

LocIn: A Targeted Integration System for the Efficient Creation of Isogenic Mammalian Cell Lines



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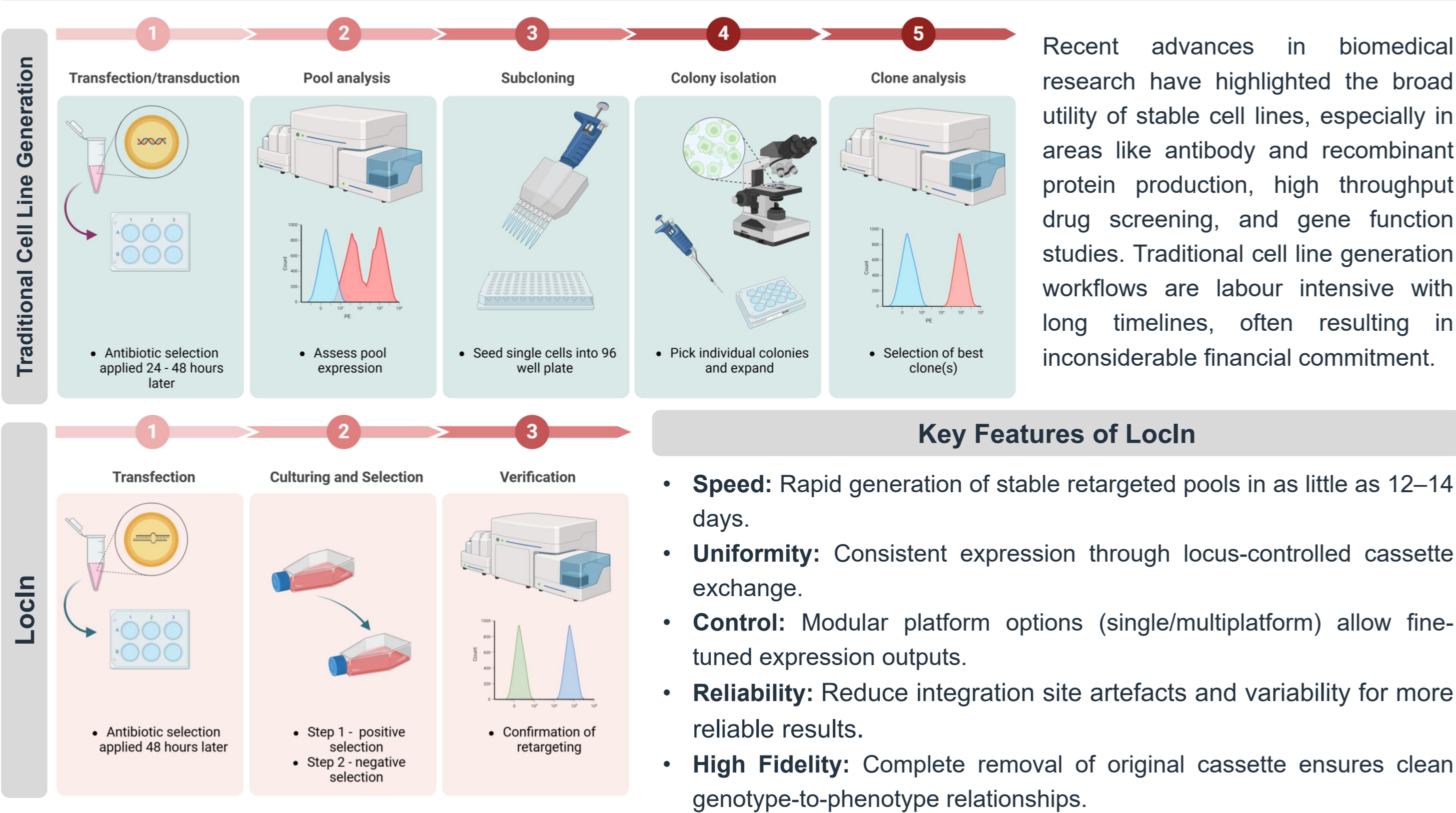
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Introduction

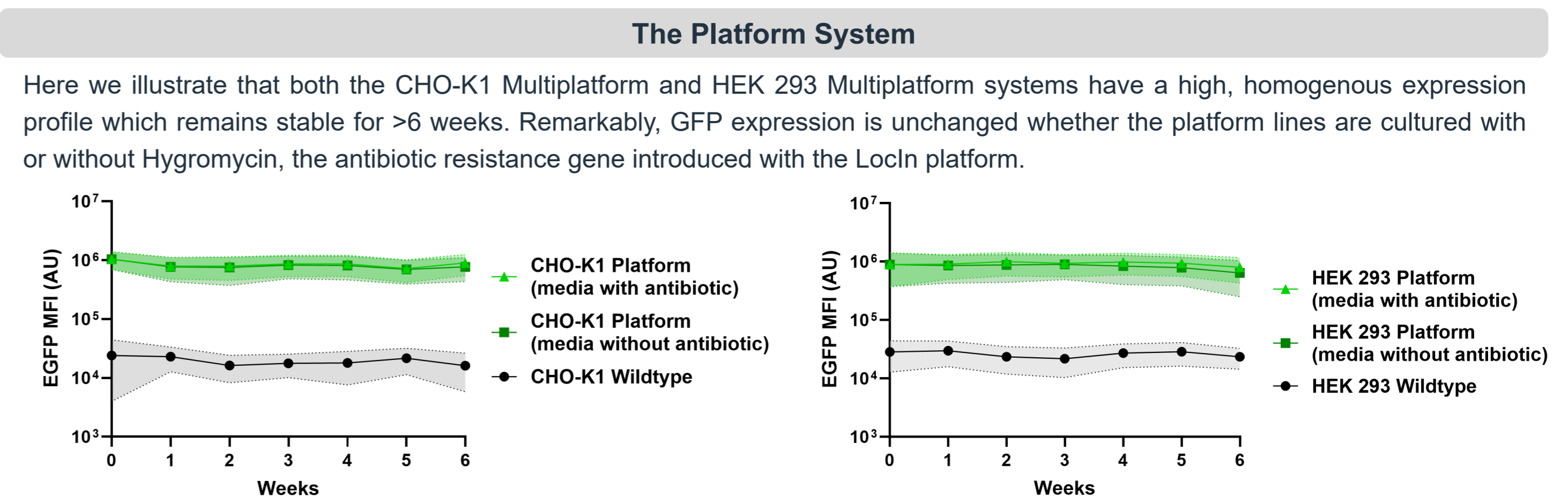
LocIn is a high-fidelity targeted integration platform that enables rapid, high-quality generation of isogenic mammalian cell lines, eliminating the need for subcloning and significantly reducing development time. By standardising integration patterns, LocIn removes positional effects to support reliable genotype-phenotype assessments and toxicology species cross-reactivity studies. Single and multiplatform systems provide controlled low or high expression, ensuring consistent, integration artefact-free cell lines for robust experimental comparison.

Smarter Engineering for Rapid Cell Line Generation

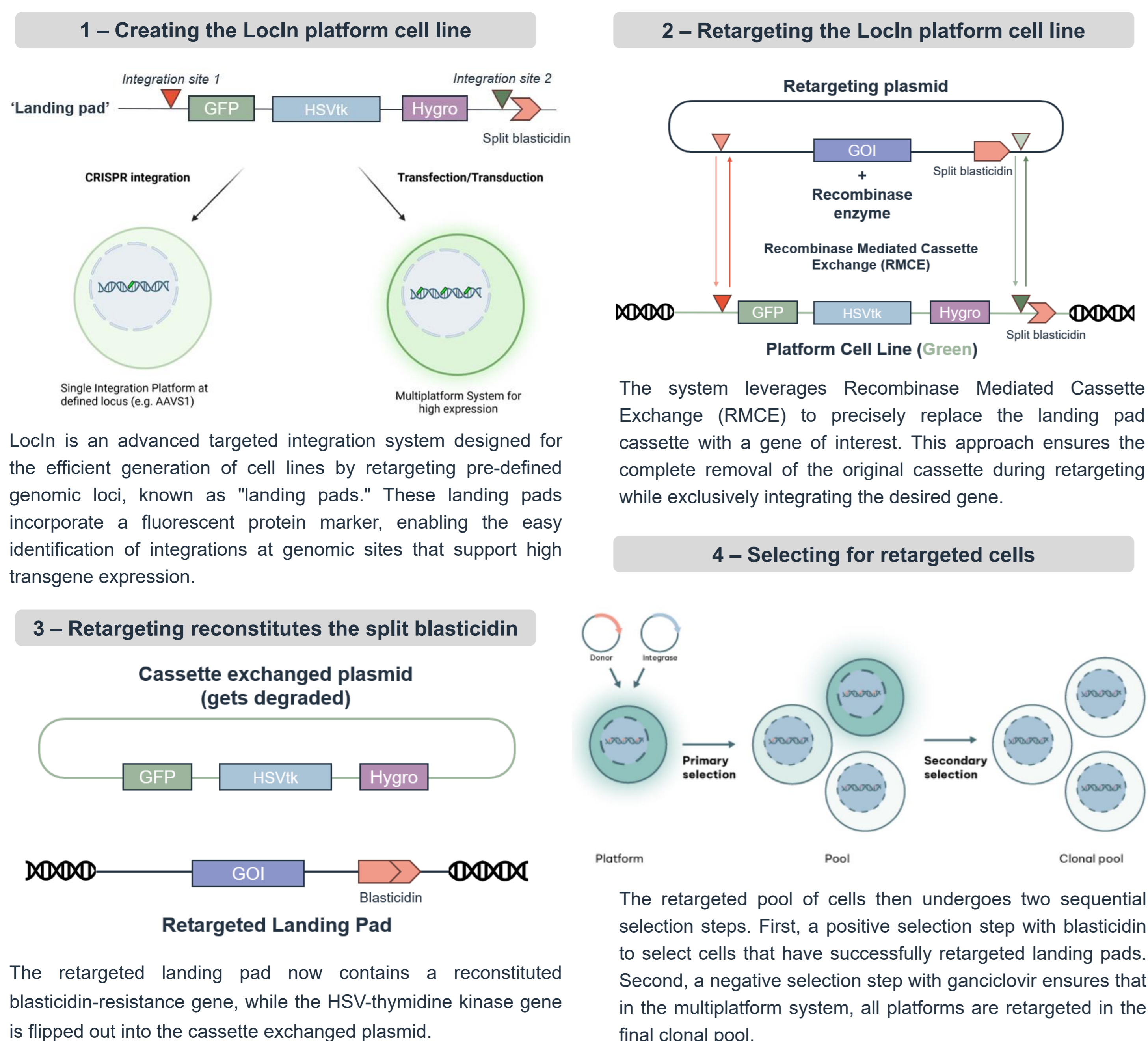


The LocIn Platform System

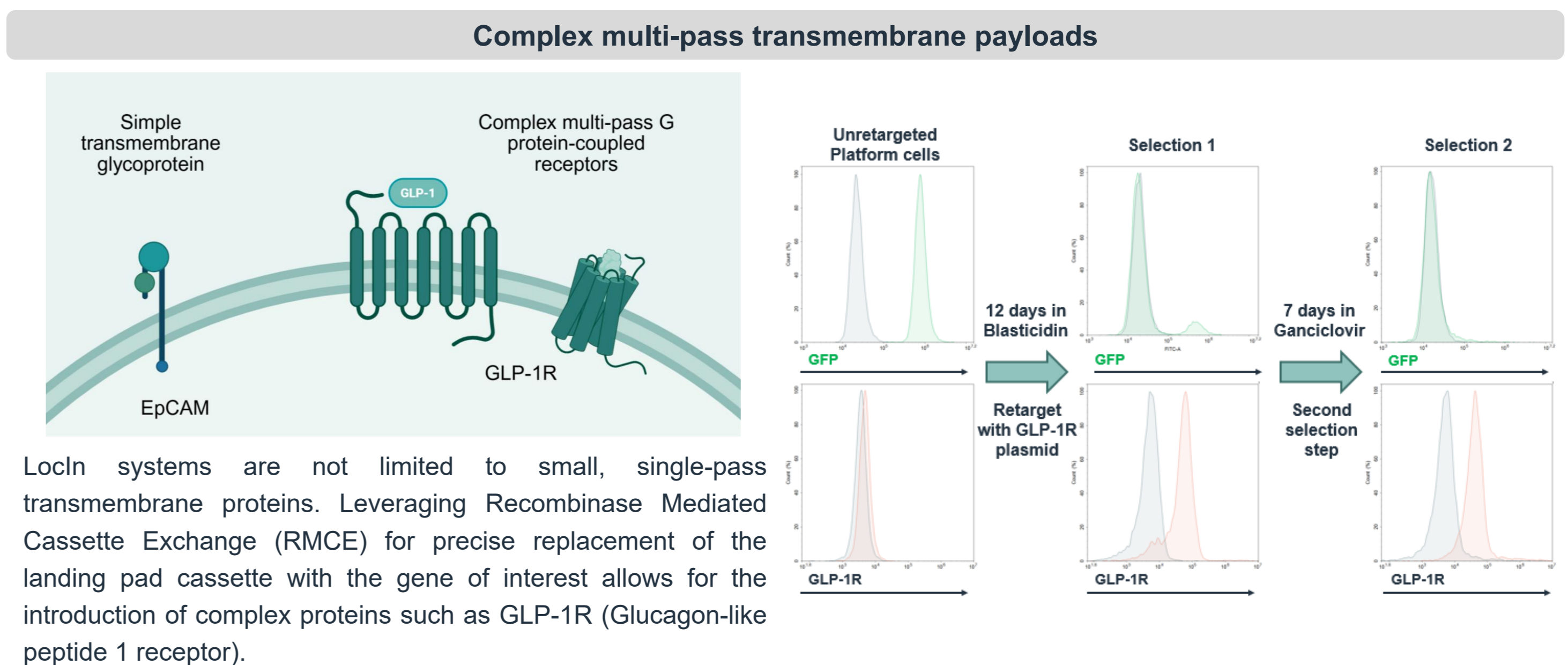
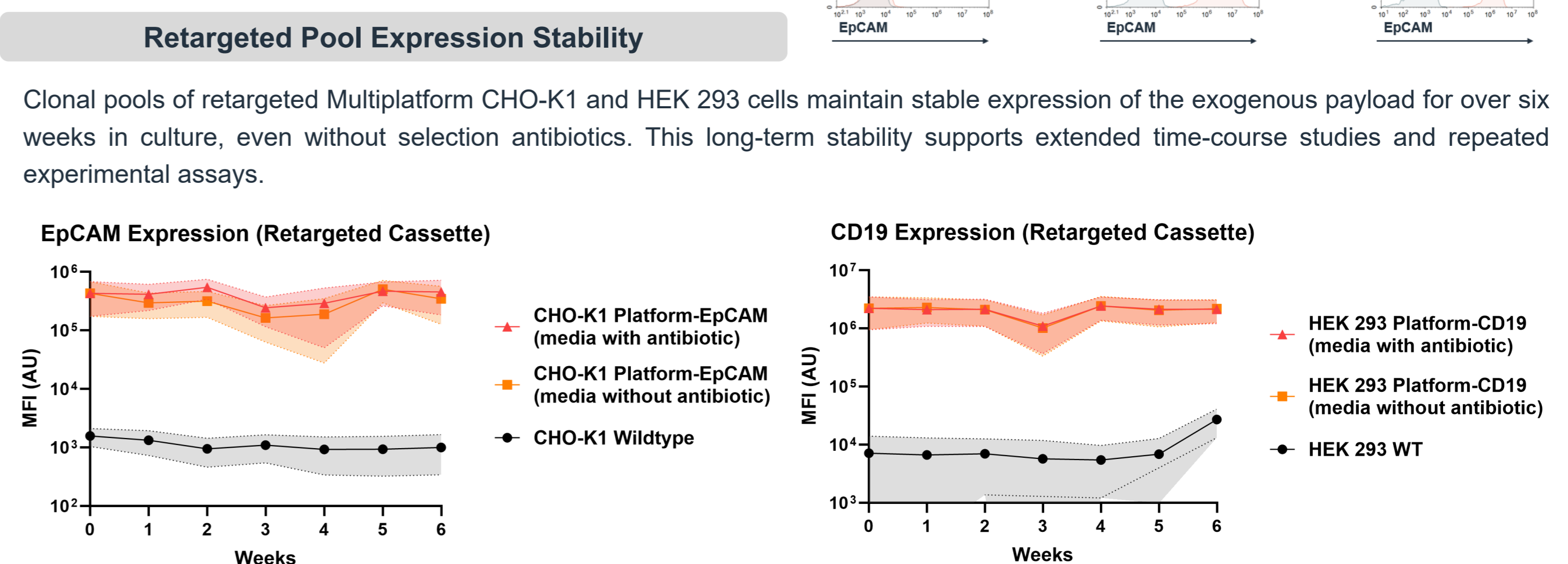
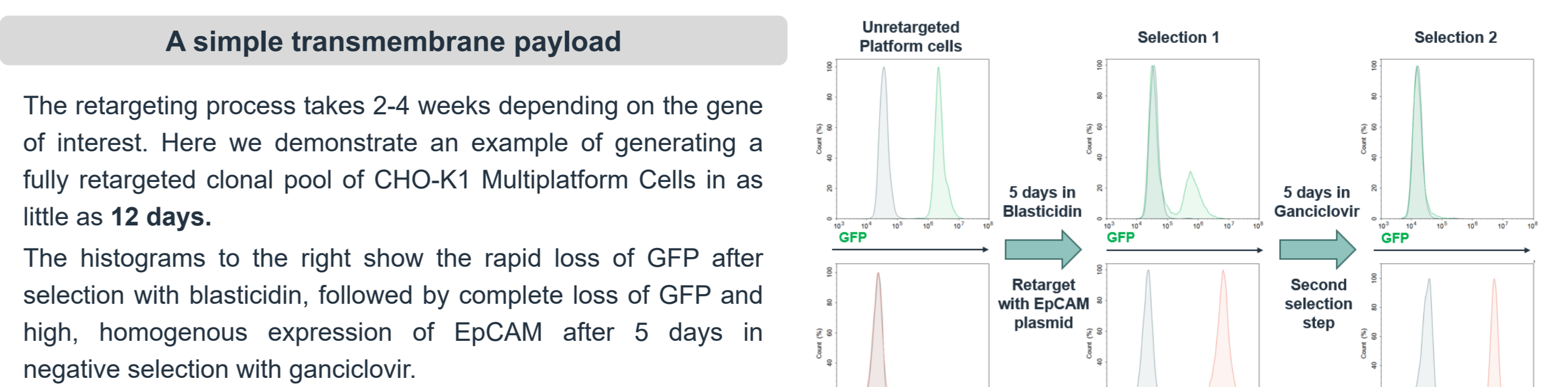
The use of LV transduction and CRISPR-mediated gene editing allows for the LocIn platform to be stably integrated in the genome of a wide range of cell lines. The Multiplatform System has been successfully introduced into multiple adherent cell lines, with extensive data illustrating the stability of the platform and retargeted systems.



How Does LocIn Work?

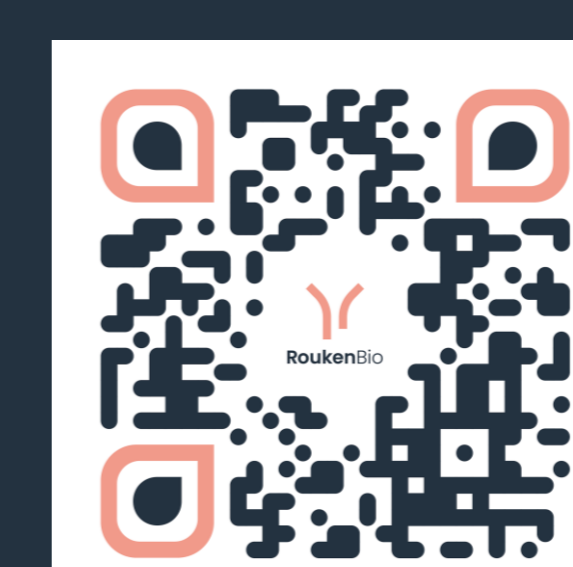


Retargeting Platform Cells



Summary

We have developed an advanced targeted integration platform that enables efficient generation of stable mammalian cell lines without reliance on labour-intensive or costly cloning workflows. The Multiplatform system supports high and uniform transgene expression and maintains stability in culture even in the absence of continuous antibiotic selection. Using two sequential selection steps, retargeted clonal pools can be established within as little as 12 days, yielding stable expression of the introduced gene without ongoing selective pressure. The LocIn architecture normalises integration profiles, facilitating more accurate comparisons across construct designs, while the Single and Multiplatform configurations provide adaptable options for applications requiring low or high expression levels.



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