Table S1 Additional examples of use of genome editing technologies in resistance breeding of crop plants.

Pathogen	**Organism**	**Target S-gene**	**System and modification**	**Gene function / encoded protein**	**TF**	**Effect/ Phenotype**	**References**
Bacterial	Rice	*OsSWEET11*, *OsSWEET13*, *OsSWEET14* / promoter	CRISPR/Cas9 (Promoter disruption-Indels in promoter)	SWEET Sugar transporter Susceptibility to *X. oryzae*	Not	Enhanced resistance against BB disease	[1-2]
	Tomato	*SIDMR6*(downy mildew resistance 6)/cds region	CRISPR/Cas9 (Gene disruption -Indels in Exon 2 and 3)	2-oxoglutarate (2OG) Fe (II) - dependent oxygenases involved in hydroxylation or desaturation steps in plant hormone synthetic pathways, specifically up-regulated during pathogen infection. Susceptibility to *Pseudomonas syringae, P. capsici*, *Xanthomonas* spp.	Not	Increased salicylic acid levels. Enhanced broad spectrum resistance against bacterial speck, bacterial spot, *Phytophtora* blight	[3]
Fungus	Wheat	*TaEDR1* homeologous alleles / /cds region	CRISPR/Cas9 (Gene disruption - Indels in exon 4)	Raf-like mitogen activated protein kinase kinase kinase (MAPKKK) with a negative role in PM disease resistance Susceptibility to *Erysiphe cichoracearum*	Not	Enhanced tolerance to PM	[4]
	Rice	*OsERF922*/cds region	CRISPR/Cas9 *(*Gene disruption - Indels in target)	ERF family transcription factor implied in regulation of ethylene pathway. Susceptibility to Magnaporthe. oryzae	Yes	Enhanced resistance to rice blast	[5]
	Tomato	*PMR4*/cds region	CRISPR/Cas9 (Deletion and inversion in target)	PMR4 encodes for a callose synthase that is responsible for the production of callose in response to biotic and abiotic stresses. Susceptibility to *O. neolycopersici*	Not	Enhanced resistance to tomato PM	[6]
	Tomato	*PMR4*/cds region	CRISPR/Cas9 (Gene disruption - Indels in target)	Susceptibility to *O. neolycopersici*	Not	Reduced but not complete loss of susceptibility to the PM pathogen	[7]

	Tomato	*Solyc08g075770 (*Ortholog of *SlDMR6-1)/*cds region	CRISPR/Cas9 (Gene disruption - Indels in target)	Transmembrane protein involved in regulation of ROS accumulation and SA and JA defense signaling pathways. Susceptibility to *Fusarium oxysporum* f. sp. *lycopersici*	Not	Enhanced susceptibility to fusarium wilt	[8]
	Papaya	*PpalEPIC8/*cds region	CRISPR/Cas9 (Gene disruption- Deletion in target)	Susceptibility to *Phytophthora palmivora*	N.D.	Enhanced resistance against *P. palmivora*	[9]
Bacterial and fungus	Rice	*TMS/Pi21/Xa13**/ cds region	CRISPR/Cas9 multiplex genome editing system (Gene disruption - Indels in target)	Susceptibility to *M. oryzae* and *X. oryzae esempio*	Yes	Homozygous triple *tms5/pi21/xa13* mutants in the T1generation with characteristics of thermo-sensitive genic male sterility (TGMS) and enhanced resistance to rice blast and bacterial blight.	[10]
Viruses - Viral genome ***DNA viral disease***	Tobacco	*Rep*	TALEN (mutation n.d.)	Susceptibility to TbCSV, TYCCNV and TLCYnV	Not	Partial disease resistance (DNA viral disease)	[11]
	Tobacco	*IR and C1*	CRISPR/Cas9 Indels	Susceptibility to CLCuMuV	Not	Complete resistance to CLCuMuV (DNA viral disease)	[12]
Viruses - Viral genome ***RNA viral disease***	Potato	*P3, CI, NIb* and *C P* conserved regions of *PVY* genomes	CRISPR/Cas13a	Susceptibility to multiple strains of Potato Virus Y (PVY)	Not	Suppressed PVY accumulation and disease symptoms	[13]
Viruses - Host factors	Tomato	*DCL2b/*cds region	CRISPR/Cas9 Indels	Roles in small RNA biogenesis and in antiviral defense. Susceptibility to PVX, TMV	Not	Mutants showed viral symptoms when injected by targeted viruses (RNA viral disease)	[14-15]

TF= Transgene free; ND: not determined
Virus: TMV, tobacco mosaic virus; PVX, potato virus X;
Genes: CP, coat protein; Rep, replication association protein; IR, intergenic region; Pi21 encodes a proline-rich protein for rice blast resistance; Xa13= sugar transporter sweet11; TMS= thermo-sensitive male sterility.

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