Marc St-Arnaud

List of Publications by Year
in descending order

122 papers	5,907 citations	66315 42 h-index	79644 73 g-index
126 all docs	126 docs citations	126 times ranked	5170 citing authors

#	Article	IF	Citations
1	Enhanced hyphal growth and spore production of the arbuscular mycorrhizal fungus Glomus intraradices in an in vitro system in the absence of host roots. Mycological Research, 1996, 100, 328-332.	2.5	409
2	Direct interaction between the arbuscular mycorrhizal fungusGlomus intraradicesand different rhizosphere microorganisms. New Phytologist, 1999, 141, 525-533.	3.5	264
3	Arbuscular mycorrhiza on root-organ cultures. Canadian Journal of Botany, 2002, 80, 1-20.	1.2	231
4	Microbial expression profiles in the rhizosphere of willows depend on soil contamination. ISME Journal, 2014, 8, 344-358.	4.4	229
5	Linkage between bacterial and fungal rhizosphere communities in hydrocarbon-contaminated soils is related to plant phylogeny. ISME Journal, 2014, 8, 331-343.	4.4	190
6	Long-Term Phosphorus Fertilization Impacts Soil Fungal and Bacterial Diversity but not AM Fungal Community in Alfalfa. Microbial Ecology, 2010, 59, 379-389.	1.4	185
7	Harnessing phytomicrobiome signaling for rhizosphere microbiome engineering. Frontiers in Plant Science, 2015, 6, 507.	1.7	176
8	Culture-Dependent and -Independent Methods Capture Different Microbial Community Fractions in Hydrocarbon-Contaminated Soils. PLoS ONE, 2015, 10, e0128272.	1.1	167
9	Viability Testing of Orchid Seed and the Promotion of Colouration and Germination. Annals of Botany, 2000, 86, 79-86.	1.4	142
10	Direct quantification of fungal DNA from soil substrate using real-time PCR. Journal of Microbiological Methods, 2003, 53, 67-76.	0.7	140
11	Effect of arbuscular mycorrhizal fungi on trace metal uptake by sunflower plants grown on cadmium contaminated soil. New Biotechnology, 2013, 30, 780-787.	2.4	124
12	Root Exudation: The Ecological Driver of Hydrocarbon Rhizoremediation. Agronomy, 2016, 6, 19.	1.3	119
13	Nitrogen transfer and assimilation between the arbuscular mycorrhizal fungus Glomus intraradices Schenck & Smith and Ri T-DNA roots of Daucus carota L. in an in vitro compartmented system. Canadian Journal of Microbiology, 2004, 50, 251-260.	0.8	118
14	Quantification of Fusarium solani f. sp. phaseoli in Mycorrhizal Bean Plants and Surrounding Mycorrhizosphere Soil Using Real-Time Polymerase Chain Reaction and Direct Isolations on Selective Media. Phytopathology, 2003, 93, 229-235.	1.1	117
15	Molecular biodiversity of arbuscular mycorrhizal fungi in trace metalâ€polluted soils. Molecular Ecology, 2011, 20, 3469-3483.	2.0	106
16	Petroleum biodegradation capacity of bacteria and fungi isolated from petroleum-contaminated soil. International Biodeterioration and Biodegradation, 2017, 116, 48-57.	1.9	105
17	Isolation and Characterization of Plant Growth Promoting Endophytic Bacteria from Desert Plants and Their Application as Bioinoculants for Sustainable Agriculture. Agronomy, 2020, 10, 1325.	1.3	105
18	Resistance Responses of Mycorrhizal Ri T-DNA-Transformed Carrot Roots to Infection byFusarium oxysporumf. sp.chrysanthemi. Phytopathology, 1994, 84, 958.	1.1	96

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19	Phytoextraction of heavy metals by two Salicaceae clones in symbiosis with arbuscular mycorrhizal fungi during the second year of a field trial. Plant and Soil, 2010, 332, 55-67.	1.8	95
20	Soil contamination alters the willow root and rhizosphere metatranscriptome and the rootâ€“rhizosphere interactome. ISME Journal, 2018, 12, 869-884.	4.4	91
21	Rhizoremediation of petroleum hydrocarbons: a model system for plant microbiome manipulation. Microbial Biotechnology, 2018, 11, 819-832.	2.0	88
22	Trees, fungi and bacteria: tripartite metatranscriptomics of a root microbiome responding to soil contamination. Microbiome, 2018, 6, 53.	4.9	88
23	Isolation and identification of soil bacteria growing at the expense of arbuscular mycorrhizal fungi. FEMS Microbiology Letters, 2011, 317, 43-51.	0.7	86
24	Canola Rootâ€“Associated Microbiomes in the Canadian Prairies. Frontiers in Microbiology, 2018, 9, 1188.	1.5	85
25	Spore development and nuclear inheritance in arbuscular mycorrhizal fungi. BMC Evolutionary Biology, 2011, 11, 51.	3.2	84
26	A PCR-denaturing gradient gel electrophoresis approach to assess Fusarium diversity in asparagus. Journal of Microbiological Methods, 2005, 60, 143-154.	0.7	83
27	Trapping of phosphate solubilizing bacteria on hyphae of the arbuscular mycorrhizal fungus Rhizophagus irregularis DAOM 197198. Soil Biology and Biochemistry, 2015, 90, 1-9.	4.2	80
28	Altered growth of Fusarium oxysporum f. sp. chrysanthemi in an in vitro dual culture system with the vesicular arbuscular mycorrhizal fungus Glomus intraradices growing on Daucus carota transformed roots. Mycorrhiza, 1995, 5, 431-438.	1.3	77
29	Molecular Profiling of Rhizosphere Microbial Communities Associated with Healthy and Diseased Black Spruce (Picea mariana) Seedlings Grown in a Nursery. Applied and Environmental Microbiology, 2004, 70, 3541-3551.	1.4	77
30	Mycorrhizal colonization with Glomus intraradices and development stage of transformed tomato roots significantly modify the chemotactic response of zoospores of the pathogen Phytophthora nicotianae. Soil Biology and Biochemistry, 2008, 40, 2217-2224.	4.2	69
31	The bacterial community of tomato rhizosphere is modified by inoculation with arbuscular mycorrhizal fungi but unaffected by soil enrichment with mycorrhizal root exudates or inoculation with Phytophthora nicotianae. Soil Biology and Biochemistry, 2010, 42, 473-483.	4.2	67
32	Altered growth of Fusarium oxysporum f.sp. chrysanthemi in an in vitro dual culture system with the vesicular arbuscular mycorrhizal fungus Glomus intraradices growing on Daucus carota transformed roots. Mycorrhiza, 1995, 5, 431-438.	1.3	66
33	A Diverse Soil Microbiome Degrades More Crude Oil than Specialized Bacterial Assemblages Obtained in Culture. Applied and Environmental Microbiology, 2016, 82, 5530-5541.	1.4	63
34	Early rhizosphere microbiome composition is related to the growth and <scp><scp>Zn</scp></scp> uptake of willows introduced to a former landfill. Environmental Microbiology, 2015, 17, 3025-3038.	1.8	61
35	Igneous phosphate rock solubilization by biofilm-forming mycorrhizobacteria and hyphobacteria associated with Rhizoglomus irregulare DAOM 197198. Mycorrhiza, 2017, 27, 13-22.	1.3	61
36	Negative feedback on a perennial crop: Fusarium crown and root rot of asparagus is related to changes in soil microbial community structure. Plant and Soil, 2005, 268, 75-87.	1.8	60

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37	Inhibition of<i>Pythium ultimum</i>in roots and growth substrate of mycorrhizal<i>Tagetes patula</i>colonized with<i>Glomus intraradices</i>. Canadian Journal of Plant Pathology, 1994, 16, 187-194.	0.8	59
38	Chickpea genotypes shape the soil microbiome and affect the establishment of the subsequent durum wheat crop in the semiarid North American Great Plains. Soil Biology and Biochemistry, 2013, 63, 129-141.	4.2	58
39	Biodiversity and Biogeography of Fusarium Species from Northeastern North American Asparagus Fields Based on Microbiological and Molecular Approaches. Microbial Ecology, 2006, 51, 242-255.	1.4	56
40	Inhibition of <i>Fusarium oxysporum</i> f-sp. <i>dianthi</i> in the non-VAM species <i>Dianthus caryophyllus</i> by co-culture with <i>Tagetes patula</i> companion plants colonized by <i>Glomus intraradices</i>. Canadian Journal of Botany, 1997, 75, 998-1005.	1.2	52
41	Contrasting the Community Structure of Arbuscular Mycorrhizal Fungi from Hydrocarbon-Contaminated and Uncontaminated Soils following Willow (Salix spp. L.) Planting. PLoS ONE, 2014, 9, e102838.	1.1	50
42	<i>Bacteria</i>associated with arbuscular mycorrhizal fungi within roots of plants growing in a soil highly contaminated with aliphatic and aromatic petroleum hydrocarbons. FEMS Microbiology Letters, 2014, 358, 44-54.	0.7	50
43	Taxonomy and pathogenicity of Olpidium brassicae and its allied species. Fungal Biology, 2018, 122, 837-846.	1.1	49
44	Real-Time Quantitative RT-PCR of Defense-Associated Gene Transcripts of Rhizoctonia solani-Infected Bean Seedlings in Response to Inoculation with a Nonpathogenic Binucleate Rhizoctonia Isolate. Phytopathology, 2005, 95, 345-353.	1.1	44
45	Transcriptional activity of antifungal metabolite-encoding genes phlD and hcnBC in Pseudomonas spp. using qRT-PCR. FEMS Microbiology Ecology, 2009, 68, 212-222.	1.3	39
46	Differential and systemic alteration of defence-related gene transcript levels in mycorrhizal bean plants infected with Rhizoctonia solani. Canadian Journal of Botany, 2002, 80, 305-315.	1.2	38
47	Phytochemicals and spore germination: At the root of AMF host preference?. Applied Soil Ecology, 2012, 60, 98-104.	2.1	38
48	Petroleum hydrocarbon contamination, plant identity and arbuscular mycorrhizal fungal (AMF) community determine assemblages of the AMF sporeâ€associated microbes. Environmental Microbiology, 2016, 18, 2689-2704.	1.8	38
49	Anthropogenic drivers of soil microbial communities and impacts on soil biological functions in agroecosystems. Global Ecology and Conservation, 2021, 27, e01521.	1.0	38
50	Various forms of organic and inorganic P fertilizers did not negatively affect soil- and root-inhabiting AM fungi in a maizeâ€“soybean rotation system. Mycorrhiza, 2013, 23, 143-154.	1.3	36
51	Susceptibility of cones and seeds to fungal infection in a pine (Pinus spp.) collection. Forest Pathology, 2000, 30, 305-320.	0.5	35
52	Relationships between Fusarium population structure, soil nutrient status and disease incidence in field-grown asparagus. FEMS Microbiology Ecology, 2006, 58, 394-403.	1.3	35
53	Petroleum Contamination and Plant Identity Influence Soil and Root Microbial Communities While AMF Spores Retrieved from the Same Plants Possess Markedly Different Communities. Frontiers in Plant Science, 2017, 8, 1381.	1.7	34
54	Fungal Diversity, Dominance, and Community Structure in the Rhizosphere of Clonal Picea mariana Plants Throughout Nursery Production Chronosequences. Microbial Ecology, 2007, 54, 672-684.	1.4	33

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55	Fungal Communities of the Canola Rhizosphere: Keystone Species and Substantial Between-Year Variation of the Rhizosphere Microbiome. Microbial Ecology, 2020, 80, 762-777.	1.4	33
56	Proteomics as a way to identify extra-radicular fungal proteins from Glomus intraradicesÃ¢Â€Â“ RiT-DNA carrot root mycorrhizas. FEMS Microbiology Ecology, 2004, 48, 401-411.	1.3	32
57	Patterns of Fusarium community structure and abundance in relation to spatial, abiotic and biotic factors in soil. FEMS Microbiology Ecology, 2010, 71, 34-42.	1.3	32
58	Changes in Communities of Fusarium and Arbuscular Mycorrhizal Fungi as Related to Different Asparagus Cultural Factors. Microbial Ecology, 2006, 52, 104-113.	1.4	28
59	Arbuscular mycorrhizal fungi assemblages in Chernozem great groups revealed by massively parallel pyrosequencing. Canadian Journal of Microbiology, 2012, 58, 81-92.	0.8	28
60	Plant Identity Shaped Rhizospheric Microbial Communities More Strongly Than Bacterial Bioaugmentation in Petroleum Hydrocarbon-Polluted Sediments. Frontiers in Microbiology, 2019, 10, 2144.	1.5	28
61	Development of a selective myclobutanil agar (MBA) medium for the isolation of Fusarium species from asparagus fields. Canadian Journal of Microbiology, 2002, 48, 841-847.	0.8	26
62	Factors Associated with Fusarium Crown and Root Rot of Asparagus Outbreaks in Quebec. Phytopathology, 2005, 95, 867-873.	1.1	25
63	Overview of Approaches to Improve Rhizoremediation of Petroleum Hydrocarbon-Contaminated Soils. Applied Microbiology, 2021, 1, 329-351.	0.7	25
64	Role of the modification in root exudation induced by arbuscular mycorrhizal colonization on the intraradical growth of Phytophthora nicotianae in tomato. Mycorrhiza, 2009, 19, 443-448.	1.3	24
65	Lentil enhances the productivity and stability of oilseed-cereal cropping systems across different environments. European Journal of Agronomy, 2019, 105, 24-31.	1.9	24
66	Colonization potential of in vitro-produced arbuscular mycorrhizal fungus spores compared with a root-segment inoculum from open pot culture. Mycorrhiza, 1999, 8, 335-338.	1.3	23
67	Interaction between legume and arbuscular mycorrhizal fungi identity alters the competitive ability of warm-season grass species in a grassland community. Soil Biology and Biochemistry, 2014, 70, 176-182.	4.2	22
68	In Vitro Asymbiotic Germination, Protocorm Development, and Plantlet Acclimatization of Aplectrum Hyemale (Muhl. ex Willd.) Torr. (Orchidaceae). Journal of the Torrey Botanical Society, 2007, 134, 344-348.	0.1	19
69	Arbuscular mycorrhizal fungal diversity associated with Eleocharis obtusa and Panicum capillare growing in an extreme petroleum hydrocarbon-polluted sedimentation basin. FEMS Microbiology Letters, 2015, 362, fnv081.	0.7	19
70	Plant assemblage composition and soil P concentration differentially affect communities of AM and total fungi in a semi-arid grassland. FEMS Microbiology Ecology, 2015, 91, 1-13.	1.3	19
71	Concentration of Petroleum-Hydrocarbon Contamination Shapes Fungal Endophytic Community Structure in Plant Roots. Frontiers in Microbiology, 2016, 7, 685.	1.5	19
72	Arbuscular Mycorrhizal Fungal Assemblages Significantly Shifted upon Bacterial Inoculation in Non-Contaminated and Petroleum-Contaminated Environments. Microorganisms, 2020, 8, 602.	1.6	19

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73	Allelic Differences within and among Sister Spores of the Arbuscular Mycorrhizal Fungus Glomus etunicatum Suggest Segregation at Sporulation. PLoS ONE, 2013, 8, e83301.	1.1	19
74	Impact of 12-year field treatments with organic and inorganic fertilizers on crop productivity and mycorrhizal community structure. Biology and Fertility of Soils, 2013, 49, 1109-1121.	2.3	18
75	Bacterial Communities of the Canola Rhizosphere: Network Analysis Reveals a Core Bacterium Shaping Microbial Interactions. Frontiers in Microbiology, 2020, 11, 1587.	1.5	16
76	In-Depth Characterization of Plant Growth Promotion Potentials of Selected Alkanes-Degrading Plant Growth-Promoting Bacterial Isolates. Frontiers in Microbiology, 2022, 13, 863702.	1.5	16
77	An altered root exudation pattern through mycorrhization affecting microconidia germination of the highly specialized tomato pathogen <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i> (<i>Fol</i>) is not tomato specific but also occurs in <i>Fol</i> nonhost plants. Canadian Journal of Botany, 2007, 85, 347-352.	1.2	14
78	Arbuscular Mycorrhizal Fungal Communities of Native Plant Species under High Petroleum Hydrocarbon Contamination Highlights Rhizophagus as a Key Tolerant Genus. Microorganisms, 2020, 8, 872.	1.6	12
79	Arbuscular mycorrhizal responsiveness of in vitro tomato root lines is not related to growth and nutrient uptake rates. Canadian Journal of Botany, 2003, 81, 645-656.	1.2	11
80	What determines host specificity in hyperspecialized plant parasitic nematodes?. BMC Genomics, 2019, 20, 457.	1.2	11
81	Expression of Nâ€cycling genes of root microbiomes provides insights for sustaining oilseed crop production. Environmental Microbiology, 2020, 22, 4545-4556.	1.8	11
82	Effects of arbuscular mycorrhizal fungi inoculation and crop sequence on root-associated microbiome, crop productivity and nutrient uptake in wheat-based and flax-based cropping systems. Applied Soil Ecology, 2021, 168, 104136.	2.1	10
83	Long-Term Persistence of Arbuscular Mycorrhizal Fungi in the Rhizosphere and Bulk Soils of Non-host Brassica napus and Their Networks of Co-occurring Microbes. Frontiers in Plant Science, 2022, 13, 828145.	1.7	10
84	A new species of Pseudorobillarda, an endophyte from Thuja occidentalis in Canada, and a key to the species. Mycologia, 2003, 95, 955-958.	0.8	9
85	Transcriptome-wide selection of a reliable set of reference genes for gene expression studies in potato cyst nematodes (Globodera spp.). PLoS ONE, 2018, 13, e0193840.	1.1	9
86	First Report of Fusarium solani Canker and Wilt Symptoms on Red Oak (Quercus rubra) in Quebec, Canada. Plant Disease, 1999, 83, 78-78.	0.7	8
87	Ã‰valuation au QuÃ©bec dâ€™un modÃ¨le de prÃ©diction de la fin de la pÃ©riode annuelle dâ€™Ã©jection des ascospores du Venturia inaequalis.. Phytoprotection, 1990, 71, 17-23.	0.3	7
88	First Report of Cryptocline taxicola Infecting Pacific Yew (Taxus brevifolia) in Eastern North America. Plant Disease, 2001, 85, 922-922.	0.7	7
89	Contribution of <i>Medicago sativa</i> to the productivity and nutritive value of forage in semiâ€arid grassland pastures. Grass and Forage Science, 2018, 73, 159-173.	1.2	6
90	Inter-Kingdom Networks of Canola Microbiome Reveal Bradyrhizobium as Keystone Species and Underline the Importance of Bulk Soil in Microbial Studies to Enhance Canola Production. Microbial Ecology, 2022, 84, 1166-1181.	1.4	6

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91	Root endophytes modify the negative effects of chickpea on the emergence of durum wheat. Applied Soil Ecology, 2015, 96, 201-210.	2.1	5
92	Investigating the Effect of a Mixed Mycorrhizal Inoculum on the Productivity of Biomass Plantation Willows Grown on Marginal Farm Land. Forests, 2018, 9, 185.	0.9	5
93	<i>Brassicaceae</i> host plants mask the feedback from the previous year's soil history on bacterial communities, except when they experience drought. Environmental Microbiology, 2022, 24, 3529-3548.	1.8	5
94	Phialocephala victorinii sp. nov., Endophyte of Cypripedium parviflorum. Mycologia, 2000, 92, 571.	0.8	4
95	Salix purpurea and Eleocharis obtusa Rhizospheres Harbor a Diverse Rhizospheric Bacterial Community Characterized by Hydrocarbons Degradation Potentials and Plant Growth-Promoting Properties. Plants, 2021, 10, 1987.	1.6	4
96	Suitability of <i>Glomus intraradices</i> in vitro produced spores and root segment inoculum for the establishment of a mycorrhizosphere in an experimental microcosm. Canadian Journal of Botany, 2001, 79, 879-885.	1.2	4
97	Influence of High Salt Levels on the Germination and Growth of Five Potentially Utilizable Plants for Median Turfing in Northern Climates. Journal of Environmental Horticulture, 1988, 6, 118-121.	0.3	4
98	A new species Polynema muirii on Fagus grandifolia. Mycologia, 1999, 91, 136-140.	0.8	3
99	Rhizosphere shotgun metagenomic analyses fail to show differences between ancestral and modern wheat genotypes grown under low fertilizer inputs. FEMS Microbiology Ecology, 2021, 97, .	1.3	3
100	Hydrocarbon substrate richness impacts microbial abundance, microbiome composition, and hydrocarbon loss. Applied Soil Ecology, 2021, 165, 104015.	2.1	3
101	Role of Root Exudates and Rhizosphere Microflora in the Arbuscular Mycorrhizal Fungi-Mediated Biocontrol of Phytophthora nicotianae in Tomato. Soil Biology, 2009, , 141-158.	0.6	3
102	Sustainable agriculture and the multigenomic model: how advances in the genetics of arbuscular mycorrhizal fungi will change soil management practices.. , 0, , 269-287.		3
103	First Report of Ceratocystis fimbriata Infecting Balsam Poplar (Populus balsamifera). Plant Disease, 1999, 83, 879-879.	0.7	3
104	Diarimella laurentidae anam.: sp.nov. from Quebec. Canadian Journal of Botany, 1998, 76, 2037-2041.	1.2	2
105	Leptomelanconium abietis sp. nov. on Needles of Abies balsamea. Mycologia, 2001, 93, 212.	0.8	2
106	Arbuscular Mycorrhizal Fungi Communities in Major Intensive North American Grain Productions. , 2008, , 135-157.		2
107	Root Rot of Black Spruce Caused by Cylindrocladium canadense in Eastern North America. Plant Disease, 2005, 89, 204-204.	0.7	2
108	First Report of Root Rot on Asparagus Caused by Phytophthora megasperma in Canada. Plant Disease, 2003, 87, 447-447.	0.7	2

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109	A new species of Pseudorobillarda, an endophyte from Thuja occidentalis in Canada, and a key to the species. Mycologia, 2003, 95, 955-8.	0.8	2
110	Allometry in the histogenesis of <i>Prunus</i> fruits (Rosaceae). Canadian Journal of Botany, 1995, 73, 299-306.	1.2	1
111	New hosts for<i>Choanatiara lunata</i>. Canadian Journal of Plant Pathology, 1998, 20, 319-323.	0.8	1
112	A New Species Polynema muirii on Fagus grandifolia. Mycologia, 1999, 91, 136.	0.8	1
113	Suitability of Glomus intraradices in vitro produced spores and root segment inoculum for the establishment of a mycorrhizosphere in an experimental microcosm. Canadian Journal of Botany, 2001, 79, 879-885.	1.2	1
114	Leptomelanconium abietis sp. nov. on needles of Abies balsamea. Mycologia, 2001, 93, 212-215.	0.8	1
115	Copper Release from Chemical Root-Control Baskets in Hardwood Tree Production. Journal of Environmental Quality, 2002, 31, 910.	1.0	1
116	Copper Release from Chemical Rootâ€Control Baskets in Hardwood Tree Production. Journal of Environmental Quality, 2002, 31, 910-916.	1.0	1
117	A New Species of Pseudorobillarda, an Endophyte from Thuja occidentalis in Canada, and a Key to the Species. Mycologia, 2003, 95, 955.	0.8	1
118	First Report of Naemacyclus fimbriatus Infecting Pitch Pine (Pinus rigida). Plant Disease, 1998, 82, 959-959.	0.7	1
119	PremiÃ¨re mention du Marssonina salicicola sur des saules pleureurs au QuÃ©bec. Phytoprotection, 0, 79, 87-91.	0.3	1
120	Un modÃ¨le dâ€™estimation de lâ€™Ã©tat dâ€™avancement de la pÃ©riode dâ€™infection primaire par le Venturia inaequalis en verger de pommiers. Phytoprotection, 0, 71, 73-84.	0.3	1
121	Phytoremediation. , 2010, , .		1
122	<i>Diarimella laurentidae</i> anam.: sp.nov. from Quebec. Canadian Journal of Botany, 1998, 76, 2037-2041.	1.2	1