# Article information:

DICE, an efficient system for iterative genomic editing in human pluripotent stem cells - PubMed
<https://pubmed.ncbi.nlm.nih.gov/24304893/>

# Article summary:

1. A novel human locus, H11, located in a safe, intergenic, transcriptionally active region of chromosome 22 was identified as the recipient site for robust and ubiquitous expression of inserted genes.

2. Dual integrase cassette exchange (DICE) mediated by phiC31 and Bxb1 integrases was used to insert genes of interest flanked by phiC31 and Bxb1 attB sites at the H11 locus.

3. The DICE system offers rapid, efficient and precise gene insertion in ESC and iPSC and is particularly well suited for repeated modifications of the same locus.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy due to its use of scientific evidence to support its claims. The authors provide detailed information about their methods, including the identification of a novel human locus as the recipient site for gene insertion, as well as their use of dual integrase cassette exchange (DICE) mediated by phiC31 and Bxb1 integrases to insert genes into this locus. Furthermore, they provide evidence from experiments conducted using human embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs), demonstrating that their system provides complete control over content, direction and copy number of inserted genes with a specificity of 100%.

However, there are some potential biases in the article that should be noted. For example, the authors do not discuss any possible risks associated with their method or any potential ethical considerations that may arise from its use. Additionally, they do not explore any counterarguments or alternative approaches that could be used for genomic engineering in human pluripotent stem cells. Finally, it is also worth noting that the article does not present both sides equally; instead it focuses solely on promoting the benefits of their proposed system without providing an equal amount of attention to potential drawbacks or limitations.

# Topics for further research:

* Genomic engineering risks
* Ethical considerations of genomic engineering
* Alternative approaches to genomic engineering
* Potential drawbacks of genomic engineering
* Limitations of genomic engineering
* Benefits of genomic engineering

# Report location:

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