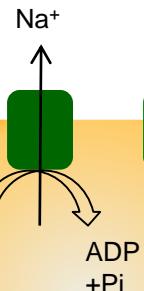


### Na<sup>+</sup> exclusion from the plant

### Improvement of plant K<sup>+</sup> nutrition

### Maintainance of aquaporin-mediated water transport

**ENa1-5**



**Nha**



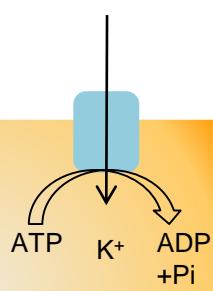
**Trk**



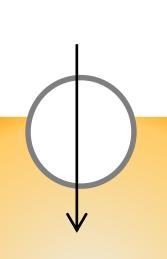
**HAK**



**ACU**



**Aquaporins**



**vacuole**

Na<sup>+</sup>

**Vnx**

**Nhx**

Na<sup>+</sup> / K<sup>+</sup>  
endosome

**Kha**

Golgi

K<sup>+</sup>

water

**Aquaporins**

PLANT  
APOPLASM

PLANT CELLS

K<sup>+</sup>

?

K<sup>+</sup>

**SKC**

K<sup>+</sup>

K<sup>+</sup>

**TOK**

K<sup>+</sup>

SOIL

FUNGUS:  
EXTRARADICAL HYPHAE

FUNGUS:  
HARTIG NET

Fungal species	Plant species	Maximum NaCl concentration tested (mM)	Reference
<i>Alpova diplophloeus</i>	<i>Alnus incana, Alnus viridis</i>	40	Beaudoin-Nadeau et al. 2016
<i>Hebeloma</i> <i>H. crustuliniforme</i> <i>sp.</i>	<i>Picea glauca</i>	25	Muhsin and Zwiazek 2002a
	<i>Picea glauca, Pinus banksiana</i>	200	Bois et al. 2006b
	<i>Picea glauca, Picea mariana, Pinus taeda</i>	25	Nguyen et al. 2006
	<i>Ulmus americana</i>	60	Calvo-Polanco et al. 2008a
	<i>Betula papyrifera, Populus tremuloides</i>	25	Yi et al. 2008
	<i>Pinus banksiana</i>	60	Calvo-Polanco et al. 2008b
<i>Laccaria</i> <i>L. bicolor</i> <i>L. laccata</i>	<i>Picea glauca, Pinus banksiana</i>	200	Bois et al. 2006b
	<i>Picea glauca, Picea mariana, Pinus taeda</i>	25	Nguyen et al. 2006
	<i>Ulmus americana</i>	60	Calvo-Polanco et al. 2008a
	<i>Pinus banksiana</i>	60	Calvo-Polanco et al. 2008b
	<i>Betula papyrifera, Populus tremuloides</i>	25	Yi et al. 2008
	<i>Pinus taeda</i>	80	Dixon et al. 1993
<i>Paxillus involutus</i>	<i>Populus x canescens</i>	150	Langenfeld-Heyser et al. 2007
	<i>Populus x canescens</i>	150	Luo et al. 2009, 2010
	<i>Populus x canescens</i>	150	Li et al. 2012
	<i>Populus x canescens</i>	100	Ma et al. 2014
	<i>Populus x canescens</i>	100	Sa et al. 2019
	<i>Alnus incana, Alnus viridis</i>	40	Beaudoin-Nadeau et al. 2016
<i>Pisolithus tinctorius</i>	<i>Pinus taeda</i>	80	Dixon et al. 1993
<i>Scleroderma bermudense</i>	<i>Coccoloba uvifera</i>	500	Bandou et al. 2006
<i>Suillus tomentosus</i>	<i>Picea glauca, Pinus banksiana</i>	200	Bois et al. 2006b
	<i>Pinus banksiana</i>	60	Calvo-Polanco et al. 2008b
	<i>Pinus banksiana</i>	60	Lee et al. 2010
	<i>Picea glauca, Pinus banksiana</i>	50	Calvo-Polanco et al. 2011
<i>Wilcoxina mikolae</i>	<i>Pinus banksiana</i>	60	Calvo-Polanco et al. 2008b

**Table 2**

Genus	Isolates	Maximum NaCl concentration tested (mM)	Other compounds tested	Reference
<i>Hebeloma</i> 5 species <i>H. crustuliniforme</i> <i>H. crustuliniforme</i>	10	170	-	Hutchison 1990
	1	200	+	Kernaghan et al. 2002
	1	300	-	Bois et al. 2006a
<i>Laccaria</i> 4 species <i>L. laccata</i> <i>L. bicolor</i> <i>L. bicolor</i>	10	170	-	Hutchison 1990
	1	120	+	Dixon et al. 1993
	1	200	+	Kernaghan et al. 2002
	1	300	-	Bois et al. 2006a
<i>Paxillus</i> <i>P. involutus</i> <i>P. involutus</i> <i>P. involutus</i>	4	170	-	Hutchison 1990
	1	200	+	Kernaghan et al. 2002*
	2	500	-	Zhang et al. 2008
<i>Pisolithus</i> <i>P. arhizus</i> <i>P. tinctorius</i> 3 species <i>P. tinctorius</i>	2	170	-	Hutchison 1990
	2	120	+	Dixon et al. 1993
	18	200	-	Chen et al. 2001
	10	500	-	Matsuda et al. 2006
<i>Rhizopogon</i> <i>R. rubescens</i> 4 species	1	200	-	Matsuda et al. 2006
	5	170	-	Hutchison 1990*
<i>Suillus</i> 15 species 2 species <i>S. brevipes</i> <i>S. tomentosus</i> <i>S. luteus</i> 2 species <i>S. granulatus</i>	34	170	-	Hutchison 1990
	3	120	+	Dixon et al. 1993
	1	200	+	Kernaghan et al. 2002*
	1	300	-	Bois et al. 2006a
	1	200	-	Matsuda et al. 2006
	2	800	-	Tang et al. 2009
	5	300	-	Obase et al. 2010

Table 1