

Target site selection and its experimental manipulation

Research project summary

SB transposition occurs into chromosomes in a random manner, which is clearly undesired for human applications due to potential genotoxic effects associated with transposon integration. We succeeded in targeting SB transposition into predetermined chromosomal loci. We are currently investigating the use of modular targeting fusion proteins, in which the module responsible for target binding can be a natural DNA-binding protein or domain, or an artificial protein such as a designer zinc finger. Targeted transposition could be a powerful method for safe transgene integration in human applications.