Pieter Leyssen

List of Publications by Year
in descending order

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102 papers	4,697 citations	117453 34 h-index	118652 62 g-index
105 all docs	105 docs citations	105 times ranked	7130 citing authors

#	Article	IF	Citations
1	Î±-Ketoamides as Broad-Spectrum Inhibitors of Coronavirus and Enterovirus Replication: Structure-Based Design, Synthesis, and Activity Assessment. Journal of Medicinal Chemistry, 2020, 63, 4562-4578.	2.9	437
2	Remdesivir, Molnupiravir and Nirmatrelvir remain active against SARS-CoV-2 Omicron and other variants of concern. Antiviral Research, 2022, 198, 105252.	1.9	302
3	The Predominant Mechanism by Which Ribavirin Exerts Its Antiviral Activity In Vitro against Flaviviruses and Paramyxoviruses Is Mediated by Inhibition of IMP Dehydrogenase. Journal of Virology, 2005, 79, 1943-1947.	1.5	254
4	Bioactivity-Based Molecular Networking for the Discovery of Drug Leads in Natural Product Bioassay-Guided Fractionation. Journal of Natural Products, 2018, 81, 758-767.	1.5	237
5	STAT2 signaling restricts viral dissemination but drives severe pneumonia in SARS-CoV-2 infected hamsters. Nature Communications, 2020, 11, 5838.	5.8	225
6	Itraconazole Inhibits Enterovirus Replication by Targeting the Oxysterol-Binding Protein. Cell Reports, 2015, 10, 600-615.	2.9	201
7	Mutations in the chikungunya virus non-structural proteins cause resistance to favipiravir (T-705), a broad-spectrum antiviral. Journal of Antimicrobial Chemotherapy, 2014, 69, 2770-2784.	1.3	187
8	Molecular strategies to inhibit the replication of RNA viruses. Antiviral Research, 2008, 78, 9-25.	1.9	117
9	Identification of Inhibitors of SARS-CoV-2 3CL-Pro Enzymatic Activity Using a Small Molecule in Vitro Repurposing Screen. ACS Pharmacology and Translational Science, 2021, 4, 1096-1110.	2.5	101
10	A Novel, Broad-Spectrum Inhibitor of Enterovirus Replication That Targets Host Cell Factor Phosphatidylinositol 4-Kinase IIIÎ². Antimicrobial Agents and Chemotherapy, 2013, 57, 4971-4981.	1.4	96
11	The combined treatment of Molnupiravir and Favipiravir results in a potentiation of antiviral efficacy in a SARS-CoV-2 hamster infection model. EBioMedicine, 2021, 72, 103595.	2.7	91
12	Synergy of entry inhibitors with direct-acting antivirals uncovers novel combinations for prevention and treatment of hepatitis C. Gut, 2015, 64, 483-494.	6.1	83
13	The Anti-Yellow Fever Virus Activity of Ribavirin Is Independent of Error-Prone Replication. Molecular Pharmacology, 2006, 69, 1461-1467.	1.0	80
14	Antimicrobial, Anthelmintic, and Antiviral Activity of Plants Traditionally Used for Treating Infectious Disease in the Similipal Biosphere Reserve, Odisha, India. Frontiers in Pharmacology, 2017, 8, 658.	1.6	78
15	Kobophenol A Inhibits Binding of Host ACE2 Receptor with Spike RBD Domain of SARS-CoV-2, a Lead Compound for Blocking COVID-19. Journal of Physical Chemistry Letters, 2021, 12, 1793-1802.	2.1	77
16	Antiviral Activity of Diterpene Esters on Chikungunya Virus and HIV Replication. Journal of Natural Products, 2015, 78, 1277-1283.	1.5	62
17	Understanding the Mechanism of the Broad-Spectrum Antiviral Activity of Favipiravir (T-705): Key Role of the F1 Motif of the Viral Polymerase. Journal of Virology, 2017, 91, .	1.5	62
18	The Capsid Binder Vapendavir and the Novel Protease Inhibitor SG85 Inhibit Enterovirus 71 Replication. Antimicrobial Agents and Chemotherapy, 2014, 58, 6990-6992.	1.4	60

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19	Interferons, Interferon Inducers, and Interferon-Ribavirin in Treatment of Flavivirus-Induced Encephalitis in Mice. Antimicrobial Agents and Chemotherapy, 2003, 47, 777-782.	1.4	55
20	The RNA Template Channel of the RNA-Dependent RNA Polymerase as a Target for Development of Antiviral Therapy of Multiple Genera within a Virus Family. PLoS Pathogens, 2015, 11, e1004733.	2.1	55
21	Antiviral Activity of Broad-Spectrum and Enterovirus-Specific Inhibitors against Clinical Isolates of Enterovirus D68. Antimicrobial Agents and Chemotherapy, 2015, 59, 7782-7785.	1.4	54
22	Discovery of Multitarget Antivirals Acting on Both the Dengue Virus NS5-NS3 Interaction and the Host Src/Fyn Kinases. Journal of Medicinal Chemistry, 2015, 58, 4964-4975.	2.9	52
23	Euphorbia dendroides Latex as a Source of Jatrophane Esters: Isolation, Structural Analysis, Conformational Study, and Anti-CHIKV Activity. Journal of Natural Products, 2016, 79, 2873-2882.	1.5	52
24	Environmentally Friendly Procedure Based on Supercritical Fluid Chromatography and Tandem Mass Spectrometry Molecular Networking for the Discovery of Potent Antiviral Compounds from Euphorbia semiperfoliata. Journal of Natural Products, 2017, 80, 2620-2629.	1.5	51
25	Complete Genome Sequence, Taxonomic Assignment, and Comparative Analysis of the Untranslated Regions of the Modoc Virus, a Flavivirus with No Known Vector. Virology, 2002, 293, 125-140.	1.1	46
26	Antiviral activity of [1,2,3]triazolo[4,5- d]pyrimidin-7(6 H)-ones against chikungunya virus targeting the viral capping nsP1. Antiviral Research, 2017, 144, 216-222.	1.9	44
27	Antibacterial, Antifungal, Antiviral, and Anthelmintic Activities of Medicinal Plants of Nepal Selected Based on Ethnobotanical Evidence. Evidence-based Complementary and Alternative Medicine, 2020, 2020, 1-14.	0.5	44
28	Structureâ€“activity relationship study of arbidol derivatives as inhibitors of chikungunya virus replication. Bioorganic and Medicinal Chemistry, 2014, 22, 6014-6025.	1.4	43
29	Complete genome sequence of Montana Myotis leukoencephalitis virus, phylogenetic analysis and comparative study of the 3â€² untranslated region of flaviviruses with no known vector. Journal of General Virology, 2002, 83, 1875-1885.	1.3	40
30	Antiviral Activity of Flexibilane and Tigliane Diterpenoids from Stillingia lineata. Journal of Natural Products, 2015, 78, 1119-1128.	1.5	39
31	A highly potent antibody effective against SARS-CoV-2 variants of concern. Cell Reports, 2021, 37, 109814.	2.9	39
32	LC-MS2-Based dereplication of Euphorbia extracts with anti-Chikungunya virus activity. FÃ¬toterapÃ¬Ã¢, 2015, 105, 202-209.	1.1	37
33	Isolation of Premyrsinane, Myrsinane, and Tigliane Diterpenoids from Euphorbia pithyusa Using a Chikungunya Virus Cell-Based Assay and Analogue Annotation by Molecular Networking. Journal of Natural Products, 2017, 80, 2051-2059.	1.5	37
34	Identification of a Series of Compounds with Potent Antiviral Activity for the Treatment of Enterovirus Infections. ACS Medicinal Chemistry Letters, 2013, 4, 585-589.	1.3	36
35	Linear and branched alkyl-esters and amides of gallic acid and other (mono-, di- and tri-) hydroxy benzoyl derivatives as promising anti-HCV inhibitors. European Journal of Medicinal Chemistry, 2015, 92, 656-671.	2.6	36
36	A novel druggable interprotomer pocket in the capsid of rhino- and enteroviruses. PLoS Biology, 2019, 17, e3000281.	2.6	36

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37	Benzouracilâ€“coumarinâ€“arene conjugates as inhibiting agents for chikungunya virus. Antiviral Research, 2015, 118, 103-109.	1.9	35
38	Design, synthesis, optimization and antiviral activity of a class of hybrid dengue virus E protein inhibitors. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 1747-1752.	1.0	34
39	Assessing medicinal plants traditionally used in the Chirang Reserve Forest, Northeast India for antimicrobial activity. Journal of Ethnopharmacology, 2018, 225, 220-233.	2.0	33
40	Evaluation of SARS-CoV-2 3C-like protease inhibitors using self-assembled monolayer desorption ionization mass spectrometry. Antiviral Research, 2020, 182, 104924.	1.9	33
41	Bioengineering and Semisynthesis of an Optimized Cyclophilin Inhibitor for Treatment of Chronic Viral Infection. Chemistry and Biology, 2015, 22, 285-292.	6.2	32
42	A novel method for high-throughput screening to quantify antiviral activity against viruses that induce limited CPE. Journal of Virological Methods, 2012, 183, 176-179.	1.0	30
43	In vitro activity of itraconazole against SARSâ€CoVâ€2. Journal of Medical Virology, 2021, 93, 4454-4460.	2.5	30
44	Modification of the length and structure of the linker of N6-benzyladenosine modulates its selective antiviral activity against enterovirus 71. European Journal of Medicinal Chemistry, 2016, 111, 84-94.	2.6	29
45	In vitro characterisation of a pleconaril/pirodavir-like compound with potent activity against rhinoviruses. Virology Journal, 2015, 12, 106.	1.4	28
46	Inhibition of Chikungunya Virus-Induced Cell Death by Salicylate-Derived Bryostatin Analogues Provides Additional Evidence for a PKC-Independent Pathway. Journal of Natural Products, 2016, 79, 680-684.	1.5	28
47	A novel benzonitrile analogue inhibits rhinovirus replication. Journal of Antimicrobial Chemotherapy, 2014, 69, 2723-2732.	1.3	27
48	Broad spectrum anti-coronavirus activity of a series of anti-malaria quinoline analogues. Antiviral Research, 2021, 193, 105127.	1.9	27
49	Computer-aided identification, synthesis and evaluation of substituted thienopyrimidines as novel inhibitors of HCV replication. European Journal of Medicinal Chemistry, 2016, 123, 31-47.	2.6	26
50	Viral engagement with host receptors blocked by a novel class of tryptophan dendrimers that targets the 5-fold-axis of the enterovirus-A71 capsid. PLoS Pathogens, 2019, 15, e1007760.	2.1	26
51	Infection of SCID mice with Montana Myotis leukoencephalitis virus as a model for flavivirus encephalitis. Journal of General Virology, 2002, 83, 1887-1896.	1.3	26
52	New 1-phenyl-5-(1H-pyrrol-1-yl)-1H-pyrazole-3-carboxamides inhibit hepatitis C virus replication via suppression of cyclooxygenase-2. European Journal of Medicinal Chemistry, 2015, 90, 497-506.	2.6	25
53	Acute Encephalitis, a Poliomyelitisâ€like Syndrome and Neurological Sequelae in a Hamster Model for Flavivirus Infections. Brain Pathology, 2003, 13, 279-290.	2.1	24
54	Synthesis and Structure-Activity Relationships of Imidazole-Coumarin Conjugates against Hepatitis C Virus. Molecules, 2016, 21, 228.	1.7	24

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55	Investigation of Premyrsinane and Myrsinane Esters in Euphorbia cupanii and Euphobia pithyusa with MS2LDA and Combinatorial Molecular Network Annotation Propagation. Journal of Natural Products, 2019, 82, 1459-1470.	1.5	24
56	Sangamides, a new class of cyclophilin-inhibiting host-targeted antivirals for treatment of HCV infection. MedChemComm, 2012, 3, 944-949.	3.5	23
57	Chemical modification of the plant isoprenoid cytokinin N6-isopentenyladenosine yields a selective inhibitor of human enterovirus 71 replication. European Journal of Medicinal Chemistry, 2015, 90, 406-413.	2.6	23
58	Reaching beyond HIV/HCV: nelfinavir as a potential starting point for broad-spectrum protease inhibitors against dengue and chikungunya virus. RSC Advances, 2015, 5, 85938-85949.	1.7	21
59	Substituted 2,6-bis(benzimidazol-2-yl)pyridines: A novel chemical class of pestivirus inhibitors that targets a hot spot for inhibition of pestivirus replication in the RNA-dependent RNA polymerase. Antiviral Research, 2014, 106, 71-79.	1.9	20
60	Protein kinases C as potential host targets for the inhibition of chikungunya virus replication. Antiviral Research, 2017, 139, 79-87.	1.9	20
61	Rational modifications on a benzylidene-acrylohydrazide antiviral scaffold, synthesis and evaluation of bioactivity against Chikungunya virus. European Journal of Medicinal Chemistry, 2018, 149, 56-68.	2.6	20
62	Structure Elucidation of Coxsackievirus A16 in Complex with GPP3 Informs a Systematic Review of Highly Potent Capsid Binders to Enteroviruses. PLoS Pathogens, 2015, 11, e1005165.	2.1	20
63	The Enterovirus 3C Protease Inhibitor SG85 Efficiently Blocks Rhinovirus Replication and Is Not Cross-Resistant with Rupintrivir. Antimicrobial Agents and Chemotherapy, 2015, 59, 5814-5818.	1.4	18
64	Optimization of a Class of Tryptophan Dendrimers That Inhibit HIV Replication Leads to a Selective, Specific, and Low-Nanomolar Inhibitor of Clinical Isolates of Enterovirus A71. Antimicrobial Agents and Chemotherapy, 2016, 60, 5064-5067.	1.4	18
65	In silico identification, design and synthesis of novel piperazine-based antiviral agents targeting the hepatitis C virus helicase. European Journal of Medicinal Chemistry, 2017, 125, 1115-1131.	2.6	18
66	Structurally Diverse Diterpenoids from Sandwithia guyanensis. Journal of Natural Products, 2018, 81, 901-912.	1.5	18
67	Inhibition of the Replication of Different Strains of Chikungunya Virus by 3-Aryl-[1,2,3]triazolo[4,5-d]pyrimidin-7(6H)-ones. ACS Infectious Diseases, 2018, 4, 605-619.	1.8	18
68	Discovery of Multitarget Agents Active as Broad-Spectrum Antivirals and Correctors of Cystic Fibrosis Transmembrane Conductance Regulator for Associated Pulmonary Diseases. Journal of Medicinal Chemistry, 2017, 60, 1400-1416.	2.9	17
69	Structure-activity relationship studies on a Trp dendrimer with dual activities against HIV and enterovirus A71. Modifications on the amino acid. Antiviral Research, 2017, 139, 32-40.	1.9	17
70	Cytopathic SARS-CoV-2 screening on VERO-E6 cells in a large-scale repurposing effort. Scientific Data, 2022, 9, .	2.4	17
71	Impact of Direct Virus-Induced Neuronal Dysfunction and Immunological Damage on the Progression of Flavivirus (Modoc) Encephalitis in a Murine Model. Journal of NeuroVirology, 2003, 9, 69-78.	1.0	16
72	Norbornane-based nucleoside and nucleotide analogues locked in North conformation. Bioorganic and Medicinal Chemistry, 2015, 23, 184-191.	1.4	16

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73	Simplified Bryostatin Analogues Protect Cells from Chikungunya Virus-Induced Cell Death. Journal of Natural Products, 2016, 79, 675-679.	1.5	16
74	Fluorination of Naturally Occurring N6-Benzyladenosine Remarkably Increased Its Antiviral Activity and Selectivity. Molecules, 2017, 22, 1219.	1.7	16
75	Design, synthesis and evaluation against Chikungunya virus of novel small-molecule antiviral agents. Bioorganic and Medicinal Chemistry, 2018, 26, 869-874.	1.4	16
76	From norbornane-based nucleotide analogs locked in South conformation to novel inhibitors of feline herpes virus. Bioorganic and Medicinal Chemistry, 2014, 22, 2974-2983.	1.4	15
77	Synthesis, biological activity and structureâ€“activity relationship of 4,5-dimethoxybenzene derivatives inhibitor of rhinovirus 14 infection. European Journal of Medicinal Chemistry, 2014, 76, 445-459.	2.6	15
78	Novel Class of Chikungunya Virus Small Molecule Inhibitors That Targets the Viral Capping Machinery. Antimicrobial Agents and Chemotherapy, 2020, 64, .	1.4	15
79	A dengue type 2 reporter virus assay amenable to high-throughput screening. Antiviral Research, 2020, 183, 104929.	1.9	13
80	Development and optimization of a highâ€throughput screening assay for in vitro antiâ€SARSâ€CoVâ€2 activity: Evaluation of 5676 Phase 1 Passed Structures. Journal of Medical Virology, 2022, 94, 3101-3111.	2.5	13
81	H1PVAT is a novel and potent early-stage inhibitor of poliovirus replication that targets VP1. Antiviral Research, 2014, 110, 1-9.	1.9	12
82	Comparative analysis of the anti-chikungunya virus activity of novel bryostatin analogs confirms the existence of a PKC-independent mechanism. Biochemical Pharmacology, 2016, 120, 15-21.	2.0	11
83	Shape-based virtual screening, synthesis and evaluation of novel pyrrolone derivatives as antiviral agents against HCV. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 936-940.	1.0	11
84	Intra-host emergence of an enterovirus A71 variant with enhanced PSGL1 usage and neurovirulence. Emerging Microbes and Infections, 2019, 8, 1076-1085.	3.0	10
85	Comparative analysis of the molecular mechanism of resistance to vapendavir across a panel of picornavirus species. Antiviral Research, 2021, 195, 105177.	1.9	10
86	Exploration of the anti-enterovirus activity of a series of pleconaril/pirodavir-like compounds. Antiviral Chemistry and Chemotherapy, 2015, 24, 56-61.	0.3	9
87	3-(imidazo[1,2- a :5,4- b â€²]dipyridin-2-yl)aniline inhibits pestivirus replication by targeting a hot spot drug binding pocket in the RNA-dependent RNA polymerase. Antiviral Research, 2016, 129, 99-103.	1.9	8
88	Antiviral and Cytotoxic Activity of Different Plant Parts of Banana (Musa spp.). Viruses, 2020, 12, 549.	1.5	8
89	Quinolinecarboxamides Inhibit the Replication of the Bovine Viral Diarrhea Virus by Targeting a Hot Spot for the Inhibition of Pestivirus Replication in the RNA-Dependent RNA Polymerase. Molecules, 2020, 25, 1283.	1.7	8
90	HIV protease inhibitors Nelfinavir and Lopinavir/Ritonavir markedly improve lung pathology in SARS-CoV-2-infected Syrian hamsters despite lack of an antiviral effect. Antiviral Research, 2022, 202, 105311.	1.9	8

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91	Development of New Sulfur-Containing Conjugated Compounds as Anti-HCV Agents. Phosphorus, Sulfur and Silicon and the Related Elements, 2011, 186, 1144-1152.	0.8	6
92	VP1 crystal structure-guided exploration and optimization of 4,5-dimethoxybenzene-based inhibitors of rhinovirus 14 infection. European Journal of Medicinal Chemistry, 2016, 115, 453-462.	2.6	6
93	NMR-based conformational analysis of 2â€²,6-disubstituted uridines and antiviral evaluation of new phosphoramidate prodrugs. Bioorganic and Medicinal Chemistry, 2015, 23, 5809-5815.	1.4	5
94	PI4KIII inhibitor enviroxime impedes the replication of the hepatitis C virus by inhibiting PI3 kinases. Journal of Antimicrobial Chemotherapy, 2018, 73, 3375-3384.	1.3	4
95	Synthesis, Structureâ€“Activity Relationships, and Antiviral Profiling of 1-Heteroaryl-2-Alkoxyphenyl Analogs as Inhibitors of SARS-CoV-2 Replication. Molecules, 2022, 27, 1052.	1.7	4
96	Exploring the importance of zinc binding and steric/hydrophobic factors in novel HCV replication inhibitors. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 1196-1199.	1.0	3
97	Novel symmetrical phenylenediamines as potential anti-hepatitis C virus agents. Antiviral Chemistry and Chemotherapy, 2015, 24, 155-160.	0.3	1
98	Enterovirus Inhibition by Hinged Aromatic Compounds with Polynuclei. Molecules, 2020, 25, 3821.	1.7	1
99	In silico development of a novel putative inhibitor of the 3C protease of Coxsackievirus B3 with a benzene sulfonamide skeleton. Journal of Pharmaceutical Chemistry, 2017, 4, 25-34.	0.2	1
100	Identification and Analysis of Antiviral Compounds Against Poliovirus. Methods in Molecular Biology, 2016, 1387, 325-338.	0.4	0
101	A novel class of small molecule inhibitors targeting the chikungunya virus capping machinery with a high barrier to resistance. Access Microbiology, 2019, 1, .	0.2	0
102	Computer-Aided Design and Synthesis of (Functionalized quinazoline)â€“(Î±-substituted) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td (Sciences, 2022, 23, 7646.	1.8	0