

Locus coeruleus volume and cell population changes during disease progression: A stereological study in human postmortem brain for early-stage biomarker discovery

Alzheimer's and Dementia

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Quantifying the accretion of hyperphosphorylated tau in the locus coeruleus and dorsal raphe nucleus: the pathological building blocks of early Alzheimer's disease. <i>Neuropathology and Applied Neurobiology</i> , 2017, 43, 393-408.	1.8	145
2	Locus coeruleus cellular and molecular pathology during the progression of Alzheimer's disease. <i>Acta Neuropathologica Communications</i> , 2017, 5, 8.	2.4	197
3	Magnetic resonance imaging of the human locus coeruleus: A systematic review. <i>Neuroscience and Biobehavioral Reviews</i> , 2017, 83, 325-355.	2.9	124
4	Chemogenetic locus coeruleus activation restores reversal learning in a rat model of Alzheimer's disease. <i>Brain</i> , 2017, 140, 3023-3038.	3.7	146
5	Investigating Focal Connectivity Deficits in Alzheimer's Disease Using Directional Brain Networks Derived from Resting-State fMRI. <i>Frontiers in Aging Neuroscience</i> , 2017, 9, 211.	1.7	17
6	Two Subpopulations of Noradrenergic Neurons in the Locus Coeruleus Complex Distinguished by Expression of the Dorsal Neural Tube Marker Pax7. <i>Frontiers in Neuroanatomy</i> , 2017, 11, 60.	0.9	34
7	The Neuroanatomy of the Reticular Nucleus Locus Coeruleus in Alzheimer's Disease. <i>Frontiers in Neuroanatomy</i> , 2017, 11, 80.	0.9	44
8	Down but Not Out: The Consequences of Pretangle Tau in the Locus Coeruleus. <i>Neural Plasticity</i> , 2017, 2017, 1-9.	1.0	39
9	The Longevity of Hippocampus-Dependent Memory Is Orchestrated by the Locus Coeruleus-Noradrenergic System. <i>Neural Plasticity</i> , 2017, 2017, 1-9.	1.0	70
10	Light at the beginning of the tunnel? Investigating early mechanistic changes in Alzheimer's disease. <i>Brain</i> , 2017, 140, 2770-2773.	3.7	9
11	Long Road to Ruin: Noradrenergic Dysfunction in Neurodegenerative Disease. <i>Trends in Neurosciences</i> , 2018, 41, 211-223.	4.2	212
12	Locus coeruleus integrity in old age is selectively related to memories linked with salient negative events. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 2228-2233.	3.3	104
13	The neurochemistry of agitation in Alzheimer's disease: a systematic review. <i>Ageing Research Reviews</i> , 2018, 43, 99-107.	5.0	31
14	Selective Vulnerability of Brainstem Nuclei in Distinct Tauopathies: A Postmortem Study. <i>Journal of Neuropathology and Experimental Neurology</i> , 2018, 77, 149-161.	0.9	42
15	Cognitive correlates of $\alpha 7$ nicotinic acetylcholine receptors in mild Alzheimer's dementia. <i>Brain</i> , 2018, 141, 1840-1854.	3.7	60
16	Association of Excessive Daytime Sleepiness With Longitudinal $\beta 2$ -Amyloid Accumulation in Elderly Persons Without Dementia. <i>JAMA Neurology</i> , 2018, 75, 672.	4.5	150
17	The cerebellum in Alzheimer's disease: evaluating its role in cognitive decline. <i>Brain</i> , 2018, 141, 37-47.	3.7	222
18	Probing the correlation of neuronal loss, neurofibrillary tangles, and cell death markers across the Alzheimer's disease Braak stages: a quantitative study in humans. <i>Neurobiology of Aging</i> , 2018, 61, 1-12.	1.5	89

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19	A probabilistic atlas of human brainstem pathways based on connectome imaging data. <i>NeuroImage</i> , 2018, 169, 227-239.	2.1	71
20	Locus Coeruleus Ablation Exacerbates Cognitive Deficits, Neuropathology, and Lethality in P301S Tau Transgenic Mice. <i>Journal of Neuroscience</i> , 2018, 38, 74-92.	1.7	93
21	In vivo Brainstem Imaging in Alzheimer's Disease: Potential for Biomarker Development. <i>Frontiers in Aging Neuroscience</i> , 2018, 10, 266.	1.7	12
22	Neuropathologic Correlates of Psychiatric Symptoms in Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2018, 66, 115-126.	1.2	133
23	On the origin of tau seeding activity in Alzheimer's disease. <i>Acta Neuropathologica</i> , 2018, 136, 815-817.	3.9	10
24	Noradrenergic Dysfunction in Alzheimer's and Parkinson's Diseases—An Overview of Imaging Studies. <i>Frontiers in Aging Neuroscience</i> , 2018, 10, 127.	1.7	48
25	Commentary: Locus Coeruleus Ablation Exacerbates Cognitive Deficits, Neuropathology, and Lethality in P301S Tau Transgenic Mice. <i>Frontiers in Neuroscience</i> , 2018, 12, 401.	1.4	7
26	Hypercapnic and Hypoxic Respiratory Response During Wakefulness and Sleep in a Streptozotocin Model of Alzheimer's Disease in Rats. <i>Journal of Alzheimer's Disease</i> , 2018, 65, 1159-1174.	1.2	5
27	In vivo mapping of brainstem nuclei functional connectivity disruption in Alzheimer's disease. <i>Neurobiology of Aging</i> , 2018, 72, 72-82.	1.5	58
28	Pretangle pathology within cholinergic nucleus basalis neurons coincides with neurotrophic and neurotransmitter receptor gene dysregulation during the progression of Alzheimer's disease. <i>Neurobiology of Disease</i> , 2018, 117, 125-136.	2.1	37
29	Profound degeneration of wake-promoting neurons in Alzheimer's disease. <i>Alzheimer's and Dementia</i> , 2019, 15, 1253-1263.	0.4	72
30	The role of Locus Coeruleus in neuroinflammation occurring in Alzheimer's disease. <i>Brain Research Bulletin</i> , 2019, 153, 47-58.	1.4	35
31	Locus coeruleus imaging as a biomarker for noradrenergic dysfunction in neurodegenerative diseases. <i>Brain</i> , 2019, 142, 2558-2571.	3.7	219
32	Early alteration of the locus coeruleus in phenotypic variants of Alzheimer's disease. <i>Annals of Clinical and Translational Neurology</i> , 2019, 6, 1345-1351.	1.7	47
33	An experimental model of Braak's pretangle proposal for the origin of Alzheimer's disease: the role of locus coeruleus in early symptom development. <i>Alzheimer's Research and Therapy</i> , 2019, 11, 59.	3.0	37
34	The role of artificial intelligence and machine learning in harmonization of high-resolution post-mortem MRI (virtopsy) with respect to brain microstructure. <i>Brain Informatics</i> , 2019, 6, 3.	1.8	20
35	FOD-based registration for susceptibility distortion correction in brainstem connectome imaging. <i>NeuroImage</i> , 2019, 202, 116164.	2.1	10
36	Rostral locus coeruleus integrity is associated with better memory performance in older adults. <i>Nature Human Behaviour</i> , 2019, 3, 1203-1214.	6.2	129

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37	Locus Coeruleus Degeneration Induces Forebrain Vascular Pathology in a Transgenic Rat Model of Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2019, 70, 371-388.	1.2	26
38	Iron, Myelin, and the Brain: Neuroimaging Meets Neurobiology. <i>Trends in Neurosciences</i> , 2019, 42, 384-401.	4.2	123
39	Beta-blockers and salbutamol limited emotional memory disturbance and damage induced by orchietomy in the rat hippocampus. <i>Life Sciences</i> , 2019, 224, 128-137.	2.0	11
40	Locus coeruleus MRI contrast is reduced in Alzheimer's disease dementia and correlates with CSF A β ² levels. <i>Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring</i> , 2019, 11, 281-285.	1.2	56
41	Mild cognitive impairment in de novo Parkinson's disease: A neuromelanin MRI study in locus coeruleus. <i>Movement Disorders</i> , 2019, 34, 884-892.	2.2	49
42	Alpha1-Adrenergic Receptor Mediated Long-Term Depression at CA3-CA1 Synapses Can Be Induced via Accumulation of Endogenous Norepinephrine and Is Preserved Following Noradrenergic Denervation. <i>Frontiers in Synaptic Neuroscience</i> , 2019, 11, 27.	1.3	10
43	Impairments of attention in Alzheimer's disease. <i>Current Opinion in Psychology</i> , 2019, 29, 41-48.	2.5	23
44	<i>In vivo</i> characterization of a novel norepinephrine transporter PET tracer [¹⁸ F]NS12137 in adult and immature Sprague-Dawley rats. <i>Theranostics</i> , 2019, 9, 11-19.	4.6	10
45	<i>In vivo</i> visualization of age-related differences in the locus coeruleus. <i>Neurobiology of Aging</i> , 2019, 74, 101-111.	1.5	117
46	Dopamin, oxidativer Stress und Protein-Chinonmodifikationen bei Parkinson und anderen neurodegenerativen Erkrankungen. <i>Angewandte Chemie</i> , 2019, 131, 6580-6596.	1.6	7
47	Dopamine, Oxidative Stress and Protein-Quinone Modifications in Parkinson's and Other Neurodegenerative Diseases. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6512-6527.	7.2	160
48	Assessing disease-modifying effects of norepinephrine in Down syndrome and Alzheimer's disease. <i>Brain Research</i> , 2019, 1702, 3-11.	1.1	7
49	Roles of tau pathology in the locus coeruleus (LC) in age-associated pathophysiology and Alzheimer's disease pathogenesis: Potential strategies to protect the LC against aging. <i>Brain Research</i> , 2019, 1702, 17-28.	1.1	54
50	Revisiting the intersection of amyloid, pathologically modified tau and iron in Alzheimer's disease from a ferroptosis perspective. <i>Progress in Neurobiology</i> , 2020, 184, 101716.	2.8	98
51	Inhibitory designer receptors aggravate memory loss in a mouse model of down syndrome. <i>Neurobiology of Disease</i> , 2020, 134, 104616.	2.1	9
52	Resistance, vulnerability and resilience: A review of the cognitive cerebellum in aging and neurodegenerative diseases. <i>Neurobiology of Learning and Memory</i> , 2020, 170, 106981.	1.0	64
53	Amyloid- β Positivity Predicts Cognitive Decline but Cognition Predicts Progression to Amyloid- β Positivity. <i>Biological Psychiatry</i> , 2020, 87, 819-828.	0.7	24
54	What's That (Blue) Spot on my MRI? Multimodal Neuroimaging of the Locus Coeruleus in Neurodegenerative Disease. <i>Frontiers in Neuroscience</i> , 2020, 14, 583421.	1.4	37

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55	Calbindin-D28K, parvalbumin, and calretinin in young and aged human locus coeruleus. <i>Neurobiology of Aging</i> , 2020, 94, 243-249.	1.5	5
56	Characterizing the human APOE epsilon 4 knock-in transgene in female and male rats with multimodal magnetic resonance imaging. <i>Brain Research</i> , 2020, 1747, 147030.	1.1	11
57	The role of the locus coeruleus in the generation of pathological anxiety. <i>Brain and Neuroscience Advances</i> , 2020, 4, 239821282093032.	1.8	102
58	Locus Coeruleus and neurovascular unit: From its role in physiology to its potential role in Alzheimer's disease pathogenesis. <i>Journal of Neuroscience Research</i> , 2020, 98, 2406-2434.	1.3	38
59	Locus coeruleus: a new look at the blue spot. <i>Nature Reviews Neuroscience</i> , 2020, 21, 644-659.	4.9	316
60	Biomarkers for Alzheimer's Disease Early Diagnosis. <i>Journal of Personalized Medicine</i> , 2020, 10, 114.	1.1	58
61	Degeneration of the locus coeruleus is a common feature of tauopathies and distinct from TDP-43 proteinopathies in the frontotemporal lobar degeneration spectrum. <i>Acta Neuropathologica</i> , 2020, 140, 675-693.	3.9	15
63	Reduced monoaminergic nuclei MRI signal detectable in pre-symptomatic older adults with future memory decline. <i>Scientific Reports</i> , 2020, 10, 18707.	1.6	15
64	Locus coeruleus connectivity alterations in late-life major depressive disorder during a visual oddball task. <i>NeuroImage: Clinical</i> , 2020, 28, 102482.	1.4	14
65	±1-Adrenergic Receptors in Neurotransmission, Synaptic Plasticity, and Cognition. <i>Frontiers in Pharmacology</i> , 2020, 11, 581098.	1.6	55
66	Brainstem Volumetric Integrity in Preclinical and Prodromal Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2020, 77, 1579-1594.	1.2	19
67	Optimizing neuromelanin contrast in the substantia nigra and locus coeruleus using a magnetization transfer contrast prepared 3D gradient recalled echo sequence. <i>NeuroImage</i> , 2020, 218, 116935.	2.1	20
68	Impaired Phasic Discharge of Locus Coeruleus Neurons Based on Persistent High Tonic Discharge—A New Hypothesis With Potential Implications for Neurodegenerative Diseases. <i>Frontiers in Neurology</i> , 2020, 11, 371.	1.1	27
69	In vivo MRI Structural and PET Metabolic Connectivity Study of Dopamine Pathways in Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2020, 75, 1003-1016.	1.2	23
70	Relevance of biomarkers across different neurodegenerative diseases. <i>Alzheimer's Research and Therapy</i> , 2020, 12, 56.	3.0	42
71	Epilepsy and Alzheimer's Disease: Potential mechanisms for an association. <i>Brain Research Bulletin</i> , 2020, 160, 107-120.	1.4	45
72	How Arousal-Related Neurotransmitter Systems Compensate for Age-Related Decline. , 2020, , 101-120.		2
73	Age-related changes in the functional integrity of the phasic alerting system: a pupillometric investigation. <i>Neurobiology of Aging</i> , 2020, 91, 136-147.	1.5	6

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74	Neurodegeneration of Trigeminal Mesencephalic Neurons by the Tooth Loss Triggers the Progression of Alzheimer's Disease in 3Å—Tg-AD Model Mice. <i>Journal of Alzheimer's Disease</i> , 2020, 76, 1443-1459.	1.2	22
75	Correlation between cognition and plasma noradrenaline level in Alzheimer's disease: a potential new blood marker of disease evolution. <i>Translational Psychiatry</i> , 2020, 10, 213.	2.4	16
76	Disrupted functional connectivity of the locus coeruleus in healthy adults with parental history of Alzheimer's disease. <i>Journal of Psychiatric Research</i> , 2020, 123, 81-88.	1.5	16
77	Decreased excitability of locus coeruleus neurons during hypercapnia is exaggerated in the streptozotocin-model of Alzheimer's disease. <i>Experimental Neurology</i> , 2020, 328, 113250.	2.0	7
78	Locus coeruleus pathology in progressive supranuclear palsy, and its relation to disease severity. <i>Acta Neuropathologica Communications</i> , 2020, 8, 11.	2.4	24
79	Preventive Electroacupuncture Ameliorates D-Galactose-Induced Alzheimer's Disease-Like Pathology and Memory Deficits Probably via Inhibition of GSK3 α /mTOR Signaling Pathway. <i>Evidence-based Complementary and Alternative Medicine</i> , 2020, 2020, 1-12.	0.5	12
80	Dopamine modulates individual differences in avoidance behavior: A pharmacological, immunohistochemical, neurochemical and volumetric investigation. <i>Neurobiology of Stress</i> , 2020, 12, 100219.	1.9	17
81	Noradrenergic-dependent functions are associated with age-related locus coeruleus signal intensity differences. <i>Nature Communications</i> , 2020, 11, 1712.	5.8	74
82	Effects and mechanisms of information saliency in enhancing value-based decision-making in younger and older adults. <i>Neurobiology of Aging</i> , 2021, 99, 86-98.	1.5	5
83	Acute neuroinflammation, sickness behavior and working memory responses to acute systemic LPS challenge following noradrenergic lesion in mice. <i>Brain, Behavior, and Immunity</i> , 2021, 94, 357-368.	2.0	22
84	An in vivo probabilistic atlas of the human locus coeruleus at ultra-high field. <i>NeuroImage</i> , 2021, 225, 117487.	2.1	50
85	Locus Coeruleus Magnetic Resonance Imaging in Neurological Diseases. <i>Current Neurology and Neuroscience Reports</i> , 2021, 21, 2.	2.0	27
86	The mechanistic link between selective vulnerability of the locus coeruleus and neurodegeneration in Alzheimer's disease. <i>Acta Neuropathologica</i> , 2021, 141, 631-650.	3.9	75
87	Inflaming the Brain with Iron. <i>Antioxidants</i> , 2021, 10, 61.	2.2	49
88	The Locus Coeruleus- Norepinephrine System in Stress and Arousal: Unraveling Historical, Current, and Future Perspectives. <i>Frontiers in Psychiatry</i> , 2020, 11, 601519.	1.3	68
89	Early β 2 adrenoceptor dependent time window for fear memory persistence in APP ^{swe} /PS1 ^{dE9} mice. <i>Scientific Reports</i> , 2021, 11, 870.	1.6	3
90	FDG-PET assessment of the locus coeruleus in Alzheimer's disease. <i>NeuroImage Reports</i> , 2021, 1, 100002.	0.5	9
91	Elevated Norepinephrine Metabolism Gauges Alzheimer's Disease-Related Pathology and Memory Decline. <i>Journal of Alzheimer's Disease</i> , 2021, 80, 521-526.	1.2	14

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92	Deepen into sleep and wake patterns across Alzheimer's disease phenotypes. <i>Alzheimer's and Dementia</i> , 2021, 17, 1403-1406.	0.4	12
93	Pontine Arteriolosclerosis and Locus Coeruleus Oxidative Stress Differentiate Resilience from Mild Cognitive Impairment in a Clinical Pathologic Cohort. <i>Journal of Neuropathology and Experimental Neurology</i> , 2021, 80, 325-335.	0.9	7
94	The role of noradrenaline in cognition and cognitive disorders. <i>Brain</i> , 2021, 144, 2243-2256.	3.7	81
95	Molecular dynamics simulations reveal the destabilization mechanism of Alzheimer's disease-related tau R3-R4 Protofilament by norepinephrine. <i>Biophysical Chemistry</i> , 2021, 271, 106541.	1.5	13
96	Neuropathology of the Brainstem to Mechanistically Understand and to Treat Alzheimer's Disease. <i>Journal of Clinical Medicine</i> , 2021, 10, 1555.	1.0	9
97	Alzheimer's disease: An evolving understanding of noradrenergic involvement and the promising future of electroceutical therapies. <i>Clinical and Translational Medicine</i> , 2021, 11, e397.	1.7	22
98	Interaction of Neuromelanin with Xenobiotics and Consequences for Neurodegeneration; Promising Experimental Models. <i>Antioxidants</i> , 2021, 10, 824.	2.2	20
99	Heightened Hippocampal $\hat{2}$ -Adrenergic Receptor Function Drives Synaptic Potentiation and Supports Learning and Memory in the TgF344-AD Rat Model during Prodromal Alzheimer's Disease. <i>Journal of Neuroscience</i> , 2021, 41, 5747-5761.	1.7	35
100	The connections of Locus Coeruleus with hypothalamus: potential involvement in Alzheimer's disease. <i>Journal of Neural Transmission</i> , 2021, 128, 589-613.	1.4	14
101	Genetic reduction of tyramine $\hat{2}$ hydroxylase suppresses Tau toxicity in a <i>Drosophila</i> model of tauopathy. <i>Neuroscience Letters</i> , 2021, 755, 135937.	1.0	5
102	Phasic alerting increases visual processing speed in amnesic mild cognitive impairment. <i>Neurobiology of Aging</i> , 2021, 102, 23-31.	1.5	1
103	New frontiers in Alzheimer's disease diagnostic: Monoamines and their derivatives in biological fluids. <i>Experimental Gerontology</i> , 2021, 152, 111452.	1.2	10
104	Elevated norepinephrine metabolism is linked to cortical thickness in the context of Alzheimer's disease pathology. <i>Neurobiology of Aging</i> , 2021, 102, 17-22.	1.5	11
105	Examining the Role of the Noradrenergic Locus Coeruleus for Predicting Attention and Brain Maintenance in Healthy Old Age and Disease: An MRI Structural Study for the Alzheimer's Disease Neuroimaging Initiative. <i>Cells</i> , 2021, 10, 1829.	1.8	21
106	Physiological separation of Alzheimer's disease and Alzheimer's disease with significant levels of cerebrovascular symptomology and healthy controls. <i>Medical and Biological Engineering and Computing</i> , 2021, 59, 1597-1610.	1.6	8
108	Regional locus coeruleus degeneration is uncoupled from noradrenergic terminal loss in Parkinson's disease. <i>Brain</i> , 2021, 144, 2732-2744.	3.7	57
109	The \hat{a} , b, c of pretangle tau and their relation to aging and the risk of Alzheimer's Disease. <i>Seminars in Cell and Developmental Biology</i> , 2021, 116, 125-134.	2.3	12
110	Noradrenaline in the aging brain: Promoting cognitive reserve or accelerating Alzheimer's disease?. <i>Seminars in Cell and Developmental Biology</i> , 2021, 116, 108-124.	2.3	32

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111	The Locus Coeruleus in Aging and Alzheimer's Disease: A Postmortem and Brain Imaging Review. <i>Journal of Alzheimer's Disease</i> , 2021, 83, 5-22.	1.2	52
112	Widespread Reduced Density of Noradrenergic Locus Coeruleus Axons in the App Knock-In Mouse Model of Amyloid- β Amyloidosis. <i>Journal of Alzheimer's Disease</i> , 2021, 82, 1513-1530.	1.2	7
113	Metabolomic Biomarkers Are Associated With Area of the Pons in Fragile X Premutation Carriers at Risk for Developing FXTAS. <i>Frontiers in Psychiatry</i> , 2021, 12, 691717.	1.3	2
114	Sex Differences in Locus Coeruleus: A Heuristic Approach That May Explain the Increased Risk of Alzheimer's Disease in Females. <i>Journal of Alzheimer's Disease</i> , 2021, 83, 505-522.	1.2	9
116	From exploration to exploitation: a shifting mental mode in late life development. <i>Trends in Cognitive Sciences</i> , 2021, 25, 1058-1071.	4.0	21
117	Editorial: Roles of Sleep Disruption and Circadian Rhythm Alterations on Neurodegeneration and Alzheimer's Disease. <i>Frontiers in Neuroscience</i> , 2021, 15, 737895.	1.4	5
118	In vivo and neuropathology data support locus coeruleus integrity as indicator of Alzheimer's disease pathology and cognitive decline. <i>Science Translational Medicine</i> , 2021, 13, eabj2511.	5.8	107
119	Sleep, neuronal hyperexcitability, inflammation and neurodegeneration: Does early chronic short sleep trigger and is it the key to overcoming Alzheimer's disease?. <i>Neuroscience and Biobehavioral Reviews</i> , 2021, 129, 157-179.	2.9	10
120	Age-related neuroinflammation and pathology in the locus coeruleus and hippocampus: beta-adrenergic antagonists exacerbate impairment of learning and memory in aged mice. <i>Neurobiology of Aging</i> , 2021, 106, 241-256.	1.5	19
121	Transcutaneous vagus nerve stimulation (tVNS) as a potential therapeutic application for neurodegenerative disorders – A focus on dysautonomia in Parkinson's disease. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2021, 235, 102858.	1.4	2
122	Tau-driven degeneration of sleep- and wake-regulating neurons in Alzheimer's disease. <i>Sleep Medicine Reviews</i> , 2021, 60, 101541.	3.8	29
123	Pathological mechanisms and therapeutic strategies for Alzheimer's disease. <i>Neural Regeneration Research</i> , 2022, 17, 543.	1.6	146
124	Comparisons of neuroinflammation, microglial activation, and degeneration of the locus coeruleus-norepinephrine system in APP/PS1 and aging mice. <i>Journal of Neuroinflammation</i> , 2021, 18, 10.	3.1	35
125	A probabilistic atlas of locus coeruleus pathways to transentorhinal cortex for connectome imaging in Alzheimer's disease. <i>NeuroImage</i> , 2020, 223, 117301.	2.1	24
130	Norepinephrine metabolite DOPEGAL activates AEP and pathological Tau aggregation in locus coeruleus. <i>Journal of Clinical Investigation</i> , 2019, 130, 422-437.	3.9	65
136	Assessment of Memory Impairment in Early Diagnosis of Alzheimer's Disease. <i>Current Alzheimer Research</i> , 2019, 16, 975-985.	0.7	5
139	Locus Coeruleus magnetic resonance imaging in cognitively intact elderly subjects. <i>Brain Imaging and Behavior</i> , 2021, , 1.	1.1	8
141	Changes in Organ Systems over the Lifespan. , 2021, , 7-25.		0

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142	$\hat{3}$ -Glutamyl-Transpeptidase-Resistant Glutathione Analog Attenuates Progression of Alzheimer's Disease-like Pathology and Neurodegeneration in a Mouse Model. <i>Antioxidants</i> , 2021, 10, 1796.	2.2	8
143	Is There Any Evidence of Monocytes Involvement in Alzheimer's Disease? A Pilot Study on Human Postmortem Brain. <i>Journal of Alzheimer's Disease Reports</i> , 2021, 5, 1-11.	1.2	5
144	Noradrenergic modulation of rhythmic neural activity shapes selective attention. <i>Trends in Cognitive Sciences</i> , 2022, 26, 38-52.	4.0	52
145	Diffusion MRI tractography of the locus coeruleus-transentorhinal cortex connections using GOESP. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 1816-1831.	1.9	5
146	Fully automated deep learning-based localization and segmentation of the locus coeruleus in aging and Parkinson's disease using neuromelanin-sensitive MRI. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2021, 16, 2129-2135.	1.7	8
147	Novelty-like activation of locus coeruleus protects against deleterious human pretangle tau effects while stress-inducing activation worsens its effects. <i>Alzheimer's and Dementia: Translational Research and Clinical Interventions</i> , 2021, 7, e12231.	1.8	19
148	Baseline Prediction of rTMS efficacy in Alzheimer patients. <i>Psychiatry Research</i> , 2022, 308, 114348.	1.7	7
149	Psychedelics as Novel Therapeutics in Alzheimer's Disease: Rationale and Potential Mechanisms. <i>Current Topics in Behavioral Neurosciences</i> , 2021, , 287-317.	0.8	11
150	From chronic stress and anxiety to neurodegeneration: Focus on neuromodulation of the axon initial segment. <i>Handbook of Clinical Neurology</i> / Edited By P J Vinken and G W Bruyn, 2022, 184, 481-495.	1.0	2
151	Patient-Specific iPSCs-Based Models of Neurodegenerative Diseases: Focus on Aberrant Calcium Signaling. <i>International Journal of Molecular Sciences</i> , 2022, 23, 624.	1.8	8
152	Advances in Deep Neuropathological Phenotyping of Alzheimer Disease: Past, Present, and Future. <i>Journal of Neuropathology and Experimental Neurology</i> , 2022, 81, 2-15.	0.9	26
153	Locus coeruleus integrity is related to tau burden and memory loss in autosomal-dominant Alzheimer's disease. <i>Neurobiology of Aging</i> , 2022, 112, 39-54.	1.5	49
154	Locus Coeruleus Shows a Spatial Pattern of Structural Disintegration in Parkinson's Disease. <i>Movement Disorders</i> , 2022, 37, 479-489.	2.2	27
155	Consequences of Hyperphosphorylated Tau in the Locus Coeruleus on Behavior and Cognition in a Rat Model of Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2022, 86, 1037-1059.	1.2	11
156	A phase II study repurposing atomoxetine for neuroprotection in mild cognitive impairment. <i>Brain</i> , 2022, 145, 1924-1938.	3.7	39
157	Locus coeruleus in the pathogenesis of Alzheimer's disease: A systematic review. <i>Alzheimer's and Dementia: Translational Research and Clinical Interventions</i> , 2022, 8, e12257.	1.8	17
158	Association of locus coeruleus integrity with Braak stage and neuropsychiatric symptom severity in Alzheimer's disease. <i>Neuropsychopharmacology</i> , 2022, 47, 1128-1136.	2.8	30
159	The role of the locus coeruleus/norepinephrine system in the pathogenesis of neurodegenerative disorders: An update. <i>Current Opinion in Neurology</i> , 2022, 35, 220-229.	1.8	3

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160	Tau modification by the norepinephrine metabolite DOPEGAL stimulates its pathology and propagation. <i>Nature Structural and Molecular Biology</i> , 2022, 29, 292-305.	3.6	14
161	Locus Coeruleus magnetic resonance imaging: a comparison between native-space and template-space approach. <i>Journal of Neural Transmission</i> , 2022, 129, 387-394.	1.4	12
162	Waning locus coeruleus integrity precedes cortical tau accrual in preclinical autosomal dominant Alzheimer's disease. <i>Alzheimer's and Dementia</i> , 2023, 19, 169-180.	0.4	11
163	Subcortical Neuronal Correlates of Sleep in Neurodegenerative Diseases. <i>JAMA Neurology</i> , 2022, 79, 498.	4.5	20
164	Cerebrospinal fluid catecholamines in Alzheimer's disease patients with and without biological disease. <i>Translational Psychiatry</i> , 2022, 12, 151.	2.4	16
165	Associations between MRI-assessed locus coeruleus integrity and cortical gray matter microstructure. <i>Cerebral Cortex</i> , 2022, 32, 4191-4203.	1.6	9
166	Role of diet and its effects on the gut microbiome in the pathophysiology of mental disorders. <i>Translational Psychiatry</i> , 2022, 12, 164.	2.4	55
167	Associations Between Brainstem Volume and Alzheimer's Disease Pathology in Middle-Aged Individuals of the Framingham Heart Study. <i>Journal of Alzheimer's Disease</i> , 2022, 86, 1603-1609.	1.2	0
168	The Locus Coeruleus "Noradrenaline system: Looking into Alzheimer's therapeutics with rose coloured glasses. <i>Biomedicine and Pharmacotherapy</i> , 2022, 151, 113179.	2.5	7
169	Decreased Signal in the Locus Coeruleus Based on Neuromelanin-Sensitive MRI Technique as an Imaging Biomarker for Alzheimer's Disease. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
170	Noradrenaline in Alzheimer's Disease: A New Potential Therapeutic Target. <i>International Journal of Molecular Sciences</i> , 2022, 23, 6143.	1.8	11
171	Noradrenergic Modulation of the Piriform Cortex: A Possible Avenue for Understanding Pre-Clinical Alzheimer's Disease Pathogenesis. <i>Frontiers in Cellular Neuroscience</i> , 0, 16, .	1.8	1
172	The Relationships Among Metal Homeostasis, Mitochondria, and Locus Coeruleus in Psychiatric and Neurodegenerative Disorders: Potential Pathogenetic Mechanism and Therapeutic Implications. <i>Cellular and Molecular Neurobiology</i> , 2023, 43, 963-989.	1.7	4
173	Cognitive Impairment in Alzheimer's and Metabolic Diseases: A Catecholaminergic Hypothesis. <i>Neuroscience</i> , 2022, , .	1.1	6
175	Water-Soluble Melanin-Protein-Fe/Cu Conjugates Derived from Norepinephrine as Reliable Models for Neuromelanin of Human Brain Locus Coeruleus. <i>Angewandte Chemie</i> , 0, , .	1.6	1
176	Water-Soluble Melanin-Protein-Fe/Cu Conjugates Derived from Norepinephrine as Reliable Models for Neuromelanin of Human Brain Locus Coeruleus. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	2
177	Neuromelanins in brain aging and Parkinson's disease: synthesis, structure, neuroinflammatory, and neurodegenerative role. <i>IUBMB Life</i> , 2023, 75, 55-65.	1.5	26
178	Early loss of locus coeruleus innervation promotes cognitive and neuropathological changes before amyloid plaque deposition in a transgenic rat model of Alzheimer's disease. <i>Neuropathology and Applied Neurobiology</i> , 2022, 48, .	1.8	4

#	ARTICLE	IF	CITATIONS
179	Role of the gut microbiome in the pathophysiology of brain disorders. , 2023, , 913-928.		0
180	Locus Coeruleus Degeneration Differs Between Frontotemporal Lobar Degeneration Subtypes. Journal of Alzheimer's Disease, 2022, , 1-9.	1.2	1
181	The Mechanistic Pathways of Periodontal Pathogens Entering the Brain: The Potential Role of Treponema denticola in Tracing Alzheimer's Disease Pathology. International Journal of Environmental Research and Public Health, 2022, 19, 9386.	1.2	11
182	Intestinal Flora Balance Therapy Based on Probiotic Support Improves Cognitive Function and Symptoms in Patients with Alzheimer's Disease: A Systematic Review and Meta-analysis. BioMed Research International, 2022, 2022, 1-9.	0.9	6
183	Herpes Simplex Virus Type 1 Preferentially Enhances Neuro-Inflammation and Senescence in Brainstem of Female Mice. Journal of Virology, 2022, 96, .	1.5	6
184	Electroencephalographic hallmarks of Alzheimer's disease. International Journal of Psychophysiology, 2022, 181, 85-94.	0.5	4
185	Potential of food-derived bioactive peptides in alleviation and prevention of Alzheimer's disease. Food and Function, 2022, 13, 10851-10869.	2.1	5
186	Associations between locus coeruleus integrity and diagnosis, age, and cognitive performance in older adults with and without late-life depression: An exploratory study. NeuroImage: Clinical, 2022, 36, 103182.	1.4	4
187	Spatiotemporal characterization of cellular tau pathology in the human locus coeruleus-pericoeruleus complex by three-dimensional imaging. Acta Neuropathologica, 2022, 144, 651-676.	3.9	19
188	The Neurodegenerative Elderly Syndrome (NES) hypothesis: Alzheimer and Parkinson are two faces of the same disease. IBRO Neuroscience Reports, 2022, 13, 330-343.	0.7	4
189	REM sleep behavior and olfactory dysfunction: Enhancing the utility and translation of animal models in the search for precision medicines for Parkinson's disease. Neuroscience and Biobehavioral Reviews, 2022, 143, 104897.	2.9	1
191	Targeting the cannabinoid system to counteract the deleterious effects of stress in Alzheimer's disease. Frontiers in Aging Neuroscience, 0, 14, .	1.7	2
192	Decreased locus coeruleus signal associated with Alzheimer's disease based on neuromelanin-sensitive magnetic resonance imaging technique. Frontiers in Neuroscience, 0, 16, .	1.4	2
193	<scp>Magnetic resonance imaging</scp> Locus Coeruleus abnormality in amnesic Mild Cognitive Impairment is associated with future progression to dementia. European Journal of Neurology, 2023, 30, 32-46.	1.7	13
194	Sulfanegen stimulates 3-mercaptopyruvate sulfurtransferase activity and ameliorates Alzheimer's disease pathology and oxidative stress in vivo. Redox Biology, 2022, 57, 102484.	3.9	9
195	The contemporaneous epidemic of chronic, copper deficiency. Journal of Nutritional Science, 2022, 11, .	0.7	3
199	Identifying vulnerable brain networks associated with Alzheimer's disease risk. Cerebral Cortex, 2023, 33, 5307-5322.	1.6	5
200	Brain metabolic correlates of Locus Coeruleus degeneration in Alzheimer's disease: a multimodal neuroimaging study. Neurobiology of Aging, 2023, 122, 12-21.	1.5	3

#	ARTICLE	IF	CITATIONS
202	Dysfunction of norepinephrine and its metabolites in Alzheimer's dementia – A review with meta-analysis. <i>Ageing Research Reviews</i> , 2023, 83, 101784.	5.0	1
203	State-of-the-art imaging of neuromodulatory subcortical systems in aging and Alzheimer's disease: Challenges and opportunities. <i>Neuroscience and Biobehavioral Reviews</i> , 2023, 144, 104998.	2.9	5
204	Locus coeruleus and dorsal cingulate morphology contributions to slowed processing speed. <i>Neuropsychologia</i> , 2023, 179, 108449.	0.7	0
205	The Neurotoxin DSP-4 Dysregulates the Locus Coeruleus-Norepinephrine System and Recapitulates Molecular and Behavioral Aspects of Prodromal Neurodegenerative Disease. <i>ENeuro</i> , 2023, 10, ENEURO.0483-22.2022.	0.9	9
206	High resolution 16S rRNA gene Next Generation Sequencing study of brain areas associated with Alzheimer's and Parkinson's disease. <i>Frontiers in Aging Neuroscience</i> , 0, 14, .	1.7	4
207	Rostral-middle locus coeruleus integrity and subjective cognitive decline in early old age. <i>Journal of the International Neuropsychological Society</i> , 2023, 29, 763-774.	1.2	5
208	Priorities for research on neuromodulatory subcortical systems in Alzheimer's disease: Position paper from the NSS PIA of ISTAART. <i>Alzheimer's and Dementia</i> , 2023, 19, 2182-2196.	0.4	11
209	Rapid Eye Movement Sleep, Neurodegeneration, and Amyloid Deposition in Aging. <i>Annals of Neurology</i> , 2023, 93, 979-990.	2.8	8
210	Locus Coeruleus Dysfunction and Trigeminal Mesencephalic Nucleus Degeneration: A Cue for Periodontal Infection Mediated Damage in Alzheimer's Disease?. <i>International Journal of Environmental Research and Public Health</i> , 2023, 20, 1007.	1.2	3
211	Exploring cognitive and biological correlates of sleep quality and their potential links with Alzheimer's disease (ALFASleep project): protocol for an observational study. <i>BMJ Open</i> , 2022, 12, e067159.	0.8	1
213	The gene expression landscape of the human locus coeruleus revealed by single-nucleus and spatially-resolved transcriptomics. <i>ELife</i> , 0, 12, .	2.8	0
214	Lithium engages autophagy for neuroprotection and neuroplasticity: Translational evidence for therapy. <i>Neuroscience and Biobehavioral Reviews</i> , 2023, 148, 105148.	2.9	2
215	Age-dependent dysregulation of locus coeruleus firing in a transgenic rat model of Alzheimer's disease. <i>Neurobiology of Aging</i> , 2023, 125, 98-108.	1.5	6
216	Super-resolution in brain positron emission tomography using a real-time motion capture system. <i>NeuroImage</i> , 2023, 272, 120056.	2.1	4
217	Noradrenergic and cholinergic systems take centre stage in neuropsychiatric diseases of ageing. <i>Neuroscience and Biobehavioral Reviews</i> , 2023, 149, 105167.	2.9	8
219	Chemexcitation: Mammalian Photochemistry in the Dark^{â€‹}. <i>Photochemistry and Photobiology</i> , 2023, 99, 251-276.	1.3	5
220	Locus coeruleus and the defensive activation theory of rapid eye movement sleep: A mechanistic perspective. <i>Frontiers in Neuroscience</i> , 0, 17, .	1.4	1
222	Probiotic supplement as a promising strategy in early tau pathology prevention: Focusing on GSK-3^{â€‹}?. <i>Frontiers in Neuroscience</i> , 0, 17, .	1.4	5

#	ARTICLE	IF	CITATIONS
223	Cerebrospinal fluid and positron-emission tomography biomarkers for noradrenergic dysfunction in neurodegenerative diseases: a systematic review and meta-analysis. <i>Brain Communications</i> , 2023, 5, .	1.5	3
224	Ultra-high field imaging, plasma markers and autopsy data uncover a specific rostral locus coeruleus vulnerability to hyperphosphorylated tau. <i>Molecular Psychiatry</i> , 2023, 28, 2412-2422.	4.1	4
235	The role of brain noradrenaline in Alzheimer's disease: Implications for a precision medicine-oriented approach. , 2024, , 526-539.		0
240	Locus Coeruleus and Noradrenergic Pharmacology in Neurodegenerative Disease. <i>Handbook of Experimental Pharmacology</i> , 2023, , .	0.9	2
246	Healthy aging and Alzheimer's disease. <i>Advances in Magnetic Resonance Technology and Applications</i> , 2023, , 537-547.	0.0	0
251	Exploring the Role of Locus Coeruleus in Alzheimer's Disease: a Comprehensive Update on MRI Studies and Implications. <i>Current Neurology and Neuroscience Reports</i> , 0, , .	2.0	0
261	Control of pupil responses. , 2024, , .		0