



Prof. Dr. Sergey Shabala (Tasmania, Australia)

Current position:

Professor in Plant Physiology and Stress Physiology Research Group Leader,
School of Agricultural Science, University of Tasmania;
Co-Director, Australia-China Research Centre for Plant Stress Biology

Research interests/areas of expertise

Plant stress physiology
Membrane transport
Biophysics
Cell biology

Formal qualifications

1989: PhD in Plant Physiology, Inst. Exp. Botany, Minsk, Byelorussia
1984: B.Sc. (Hons.) 1st Class, Automation & Control Systems, Kishinev Polytechnic Inst., Moldova

Career history

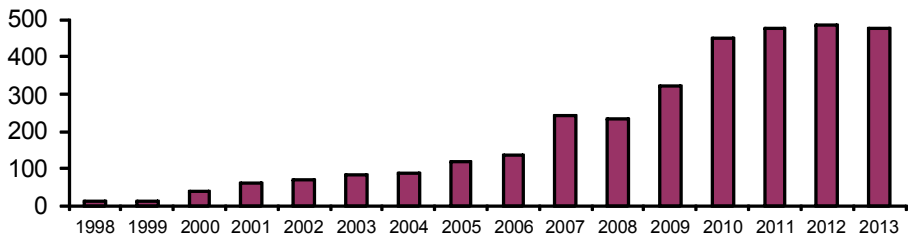
2011-current	Professor in Plant Physiology	Univ. Tasmania
200 -2010	A/Professor in Plant Physiology	Univ. Tasmania
2003-2006	Senior Lecturer in Plant Nutrition	Univ. Tasmania
1999-2002	Lecturer in Plant Nutrition	Univ. Tasmania
1998-1999	A/Lecturer in Plant Nutrition	Univ. Tasmania
1995-1998	Research Fellow in Biophysics	Univ. Tasmania
2013	Visiting Professor	Univ. Florence, Italy
2013	Visiting Professor	Univ. Autonomous Barcelona
2012	Visiting Professor	Univ. Colima, Mexico
2007	Visiting Professor	Univ. Wurzburg, Germany
2007	Visiting Fellow	USDA Molecular Plant Pathology Inst.
2006	Visiting Professor	Univ. Colima, Mexico
2001	Visiting Fellow	Univ. Groningen, The Netherlands
2000	Visiting Fellow	Univ. Washington, Seattle, USA

Key achievements

Ranked within top 0.5 % scientists in the world by Thomson ISI Essential Science Indicators.
Received in total close to \$6M of Category 1 competitive research funding over the last 15 years. This includes seven ARC Discovery grants (all but one as the 1st named CI) and four industry (GRDC) grants.
Edited four books for leading international publishers (Springer; Humana; CABI).
Reviewed ~500 papers for 70 international journals since 2000, including top journals such as Science; Plant Cell; Plant J.; Plant Physiol.
Made ~150 presentations at National and International conferences.
Obtained 12 patents (author's certificates).
Delivered 25 invited talks at major international conferences (including three Gordon Research Conferences) and over 40 invited institutional seminars in 17 countries.
Reviewed 18 PhD and DSc theses over the last 10 years.
Reviewed ~100 competitive grants for major national funding agencies in 14 countries. This includes the ARC, BBSRC (UK), USDA, NSF (USA), NSERC (Canada), Austrian, Israeli, Dutch, Swiss, Czech, South African, Qatar, Russian, Polish and Serbian funding bodies.
Collaborate with > 40 laboratories from 24 countries.
Hosted over 40 international visitors from 12 countries in my laboratory.

Research higher degree supervision Undergraduate teaching

14 graduated HDR students (12 PhD + 2 MSc)
Currently supervising 23 PhD and 1 MSc students (3 external to UTAS)
Crop Physiology; Crop Production; Plant Nutrition and Soil Fertility; Horticulture

Current editorial duties	<p>Journal of Experimental Botany (IF =5.48; ranked 12/189 in Plant Science; Associate Editor);</p> <p>Functional Plant Biology (IF =2.73; advisory board member)</p> <p>Environmental and Experimental Botany (IF = 2.92; editorial board member)</p> <p>Plant and Soil (IF = 2.73; Associate Editor)</p> <p>Frontiers in Plant Biophysics and Modelling (newly launched journal; Associate Editor)</p> <p>Plant Signalling and Behaviour (IF = 2.0; Associate Editor)</p> <p>Peer Journal (newly launched journal; Associate Editor)</p>																																		
Professional offices held	<p>Discipline representative (cell biology); Australian Society for Plant Science (2008-2010)</p> <p>State representative (Tasmania); Australian Society for Biophysics (1996-2002)</p>																																		
Organising committees and boards	<p>Chair, 2013 Int. Symposium on Oxidative Stress and Cell Death in Plants (Florence, June 2013)</p> <p>International Advisory Board Member, The 2nd Int. Conf. on Optimum Utilization of Salt-Affected Ecosystems in Arid Regions (Cairo, Sept 2013)</p> <p>Organising Committee Member; Australian Soc. Biophys. Annual Meeting (1996)</p> <p>Organising Committee Member; Int. Conference on Agriculture (Melitopol, Ukraine, 1994)</p> <p>International Selection Committee Member, King Abdullah Univ. of Science & Technology (KSA, 2012)</p>																																		
Prizes and distinctions	<p>Vice Chancellor's Award for Research Excellence in 2009 (Univ. Tasmania)</p> <p>Dean's Award for Research Excellence in 2013 (FSET; Univ. Tasmania)</p> <p>Dean's Award for Research Excellence in 2006 (FSET; Univ. Tasmania)</p> <p>The Alf Anderson Award by the Plant Nutrition Trust (Australia) (1999)</p> <p>Outstanding Research Award by the Cabinet of Ministers of Ukraine (1994-1995)</p>																																		
Administrative and managerial duties (examples)	<p>from 2011; ongoing: Faculty Research Management Committee</p> <p>2011-2012: UTAS ERA Advisory Committee</p> <p>2011-2012: Univ. Tasmania Academic Senate member</p> <p>2009-2010: Univ. Tasmania Board of Graduate Research member</p> <p>2004-2005: Univ. Tasmania Internal Research Grants Committee member</p> <p>2008-2009: Univ. Tasmania Scholarship Committee member</p> <p>from 2007, ongoing: Univ. Tasmania College of Experts member</p> <p>2006-2010: School Management Committee member</p> <p>from 2008, ongoing: Graduate Research Coordinator</p> <p>1989-1992: Chair, Young Scientists Council, Ecological Genetics Institute (Moldavian Acad. Sci.)</p> <p>1989-1992: Research Board member, Ecological Genetics Institute (Moldavian Acad. Sci.)</p>																																		
Bibliometry	<p>Citation kinetics according to Scopus (by Aug 1, 2013)</p>  <table border="1"> <caption>Citation kinetics according to Scopus (by Aug 1, 2013)</caption> <thead> <tr> <th>Year</th> <th>Citations</th> </tr> </thead> <tbody> <tr><td>1998</td><td>10</td></tr> <tr><td>1999</td><td>15</td></tr> <tr><td>2000</td><td>25</td></tr> <tr><td>2001</td><td>40</td></tr> <tr><td>2002</td><td>60</td></tr> <tr><td>2003</td><td>80</td></tr> <tr><td>2004</td><td>90</td></tr> <tr><td>2005</td><td>110</td></tr> <tr><td>2006</td><td>130</td></tr> <tr><td>2007</td><td>240</td></tr> <tr><td>2008</td><td>230</td></tr> <tr><td>2009</td><td>320</td></tr> <tr><td>2010</td><td>450</td></tr> <tr><td>2011</td><td>470</td></tr> <tr><td>2012</td><td>480</td></tr> <tr><td>2013</td><td>480</td></tr> </tbody> </table> <p>Total career publications in English =161 (142 refereed papers, 15 book chapters, 4 books)</p> <p>Publications since 2003 (over the last 10 years) = 127 (109 refereed papers, 14 book chapters, 4 books)</p> <p>Total career citations = 3363 (Scopus); H-index = 34</p> <p>Average IF of all publications over the last 10 years = 4.18; average cites per paper = 27.1</p> <p>A senior author in 70 % of all published papers/chapters (113 of 160)</p>	Year	Citations	1998	10	1999	15	2000	25	2001	40	2002	60	2003	80	2004	90	2005	110	2006	130	2007	240	2008	230	2009	320	2010	450	2011	470	2012	480	2013	480
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Publications	<p>Refereed journal articles</p> <p>(ISI impact factor is added after each paper)</p> <p>2013</p> <ol style="list-style-type: none"> 1. Bonales-Alatorre E, Shabala S, Chen ZH, Pottosin I (2013) Reduced tonoplast FV and SV channels activity is essential for conferring salinity 																																		

tolerance in a facultative halophyte, *Chenopodium quinoa*. *Plant Physiol* **162**: 940-952 [IF = **6.53**]

2. Bose J, Xie YJ, Shen WB, **Shabala S** (2013) Haem oxygenase modifies salinity tolerance in Arabidopsis by controlling K⁺ retention via regulation of the plasma membrane H⁺ ATPase and by altering SOS1 transcript levels in roots. *J Exp Bot* **64**: 471-481 [IF = **5.48**]
3. Rodrigo-Moreno A, Andrés-Colás N, Poschenrieder C, Gunsé B, Peñarrubia L, **Shabala S** (2013) Calcium- and potassium-permeable plasma membrane transporters are activated by copper in Arabidopsis root tips: linking copper transport with cytosolic hydroxyl radical production. *Plant Cell Environ* **36**: 844-855 [IF = **5.21**]
4. Jayakannan M, Bose J, Babourina O, Rengel Z, **Shabala S** (2013) Salicylic acid improves salinity tolerance in Arabidopsis by restoring membrane potential and preventing salt-induced K⁺ loss via a GORK channel. *J Exp Bot* **64**: 2255-2268 [IF = **5.48**]
5. Adolf VI, Jacobsen S-E, **Shabala S** (2013) Salt tolerance mechanisms in quinoa (*Chenopodium quinoa willd.*). *Env Exp Bot* **92**: 43-54 [IF = **2.98**]
6. Teakle NL, Bazihizina N, **Shabala S**, Colmer TD, Barrett-Lennard EG, Rodrigo-Moreno A, Läuchli AE. (2013) Differential tolerance to combined salinity and O₂ deficiency in the halophytic grasses *Puccinellia ciliata* and *Thinopyrum ponticum*: The importance of K⁺ retention in roots. *Env Exp Bot* **87**: 69-78 [IF = **2.98**]
7. Bonales-Alatorre E, Pottosin I, Shabala L, Chen ZH, Zeng F, Jacobsen S-E, **Shabala S** (2013) Differential activity of plasma and vacuolar membrane transporters contributes to genotypic differences in salinity tolerance in a halophyte species, *Chenopodium quinoa*. *Int J Mol Sci* **14**: 9267-9285 [IF = **2.46**]
8. Bose J, Babourina O, **Shabala S**, Rengel Z (2013) Low-pH and aluminum resistance in Arabidopsis correlates with high cytosolic magnesium content and increased magnesium uptake by plant roots. *Plant Cell Physiol* **54**: 1093-1104 [IF = **4.7**]
9. Tegg R, Shabala S, Cuin TA, Wilson C (2013) Enhanced resistance to the cellulose biosynthetic inhibitors, thaxtomin A and isoxaben in Arabidopsis thaliana mutants, also provides specific co-resistance to the auxin transport inhibitor, 1-NPA. *BMC Plant Biology* **13** (76) DOI: 10.1186/1471-2229-13-76 [IF = **4.35**]
10. Pirie A, Parsons D, Renggli J, Narkowicz C, Jacobson GA, **Shabala S** (2013) Modulation of flavonoid and tannin production of *Carpobrotus rossii* by environmental conditions. *Env Exp Bot* **87**, 19-31 [IF = **2.98**]
11. Maksimović JD, Zhang J, Zeng F, Živanović BD, Shabala L, Zhou M, **Shabala S** (2013) Linking oxidative and salinity stress tolerance in barley: can root antioxidant enzyme activity be used as a measure of stress tolerance? *Plant Soil* **365**: 141-155 [IF = **2.73**]
12. Barret-Lennard EG, **Shabala S** (2013) The waterlogging/salinity interaction in higher plants revisited – focusing on the hypoxia-induced disturbance to K⁺ homeostasis. *Funct Plant Biol* **40**: 872-882 [IF = **2.92**]
13. Shabala L, McMeekin T, **Shabala S** (2013) Thraustochytrids can be grown in low salt media without affecting PUFA production. *Marine Biotechnology* (in press; accepted 18.1.13) [IF = **3.43**]
14. Rodrigo-Moreno A, Poschenrieder C, **Shabala S** (2013) Transition metals: a double edge sword in ROS generation and signaling. *Plant Signaling & Behavior* **8**(3): e23425. [IF = **2.00**]
15. Ordonez N, Shabala L, Gehring C, **Shabala S** (2012) Using the Non-invasive Microelectrode Ion Flux Estimation Technique (MIFE) to study the regulation of root membrane transport by signaling molecules. *Methods Molecular Biol* **1016**: 95-106; DOI 10.1007/978-1-62703-441-8_7
16. **Shabala S**, Hariadi Y, Jacobsen S-E (2013) Genotypic difference in

salinity tolerance in quinoa is determined by differential control of xylem Na^+ loading and stomatal density. *J Plant Physiol* **170**: 906-914 [IF = **2.79**]

17. Laohavisita A, Richards SL, Shabala L, Chen C, Colaço RDDR, Swarbreck SM, Shaw E, Dark A, **Shabala S**, Shang Z, Davies JM (Plant Phys) Salinity-induced calcium signaling and root adaptation in *Arabidopsis thaliana* require the calcium regulatory protein annexin1. *Plant Physiol* (in press; DOI:10.1104/pp.113.217810) [IF = **6.53**]
18. Zeng F, Shabala L, Zhou M, Zhang GP, **Shabala S** (2013) Barley responses to combined waterlogging and salinity stress: separating effects of oxygen deprivation and elemental toxicity. *Frontiers Plant Physiol* (in press; DOI: 10.3389/fpls.2013.00313)
19. **Shabala S** (2013) Learning from halophytes: physiological basis and strategies to improve abiotic stress tolerance in crops. *Ann Bot* (in press; accepted 22/07/2013) [IF = **3.99**]
20. Wu H, Shabala L, Barry K, Zhou M, **Shabala S** (2013) Ability of leaf mesophyll to retain potassium correlates with salinity tolerance in wheat and barley. *Physiol Plantarum* (in press; DOI: 10.1111/ppl.12056) [IF = **3.11**]
21. Shabala L, Walker EJ, Eklund A, Randall-Demillo S, **Shabala S**, Guven N, Cook AL, Eri RD (2013) Exposure of colonic epithelial cells to oxidative and endoplasmic reticulum stress causes rapid potassium efflux and calcium influx. *Cell Biochem Funct* (in press; DOI: 10.1002/cbf.2946) [IF = **1.77**]
22. Bose J, Shabala L, Pottosin I, Zeng F, Velarde-Buendía AM, Massart A, Poschenrieder C, Hariadi Y, **Shabala S** (2013) Kinetics of xylem loading, membrane potential maintenance, and sensitivity of K^+ -permeable channels to ROS: physiological traits that differentiate salinity tolerance between pea and barley. *Plant Cell Environ* (in press; accepted Aug 2013) [IF = **5.21**]

2012

23. **Shabala S**, Cuin TA, Shabala L, Newman IA (2012) Quantifying kinetics of net ion fluxes from plant tissues by non-invasive microelectrode measuring MIFE technique. *Methods Mol Biol* **913**: 119-134.
24. **Shabala S**, Shabala L, Bose J, Cuin TA, Newman IA (2012) Ion Flux Measurements Using the MIFE Technique. *Methods Mol Biol* **953**: 171-183
25. Laohavisit A, Shang Z, Rubio L, Cuin TA, Véry A, Wang A, Mortimer JC, Macpherson N, Coxon KM, Battey NH, Brownlee C, Park OK, Sentenac H, **Shabala S**, Webb AAR, Davies JM (2012) Arabidopsis annexin1 mediates the radical-activated plasma membrane Ca^{2+} - and K^+ - permeable conductance in root cells. *Plant Cell* **24**: 1522-33 [IF = **8.98**]
26. Adolf VI, **Shabala S**, Andersen MN, Razzaghi F, Jacobsen S (2012) Varietal differences of quinoa's tolerance to saline conditions. *Plant Soil* **357**: 117-29 [IF = **2.73**]
27. Cuin TA, Zhou M, Parsons D, **Shabala S** (2012) Genetic behaviour of physiological traits conferring cytosolic K^+/Na^+ homeostasis in wheat. *Plant Biology* **14**: 438-46 [IF = **2.39**]
28. Velarde-Buendía AM, **Shabala S**, Cvikrova M, Dobrovinskaya O, Pottosin I (2012) Salt-sensitive and salt-tolerant barley varieties differ in the extent of potentiation of the ROS-induced K^+ efflux by polyamines. *Plant Physiol Biochem* **61**: 18-23 [IF = **2.83**]
29. Pandolfi C, Mancuso S, **Shabala S** (2012) Physiology of acclimation to salinity stress in pea (*Pisum sativum*). *Env Exp Bot* **84**: 44-51 [IF = **2.98**]
30. Pottosin I, Velarde-Buendía A-, Zepeda-Jazo I, Dobrovinskaya O, **Shabala S** (2012) Synergism between polyamines and ROS in the induction of Ca^{2+} and K^+ fluxes in roots. *Plant Signal Behav* **7**: 1084-7 [IF =

2.0]

31. Shabala L, Mackay A, Tian Y, Jacobsen SE, Zhou DW, **Shabala S** (2012) Oxidative stress protection and stomatal patterning as components of salinity tolerance mechanism in quinoa (*Chenopodium quinoa*). *Physiol Plantar* **146**: 26-38 [IF = **3.11**]

2011

32. **Shabala S** (2011) Physiological and cellular aspects of phytotoxicity tolerance in plants: the role of membrane transporters and implications for crop breeding for waterlogging tolerance. *New Phytol* **190**: 289-298 [IF = **6.64**]
33. Demidchik V, Shang ZL, Shin R, Colaco R, Laohavisit A, **Shabala S**, Davies JM (2011) Receptor-like activity evoked by extracellular ADP in Arabidopsis root epidermal plasma membrane. *Plant Physiol* **156**: 1375-1385 [IF = **6.53**]
34. **Shabala S**, Baekgaard L, Shabala L, Fuglsang A, Babourina O, Palmgren MG, Cuin TA, Rengel Z, Nemchinov LG (2011) Plasma membrane Ca^{2+} transporters mediate virus-induced acquired resistance to oxidative stress. *Plant Cell Environ* **34**: 406-417 [IF = **5.21**]
35. Cuin TA, Bose J, Stefano G, Jha D, Tester M, Mancuso S, **Shabala S** (2011) Assessing the role of root plasma membrane and tonoplast Na^+/H^+ exchangers in salinity tolerance in wheat: in planta quantification methods. *Plant Cell Environ* **34**: 947-961 [IF = **5.21**]
36. Wegner LH, Stefano G, Shabala L, Rossi M, Mancuso S, **Shabala S** (2011) Sequential depolarization of root cortical and stelar cells induced by an acute salt shock - implications for Na^+ and K^+ transport into xylem vessels. *Plant Cell Environ* **34**: 859-869 [IF = **5.21**]
37. **Shabala S**, Mackay A. (2011) Ion Transport in Halophytes. *Adv Bot Res* **57**: 151-199 [invited review; IF = **2.85**]
38. Hariadi Y, Marandon K, Tian Y, Jacobsen SE, **Shabala S** (2011) Ionic and osmotic relations in quinoa (*Chenopodium quinoa* Willd.) plants grown at various salinity levels. *J Exp Bot* **62**: 185-193 [IF = **5.48**]
39. Guijt RM, Armstrong JP, Candish E, Lefleur V, Percey W, **Shabala S**, Hauser PC, Breadmore MC (2011) Microfluidic chips for capillary electrophoresis with integrated electrodes for capacitively coupled conductivity detection based on printed circuit board technology. *Sensors Actuators B* **159**: 307-313 [IF = **3.37**]
40. **Shabala S**, Shabala L (2011) Ion transport and osmotic adjustment in plants and bacteria. *BioMol Concepts* **2**: 407-419 [invited review; new journal; IF not available yet]
41. **Shabala S**, Bækgaard L, Shabala L, Fuglsang AT, Cuin TA, Nemchinov LG, Palmgren MG (2011) Endomembrane Ca^{2+} -ATPases play a significant role in virus-induced adaptation to oxidative stress. *Plant Signal Behavior* **6**(7): 1053-1056 [IF = **2.0**]
42. Zepeda-Jazo I, Velarde-Buendía AM, Enríquez-Figueroa R, Bose J, **Shabala S**, Muñiz-Murguía J, Pottosin I (2011) Polyamines interact with hydroxyl radicals in activating Ca^{2+} and K^+ transport across the root epidermal plasma membranes. *Plant Physiol* **157**: 2167-2180 [IF = **6.53**]

2010

43. **Shabala S**, Shabala L, Cuin TA, Pang JY, Percey W, Chen ZH, Conn S, Eing C, Wegner LH (2010) Xylem ionic relations and salinity tolerance in barley. *Plant J* **61**: 839-853 [IF = **6.16**]
44. **Shabala S**, Babourina O, Rengel Z, Nemchinov LG (2010) Non-invasive microelectrode potassium flux measurements as a potential tool for early recognition of virus-host compatibility in plants. *Planta* **232**: 807-815 [IF = **3.00**]

45. Demidchik V, Cuin TA, Svistunenko D, Smith SJ, Miller AJ, **Shabala S**, Sokolik A, Yurin V (2010) Arabidopsis root K^+ efflux conductance activated by hydroxyl radicals: single-channel properties, genetic basis and involvement in stress-induced cell death. *J Cell Sci* **123**: 1468-1479 [IF = **6.11**]
46. Pandolfi C, Pottosin I, Cuin TA, Mancuso S, **Shabala S** (2010) Specificity of polyamine effects on NaCl-induced ion flux kinetics and salt stress amelioration in plants. *Plant Cell Physiol* **51**: 422-434 [IF = **4.70**; Editor-in-Chief's Choice]
47. Cuin TA, Parsons D, **Shabala S** (2010) Wheat cultivars can be screened for NaCl salinity tolerance by measuring leaf chlorophyll content and shoot sap potassium. *Funct Plant Biol* **37**: 656-664 [IF = **2.92**]
48. ten Hoopen F, Cuin TA, Pedas P, Hegelund JN, **Shabala S**, Schjoerring JK, Jahn TP (2010) Competition between uptake of ammonium and potassium in barley and Arabidopsis roots: molecular mechanisms and physiological consequences. *J Exp Bot* **61**: 2303-2315 [IF = **5.48**]
49. Bose J, Babourina O, **Shabala S**, Rengel Z (2010) Aluminium-dependent dynamics of ion transport in Arabidopsis: specificity of low pH and aluminium responses. *Physiol Plantar* **139**: 401-412 [IF = **3.11**]

2009

50. **Shabala S** (2009) Salinity and programmed cell death: unravelling mechanisms for ion specific signalling. *J Exp Bot* **60**: 709-711 [IF = **5.48**; invited review]
51. Demidchik V, Shang Z, Shin R, Thompson E, Rubio L, Laohavist A, Mortimer JC, Chivasa S, Slabas AR, Glover BJ, Schachtman DP, **Shabala S**, Davies JM (2009) Plant extracellular ATP signalling by plasma membrane NADPH oxidase and Ca^{2+} channels. *Plant J* **58**: 903-913 [IF = **6.16**]
52. **Shabala S**, Pang JY, Zhou MZ, Shabala L., Cuin TA, Nick P, Wegner LH (2009) Electrical signalling and cytokinins mediate effects of light and root cutting on ion uptake in intact plants. *Plant Cell Environ* **32**: 194-207 [IF = **5.21**]
53. **Shabala L**, McMeekin T, **Shabala S** (2009) Osmotic adjustment and requirement for sodium in marine protist thraustochytrid. *Environmental Microbiol* **11**: 1835-1843 [IF = **5.84**]
54. **Shabala L**, Bowman J, Brown J, Ross T, McMeekin T, **Shabala S** (2009) Ion transport and osmotic adjustment in *Escherichia coli* in response to ionic and non-ionic osmotica. *Environmental Microbiol* **11**: 137-148 [IF = **5.84**]
55. Smethurst CF, Gill WM, **Shabala S** (2009) Using excised leaves to screen lucerne for salt tolerance. *Plant Signal Behavior* **4**(1): 1-3 [IF = **2.0**]
56. Pottosin I, Wherrett T, **Shabala S** (2009) SV channels dominate the vacuolar Ca^{2+} release during intracellular signaling. *FEBS Letters* **583**: 921-926 [IF = **3.54**]
57. **Shabala S** (2009) Metal cations in CO_2 assimilation and conversion by plants. *Journal of Metals* **61**: 28-34
58. Valencia-Cruz G, Shabala L Delgado-Enciso I, Bonales-Alatorre E, **Shabala S**, Pottosin I, Dobrovinskaya O (2009) Kbg and Kv1.3 channels mediate potassium efflux in the early phase of apoptosis in Jurkat T lymphocytes. *American J Physiol* **297**: C1544-C1553 [IF = **4.23**]
59. Cuin TA, Tian Y, Betts SA, Chalmandrier R, **Shabala S** (2009) Ionic relations and osmotic adjustment in durum and bread wheat under saline conditions. *Funct Plant Biol* **36**: 1110-1119 [IF = **2.92**]

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60. **Shabala S**, Cuin TA (2008) Potassium transport and plant salt tolerance. *Physiol Plantar* **133**: 651-669 (invited review) [IF = **3.11**]
 61. Cuin TA, Betts SA, Chalmandrier R, **Shabala S** (2008) A root's ability to retain K^+ correlates with salt tolerance in wheat. *J Exp Bot* **59**: 2697-2706 [IF = **5.48**]
 62. Smethurst CF, Rix K, Garnett T, Auricht G, Bayart A, Lane P, Wilson SJ, **Shabala S** (2008) Multiple traits associated with salt tolerance in lucerne: revealing the underlying cellular mechanisms. *Funct Plant Biol* **35**: 640-650 [IF = **2.92**]
 63. Chen ZG, **Shabala S**, Mendham N, Newman I, Zhang GP, Zhou MX (2008) Combining ability of salinity tolerance on the basis of NaCl-induced K^+ flux from roots of barley. *Crop Sci* **48**: 1382-1388 [IF = **1.64**]
 64. Nemchinov LG, Shabala L, **Shabala S** (2008) Calcium efflux as a component of the hypersensitive response of *Nicotiana benthamiana* to *Pseudomonas syringae*. *Plant Cell Physiol* **49**: 40-46 [IF = **4.70**]
 65. Shabala L, Sánchez-Pastor E, Trujillo X, **Shabala S**, Muñoz J, Huerta M (2008) Effects of verapamil and gadolinium on caffeine-induced contractures and calcium fluxes in frog slow skeletal muscle fibers. *J Membrane Biol* **221**: 7-13 [IF = **1.81**]
 66. Perez V, Wherrett T, **Shabala S**, Muniz J, Dobrovinskaya O, Pottosin I (2008) Homeostatic control of slow vacuolar channels by luminal cations and evaluation of the channel-mediated tonoplast Ca^{2+} fluxes in situ. *J Exp Bot* **59**: 3845-3855 [IF = **5.48**]
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- 2007**
69. Pang JY, Cuin T, Shabala L, Zhou MX, Mendham N, Shabala S (2007) Effect of secondary metabolites associated with anaerobic soil conditions on ion fluxes and electrophysiology in barley roots. *Plant Physiol* **145**: 266-276 [IF = **6.53**]
 70. Chen ZH, Pottosin II, Cuin TA, Fuglsang AT, Tester M, Jha D, Zepeda-Jazo I, Zhou MX, Palmgren MG, Newman IA, **Shabala S** (2007) Root plasma membrane transporters controlling K^+/Na^+ homeostasis in salt-stressed barley. *Plant Physiol* **145**: 1714-1725 [IF = **6.53**]
 71. Demidchik V, **Shabala S**, Davies JM (2007) Spatial variation in H_2O_2 response of *Arabidopsis thaliana* root epidermal Ca^{2+} flux and plasma membrane Ca^{2+} channels. *Plant J* **49**: 377-386 [IF = **6.16**]
 72. Fuglsang AT, Guo Y, Cuin TA, Qiu QS, Song CP, Kristiansen KA, Bych K, Schulz A, **Shabala S**, Schumaker KS, Palmgren MG, Zhu JK (2007) Arabidopsis protein kinase PKS5 inhibits the plasma membrane H^+ -ATPase by preventing interaction with 14-3-3 protein. *Plant Cell* **19**: 1617-1634 [IF = **8.98**]
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