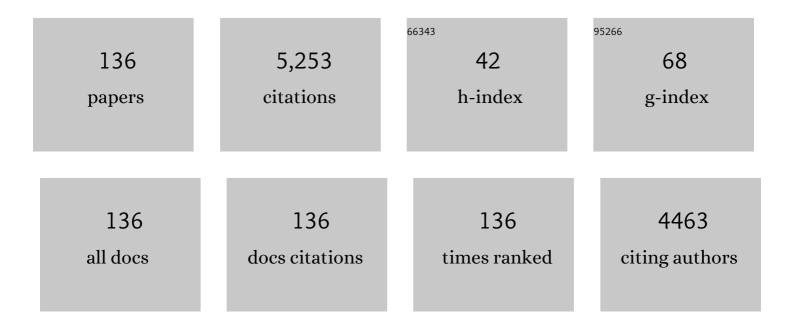
David L Mattson

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4981581/publications.pdf Version: 2024-02-01



#	Article	IF	CITATIONS
1	The Renal Medulla and Hypertension. Hypertension, 1995, 25, 663-673.	2.7	184
2	Inflammation and Hypertension: New Understandings and Potential Therapeutic Targets. Current Hypertension Reports, 2015, 17, 507.	3.5	183
3	Animal Models of Hypertension: A Scientific Statement From the American Heart Association. Hypertension, 2019, 73, e87-e120.	2.7	177
4	Influence of Dietary Sodium Intake on Renal Medullary Nitric Oxide Synthase. Hypertension, 1996, 27, 688-692.	2.7	171
5	T lymphocytes mediate hypertension and kidney damage in Dahl salt-sensitive rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2010, 298, R1136-R1142.	1.8	166
6	Role of renal NO production in the regulation of medullary blood flow. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2003, 284, R1355-R1369.	1.8	163
7	Immune Suppression Attenuates Hypertension and Renal Disease in the Dahl Salt-Sensitive Rat. Hypertension, 2006, 48, 149-156.	2.7	152
8	Genetic mutation of recombination activating gene 1 in Dahl salt-sensitive rats attenuates hypertension and renal damage. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2013, 304, R407-R414.	1.8	151
9	Infiltrating T lymphocytes in the kidney increase oxidative stress and participate in the development of hypertension and renal disease. American Journal of Physiology - Renal Physiology, 2011, 300, F734-F742.	2.7	133
10	Increased Expression of NAD(P)H Oxidase Subunit p67phox in the Renal Medulla Contributes to Excess Oxidative Stress and Salt-Sensitive Hypertension. Cell Metabolism, 2012, 15, 201-208.	16.2	131
11	Quantification of nitric oxide synthase activity in microdissected segments of the rat kidney. American Journal of Physiology - Renal Physiology, 1999, 276, F874-F881.	2.7	127
12	Importance of the renal medullary circulation in the control of sodium excretion and blood pressure. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2003, 284, R13-R27.	1.8	126
13	CD247 Modulates Blood Pressure by Altering T-Lymphocyte Infiltration in the Kidney. Hypertension, 2014, 63, 559-564.	2.7	125
14	Infiltrating immune cells in the kidney in salt-sensitive hypertension and renal injury. American Journal of Physiology - Renal Physiology, 2014, 307, F499-F508.	2.7	125
15	Inhibition of Cyclooxygenase-2 in the Rat Renal Medulla Leads to Sodium-Sensitive Hypertension. Hypertension, 2004, 44, 424-428.	2.7	103
16	Chromosome substitution reveals the genetic basis of Dahl salt-sensitive hypertension and renal disease. American Journal of Physiology - Renal Physiology, 2008, 295, F837-F842.	2.7	101
17	Nitric Oxide Synthase Activity and Isoforms in Rat Renal Vasculature. Hypertension, 2000, 35, 337-341.	2.7	93
18	ROLE OF <scp>l</scp> â€ARGININE IN NITRIC OXIDE PRODUCTION IN HEALTH AND HYPERTENSION. Clinical and Experimental Pharmacology and Physiology, 2009, 36, 249-255.	1.9	92

#	Article	IF	CITATIONS
19	Immune mechanisms of salt-sensitive hypertension and renal end-organ damage. Nature Reviews Nephrology, 2019, 15, 290-300.	9.6	86
20	Neural Nitric Oxide Synthase in the Renal Medulla and Blood Pressure Regulation. Hypertension, 1996, 28, 297-303.	2.7	86
21	Comparison of arterial blood pressure in different strains of mice. American Journal of Hypertension, 2001, 14, 405-408.	2.0	81
22	Inducible Nitric Oxide Synthase and Blood Pressure. Hypertension, 1998, 31, 15-20.	2.7	80
23	Influence of diet and genetics on hypertension and renal disease in Dahl salt-sensitive rats. Physiological Genomics, 2004, 16, 194-203.	2.3	74
24	Recovery from renal ischemia-reperfusion injury is associated with altered renal hemodynamics, blunted pressure natriuresis, and sodium-sensitive hypertension. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2009, 297, R1358-R1363.	1.8	73
25	High Dietary Protein Exacerbates Hypertension and Renal Damage in Dahl SS Rats by Increasing Infiltrating Immune Cells in the Kidney. Hypertension, 2011, 57, 269-274.	2.7	73
26	Deficiency of Renal Cortical EGF Increases ENaC Activity and Contributes to Salt-Sensitive Hypertension. Journal of the American Society of Nephrology: JASN, 2013, 24, 1053-1062.	6.1	69
27	Interleukin-6 inhibition attenuates hypertension and associated renal damage in Dahl salt-sensitive rats. American Journal of Physiology - Renal Physiology, 2016, 311, F555-F561.	2.7	65
28	Epigenomics of Hypertension. Seminars in Nephrology, 2013, 33, 392-399.	1.6	63
29	The influence of nitric oxide synthase 1 on blood flow and interstitial nitric oxide in the kidney. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 281, R91-R97.	1.8	61
30	l-Arginine uptake affects nitric oxide production and blood flow in the renal medulla. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2004, 287, R1478-R1485.	1.8	60
31	Mutation of <i>SH2B3</i> (<i>LNK</i>), a Genome-Wide Association Study Candidate for Hypertension, Attenuates Dahl Salt-Sensitive Hypertension via Inflammatory Modulation. Hypertension, 2015, 65, 1111-1117.	2.7	60
32	Amino acids as modulators of endothelium-derived nitric oxide. American Journal of Physiology - Renal Physiology, 2006, 291, F297-F304.	2.7	59
33	Dietary Protein Source Determines the Degree of Hypertension and Renal Disease in the Dahl Salt-Sensitive Rat. Hypertension, 2005, 45, 736-741.	2.7	58
34	Immune suppression blocks sodium-sensitive hypertension following recovery from ischemic acute renal failure. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2008, 294, R1234-R1239.	1.8	58
35	Maternal Diet During Gestation and Lactation Modifies the Severity of Salt-Induced Hypertension and Renal Injury in Dahl Salt-Sensitive Rats. Hypertension, 2015, 65, 447-455.	2.7	58
36	Increased Perfusion Pressure Drives Renal T-Cell Infiltration in the Dahl Salt-Sensitive Rat. Hypertension, 2017, 70, 543-551.	2.7	58

#	Article	IF	CITATIONS
37	Evidence for the presence of smooth muscle α-actin within pericytes of the renal medulla. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 1997, 273, R1742-R1748.	1.8	54
38	Long-term measurement of arterial blood pressure in conscious mice. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 1998, 274, R564-R570.	1.8	54
39	Renal cortical and medullary blood flow responses to l-NAME and ANG II in wild-type, nNOS null mutant, and eNOS null mutant mice. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2005, 289, R991-R997.	1.8	51
40	Renal Medullary Circulation. , 2012, 2, 97-140.		51
41	ROLE OF NITRIC OXIDE IN THE CONTROL OF THE RENAL MEDULLARY CIRCULATION Clinical and Experimental Pharmacology and Physiology, 1997, 24, 587-590.	1.9	48
42	National Heart, Lung, and Blood Institute Working Group Report on Salt in Human Health and Sickness. Hypertension, 2016, 68, 281-288.	2.7	48
43	Role of nitric oxide in regulation of the renal medulla in normal and hypertensive kidneys. Current Opinion in Nephrology and Hypertension, 2002, 11, 93-98.	2.0	44
44	Renal Tumor Necrosis Factor α Contributes to Hypertension in Dahl Salt-Sensitive Rats. Scientific Reports, 2016, 6, 21960.	3.3	44
45	Rap1b in Smooth Muscle and Endothelium Is Required for Maintenance of Vascular Tone and Normal Blood Pressure. Arteriosclerosis, Thrombosis, and Vascular Biology, 2014, 34, 1486-1494.	2.4	43
46	Chromosomal mapping of the genetic basis of hypertension and renal disease in FHH rats. American Journal of Physiology - Renal Physiology, 2007, 293, F1905-F1914.	2.7	42
47	Increase in Renal Medullary Nitric Oxide Synthase Activity Protects From Norepinephrine-Induced Hypertension. Hypertension, 2000, 35, 418-423.	2.7	39
48	Cationic Amino Acid Transport in the Renal Medulla and Blood Pressure Regulation. Hypertension, 2002, 39, 287-292.	2.7	38
49	Stability of global methylation profiles of whole blood and extracted DNA under different storage durations and conditions. Epigenomics, 2018, 10, 797-811.	2.1	37
50	Characterization of l-arginine transporters in rat renal inner medullary collecting duct. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2000, 278, R1506-R1512.	1.8	36
51	p66Shc regulates renal vascular tone in hypertension-induced nephropathy. Journal of Clinical Investigation, 2016, 126, 2533-2546.	8.2	36
52	Characterization of blood pressure and endothelial function in TRPV4-deficient mice with <scp>l</scp> -NAME- and angiotensin II-induced hypertension. Physiological Reports, 2014, 2, e00199.	1.7	35
53	Assessment of Renal Function; Clearance, the Renal Microcirculation, Renal Blood Flow, and Metabolic Balance. , 2013, 3, 165-200.		34
54	Renal medullary interstitial infusion ofl-arginine prevents hypertension in Dahl salt-sensitive rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 1998, 275, R1667-R1673.	1.8	32

#	Article	IF	CITATIONS
55	Genetic Susceptibility and Loss of Nr4a1 Enhances Macrophage-Mediated Renal Injury in CKD. Journal of the American Society of Nephrology: JASN, 2014, 25, 2499-2510.	6.1	32
56	Salt-sensitive increase in macrophages in the kidneys of Dahl SS rats. American Journal of Physiology - Renal Physiology, 2019, 317, F361-F374.	2.7	32
57	Substitution of chromosome 1 ameliorates l-NAME hypertension and renal disease in the fawn-hooded hypertensive rat. American Journal of Physiology - Renal Physiology, 2005, 288, F1015-F1022.	2.7	31
58	Dietary Effects on Dahl Salt-Sensitive Hypertension, Renal Damage, and the T Lymphocyte Transcriptome. Hypertension, 2019, 74, 854-863.	2.7	31
59	Role of the renin-angiotensin system during alterations of sodium intake in conscious mice. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 281, R987-R993.	1.8	30
60	Exogenous l -Arginine Ameliorates Angiotensin II-Induced Hypertension and Renal Damage in Rats. Hypertension, 2008, 52, 1084-1090.	2.7	29
61	<i>Rag1</i> -null Dahl SS rats reveal that adaptive immune mechanisms exacerbate high protein-induced hypertension and renal injury. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2018, 315, R28-R35.	1.8	29
62	Chronic Sodium Balance and Blood Pressure Response to Captopril in Conscious Mice. Hypertension, 1998, 32, 923-928.	2.7	27
63	From GWAS to functional genomics-based precision medicine. Nature Reviews Nephrology, 2017, 13, 195-196.	9.6	27
64	Epigenetic Modifications in T Cells. Hypertension, 2020, 75, 372-382.	2.7	26
65	Iron attenuates nitric oxide level and iNOS expression in endotoxin-treated mice. FEBS Letters, 1998, 424, 253-256.	2.8	24
66	Dietary influences on the Dahl SS rat gut microbiota and its effects on saltâ€sensitive hypertension and renal damage. Acta Physiologica, 2021, 232, e13662.	3.8	24
67	Parental Dietary Protein Source and the Role of <i>CMKLR1</i> in Determining the Severity of Dahl Salt-Sensitive Hypertension. Hypertension, 2019, 73, 440-448.	2.7	23
68	Inflammatory macrophages in the kidney contribute to salt-sensitive hypertension. American Journal of Physiology - Renal Physiology, 2020, 318, F544-F548.	2.7	23
69	Effects of daily sodium intake and ANG II on cortical and medullary renal blood flow in conscious rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 1998, 274, R1317-R1323.	1.8	22
70	Role of immune cells in salt-sensitive hypertension and renal injury. Current Opinion in Nephrology and Hypertension, 2016, 25, 22-27.	2.0	21
71	Role of immune factors in angiotensin II-induced hypertension and renal damage in Dahl salt-sensitive rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2018, 314, R323-R333.	1.8	21
72	NOX2-derived reactive oxygen species in immune cells exacerbates salt-sensitive hypertension. Free Radical Biology and Medicine, 2020, 146, 333-339.	2.9	21

#	Article	IF	CITATIONS
73	CCL2 mediates early renal leukocyte infiltration during salt-sensitive hypertension. American Journal of Physiology - Renal Physiology, 2020, 318, F982-F993.	2.7	20
74	Splenocyte transfer exacerbates saltâ€sensitive hypertension in rats. Experimental Physiology, 2020, 105, 864-875.	2.0	19
75	Sodium Sensitivity of Arterial Blood Pressure in L-NAME Hypertensive but not eNOS Knockout Mice. American Journal of Hypertension, 2006, 19, 327-329.	2.0	17
76	Influences of environmental factors during preeclampsia. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2020, 319, R26-R32.	1.8	16
77	Influence of dietary NaCl on L-arginine transport in the renal medulla. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2004, 286, R89-R93.	1.8	15
78	Renal Perfusion Pressure Determines Infiltration of Leukocytes in the Kidney of Rats With Angiotensin II–Induced Hypertension. Hypertension, 2020, 76, 849-858.	2.7	15
79	Amplification of Salt-Sensitive Hypertension and Kidney Damage by Immune Mechanisms. American Journal of Hypertension, 2021, 34, 3-14.	2.0	14
80	Hypertension and immunity. Current Opinion in Nephrology and Hypertension, 2015, 24, 470-474.	2.0	13
81	The complement system in hypertension and renal damage in the Dahl SS rat. Physiological Reports, 2018, 6, e13655.	1.7	13
82	Influence of dietary protein on Dahl salt-sensitive hypertension: a potential role for gut microbiota. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2018, 315, R907-R914.	1.8	13
83	Irradiation of the kidneys causes pathologic remodeling in the nontargeted heart: A role for the immune system. FASEB BioAdvances, 2020, 2, 705-719.	2.4	12
84	Candidate genes for hypertension: insights from the Dahl S rat. American Journal of Physiology - Renal Physiology, 2015, 309, F993-F995.	2.7	11
85	Novel adaptive and innate immunity targets in hypertension. Pharmacological Research, 2017, 120, 109-115.	7.1	11
86	Unique Associations of DNA Methylation Regions With 24-Hour Blood Pressure Phenotypes in Black Participants. Hypertension, 2022, 79, 761-772.	2.7	11
87	Introduction to the American Heart Association's Hypertension Strategically Focused Research Network. Hypertension, 2016, 67, 674-680.	2.7	10
88	Contribution of Th17 cells to tissue injury in hypertension. Current Opinion in Nephrology and Hypertension, 2021, 30, 151-158.	2.0	10
89	Dietary Sodium Restriction Results in Tissue-Specific Changes in DNA Methylation in Humans. Hypertension, 2021, 78, 434-446.	2.7	9
90	The function of SH2B3 (LNK) in the kidney. American Journal of Physiology - Renal Physiology, 2016, 311, F682-F685.	2.7	8

#	Article	IF	CITATIONS
91	Sexual Dimorphic Role of CD14 (Cluster of Differentiation 14) in Salt-Sensitive Hypertension and Renal Injury. Hypertension, 2021, 77, 228-240.	2.7	7
92	Exogenous <scp>L</scp> â€arginine attenuates the effects of angiotensin <scp>ll</scp> on renal hemodynamics and the pressure natriuresis–diuresis relationship. Clinical and Experimental Pharmacology and Physiology, 2014, 41, 270-278.	1.9	6
93	Renal nerves and leukocyte infiltration in the kidney during salt-sensitive hypertension. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2019, 317, R182-R189.	1.8	6
94	p66Shc-mediated hydrogen peroxide production impairs nephrogenesis causing reduction of number of glomeruli. Life Sciences, 2021, 279, 119661.	4.3	6
95	T Cell Immunometabolism and Redox Signaling in Hypertension. Current Hypertension Reports, 2021, 23, 45.	3.5	6
96	Acute Increase of Renal Perfusion Pressure Causes Rapid Activation of mTORC1 (Mechanistic Target Of) Tj ETQq	0 0 0 rgBT 2.7 rgBT	Overlock 10
97	Twenty-four-hour versus clinic blood pressure levels as predictors of long-term cardiovascular and renal disease outcomes among African Americans. Scientific Reports, 2020, 10, 11685.	3.3	4
98	Measuring Kidney Function in Conscious Mice. Methods in Molecular Biology, 2009, 573, 75-94.	0.9	3
99	Dietary protein source contributes to the risk of developing maternal syndrome in the Dahl salt-sensitive rat. Pregnancy Hypertension, 2021, 24, 126-134.	1.4	2
100	Renal mechanisms of hypertension. Current Opinion in Nephrology and Hypertension, 1999, 8, 217-224.	2.0	2
101	Lâ€∎rginine uptake mechanisms and responses of intrarenal perfusion to angiotensin II. FASEB Journal, 2006, 20, A764.	0.5	2
102	Heat stress nephropathy and hyperuricemia. American Journal of Physiology - Renal Physiology, 2018, 315, F757-F758.	2.7	1
103	Role of Gut Microbiota and Immunity in the Dietary Modulation of Dahl Saltâ€ S ensitive Hypertension. FASEB Journal, 2019, 33, 866.9.	0.5	1
104	Angiotensin II activates mTORC1 pathway in the kidneys through a pressorâ€independent mechanism FASEB Journal, 2020, 34, 1-1.	0.5	1
105	An integrated genetic analysis of disease. Nature Reviews Nephrology, 2018, 14, 287-288.	9.6	0
106	Team Science: American Heart Association's Hypertension Strategically Focused Research Network Experience. Hypertension, 2021, 77, 1857-1866.	2.7	0
107	Impaired sodium excretion following recovery from ischemic acute renal failure. FASEB Journal, 2006, 20, A341.	0.5	0
108	Cationic and Neutral Amino Acids Decrease NO in the Renal Vasculature. FASEB Journal, 2006, 20, A760.	0.5	0

#	Article	IF	CITATIONS
109	Nitric Oxide and Hypertension. , 2007, , 225-243.		0
110	Hypertension and renal disease in Dahl saltâ€sensitive (SS/Mcwi) rats are dependent on dietary protein intake. FASEB Journal, 2007, 21, A894.	0.5	0
111	Immune suppression blocks sodium sensitive hypertension following recovery from ischemic acute renal failure. FASEB Journal, 2007, 21, A591.	0.5	0
112	Exogenous Lâ€Arginine (Lâ€Arg) blunts Angiotensin II (AngII)â€mediated renal vasoconstriction and improves pressureâ€diuresis. FASEB Journal, 2009, 23, 804.4.	0.5	0
113	Renal infiltration of Tâ€lymphocytes is associated with elevated intrarenal angiotensin II (AngII) and the development of hypertension and kidney damage in Dahl saltâ€sensitive (SS) rats. FASEB Journal, 2009, 23, 805.5.	0.5	0
114	Exogenous Lâ€Arginine (Lâ€Arg) Reverses Angiotensin II (AngII)â€Mediated Renal Cortical and Medullary Vasoconstriction and Improves Pressure Diuresis and Natriuresis. FASEB Journal, 2010, 24, 1059.23.	0.5	0
115	High Dietary Protein Exacerbates Hypertension and Renal Damage in Dahl Salt‣ensitive (SS) Rats by Increasing Infiltrating Immune Cells. FASEB Journal, 2010, 24, 793.3.	0.5	0
116	Exogenous Lâ€Arginine (Lâ€Arg) attenuates the vasoconstrictor response to Angiotensin II (Ang II) stimulation in isolated rat aortic rings. FASEB Journal, 2011, 25, .	0.5	0
117	Blood pressure profile and response to NG â€nitroâ€Lâ€arginine methyl ester challenge in conscious TRPV4â€deficient mice. FASEB Journal, 2012, 26, 1056.9.	0.5	0
118	Genetic regulation and functional relevance of the p67phox gene in saltâ€sensitive hypertension. FASEB Journal, 2012, 26, 874.1.	0.5	0
119	T lymphocytes infiltrating the kidney of Dahl SS rats are activated and differentiated. FASEB Journal, 2012, 26, 879.1.	0.5	0
120	EGF deficiency contributes to the development of saltâ€sensitive hypertension via upregulation of ENaC activity. FASEB Journal, 2012, 26, 867.9.	0.5	0
121	Angiotensin Ilâ€induced impairment of vasodilation in mouse mesenteric arteries: role of endothelial TRPV4 channels. FASEB Journal, 2013, 27, 916.4.	0.5	0
122	Mutation of Sh2b3 attenuates Dahl SS hypertension via inflammatory signaling. FASEB Journal, 2013, 27, 1114.4.	0.5	0
123	The impact of maternal in utero environment on saltâ€induced hypertension in the SS rat. FASEB Journal, 2013, 27, 1182.7.	0.5	0
124	Research community driven development to genetically modify rat models for heart, lung, blood and sleep disorders (1121.3). FASEB Journal, 2014, 28, 1121.3.	0.5	0
125	Potential role of TRPV4 channels in angiotensin Ilâ€induced endothelial dysfunction (696.2). FASEB Journal, 2014, 28, 696.2.	0.5	0
126	Sodiumâ€independent Dietary Effects on Renal Immune Cell Infiltration in Saltâ€sensitive Hypertension. FASEB Journal, 2015, 29, 811.11.	0.5	0

#	Article	IF	CITATIONS
127	Angiotensin II Induced Hypertension, Renal Damage, and Immune Cell Infiltration in the Dahl Salt Sensitive Rat. FASEB Journal, 2015, 29, 812.4.	0.5	0
128	Time Course of Immune Cell Infiltration and Cytokine Production in the Kidneys of Dahl Salt ensitive (SS) Rats. FASEB Journal, 2015, 29, 667.8.	0.5	0
129	Renal Delivery of Anti-microRNA Oligonucleotides in Rats. Methods in Molecular Biology, 2017, 1527, 409-419.	0.9	0
130	Role of the Renal Nerves in Renal Damage and Immune Cell Infiltration in Dahl Salt―Sensitive Rats. FASEB Journal, 2018, 32, 870.3.	0.5	0
131	CD14 as a Novel Negative Modulator of Immune Systemâ€Dependent Renal Damage and Saltâ€Sensitive Hypertension. FASEB Journal, 2018, 32, 870.2.	0.5	0
132	Effects of Parental Dietary Protein Source on Hypertension, Renal Injury, and Renal Inflammation. FASEB Journal, 2018, 32, 883.2.	0.5	0
133	Role of the MCPâ€1/CCR2 Axis in the Development of Dahl Saltâ€Sensitive (SS) Hypertension and Renal Damage. FASEB Journal, 2019, 33, 574.6.	0.5	0
134	RNA Seq Analysis Reveals Metabolic and Natriuretic Pathways Regulated by Renal T Cell Infiltration. FASEB Journal, 2019, 33, lb534.	0.5	0
135	Liposome Delivery Enhances Clodronate Nephrotoxicity in Dahl SS Hypertension and Renal Injury. FASEB Journal, 2019, 33, 574.9.	0.5	0
136	Substitution of Casein Dietary Protein with Wheat Gluten Protein Protects Dahl Salt Sensitive Rats from the Development of Maternal Syndrome. FASEB Journal, 2019, 33, 593.8.	0.5	0