

# Francois Chaumont

## List of Publications by Year in descending order

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104  
papers

9,474  
citations

38660

50  
h-index

39575

94  
g-index

107  
all docs

107  
docs citations

107  
times ranked

7312  
citing authors

#	ARTICLE	IF	CITATIONS
1	Exposure to high nitrogen triggered a genotypeâ€dependent modulation of cell and root hydraulics, which can involve aquaporin regulation. <i>Physiologia Plantarum</i> , 2022, , e13640.	2.6	3
2	The plasma membrane aquaporin ZmPIP2;5 enhances the sensitivity of stomatal closure to water deficit. <i>Plant, Cell and Environment</i> , 2022, 45, 1146-1156.	2.8	18
3	Plasma membrane H <sup>+</sup> -ATPases promote TORC1 activation in plant suspension cells. <i>IScience</i> , 2022, 25, 104238.	1.9	1
4	Production of Recombinant Glycoproteins in <i>Nicotiana tabacum</i> BY-2 Suspension Cells. <i>Methods in Molecular Biology</i> , 2022, , 81-88.	0.4	5
5	Aquaporins involvement in the regulation of melon ( <i>Cucumis melo</i> L.) fruit cracking under different nutrient (Ca, B and Zn) treatments. <i>Environmental and Experimental Botany</i> , 2022, 201, 104981.	2.0	5
6	Inactivation of N-Acetylglucosaminyltransferase I and Î±1,3-Fucosyltransferase Genes in <i>Nicotiana tabacum</i> BY-2 Cells Results in Glycoproteins With Highly Homogeneous, High-Mannose N-Glycans. <i>Frontiers in Plant Science</i> , 2021, 12, 634023.	1.7	11
7	A consensus on the Aquaporin Gene Family in the Allotetraploid Plant, <i>Nicotiana tabacum</i> . <i>Plant Direct</i> , 2021, 5, e00321.	0.8	6
8	Unraveling Human AQP5-PIP Molecular Interaction and Effect on AQP5 Salivary Glands Localization in SS Patients. <i>Cells</i> , 2021, 10, 2108.	1.8	15
9	Functional evolution of nodulin 26â€like intrinsic proteins: from bacterial arsenic detoxification to plant nutrient transport. <i>New Phytologist</i> , 2020, 225, 1383-1396.	3.5	59
10	Evolutionary and Predictive Functional Insights into the Aquaporin Gene Family in the Allotetraploid Plant <i>Nicotiana tabacum</i> . <i>International Journal of Molecular Sciences</i> , 2020, 21, 4743.	1.8	13
11	Plasma membrane aquaporins interact with the endoplasmic reticulum resident VAP27 proteins at ERâ€PM contact sites and endocytic structures. <i>New Phytologist</i> , 2020, 228, 973-988.	3.5	16
12	Modification of the Expression of the Aquaporin ZmPIP2;5 Affects Water Relations and Plant Growth. <i>Plant Physiology</i> , 2020, 182, 2154-2165.	2.3	39
13	Are Aquaporins Expressed in Stomatal Complexes Promising Targets to Enhance Stomatal Dynamics?. <i>Frontiers in Plant Science</i> , 2020, 11, 458.	1.7	27
14	Interaction Between the SNARE SYP121 and the Plasma Membrane Aquaporin PIP2;7 Involves Different Protein Domains. <i>Frontiers in Plant Science</i> , 2020, 11, 631643.	1.7	9
15	Exploring the N-Glycosylation Profile of Glycoprotein B from Human Cytomegalovirus Expressed in CHO and <i>Nicotiana tabacum</i> BY-2 Cells. <i>International Journal of Molecular Sciences</i> , 2019, 20, 3741.	1.8	9
16	Contribution of the arbuscular mycorrhizal symbiosis to the regulation of radial root water transport in maize plants under water deficit. <i>Environmental and Experimental Botany</i> , 2019, 167, 103821.	2.0	33
17	Overexpression of X Intrinsic Protein 1;1 in <i>Nicotiana tabacum</i> and <i>Arabidopsis</i> reduces boron allocation to shoot sink tissues. <i>Plant Direct</i> , 2019, 3, e00143.	0.8	17
18	Physiological responses and aquaporin expression upon drought and osmotic stress in a conservative vs prodigal <i>Fragaria x ananassa</i> cultivar. <i>Plant Physiology and Biochemistry</i> , 2019, 145, 95-106.	2.8	20

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19	Boron demanding tissues of <i>Brassica napus</i> express specific sets of functional Nodulin26-like Intrinsic Proteins and BOR1 transporters. <i>Plant Journal</i> , 2019, 100, 68-82.	2.8	43
20	Involvement of aquaporins on nitrogen-acquisition strategies of juvenile and adult plants of an epiphytic tank-forming bromeliad. <i>Planta</i> , 2019, 250, 319-332.	1.6	9
21	The arbuscular mycorrhizal symbiosis regulates aquaporins activity and improves root cell water permeability in maize plants subjected to water stress. <i>Plant, Cell and Environment</i> , 2019, 42, 2274-2290.	2.8	69
22	In memoriam André Goffeau: From proteins to genes to genomes – The Goffeaumic approach to life sciences. <i>Yeast</i> , 2019, 36, 157-159.	0.8	0
23	Novel fluorochromes label tonoplast in living plant cells and reveal changes in vacuolar organization after treatment with protein phosphatase inhibitors. <i>Protoplasma</i> , 2018, 255, 829-839.	1.0	14
24	The Xerobanching Response Represses Lateral Root Formation When Roots Are Not in Contact with Water. <i>Current Biology</i> , 2018, 28, 3165-3173.e5.	1.8	94
25	Going with the Flow: Multiscale Insights into the Composite Nature of Water Transport in Roots. <i>Plant Physiology</i> , 2018, 178, 1689-1703.	2.3	63
26	Heterotetramerization of Plant PIP1 and PIP2 Aquaporins Is an Evolutionary Ancient Feature to Guide PIP1 Plasma Membrane Localization and Function. <i>Frontiers in Plant Science</i> , 2018, 9, 382.	1.7	49
27	Plant and Mammal Aquaporins: Same but Different. <i>International Journal of Molecular Sciences</i> , 2018, 19, 521.	1.8	55
28	Roles of Aquaporins in Stomata. <i>Signaling and Communication in Plants</i> , 2017, , 167-183.	0.5	8
29	Toward understanding of the high number of plant aquaporin isoforms and multiple regulation mechanisms. <i>Plant Science</i> , 2017, 264, 179-187.	1.7	48
30	Inactivation of the $\beta$ (1,2)-xylosyltransferase and the $\beta$ (1,3)-fucosyltransferase genes in <i>Nicotiana tabacum</i> BY-2 Cells by a Multiplex CRISPR/Cas9 Strategy Results in Glycoproteins without Plant-Specific Glycans. <i>Frontiers in Plant Science</i> , 2017, 8, 403.	1.7	134
31	Enhanced Drought Stress Tolerance by the Arbuscular Mycorrhizal Symbiosis in a Drought-Sensitive Maize Cultivar Is Related to a Broader and Differential Regulation of Host Plant Aquaporins than in a Drought-Tolerant Cultivar. <i>Frontiers in Plant Science</i> , 2017, 8, 1056.	1.7	138
32	Heteromerization of Plant Aquaporins. <i>Signaling and Communication in Plants</i> , 2017, , 29-46.	0.5	16
33	Crystal Structure of an Ammonia-Permeable Aquaporin. <i>PLoS Biology</i> , 2016, 14, e1002411.	2.6	108
34	Root ABA Accumulation Enhances Rice Seedling Drought Tolerance under Ammonium Supply: Interaction with Aquaporins. <i>Frontiers in Plant Science</i> , 2016, 7, 1206.	1.7	64
35	Single Mutations in the Transmembrane Domains of Maize Plasma Membrane Aquaporins Affect the Activity of Monomers within a Heterotetramer. <i>Molecular Plant</i> , 2016, 9, 986-1003.	3.9	51
36	Salinity-mediated transcriptional and post-translational regulation of the <i>Arabidopsis</i> aquaporin PIP2;7. <i>Plant Molecular Biology</i> , 2016, 92, 731-744.	2.0	59

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37	Tonoplast Aquaporins Facilitate Lateral Root Emergence. <i>Plant Physiology</i> , 2016, 170, 1640-1654.	2.3	53
38	The Grapevine Uncharacterized Intrinsic Protein 1 (VvXIP1) Is Regulated by Drought Stress and Transports Glycerol, Hydrogen Peroxide, Heavy Metals but Not Water. <i>PLoS ONE</i> , 2016, 11, e0160976.	1.1	37
39	The LxxxA motif in the third transmembrane helix of the maize aquaporin ZmPIP2;5 acts as an ER export signal. <i>Plant Signaling and Behavior</i> , 2015, 10, e990845.	1.2	14
40	Trafficking of Plant Plasma Membrane Aquaporins: Multiple Regulation Levels and Complex Sorting Signals. <i>Plant and Cell Physiology</i> , 2015, 56, 819-829.	1.5	66
41	Differential responses of plasma membrane aquaporins in mediating water transport of cucumber seedlings under osmotic and salt stresses. <i>Plant, Cell and Environment</i> , 2015, 38, 461-473.	2.8	45
42	The <i>Arabidopsis</i> Abiotic Stress-Induced TSPO-Related Protein Reduces Cell-Surface Expression of the Aquaporin PIP2;7 through Protein-Protein Interactions and Autophagic Degradation. <i>Plant Cell</i> , 2014, 26, 4974-4990.	3.1	128
43	Focus on Water. <i>Plant Physiology</i> , 2014, 164, 1553-1555.	2.3	9
44	A Hydraulic Model Is Compatible with Rapid Changes in Leaf Elongation under Fluctuating Evaporative Demand and Soil Water Status. <i>Plant Physiology</i> , 2014, 164, 1718-1730.	2.3	73
45	Aquaporin-facilitated transmembrane diffusion of hydrogen peroxide. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2014, 1840, 1596-1604.	1.1	550
46	The grape aquaporin VvSIP1 transports water across the ER membrane. <i>Journal of Experimental Botany</i> , 2014, 65, 981-993.	2.4	33
47	Circadian rhythms of hydraulic conductance and growth are enhanced by drought and improve plant performance. <i>Nature Communications</i> , 2014, 5, 5365.	5.8	131
48	Expression and characterization of plasma membrane aquaporins in stomatal complexes of <i>Zea mays</i> . <i>Plant Molecular Biology</i> , 2014, 86, 335-350.	2.0	67
49	New Insights into the Regulation of Aquaporins by the Arbuscular Mycorrhizal Symbiosis in Maize Plants Under Drought Stress and Possible Implications for Plant Performance. <i>Molecular Plant-Microbe Interactions</i> , 2014, 27, 349-363.	1.4	206
50	<i>Arabidopsis</i> SNAREs SYP61 and SYP121 Coordinate the Trafficking of Plasma Membrane Aquaporin PIP2;7 to Modulate the Cell Membrane Water Permeability. <i>Plant Cell</i> , 2014, 26, 3132-3147.	3.1	192
51	Maize plasma membrane aquaporin ZmPIP2;5, but not ZmPIP1;2, facilitates transmembrane diffusion of hydrogen peroxide. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 216-222.	1.4	58
52	Aquaporins: Highly Regulated Channels Controlling Plant Water Relations. <i>Plant Physiology</i> , 2014, 164, 1600-1618.	2.3	536
53	Measuring the Osmotic Water Permeability Coefficient ( $P_{\text{osm}}$ ) of Spherical Cells: Isolated Plant Protoplasts as an Example. <i>Journal of Visualized Experiments</i> , 2014, , e51652.	0.2	12
54	A New LxxxA Motif in the Transmembrane Helix3 of Maize Aquaporins Belonging to the Plasma Membrane Intrinsic Protein PIP2 Group Is Required for Their Trafficking to the Plasma Membrane. <i>Plant Physiology</i> , 2014, 166, 125-138.	2.3	36

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55	Channel-mediated lactic acid transport: a novel function for aquaglyceroporins in bacteria. <i>Biochemical Journal</i> , 2013, 454, 559-570.	1.7	65
56	Insights into plant plasma membrane aquaporin trafficking. <i>Trends in Plant Science</i> , 2013, 18, 344-352.	4.3	86
57	Aquaporins and Leaf Hydraulics: Poplar Sheds New Light. <i>Plant and Cell Physiology</i> , 2013, 54, 1963-1975.	1.5	44
58	Repression of early lateral root initiation events by transient water deficit in barley and maize. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2012, 367, 1534-1541.	1.8	36
59	Selective Regulation of Maize Plasma Membrane Aquaporin Trafficking and Activity by the SNARE SYP121. <i>Plant Cell</i> , 2012, 24, 3463-3481.	3.1	109
60	A conserved cysteine residue is involved in disulfide bond formation between plant plasma membrane aquaporin monomers. <i>Biochemical Journal</i> , 2012, 445, 101-111.	1.7	80
61	Arbuscular mycorrhizal symbiosis increases relative apoplastic water flow in roots of the host plant under both well-watered and drought stress conditions. <i>Annals of Botany</i> , 2012, 109, 1009-1017.	1.4	220
62	Short-term control of maize cell and root water permeability through plasma membrane aquaporin isoforms. <i>Plant, Cell and Environment</i> , 2012, 35, 185-198.	2.8	127
63	Comparative landscape genetic analyses show a Belgian motorway to be a gene flow barrier for red deer ( <i>Cervus elaphus</i> ), but not wild boars ( <i>Sus scrofa</i> ). <i>Molecular Ecology</i> , 2012, 21, 3445-3457.	2.0	100
64	Plant Aquaporins: Roles in Water Homeostasis, Nutrition, and Signaling Processes. <i>Signaling and Communication in Plants</i> , 2011, , 3-36.	0.5	34
65	<i>Solanaceae</i> XIPs are plasma membrane aquaporins that facilitate the transport of many uncharged substrates. <i>Plant Journal</i> , 2011, 66, 306-317.	2.8	199
66	Identification and characterization of two plasma membrane aquaporins in durum wheat ( <i>Triticum</i> ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 <i>Biochemistry</i> , 2011, 49, 1029-1039.	2.8	105
67	Population structure and genetic diversity of red deer ( <i>Cervus elaphus</i> ) in forest fragments in north-western France. <i>Conservation Genetics</i> , 2011, 12, 1287-1297.	0.8	26
68	Regulation of plasma membrane aquaporins by inoculation with a <i>Bacillus megaterium</i> strain in maize ( <i>Zea mays</i> L.) plants under unstressed and salt-stressed conditions. <i>Planta</i> , 2010, 232, 533-543.	1.6	224
69	Aquaporins: A Family of Highly Regulated Multifunctional Channels. <i>Advances in Experimental Medicine and Biology</i> , 2010, 679, 1-17.	0.8	90
70	Transporters, channels, or simple diffusion? Dogmas, atypical roles and complexity in transport systems. <i>International Journal of Biochemistry and Cell Biology</i> , 2010, 42, 857-868.	1.2	32
71	Maize Black Mexican sweet suspension cultured cells are a convenient tool for studying aquaporin activity and regulation. <i>Plant Signaling and Behavior</i> , 2009, 4, 890-892.	1.2	12
72	Drought and Abscisic Acid Effects on Aquaporin Content Translate into Changes in Hydraulic Conductivity and Leaf Growth Rate: A Trans-Scale Approach. <i>Plant Physiology</i> , 2009, 149, 2000-2012.	2.3	331

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73	Membrane water permeability and aquaporin expression increase during growth of maize suspension cultured cells. <i>Plant, Cell and Environment</i> , 2009, 32, 1334-1345.	2.8	22
74	An N-terminal diacidic motif is required for the trafficking of maize aquaporins ZmPIP2;4 and ZmPIP2;5 to the plasma membrane. <i>Plant Journal</i> , 2009, 57, 346-355.	2.8	102
75	Role of aquaporins in leaf physiology. <i>Journal of Experimental Botany</i> , 2009, 60, 2971-2985.	2.4	270
76	The expression pattern of plasma membrane aquaporins in maize leaf highlights their role in hydraulic regulation. <i>Plant Molecular Biology</i> , 2008, 68, 337-353.	2.0	142
77	Maize Plasma Membrane Aquaporins Belonging to the PIP1 and PIP2 Subgroups are in vivo Phosphorylated. <i>Plant and Cell Physiology</i> , 2008, 49, 1364-1377.	1.5	70
78	FRET imaging in living maize cells reveals that plasma membrane aquaporins interact to regulate their subcellular localization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 12359-12364.	3.3	309
79	The <i>Arabidopsis thaliana</i> trehalase is a plasma membrane-bound enzyme with extracellular activity. <i>FEBS Letters</i> , 2007, 581, 4010-4016.	1.3	46
80	Modulating the expression of aquaporin genes in planta: A key to understand their physiological functions?. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 1142-1156.	1.4	127
81	Genetic structure and assignment tests demonstrate illegal translocation of red deer ( <i>Cervus</i> ) Tj ETQq1 1 0.784314 rrgBT /Overlock 10	2.6	98
82	Localization and Quantification of Plasma Membrane Aquaporin Expression in Maize Primary Root: A Clue to Understanding their Role as Cellular Plumbers. <i>Plant Molecular Biology</i> , 2006, 62, 305-323.	2.0	211
83	Water permeability differs between growing and non-growing barley leaf tissues. <i>Journal of Experimental Botany</i> , 2006, 58, 377-390.	2.4	68
84	Solute and Water Relations of Growing Plant Cells. , 2006, , 7-31.		4
85	Regulation of plant aquaporin activity. <i>Biology of the Cell</i> , 2005, 97, 749-764.	0.7	256
86	A Novel Plant Major Intrinsic Protein in <i>Physcomitrella patens</i> Most Similar to Bacterial Glycerol Channels. <i>Plant Physiology</i> , 2005, 139, 287-295.	2.3	103
87	The Role of Aquaporins and Membrane Damage in Chilling and Hydrogen Peroxide Induced Changes in the Hydraulic Conductance of Maize Roots. <i>Plant Physiology</i> , 2005, 137, 341-353.	2.3	230
88	Dynamic Changes in the Osmotic Water Permeability of Protoplast Plasma Membrane. <i>Plant Physiology</i> , 2004, 135, 2301-2317.	2.3	78
89	Interactions between Plasma Membrane Aquaporins Modulate Their Water Channel Activity. <i>Plant Cell</i> , 2004, 16, 215-228.	3.1	400
90	Expression of a cauliflower tonoplast aquaporin tagged with GFP in tobacco suspension cells correlates with an increase in cell size. <i>Plant Molecular Biology</i> , 2003, 52, 387-400.	2.0	49

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91	Aquaporins Constitute a Large and Highly Divergent Protein Family in Maize. <i>Plant Physiology</i> , 2001, 125, 1206-1215.	2.3	555
92	Plasma Membrane Intrinsic Proteins from Maize Cluster in Two Sequence Subgroups with Differential Aquaporin Activity. <i>Plant Physiology</i> , 2000, 122, 1025-1034.	2.3	306
93	Characterization of Plasma Membrane MIP Proteins in Maize. , 2000, , 269-274.		4
94	Desiccation and osmotic stress increase the abundance of mRNA of the tonoplast aquaporin BobTIP26-1 in cauliflower cells. <i>Planta</i> , 1999, 209, 77-86.	1.6	52
95	Characterization of a Maize Tonoplast Aquaporin Expressed in Zones of Cell Division and Elongation1. <i>Plant Physiology</i> , 1998, 117, 1143-1152.	2.3	142
96	Different in Vitro and in Vivo Targeting Properties of the Transit Peptide of a Chloroplast Envelope Inner Membrane Protein. <i>Journal of Biological Chemistry</i> , 1997, 272, 15264-15269.	1.6	62
97	Expression of an Arabidopsis plasma membrane aquaporin in <i>Dictyostelium</i> results in hypoosmotic sensitivity and developmental abnormalities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997, 94, 6202-6209.	3.3	20
98	Mitochondrial and chloroplast targeting sequences in tandem modify protein import specificity in plant organelles. <i>Plant Molecular Biology</i> , 1996, 30, 769-780.	2.0	57
99	Characterization of a New Vacuolar Membrane Aquaporin Sensitive to Mercury at a Unique Site. <i>Plant Cell</i> , 1996, 8, 587.	3.1	31
100	Targeting the maize T-urf13 product into tobacco mitochondria confers methomyl sensitivity to mitochondrial respiration.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995, 92, 1167-1171.	3.3	48
101	Protein Import into Plant Mitochondria. <i>Advances in Cellular and Molecular Biology of Plants</i> , 1995, , 207-235.	0.2	2
102	Truncated presequences of mitochondrial F1-ATPase $\hat{2}$ subunit from <i>Nicotiana plumbaginifolia</i> transport CAT and GUS proteins into mitochondria of transgenic tobacco. <i>Plant Molecular Biology</i> , 1994, 24, 631-641.	2.0	48
103	Aerobic and anaerobic glucose metabolism of <i>Phytomonas</i> sp. isolated from <i>Euphorbia characias</i> . <i>Molecular and Biochemical Parasitology</i> , 1994, 67, 321-331.	0.5	43
104	Sequence of the gene encoding the mitochondrial F1ATPase alpha subunit from <i>Nicotiana plumbaginifolia</i> . <i>Nucleic Acids Research</i> , 1988, 16, 6247-6247.	6.5	19