

## Supplementary Material to "Can WRKY transcription factors help plants to overcome environmental challenges?"

**Table S1** - Studies concerning genetic transformation performed with *WRKY* genes in different plant species in response to abiotic stresses. Event (Si: Silencing, OE: Overexpression); reaction: respective phenotype observed under certain stress (T: Tolerance, S: Sensitivity)

Species	Event	Gene	Stress	Reaction	Reference
<i>Arabidopsis thaliana</i>	OE	<i>GhWRKY34</i>	Salt	T	Zhou <i>et al.</i> , 2015
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY28/AtBHLH17</i>	NaCl, mannitol and oxidative stress	T	Babitha <i>et al.</i> , 2012
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY18</i>	Salt/Osmotic	S	Chen <i>et al.</i> , 2010
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY60</i>	Salt/Osmotic	S	Chen <i>et al.</i> , 2010
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY46</i>	Salt	T	Ding <i>et al.</i> , 2015
<i>Arabidopsis thaliana</i>	OE	<i>RtWRKY1</i>	Salt	T	Du <i>et al.</i> , 2017
<i>Arabidopsis thaliana</i>	OE	<i>TaWRKY1</i>	Heat/Drought	T	He <i>et al.</i> , 2016
<i>Arabidopsis thaliana</i>	OE	<i>TaWRKY33</i>	Heat/Drought	T	He <i>et al.</i> , 2016
<i>Arabidopsis thaliana</i>	Si	<i>AtWRKY25</i>	Heat	S	Li <i>et al.</i> , 2011
<i>Arabidopsis thaliana</i>	Si	<i>AtWRKY26</i>	Heat	S	Li <i>et al.</i> , 2011
<i>Arabidopsis thaliana</i>	Si	<i>AtWRKY33</i>	Heat	S	Li <i>et al.</i> , 2011
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY39</i>	Heat	T	Li S <i>et al.</i> , 2010
<i>Arabidopsis thaliana</i>	OE	<i>VvWRKY11</i>	Drought	T	Liu <i>et al.</i> , 2011
<i>Arabidopsis thaliana</i>	OE	<i>CmWRKY17</i>	Salt	S	Li <i>et al.</i> , 2015
<i>Arabidopsis thaliana</i>	OE	<i>TaWRKY2</i>	Salt and Drought	T	Niu <i>et al.</i> , 2012
<i>Arabidopsis thaliana</i>	OE	<i>TaWRKY19</i>	Cold, salt and drought	T	Niu <i>et al.</i> , 2012
<i>Arabidopsis thaliana</i>	OE	<i>HaWRKY76</i>	Flooding/drought	T	Raineri <i>et al.</i> , 2015
<i>Arabidopsis thaliana</i>	OE	<i>AtWRKY39</i>	Heat	T	Li S <i>et al.</i> , 2010
<i>Arabidopsis thaliana</i>	OE	<i>CsWRKY46</i>	Cold	T	Zhang <i>et al.</i> , 2016
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY54</i>	Salt	T	Zhou <i>et al.</i> , 2008
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY54</i>	Drought	T	Zhou <i>et al.</i> , 2008
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY21</i>	Cold	T	Zhou <i>et al.</i> , 2008
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY21</i>	Cold	T	Zhou <i>et al.</i> , 2008
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY54</i>	Salt/Drought	T	Zhou <i>et al.</i> , 2008
<i>Arabidopsis thaliana</i>	OE	<i>GhWRKY34</i>	Salt	T	Zhou <i>et al.</i> , 2015
<i>Arabidopsis thaliana</i>	OE	<i>GmWRKY13</i>	Salt/Drought	S	Zhou <i>et al.</i> , 2008
<i>Gossypium hirsutum</i>	Si	<i>GhWRKY27</i>	Drought	T	Yan <i>et al.</i> , 2015
<i>Gossypium hirsutum</i>	Si	<i>GhWRKY27a</i>	drought	T	Yan <i>et al.</i> , 2015
<i>Nicotiana benthamiana</i>	OE	<i>GhWRKY41</i>	Drought/Salt	T	Chu <i>et al.</i> , 2015
<i>Nicotiana sp.</i>	OE	<i>GmWRKY57B</i>	Drought	T	Zhang <i>et al.</i> , 2008
<i>Nicotiana benthamiana</i>	OE	<i>GhWRKY17</i>	Drought/Salt	S	Yan <i>et al.</i> , 2014
<i>Nicotiana benthamiana</i>	OE	<i>GhWRKY25</i>	Drought/Salt	S/T	Liu <i>et al.</i> , 2015

Species	Event	Gene	Stress	Reaction	Reference
<i>Nicotiana benthamiana</i>	OE	<i>NbWRKY79</i>	Salt	T	Nam <i>et al.</i> , 2017
<i>Nicotiana benthamiana</i> and <i>Nicotiana tabacum</i>	OE	<i>BhWRKY1</i>	Drought	T	Wang <i>et al.</i> , 2009
<i>Nicotiana tabacum</i>	OE	<i>SIWRKY</i>	Salt/Drought	T	Li <i>et al.</i> , 2012
<i>Nicotiana tabacum</i>	OE	<i>BcWRKY46</i>	Cold, salinity and Drought	T	Niu <i>et al.</i> , 2012
<i>Nicotiana tabacum</i>	OE	<i>TaWRKY1</i>	Drought	T	Ding <i>et al.</i> , 2016
<i>Oryza sativa</i>	OE	<i>OsWRKY11</i>	Heat/Drought	T	Wu <i>et al.</i> , 2009
<i>Oryza sativa</i>	OE	<i>OsWRKY74</i>	Phosphate starvation	T	Dai <i>et al.</i> , 2016
<i>Oryza sativa</i>	OE	<i>OsWRKY30</i>	Drought	T	Shen <i>et al.</i> , 2012
<i>Oryza sativa</i>	OE	<i>OsWRKY76</i>	Cold	T	Yokotani <i>et al.</i> , 2013
<i>Zea mays</i>	OE	<i>ZmWRKY4</i>	Cadmium stress	T	Hong <i>et al.</i> , 2017

At – *Arabidopsis thaliana*, Bh - *Boea hygrometrica*, Bc - *Brassica campestris ssp. chinensis*, Cm - *Chrysanthemum*, Cs - *Cucurbita ssp.*, Gh - *Gossypium hirsutum*, Gm - *Glycine max*, Ha - *Helianthus annuus*, Nb - *Nicotiana benthamiana*, Os - *Oryza sativa*, Rt - *Reaumuria trigyna*, Sl - *Solanum lycopersicum*, Ta - *Triticum aestivum*, Vv - *Vitis vinifera*, Zm - *Zea mays*.

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