Identifying the switches that controls CD83 expression in B cells

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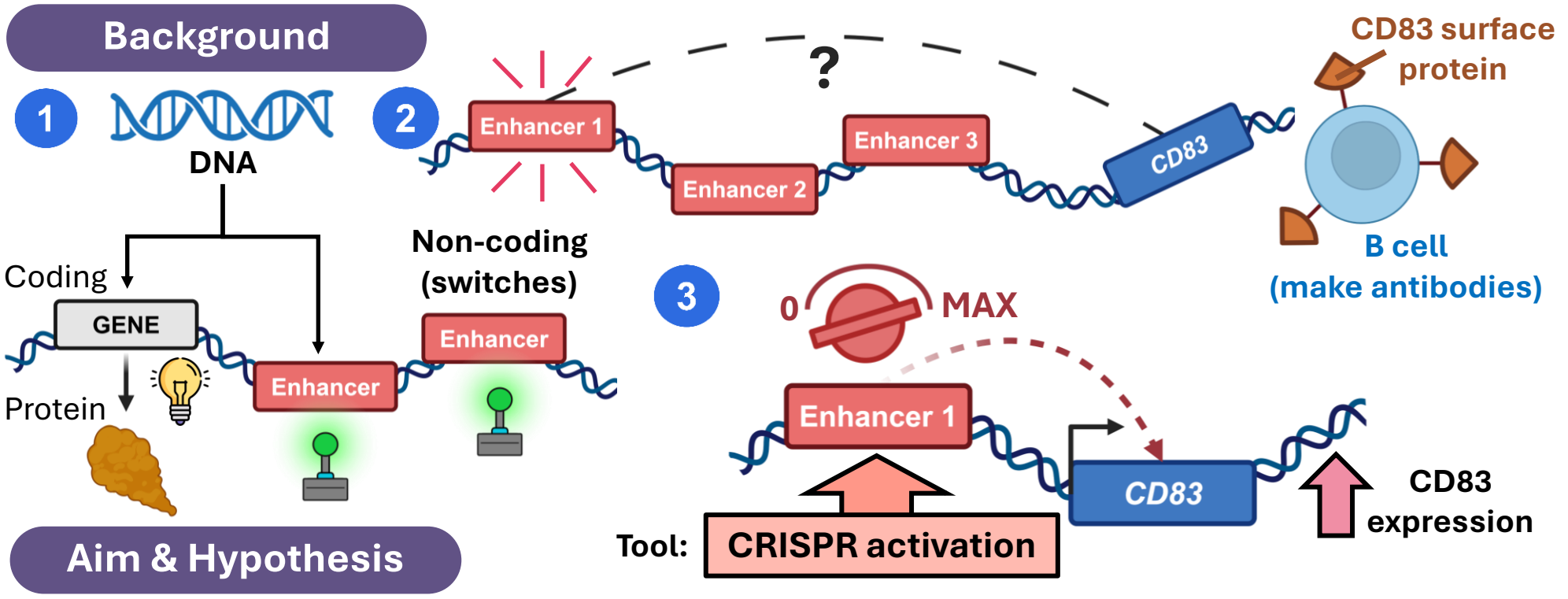
citizens of science

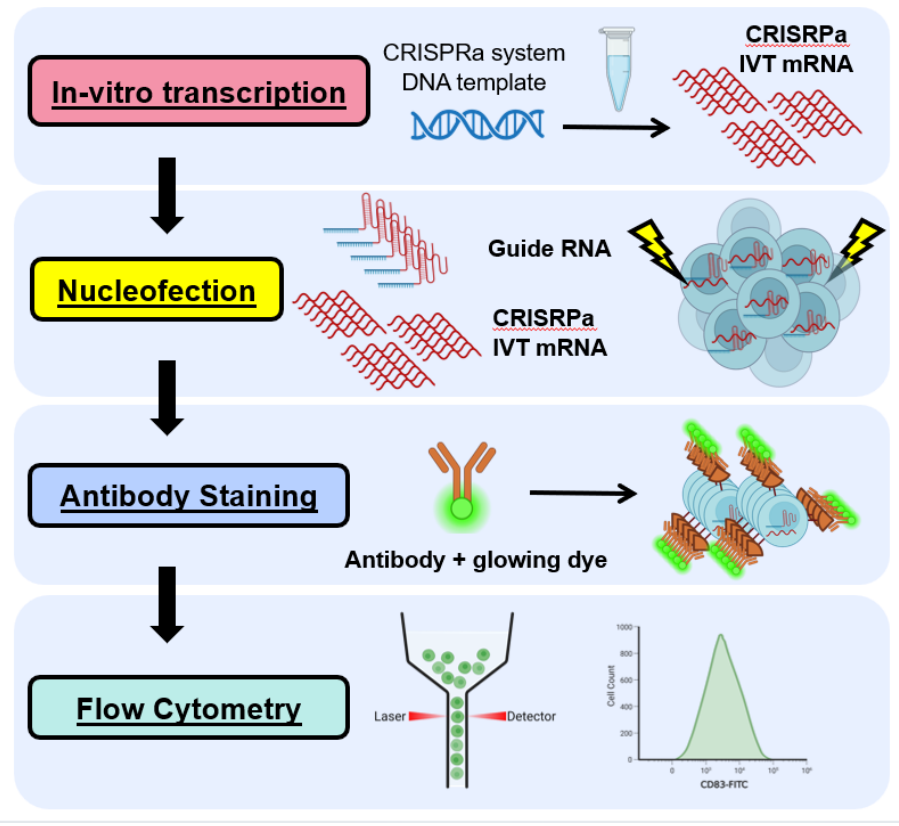
Background

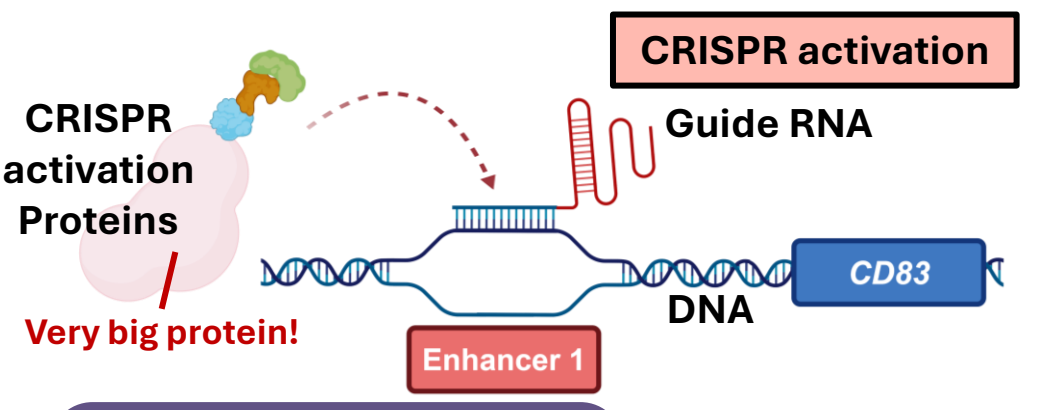


Aim & Hypothesis

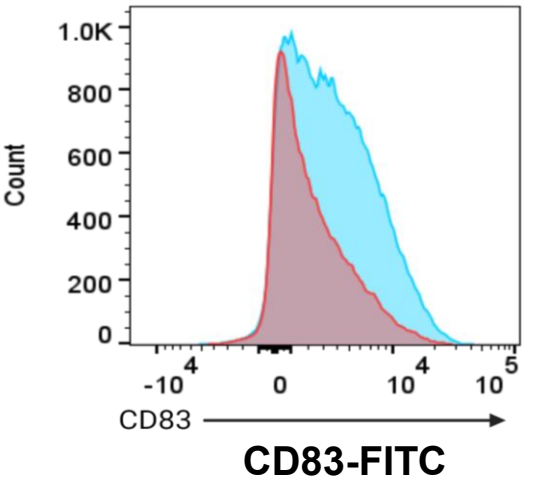
Aim	Hypothesis
To determine if the non-coding enhancer (switch) controls CD83 expression.	Activating non-coding enhancer 1 (switch) will increase CD83 protein expression.

Method





Results



Non-targeting control guide RNA

Enhancer guide RNA

*There is **increase in CD83** protein expression when we **activate the enhancer (switch).***

Key Takeaways

1. CRISPRa helps activate a gene without cutting or changing the DNA sequence.
2. Non-coding (“junk”) DNA is not really junk!
3. Non-coding DNA like enhancers can control coding gene activity.