

Leonard H Rome

List of Publications by Year in descending order

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115
papers

8,055
citations

57719

44
h-index

49868

87
g-index

115
all docs

115
docs citations

115
times ranked

7040
citing authors

#	ARTICLE	IF	CITATIONS
1	Reassessment of Exosome Composition. <i>Cell</i> , 2019, 177, 428-445.e18.	13.5	1,786
2	Two species of lysosomal organelles in cultured human fibroblasts. <i>Cell</i> , 1979, 17, 143-153.	13.5	378
3	The 193-Kd Vault Protein, Vparp, Is a Novel Poly(Adp-Ribose) Polymerase. <i>Journal of Cell Biology</i> , 1999, 146, 917-928.	2.3	355
4	Isolation and characterization of a novel ribonucleoprotein particle: large structures contain a single species of small RNA.. <i>Journal of Cell Biology</i> , 1986, 103, 699-709.	2.3	287
5	Structural requirements for time-dependent inhibition of prostaglandin biosynthesis by anti-inflammatory drugs.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1975, 72, 4863-4865.	3.3	286
6	The transport of lysosomal enzymes. <i>Journal of Supramolecular Structure</i> , 1977, 6, 95-101.	2.3	208
7	Vaults Are Up-regulated in Multidrug-resistant Cancer Cell Lines. <i>Journal of Biological Chemistry</i> , 1998, 273, 8971-8974.	1.6	207
8	Vaults. III. Vault ribonucleoprotein particles open into flower-like structures with octagonal symmetry.. <i>Journal of Cell Biology</i> , 1991, 112, 225-235.	2.3	161
9	Vaults. II. Ribonucleoprotein structures are highly conserved among higher and lower eukaryotes.. <i>Journal of Cell Biology</i> , 1990, 110, 895-901.	2.3	143
10	Sizing large proteins and protein complexes by electrospray ionization mass spectrometry and ion mobility. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 1206-1216.	1.2	141
11	Direct demonstration of binding of a lysosomal enzyme, alpha-L-iduronidase, to receptors on cultured fibroblasts.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1979, 76, 2331-2334.	3.3	140
12	Vaults and Telomerase Share a Common Subunit, TEP1. <i>Journal of Biological Chemistry</i> , 1999, 274, 32712-32717.	1.6	128
13	Engineering of vault nanocapsules with enzymatic and fluorescent properties. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 4348-4352.	3.3	123
14	Assembly of Vault-like Particles in Insect Cells Expressing Only the Major Vault Protein. <i>Journal of Biological Chemistry</i> , 2001, 276, 23217-23220.	1.6	120
15	Structure of the vault, a ubiquitous cellular component. <i>Structure</i> , 1999, 7, 371-379.	1.6	114
16	Unlocking vaults: organelles in search of a function. <i>Trends in Cell Biology</i> , 1991, 1, 47-50.	3.6	112
17	A Vault Nanoparticle Vaccine Induces Protective Mucosal Immunity. <i>PLoS ONE</i> , 2009, 4, e5409.	1.1	98
18	Stimulation of in vitro myelin synthesis by microglia. <i>Glia</i> , 1994, 11, 326-335.	2.5	97

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19	Novel CCL21-Vault Nanocapsule Intratumoral Delivery Inhibits Lung Cancer Growth. PLoS ONE, 2011, 6, e18758.	1.1	93
20	Targeting Vault Nanoparticles to Specific Cell Surface Receptors. ACS Nano, 2009, 3, 27-36.	7.3	92
21	Cryoelectron Microscopy Imaging of Recombinant and Tissue Derived Vaults: Localization of the MVP N Termini and VPARP. Journal of Molecular Biology, 2004, 344, 91-105.	2.0	85
22	Up-regulation of vaults may be necessary but not sufficient for multidrug resistance. International Journal of Cancer, 2001, 92, 195-202.	2.3	80
23	Assay and purification of a solubilized membrane receptor that binds the lysosomal enzyme β -l-iduronidase. Archives of Biochemistry and Biophysics, 1982, 214, 681-687.	1.4	79
24	Synthesis of a myelin-like membrane by oligodendrocytes in culture. Journal of Neuroscience Research, 1986, 15, 49-65.	1.3	76
25	Development of the Vault Particle as a Platform Technology. ACS Nano, 2013, 7, 889-902.	7.3	75
26	Aspirin as a quantitative acetylating reagent for the fatty acid oxygenase that forms prostaglandins. Prostaglandins, 1976, 11, 23-30.	1.2	74
27	The Telomerase/Vault-Associated Protein Tep1 Is Required for Vault RNA Stability and Its Association with the Vault Particle. Journal of Cell Biology, 2001, 152, 157-164.	2.3	73
28	Vaults are the answer, what is the question?. Trends in Cell Biology, 1996, 6, 174-178.	3.6	71
29	Lysosomal enzyme precursors in coated vesicles derived from the exocytic and endocytic pathways.. Journal of Cell Biology, 1987, 104, 1743-1748.	2.3	67
30	RNA location and modeling of a WD40 repeat domain within the vault. Rna, 2000, 6, 890-900.	1.6	66
31	Myelination in cerebellar slice cultures: Development of a system amenable to biochemical analysis. Journal of Neuroscience Research, 1993, 36, 621-634.	1.3	63
32	Smart Vaults: Thermally-Responsive Protein Nanocapsules. ACS Nano, 2013, 7, 867-874.	7.3	59
33	The Vault Exterior Shell Is a Dynamic Structure that Allows Incorporation of Vault-Associated Proteins into Its Interior. Biochemistry, 2006, 45, 12184-12193.	1.2	58
34	Human kidney β -l-Iduronidase: Purification and characterization. Archives of Biochemistry and Biophysics, 1978, 189, 344-353.	1.4	54
35	Analysis of sulfatide from rat cerebellum and multiple sclerosis white matter by negative ion electrospray mass spectrometry. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2000, 1484, 59-70.	1.2	54
36	Bioengineered Vaults: Self-Assembling Protein Shell-Lipophilic Core Nanoparticles for Drug Delivery. ACS Nano, 2014, 8, 7723-7732.	7.3	54

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37	Recombinant Major Vault Protein Is Targeted to Neuritic Tips of PC12 Cells. <i>Journal of Cell Biology</i> , 1999, 144, 1163-1172.	2.3	53
38	Vault Poly(ADP-Ribose) Polymerase Is Associated with Mammalian Telomerase and Is Dispensable for Telomerase Function and Vault Structure In Vivo. <i>Molecular and Cellular Biology</i> , 2004, 24, 5314-5323.	1.1	50
39	Relationship of LRP-human major vault protein <i>in vitro</i> and clinical resistance to anticancer drugs. <i>Cytotechnology</i> , 1996, 19, 191-197.	0.7	49
40	Vault Nanoparticles Packaged with Enzymes as an Efficient Pollutant Biodegradation Technology. <i>ACS Nano</i> , 2015, 9, 10931-10940.	7.3	49
41	Expression of a beta 1-related integrin by oligodendroglia in primary culture: evidence for a functional role in myelination. <i>Journal of Cell Biology</i> , 1994, 124, 1039-1046.	2.3	48
42	Increased Susceptibility of Vault Poly(ADP-Ribose) Polymerase-Deficient Mice to Carcinogen-Induced Tumorigenesis. <i>Cancer Research</i> , 2005, 65, 8846-8852.	0.4	47
43	Dictyostelium Vaults: Disruption of the Major Proteins Reveals Growth and Morphological Defects and Uncovers a New Associated Protein. <i>Journal of Biological Chemistry</i> , 1995, 270, 16588-16594.	1.6	46
44	RGD-containing peptides inhibit the synthesis of myelin-like membrane by cultured oligodendrocytes.. <i>Journal of Cell Biology</i> , 1988, 107, 1551-1559.	2.3	45
45	The sequence of a cDNA encoding the major vault protein from <i>Rattus norvegicus</i> . <i>Gene</i> , 1994, 151, 257-260.	1.0	45
46	Draft Crystal Structure of the Vault Shell at 9-Å... Resolution. <i>PLoS Biology</i> , 2007, 5, e318.	2.6	43
47	Particles slip cell security. <i>Nature Materials</i> , 2008, 7, 519-520.	13.3	43
48	Targeted Vault Nanoparticles Engineered with an Endosomolytic Peptide Deliver Biomolecules to the Cytoplasm. <i>ACS Nano</i> , 2011, 5, 6128-6137.	7.3	43
49	Butanedione treatment reduces receptor binding of a lysosomal enzyme to cells and membranes. <i>Biochemical and Biophysical Research Communications</i> , 1980, 92, 986-993.	1.0	41
50	Vaults Engineered for Hydrophobic Drug Delivery. <i>Small</i> , 2011, 7, 1432-1439.	5.2	41
51	Vault Nanoparticles Containing an Adenovirus-Derived Membrane Lytic Protein Facilitate Toxin and Gene Transfer. <i>ACS Nano</i> , 2009, 3, 691-699.	7.3	40
52	Preparative agarose gel electrophoresis for the purification of small organelles and particles. <i>Analytical Biochemistry</i> , 1986, 156, 161-170.	1.1	39
53	Evidence that an RGD-dependent receptor mediates the binding of oligodendrocytes to a novel ligand in a glial-derived matrix.. <i>Journal of Cell Biology</i> , 1988, 107, 1541-1549.	2.3	39
54	Functional evidence for the role of axolemma in CNS myelination. <i>Neuron</i> , 1994, 13, 473-485.	3.8	39

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55	Vault Nanocapsule Dissociation into Halves Triggered at Low pH. <i>Biochemistry</i> , 2007, 46, 2865-2875.	1.2	39
56	Utilization of a Protein "Shuttle" To Load Vault Nanocapsules with Gold Probes and Proteins. <i>ACS Nano</i> , 2009, 3, 3175-3183.	7.3	38
57	Properties of a partially-purified preparation of the prostaglandin-forming oxygenase from sheep vesicular gland. <i>Prostaglandins</i> , 1975, 10, 813-824.	1.2	37
58	The La RNA-binding Protein Interacts with the Vault RNA and Is a Vault-associated Protein. <i>Journal of Biological Chemistry</i> , 2002, 277, 41282-41286.	1.6	37
59	Subpopulations of liver coated vesicles resolved by preparative agarose gel electrophoresis. <i>Journal of Cell Biology</i> , 1986, 103, 287-297.	2.3	35
60	Vault Nanocapsules as Adjuvants Favor Cell-Mediated over Antibody-Mediated Immune Responses following Immunization of Mice. <i>PLoS ONE</i> , 2012, 7, e38553.	1.1	35
61	Polyribosomes Are Molecular 3D Nanoprinters That Orchestrate the Assembly of Vault Particles. <i>ACS Nano</i> , 2014, 8, 11552-11559.	7.3	35
62	Lysosomal function in the degradation of defective collagen in cultured lung fibroblasts. <i>Biochemistry</i> , 1984, 23, 2134-2138.	1.2	33
63	Genetic evidence for transmembrane acetylation by lysosomes. <i>Science</i> , 1986, 233, 1087-1089.	6.0	32
64	Structural Stability of Vault Particles. <i>Journal of Pharmaceutical Sciences</i> , 2009, 98, 1376-1386.	1.6	32
65	A very early induction of major vault protein accompanied by increased drug resistance in U-937 cells. <i>International Journal of Cancer</i> , 2002, 97, 149-156.	2.3	31
66	Encapsulation of Semiconducting Polymers in Vault Protein Cages. <i>Nano Letters</i> , 2008, 8, 3503-3509.	4.5	31
67	Dual pH- and temperature-responsive protein nanoparticles. <i>European Polymer Journal</i> , 2015, 69, 532-539.	2.6	31
68	Vault Nanoparticles: Chemical Modifications for Imaging and Enhanced Delivery. <i>ACS Nano</i> , 2017, 11, 872-881.	7.3	30
69	Vaults: Large cytoplasmic RNP's that associate with cytoskeletal elements. <i>Molecular Biology Reports</i> , 1990, 14, 121-122.	1.0	29
70	Identification of conserved vault RNA expression elements and a non-expressed mouse vault RNA gene. <i>Gene</i> , 2003, 309, 65-70.	1.0	28
71	The p80 homology region of TEP1 is sufficient for its association with the telomerase and vault RNAs, and the vault particle. <i>Nucleic Acids Research</i> , 2005, 33, 893-902.	6.5	28
72	A Vault-Encapsulated Enzyme Approach for Efficient Degradation and Detoxification of Bisphenol A and Its Analogues. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 5808-5817.	3.2	28

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73	Vaults Are Dynamically Unconstrained Cytoplasmic Nanoparticles Capable of Half Vault Exchange. <i>ACS Nano</i> , 2010, 4, 7229-7240.	7.3	27
74	A Protective Vaccine against Chlamydia Genital Infection Using Vault Nanoparticles without an Added Adjuvant. <i>Vaccines</i> , 2017, 5, 3.	2.1	26
75	Nuclear localization of the major vault protein in U373 cells. <i>Cell and Tissue Research</i> , 2005, 321, 97-104.	1.5	25
76	Immobilized fungal enzymes: Innovations and potential applications in biodegradation and biosynthesis. <i>Biotechnology Advances</i> , 2022, 57, 107936.	6.0	23
77	Decolorization and detoxification of synthetic dye compounds by laccase immobilized in vault nanoparticles. <i>Bioresource Technology</i> , 2022, 351, 127040.	4.8	22
78	Interaction of rat liver lysosomal membranes with actin.. <i>Journal of Cell Biology</i> , 1984, 99, 680-685.	2.3	21
79	Activation of the NLRP3 inflammasome by vault nanoparticles expressing a chlamydial epitope. <i>Vaccine</i> , 2015, 33, 298-306.	1.7	21
80	Intratumor injection of CCL21-coupled vault nanoparticles is associated with reduction in tumor volume in an in vivo model of glioma. <i>Journal of Neuro-Oncology</i> , 2020, 147, 599-605.	1.4	21
81	Curling receptors. <i>Trends in Biochemical Sciences</i> , 1985, 10, 151.	3.7	20
82	Glass micro-fibers: A model system for study of early events in myelination. <i>Journal of Neuroscience Research</i> , 1990, 27, 383-393.	1.3	20
83	Reversible pH Lability of Cross-linked Vault Nanocapsules. <i>Nano Letters</i> , 2008, 8, 3510-3515.	4.5	19
84	Cation-independent mannose 6-phosphate receptor contains covalently bound fatty acid. <i>Journal of Cellular Biochemistry</i> , 1988, 38, 23-33.	1.2	18
85	Role of axonal components during myelination. <i>Microscopy Research and Technique</i> , 1998, 41, 379-392.	1.2	18
86	Movement of vault particles visualized by GFP-tagged major vault protein. <i>Cell and Tissue Research</i> , 2006, 324, 403-410.	1.5	18
87	Expression of multiple integrins and extracellular matrix components by C6 glioma cells. <i>Journal of Neuroscience Research</i> , 1992, 31, 470-478.	1.3	17
88	Immobilization of Recombinant Vault Nanoparticles on Solid Substrates. <i>ACS Nano</i> , 2010, 4, 1417-1424.	7.3	16
89	Vault nanoparticles engineered with the protein transduction domain, TAT48, enhances cellular uptake. <i>Integrative Biology (United Kingdom)</i> , 2013, 5, 151-158.	0.6	15
90	Cloning and sequence of the cDNA encoding the rat oligodendrocyte integrin β 1 subunit. <i>Gene</i> , 1995, 158, 287-290.	1.0	14

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91	Solution Structures of Engineered Vault Particles. <i>Structure</i> , 2018, 26, 619-626.e3.	1.6	14
92	Synthesis and assembly of human vault particles in yeast. <i>Biotechnology and Bioengineering</i> , 2018, 115, 2941-2950.	1.7	14
93	Binding and internalization of lysosomal enzymes by primary cultures of rat glia. <i>Journal of Neuroscience Research</i> , 1985, 14, 35-47.	1.3	13
94	Human Vault Nanoparticle Targeted Delivery of Antiretroviral Drugs to Inhibit Human Immunodeficiency Virus Type 1 Infection. <i>Bioconjugate Chemistry</i> , 2019, 30, 2216-2227.	1.8	13
95	Vault packaged enzyme mediated degradation of amino-aromatic energetic compounds. <i>Chemosphere</i> , 2020, 242, 125117.	4.2	11
96	Immunoediting role for major vault protein in apoptotic signaling induced by bacterial <i>N</i> -acyl homoserine lactones. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	11
97	Vault nanocapsule-mediated biomimetic silicification for efficient and robust immobilization of proteins in silica composites. <i>Chemical Engineering Journal</i> , 2021, 418, 129406.	6.6	9
98	Modulation of the Vault Protein-Protein Interaction for Tuning of Molecular Release. <i>Scientific Reports</i> , 2017, 7, 14816.	1.6	8
99	CCL21 Chemokine Therapy for Lung Cancer. <i>International Trends in Immunity</i> , 2013, 1, 10-15.	0.4	8
100	Analysis of MVP and VPARP promoters indicates a role for chromatin remodeling in the regulation of MVP. <i>Biochimica Et Biophysica Acta Gene Regulatory Mechanisms</i> , 2004, 1678, 33-46.	2.4	7
101	Bioengineered recombinant vault nanoparticles coupled with NY-ESO-1 glioma-associated antigens induce maturation of native dendritic cells. <i>Journal of Neuro-Oncology</i> , 2020, 148, 1-7.	1.4	7
102	[52] β -D-glucuronidase from human kidney. <i>Methods in Enzymology</i> , 1982, 83, 578-582.	0.4	6
103	A Protein Involved in Central Nervous System Myelination: Localization in the Extracellular Matrix and Induction in Neuroblastoma Cells. <i>Developmental Neuroscience</i> , 1994, 16, 267-278.	1.0	6
104	Axonal Proteins Involved in Myelination: Characterization of a Collagen-Like Protein. <i>Developmental Neuroscience</i> , 1997, 19, 421-429.	1.0	5
105	Cloning of a cDNA encoding a sequence-specific single-stranded-DNA-binding protein from <i>Rattus norvegicus</i> . <i>Gene</i> , 1999, 237, 201-207.	1.0	5
106	Encapsulation of Exogenous Proteins in Vault Nanoparticles. <i>Methods in Molecular Biology</i> , 2018, 1798, 25-37.	0.4	4
107	Matrix Interactions Regulating Myelinogenesis in Cultured Oligodendrocytes. <i>Advances in Experimental Medicine and Biology</i> , 1990, 265, 157-167.	0.8	4
108	Multidrug resistance: Locked in the vault?. <i>Nature Medicine</i> , 1995, 1, 527-527.	15.2	3

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109	[53] Uptake and binding of β -D-glucuronidase. <i>Methods in Enzymology</i> , 1982, 83, 582-587.	0.4	0
110	Drug Delivery: Vaults Engineered for Hydrophobic Drug Delivery (Small 10/2011). <i>Small</i> , 2011, 7, 1431-1431.	5.2	0
111	An Antigen Vault Nanoparticle Vaccine Can Effectively Stimulate Dendritic Cells and Activate a Specific T cell Immune Response. <i>Neurosurgery</i> , 2012, 71, E576-E577.	0.6	0
112	Minimizing the VPARP MVP interaction domain and implications in engineering new vault function. <i>FASEB Journal</i> , 2006, 20, LB60.	0.2	0
113	Nucleic acid nanocapsules: packaging mRNA into the vault particle. <i>FASEB Journal</i> , 2010, 24, 886.1.	0.2	0
114	Immunolocalization of vault particles in cultured cells. <i>Proceedings Annual Meeting Electron Microscopy Society of America</i> , 1992, 50, 458-459.	0.0	0
115	Solution Structures of Engineered Vault Particles. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0