

Repeat 1 of TAL effectors affects target specificity for the base at position zero.

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Abstract:

The “one TALE repeat – one nucleotide” DNA recognition code provides us the DNA binding proteins which specifically bind to our interested DNA sequences. Thanks to this favorable feature, many biological applications using TALE have been reported. However, TALE – DNA binding mechanism or searching process have been elusive.

The authors performed the reporter assay using many sets of TALEs and DNAs to reveal the meaning of the thymine at position 0 (T_0) of TALE target DNA which is often found in the natural TALE target sequences, and the effect of Repeat 1 RVD of TALE to DNA recognition. Finally, the authors proposed the DNA scanning process of TALE: TALE changes the residues for recognition of T_0 , before and after TALE finds its target sequence, and this process may be affected by Repeat 1 RVD type.

References:

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