Claude Murat

List of Publications by Citations

79 papers	7,998 citations	36 h-index	82 g-index
82 ext. papers	9,702 ext. citations	7.3 avg, IF	5.25 L-index

#	Paper	IF	Citations
79	The Paleozoic origin of enzymatic lignin decomposition reconstructed from 31 fungal genomes. *Science*, **2012**, 336, 1715-9	33.3	1129
78	454 Pyrosequencing analyses of forest soils reveal an unexpectedly high fungal diversity. *New Phytologist*, **2009**, 184, 449-456	9.8	751
77	Convergent losses of decay mechanisms and rapid turnover of symbiosis genes in mycorrhizal mutualists. *Nature Genetics*, **2015**, 47, 410-5	36.3	601
76	Périgord black truffle genome uncovers evolutionary origins and mechanisms of symbiosis. *Nature*, **2010**, 464, 1033-8	50.4	545
75	Genome of an arbuscular mycorrhizal fungus provides insight into the oldest plant symbiosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 20117-22	11.5	499
74	Obligate biotrophy features unraveled by the genomic analysis of rust fungi. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 9166-71	11.5	479
73	The plant cell wall-decomposing machinery underlies the functional diversity of forest fungi. *Science*, **2011**, 333, 762-5	33.3	417
72	Endophytic life strategies decoded by genome and transcriptome analyses of the mutualistic root symbiont Piriformospora indica. *PLoS Pathogens*, **2011**, 7, e1002290	7.6	279
71	Genome sequence of the button mushroom Agaricus bisporus reveals mechanisms governing adaptation to a humic-rich ecological niche. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 17501-6	11.5	277
70	Pyrosequencing reveals a contrasted bacterial diversity between oak rhizosphere and surrounding soil. *Environmental Microbiology Reports*, **2010**, 2, 281-8	3.7	271
69	Unearthing the roots of ectomycorrhizal symbioses. *Nature Reviews Microbiology*, **2016**, 14, 760-773	22.2	184
68	Insight into trade-off between wood decay and parasitism from the genome of a fungal forest pathogen. *New Phytologist*, **2012**, 194, 1001-1013	9.8	168
67	Truffles: much more than a prized and local fungal delicacy. *FEMS Microbiology Letters*, **2006**, 260, 1-8	2.9	143
66	Historical biogeography and diversification of truffles in the Tuberaceae and their newly identified southern hemisphere sister lineage. *PLoS ONE*, **2013**, 8, e52765	3.7	139
65	Polymorphism at the ribosomal DNA ITS and its relation to postglacial re-colonization routes of the Perigord truffle Tuber melanosporum. *New Phytologist*, **2004**, 164, 401-411	9.8	137
64	Molecular phylogeny and historical biogeography of the genus Tuber, the "true truffles". *Journal of Biogeography*, **2008**, 35, 815-829	4.1	107
63	ITS-1 versus ITS-2 pyrosequencing: a comparison of fungal populations in truffle grounds. *Mycologia* , **2011**, 103, 1184-93	2.4	101

62	Comparative genomics and transcriptomics depict ericoid mycorrhizal fungi as versatile saprotrophs and plant mutualists. *New Phytologist*, **2018**, 217, 1213-1229	9.8	99
61	Morphological and molecular typing of the below-ground fungal community in a natural Tuber magnatum truffle-ground. *FEMS Microbiology Letters*, **2005**, 245, 307-13	2.9	99
60	Ectomycorrhizal ecology is imprinted in the genome of the dominant symbiotic fungus Cenococcum geophilum. *Nature Communications*, **2016**, 7, 12662	17.4	97
59	Large-scale genome sequencing of mycorrhizal fungi provides insights into the early evolution of symbiotic traits. *Nature Communications*, **2020**, 11, 5125	17.4	86
58	Fine-scale spatial genetic structure of the black truffle (Tuber melanosporum) investigated with neutral microsatellites and functional mating type genes. *New Phytologist*, **2013**, 199, 176-187	9.8	68
57	The genome of the white-rot fungus Pycnoporus cinnabarinus: a basidiomycete model with a versatile arsenal for lignocellulosic biomass breakdown. *BMC Genomics*, **2014**, 15, 486	4.5	62
56	Distribution and localization of microsatellites in the Perigord black truffle genome and identification of new molecular markers. *Fungal Genetics and Biology*, **2011**, 48, 592-601	3.9	61
55	454 Pyrosequencing Analysis of Fungal Assemblages from Geographically Distant, Disparate Soils Reveals Spatial Patterning and a Core Mycobiome. *Diversity*, **2013**, 5, 73-98	2.5	58
54	Gene expression in mycorrhizal orchid protocorms suggests a friendly plant-fungus relationship. *Planta*, **2014**, 239, 1337-49	4.7	57
53	Is the Perigord black truffle threatened by an invasive species? We dreaded it and it has happened!. *New Phytologist*, **2008**, 178, 699-702	9.8	56
52	Below-ground fine-scale distribution and soil versus fine root detection of fungal and soil oomycete communities in a French beech forest. *Fungal Ecology*, **2013**, 6, 223-235	4.1	54
51	Pezizomycetes genomes reveal the molecular basis of ectomycorrhizal truffle lifestyle. *Nature Ecology and Evolution*, **2018**, 2, 1956-1965	12.3	52
50	Phylogenetic and populational study of the Tuber indicum complex. *Mycological Research*, **2006**, 110, 1034-45		51
49	Forty years of inoculating seedlings with truffle fungi: past and future perspectives. *Mycorrhiza*, **2015**, 25, 77-81	3.9	49
48	Tuber magnatum Pico, a species of limited geographical distribution: its genetic diversity inside and outside a truffle ground. *Environmental Microbiology*, **2005**, 7, 55-65	5.2	49
47	Soil analysis reveals the presence of an extended mycelial network in a Tuber magnatum truffle-ground. *FEMS Microbiology Ecology*, **2010**, 71, 43-9	4.3	46
46	Certainties and uncertainties about the life cycle of the P�igord black truffle (Tuber melanosporum Vittad.). *Annals of Forest Science*, **2016**, 73, 105-117	3.1	42
45	Climatic variations explain annual fluctuations in French P�igord black truffle wholesale markets but do not explain the decrease in black truffle production over the last 48´years. *Mycorrhiza*, **2014**, 24 Suppl 1, S115-25	3.9	41

44	Survey and analysis of simple sequence repeats in the Laccaria bicolor genome, with development of microsatellite markers. *Current Genetics*, **2011**, 57, 75-88	2.9	36
43	Phylogenetic relationships between Tuber pseudoexcavatum, a Chinese truffle, and other Tuber species based on parsimony and distance analysis of four different gene sequences. *FEMS Microbiology Letters*, **2006**, 259, 269-81	2.9	30
42	Imaging mycorrhizal fungal transformants that express EGFP during ericoid endosymbiosis. *Current Genetics*, **2007**, 52, 65-75	2.9	29
41	Characterization of transposable elements in the ectomycorrhizal fungus Laccaria bicolor. *PLoS ONE*, **2012**, 7, e40197	3.7	29
40	Two ectomycorrhizal truffles, Tuber melanosporum and T.´aestivum, endophytically colonise roots of non-ectomycorrhizal plants in natural environments. *New Phytologist*, **2020**, 225, 2542-2556	9.8	29
39	Wild and cultivated mushrooms as a model of sustainable development. *Plant Biosystems*, **2013**, 147, 226-236	1.6	28
38	Genome-wide survey of repetitive DNA elements in the button mushroom Agaricus bisporus. *Fungal Genetics and Biology*, **2013**, 55, 6-21	3.9	28
37	Cu,Zn superoxide dismutase and zinc stress in the metal-tolerant ericoid mycorrhizal fungus Oidiodendron maius Zn. *FEMS Microbiology Letters*, **2009**, 293, 48-57	2.9	26
36	Fine-scale spatial genetic structure analysis of the black truffle Tuber aestivum and its link to aroma variability. *Environmental Microbiology*, **2015**, 17, 3039-50	5.2	25
35	Identification of internal transcribed spacer sequence motifs in truffles: a first step toward their DNA bar coding. *Applied and Environmental Microbiology*, **2007**, 73, 5320-30	4.8	23
34	Five years investigation of female and male genotypes in p�igord black truffle (Tuber melanosporum Vittad.) revealed contrasted reproduction strategies. *Environmental Microbiology*, **2017**, 19, 2604-2615	5.2	22
33	Fungal diversity is not determined by mineral and chemical differences in serpentine substrates. *PLoS ONE*, **2012**, 7, e44233	3.7	22
32	New Insights into the Complex Relationship between Weight and Maturity of Burgundy Truffles (Tuber aestivum). *PLoS ONE*, **2017**, 12, e0170375	3.7	21
31	Fine-scale genetic structure of natural Tuber aestivum sites in southern Germany. *Mycorrhiza*, **2016**, 26, 895-907	3.9	18
30	PCR primers specific for the genus Tuber reveal the presence of several truffle species in a truffle-ground. *FEMS Microbiology Letters*, **2009**, 297, 67-72	2.9	17
29	Phylogenetic affiliation of the desert truffles Picoa juniperi and Picoa lefebvrei. *Antonie Van Leeuwenhoek*, **2010**, 98, 429-36	2.1	17
28	Truffle Phylogenomics. *Advances in Botanical Research*, **2014**, 211-234	2.2	16
27	Sex and truffles: first evidence of Perigord black truffle outcrosses. *New Phytologist*, **2008**, 180, 260-263	9.8	16

26	A survey of genome-wide single nucleotide polymorphisms through genome resequencing in the P�igord black truffle (Tuber melanosporum Vittad.). *Molecular Ecology Resources*, **2015**, 15, 1243-55	8.4	15
25	Beech roots are simultaneously colonized by multiple genets of the ectomycorrhizal fungus Laccaria amethystina clustered in two genetic groups. *Molecular Ecology*, **2012**, 21, 2116-29	5.7	15
24	An improved method compatible with metagenomic analyses to extract genomic DNA from soils in Tuber melanosporum orchards. *Journal of Applied Microbiology*, **2013**, 115, 163-70	4.7	15
23	SSR-based identification of genetic groups within European populations of Tuber aestivum Vittad. *Mycorrhiza*, **2016**, 26, 99-110	3.9	14
22	Draft Genome Sequence of Tuber borchii Vittad., a Whitish Edible Truffle. *Genome Announcements*, **2018**, 6,		14
21	First identification of polymorphic microsatellite markers in the Burgundy truffle, Tuber aestivum (Tuberaceae). *Applications in Plant Sciences*, **2013**, 1, 1200220	2.3	14
20	Specific regions in the Sod1 locus of the ericoid mycorrhizal fungus Oidiodendron maius from metal-enriched soils show a different sequence polymorphism. *FEMS Microbiology Ecology*, **2011**, 75, 321-31	4.3	14
19	Diversity and Structure of Fungal Communities in Neotropical Rainforest Soils: The Effect of Host Recurrence. *Microbial Ecology*, **2017**, 73, 310-320	4.4	13
18	Trichocybe, a new genus for Clitocybe puberula (Agaricomycetes, Agaricales). *Fungal Diversity*, **2010** , 42, 97-105	17.6	13
17	Influence of annual climatic variations, climate changes, and sociological factors on the production of the P�igord black truffle (Tuber melanosporum Vittad.) from 1903-1904 to 1988-1989 in the Vaucluse (France). *Mycorrhiza*, **2019**, 29, 113-125	3.9	10
16	First production of Italian white truffle (Tuber magnatum Pico) ascocarps in an orchard outside its natural range distribution in France. *Mycorrhiza*, **2021**, 31, 383-388	3.9	10
15	The Black Truffles Tuber melanosporum and Tuber indicum. *Soil Biology*, **2016**, 19-32	1	9
14	Ascoma genotyping and mating type analyses of mycorrhizas and soil mycelia of Tuber borchii in a truffle orchard established by mycelial inoculated plants. *Environmental Microbiology*, **2020**, 22, 964-975	5.2	8
13	Modulation of Plant and Fungal Gene Expression Upon Cd Exposure and Symbiosis in Ericoid Mycorrhizal. *Frontiers in Microbiology*, **2020**, 11, 341	5.7	7
12	Soil temperature and hydric potential influences the monthly variations of soil Tuber aestivum DNA in a highly productive orchard. *Scientific Reports*, **2019**, 9, 12964	4.9	6
11	New insights into black truffle biology: discovery of the potential connecting structure between a Tuber aestivum ascocarp and its host root. *Mycorrhiza*, **2019**, 29, 219-226	3.9	6
10	Genomic suppression subtractive hybridization as a tool to identify differences in mycorrhizal fungal genomes. *FEMS Microbiology Letters*, **2011**, 318, 115-22	2.9	5
9	Repeated Elements in Filamentous Fungi with a Focus on Wood-Decay Fungi **2013**, 21-40		4

8	Correction for Morin et al., Genome sequence of the button mushroom Agaricus bisporus reveals mechanisms governing adaptation to a humic-rich ecological niche. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 4146-4146	11.5	4
7	Reconstructing the evolutionary history of gypsy retrotransposons in the P�igord black truffle (Tuber melanosporum Vittad.). *Mycorrhiza*, **2016**, 26, 553-63	3.9	4
6	Molecular technologies applied to the ecology of ectomycorrhizal communities **2016**, 323-339		3
5	Contrasting demographic histories revealed in two invasive populations of the dry rot fungus Serpula lacrymans. *Molecular Ecology*, **2021**, 30, 2772-2789	5.7	2
4	Truffle Genomics: Investigating an Early Diverging Lineage of Pezizomycotina. *Soil Biology*, **2016**, 137-149	1	2
3	Frequency of the two mating types in the soil under productive and non-productive trees in five French orchards of the P�igord black truffle (Tuber melanosporum Vittad.). *Mycorrhiza*, **2021**, 31, 361-369	3.9	2
2	Identification and In Situ Distribution of a Fungal Gene Marker: The Mating Type Genes of the Black Truffle. *Methods in Molecular Biology*, **2016**, 1399, 141-9	1.4	1
1	Draft Genome Sequence of the Ectomycorrhizal Ascomycete. *Microbiology Resource Announcements*, **2019**, 8,	1.3	1