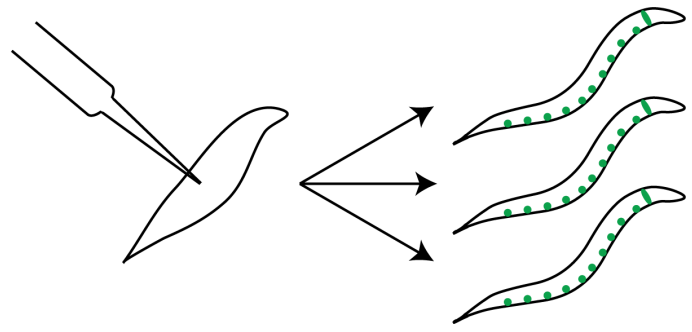


Streamlined tag insertion via CRISPR

**Modular
Plasmid
Assembly**



**High
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Jorgensen Lab



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THE UNIVERSITY OF UTAH

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