

# Igor Pottosin

## List of Publications by Year in descending order

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77  
papers

5,179  
citations

94269

37  
h-index

88477

70  
g-index

78  
all docs

78  
docs citations

78  
times ranked

4973  
citing authors

#	ARTICLE	IF	CITATIONS
1	Regulation of potassium transport in plants under hostile conditions: implications for abiotic and biotic stress tolerance. <i>Physiologia Plantarum</i> , 2014, 151, 257-279.	2.6	534
2	Root Plasma Membrane Transporters Controlling K <sup>+</sup> /Na <sup>+</sup> Homeostasis in Salt-Stressed Barley. <i>Plant Physiology</i> , 2007, 145, 1714-1725.	2.3	458
3	Calcium transport across plant membranes: mechanisms and functions. <i>New Phytologist</i> , 2018, 220, 49-69.	3.5	289
4	Calcium Efflux Systems in Stress Signaling and Adaptation in Plants. <i>Frontiers in Plant Science</i> , 2011, 2, 85.	1.7	206
5	Cross-talk between reactive oxygen species and polyamines in regulation of ion transport across the plasma membrane: implications for plant adaptive responses. <i>Journal of Experimental Botany</i> , 2014, 65, 1271-1283.	2.4	197
6	Polyamines control of cation transport across plant membranes: implications for ion homeostasis and abiotic stress signaling. <i>Frontiers in Plant Science</i> , 2014, 5, 154.	1.7	168
7	Cell-Type-Specific H <sup>+</sup> -ATPase Activity in Root Tissues Enables K <sup>+</sup> Retention and Mediates Acclimation of Barley ( <i>Hordeum vulgare</i> ) to Salinity Stress. <i>Plant Physiology</i> , 2016, 172, 2445-2458.	2.3	158
8	Polyamines prevent NaCl-induced K <sup>+</sup> efflux from pea mesophyll by blocking non-selective cation channels. <i>FEBS Letters</i> , 2007, 581, 1993-1999.	1.3	149
9	Polyamines Interact with Hydroxyl Radicals in Activating Ca <sup>2+</sup> and K <sup>+</sup> Transport across the Root Epidermal Plasma Membranes. <i>Plant Physiology</i> , 2011, 157, 2167-2180.	2.3	144
10	Reduced Tonoplast Fast-Activating and Slow-Activating Channel Activity Is Essential for Conferring Salinity Tolerance in a Facultative Halophyte, Quinoa. <i>Plant Physiology</i> , 2013, 162, 940-952.	2.3	138
11	Vacuolar calcium channels. <i>Journal of Experimental Botany</i> , 2007, 58, 1559-1569.	2.4	137
12	On a quest for stress tolerance genes: membrane transporters in sensing and adapting to hostile soils. <i>Journal of Experimental Botany</i> , 2016, 67, 1015-1031.	2.4	135
13	Slowly activating vacuolar channels can not mediate Ca <sup>2+</sup> -induced Ca <sup>2+</sup> release. <i>Plant Journal</i> , 1997, 12, 1387-1398.	2.8	114
14	Kinetics of xylem loading, membrane potential maintenance, and sensitivity of K <sup>+</sup> permeable channels to reactive oxygen species: physiological traits that differentiate salinity tolerance between pea and barley. <i>Plant, Cell and Environment</i> , 2014, 37, 589-600.	2.8	107
15	Transport Across Chloroplast Membranes: Optimizing Photosynthesis for Adverse Environmental Conditions. <i>Molecular Plant</i> , 2016, 9, 356-370.	3.9	104
16	Inhibition of Vacuolar Ion Channels by Polyamines. <i>Journal of Membrane Biology</i> , 1999, 167, 127-140.	1.0	102
17	Differential Activity of Plasma and Vacuolar Membrane Transporters Contributes to Genotypic Differences in Salinity Tolerance in a Halophyte Species, <i>Chenopodium quinoa</i> . <i>International Journal of Molecular Sciences</i> , 2013, 14, 9267-9285.	1.8	96
18	Cytoplasmic polyamines block the fast-activating vacuolar cation channel. <i>Plant Journal</i> , 1998, 16, 101-105.	2.8	90

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19	Salt-sensitive and salt-tolerant barley varieties differ in the extent of potentiation of the ROS-induced K <sup>+</sup> efflux by polyamines. <i>Plant Physiology and Biochemistry</i> , 2012, 61, 18-23.	2.8	89
20	Ion Channel Permeable for Divalent and Monovalent Cations in Native Spinach Thylakoid Membranes. <i>Journal of Membrane Biology</i> , 1996, 152, 223-233.	1.0	86
21	The energy cost of the tonoplast futile sodium leak. <i>New Phytologist</i> , 2020, 225, 1105-1110.	3.5	86
22	Cannabidiol directly targets mitochondria and disturbs calcium homeostasis in acute lymphoblastic leukemia. <i>Cell Death and Disease</i> , 2019, 10, 779.	2.7	85
23	Polyamines cause plasma membrane depolarization, activate Ca <sup>2+</sup> , and modulate H <sup>+</sup> -ATPase pump activity in pea roots. <i>Journal of Experimental Botany</i> , 2014, 65, 2463-2472.	2.4	82
24	Specificity of Polyamine Effects on NaCl-induced Ion Flux Kinetics and Salt Stress Amelioration in Plants. <i>Plant and Cell Physiology</i> , 2010, 51, 422-434.	1.5	80
25	Non-selective cation channels in plasma and vacuolar membranes and their contribution to K <sup>+</sup> transport. <i>Journal of Plant Physiology</i> , 2014, 171, 732-742.	1.6	79
26	Fast-activating cation channel in barley mesophyll vacuoles. Inhibition by calcium. <i>Plant Journal</i> , 1997, 11, 1059-1070.	2.8	70
27	Conduction of Monovalent and Divalent Cations in the Slow Vacuolar Channel. <i>Journal of Membrane Biology</i> , 2001, 181, 55-65.	1.0	66
28	SV channels dominate the vacuolar Ca <sup>2+</sup> release during intracellular signaling. <i>FEBS Letters</i> , 2009, 583, 921-926.	1.3	61
29	Mechanism of luminal Ca <sup>2+</sup> and Mg <sup>2+</sup> action on the vacuolar slowly activating channels. <i>Planta</i> , 2004, 219, 1057-1070.	1.6	56
30	Na <sup>+</sup> - K <sup>+</sup> transport in roots under salt stress. <i>Plant Signaling and Behavior</i> , 2008, 3, 401-403.	1.2	53
31	Mechanisms of salt tolerance in habanero pepper plants ( <i>Capsicum chinense</i> Jacq.): Proline accumulation, ions dynamics and sodium root-shoot partition and compartmentation. <i>Frontiers in Plant Science</i> , 2014, 5, 605.	1.7	53
32	What is the role of putrescine accumulated under potassium deficiency?. <i>Plant, Cell and Environment</i> , 2020, 43, 1331-1347.	2.8	51
33	Homeostatic control of slow vacuolar channels by luminal cations and evaluation of the channel-mediated tonoplast Ca <sup>2+</sup> fluxes in situ. <i>Journal of Experimental Botany</i> , 2008, 59, 3845-3855.	2.4	50
34	Asymmetric block of the plant vacuolar Ca <sup>2+</sup> -permeable channel by organic cations. <i>European Biophysics Journal</i> , 1999, 28, 552-563.	1.2	48
35	Mechanosensitive Ca <sup>2+</sup> -permeable channels in human leukemic cells: Pharmacological and molecular evidence for TRPV2. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 51-59.	1.4	44
36	K <sub>bg</sub> and Kv1.3 channels mediate potassium efflux in the early phase of apoptosis in Jurkat T lymphocytes. <i>American Journal of Physiology - Cell Physiology</i> , 2009, 297, C1544-C1553.	2.1	41

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37	Synergism between polyamines and ROS in the induction of Ca <sup>2+</sup> and K <sup>+</sup> fluxes in roots. <i>Plant Signaling and Behavior</i> , 2012, 7, 1084-1087.	1.2	40
38	Cooperative Block of the Plant Endomembrane Ion Channel by Ruthenium Red. <i>Biophysical Journal</i> , 1999, 77, 1973-1979.	0.2	36
39	Methyl- $\beta$ -cyclodextrin reversibly alters the gating of lipid rafts-associated Kv1.3 channels in Jurkat T lymphocytes. <i>Pflügers Archiv European Journal of Physiology</i> , 2007, 454, 235-244.	1.3	36
40	Potassium and Potassium-Permeable Channels in Plant Salt Tolerance. <i>Signaling and Communication in Plants</i> , 2010, , 87-110.	0.5	36
41	Single channel recording in the chloroplast envelope. <i>FEBS Letters</i> , 1992, 308, 87-90.	1.3	34
42	Regulation of the Fast Vacuolar Channel by Cytosolic and Vacuolar Potassium. <i>Biophysical Journal</i> , 2003, 84, 977-986.	0.2	34
43	Mitochondria as emerging targets for therapies against T cell acute lymphoblastic leukemia. <i>Journal of Leukocyte Biology</i> , 2019, 105, 935-946.	1.5	33
44	Ion Channels in Native Chloroplast Membranes: Challenges and Potential for Direct Patch-Clamp Studies. <i>Frontiers in Physiology</i> , 2015, 6, 396.	1.3	32
45	Phenolic Compounds Cannabidiol, Curcumin and Quercetin Cause Mitochondrial Dysfunction and Suppress Acute Lymphoblastic Leukemia Cells. <i>International Journal of Molecular Sciences</i> , 2021, 22, 204.	1.8	31
46	TRESK-like potassium channels in leukemic T cells. <i>Pflügers Archiv European Journal of Physiology</i> , 2008, 456, 1037-1048.	1.3	30
47	Fast-activating Channel Controls Cation Fluxes across the Native Chloroplast Envelope. <i>Journal of Membrane Biology</i> , 2005, 204, 145-156.	1.0	28
48	Choline but not its derivative betaine blocks slow vacuolar channels in the halophyte <i>Chenopodium quinoa</i> : Implications for salinity stress responses. <i>FEBS Letters</i> , 2014, 588, 3918-3923.	1.3	26
49	Overcoming Glucocorticoid Resistance in Acute Lymphoblastic Leukemia: Repurposed Drugs Can Improve the Protocol. <i>Frontiers in Oncology</i> , 2021, 11, 617937.	1.3	25
50	Regulation of the Slow Vacuolar Channel by Luminal Potassium: Role of Surface Charge. <i>Journal of Membrane Biology</i> , 2005, 205, 103-111.	1.0	22
51	Modulation of Ion Transport Across Plant Membranes by Polyamines: Understanding Specific Modes of Action Under Stress. <i>Frontiers in Plant Science</i> , 2020, 11, 616077.	1.7	21
52	Two-pore cation (TPC) channel: not a shorthanded one. <i>Functional Plant Biology</i> , 2018, 45, 83.	1.1	18
53	One of the chloroplast envelope ion channels is probably related to the mitochondrial VDAC. <i>FEBS Letters</i> , 1993, 330, 211-214.	1.3	16
54	Differential Activity of Voltage- and Ca <sup>2+</sup> -Dependent Potassium Channels in Leukemic T Cell Lines: Jurkat Cells Represent an Exceptional Case. <i>Frontiers in Physiology</i> , 2018, 9, 499.	1.3	16

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55	Effects of dehydration and low temperatures on the oxidation of high-potential cytochrome c by photosynthetic reaction centers in <i>Ectothiorhodospira shaposhnikovii</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1986, 848, 402-410.	0.5	15
56	Placing Ion Channels into a Signaling Network of T Cells: From Maturing Thymocytes to Healthy T Lymphocytes or Leukemic T Lymphoblasts. <i>BioMed Research International</i> , 2015, 2015, 1-32.	0.9	14
57	An Anion Conductance, the Essential Component of the Hydroxyl-Radical-Induced Ion Current in Plant Roots. <i>International Journal of Molecular Sciences</i> , 2018, 19, 897.	1.8	14
58	Different properties of SV channels in root vacuoles from near isogenic Al-tolerant and Al-sensitive wheat cultivars. <i>FEBS Letters</i> , 2005, 579, 6890-6894.	1.3	13
59	Powering the plasma membrane Ca <sup>2+</sup> -ROS self-amplifying loop. <i>Journal of Experimental Botany</i> , 2018, 69, 3317-3320.	2.4	13
60	Natural variation in primary root growth and K <sup>+</sup> retention in roots of habanero pepper ( <i>Capsicum</i> ) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50	1.1	11
61	Cannabidiol on the Path from the Lab to the Cancer Patient: Opportunities and Challenges. <i>Pharmaceuticals</i> , 2022, 15, 366.	1.7	11
62	Depolarization-Activated K <sup>+</sup> Channel in <i>Chara</i> Droplets. <i>Plant Physiology</i> , 1994, 106, 313-319.	2.3	10
63	Patch-clamp study of vascular plant chloroplasts: Ion channels and photocurrents. <i>Journal of Bioenergetics and Biomembranes</i> , 1995, 27, 249-258.	1.0	9
64	TRESK potassium channel in human T lymphoblasts. <i>Biochemical and Biophysical Research Communications</i> , 2013, 434, 273-279.	1.0	8
65	Cholinergic Machinery as Relevant Target in Acute Lymphoblastic T Leukemia. <i>Frontiers in Pharmacology</i> , 2016, 7, 290.	1.6	6
66	Polyamine Action on Plant Ion Channels and Pumps. , 2015, , 229-241.		6
67	Probing of pore in the <i>Chara gymnophylla</i> K <sup>+</sup> channel by blocking cations and by streaming potential measurements. <i>FEBS Letters</i> , 1992, 298, 253-256.	1.3	5
68	Tamoxifen Sensitizes Acute Lymphoblastic Leukemia Cells to Cannabidiol by Targeting Cyclophilin-D and Altering Mitochondrial Ca <sup>2+</sup> Homeostasis. <i>International Journal of Molecular Sciences</i> , 2021, 22, 8688.	1.8	5
69	Methods Related to Polyamine Control of Cation Transport Across Plant Membranes. <i>Methods in Molecular Biology</i> , 2018, 1694, 257-276.	0.4	4
70	Kv1.3 Current Voltage Dependence in Lymphocytes is Modulated by Co-Culture with Bone Marrow-Derived Stromal Cells: B and T Cells Respond Differentially. <i>Cellular Physiology and Biochemistry</i> , 2020, 54, 842-852.	1.1	4
71	Patch clamp characterization of a non-selective cation channel of ER membranes purified from <i>Beta vulgaris</i> taproots. <i>Physiologia Plantarum</i> , 2008, 132, 399-406.	2.6	3
72	Potassium and Sodium Transport Channels Under NaCl Stress. , 2014, , 325-359.		3

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73	Patch-Clamp Protocols to Study Cell Ionic Homeostasis Under Saline Conditions. <i>Methods in Molecular Biology</i> , 2012, 913, 3-18.	0.4	2
74	Infection by <i>Trypanosoma cruzi</i> Enhances Anion Conductance in Rat Neonatal Ventricular Cardiomyocytes. <i>Journal of Membrane Biology</i> , 2010, 238, 51-61.	1.0	1
75	Polyamines Depolarize the Membrane and Initiate a Cross-Talk Between Plasma Membrane Ca <sup>2+</sup> and H <sup>+</sup> Pumps. <i>Biophysical Journal</i> , 2014, 106, 586a.	0.2	1
76	Kv1.3 channel is a potential marker for B acute lymphoblastic leukemia. <i>FASEB Journal</i> , 2020, 34, 1-1.	0.2	1
77	Cooperative interaction of high-potential hemes in the cytochrome subunit of the photosynthetic reaction center of bacterium <i>Ectothiorhodospira shaposhnikovii</i> . <i>Biochemistry (Moscow)</i> , 2007, 72, 1254-1260.	0.7	0