Overview of guide RNA design tools for CRISPR-Cas9 genome editing technology

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The original version of this article unfortunately contained a mistake. The presentation of Table 1 was incorrect. The corrected table is given below.

Table 1 Overview of several representative gRNA design tools, that are available at: ¹<http://www.bioconductor.org/packages/release/bioc/html/CRISPRseek.html>; ²<http://crispr.mit.edu>; ³<http://www.e-crisp.org/E-CRISP/>; ⁴<http://cas9.cbi.pku.edu.cn>, ⁵<http://www.multicrispr.net>, and ⁶<http://www.broadinstitute.org/rnai/public/analysis-tools/sgrna-design>.

Functions/ Limits	CRISPRseek ¹	Zhang Lab ²	eCRISP ³	Kong Lab ⁴	CRISPR MultiTargeter ⁵	sgRNA Designer ⁶
Off-target analysis	Yes with PDMM penalty scoring	Yes with PDMM penalty scoring	Yes without scoring	Yes without scoring	Yes without scoring	No
gRNA efficacy prediction	Yes	No	No	No	No	Yes
Batch search	Yes	Yes	Yes	No	No	No
Paired configuration	Nickase, dCas9-FokI and Cas9-DBD fusion (dev)	Nickase	No	No	No	No
Cas9 type	Flexible	SpCas9 Only	SpCas9 Only	SpCas9 Only	SpCas9 Only	SpCas9 Only
Alternative scoring matrix for efficacy and off-targets	Yes	No	No	No	No	No
Target species	Any	A specified set	A specified set	A specified set		Human and mouse
Restriction enzyme sites	Yes	No	No	No	No	No
Compare set of sequences	Yes	No	No	No	Yes	No
Predict secondary structure	Yes	No	No	Yes	No	No

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