

# Sen M Ward

## List of Publications by Citations

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115  
papers

7,107  
citations

46  
h-index

83  
g-index

120  
ext. papers

7,760  
ext. citations

6.5  
avg, IF

5.81  
L-index

#	Paper	IF	Citations
115	Interstitial cells of Cajal mediate cholinergic neurotransmission from enteric motor neurons. <i>Journal of Neuroscience</i> , <b>2000</b> , 20, 1393-403	6.6	378
114	c-kit-dependent development of interstitial cells and electrical activity in the murine gastrointestinal tract. <i>Cell and Tissue Research</i> , <b>1995</b> , 280, 97-111	4.2	309
113	Expression of anoctamin 1/TMEM16A by interstitial cells of Cajal is fundamental for slow wave activity in gastrointestinal muscles. <i>Journal of Physiology</i> , <b>2009</b> , 587, 4887-904	3.9	301
112	Interstitial cells: regulators of smooth muscle function. <i>Physiological Reviews</i> , <b>2014</b> , 94, 859-907	47.9	278
111	c-kit-Dependent development of interstitial cells and electrical activity in the murine gastrointestinal tract. <i>Cell and Tissue Research</i> , <b>1995</b> , 280, 97-111	4.2	248
110	Regulation of gastrointestinal motility--insights from smooth muscle biology. <i>Nature Reviews Gastroenterology and Hepatology</i> , <b>2012</b> , 9, 633-45	24.2	238
109	Spontaneous electrical rhythmicity in cultured interstitial cells of cajal from the murine small intestine. <i>Journal of Physiology</i> , <b>1998</b> , 513 ( Pt 1), 203-13	3.9	224
108	A Ca(2+)-activated Cl(-) conductance in interstitial cells of Cajal linked to slow wave currents and pacemaker activity. <i>Journal of Physiology</i> , <b>2009</b> , 587, 4905-18	3.9	201
107	Distribution of the vanilloid receptor (VR1) in the gastrointestinal tract. <i>Journal of Comparative Neurology</i> , <b>2003</b> , 465, 121-35	3.4	196
106	Interstitial cells of Cajal in the guinea-pig gastrointestinal tract as revealed by c-Kit immunohistochemistry. <i>Cell and Tissue Research</i> , <b>1997</b> , 290, 11-20	4.2	181
105	Cellular and molecular basis for electrical rhythmicity in gastrointestinal muscles. <i>Annual Review of Physiology</i> , <b>1999</b> , 61, 19-43	23.1	181
104	Interstitial cells of cajal generate electrical slow waves in the murine stomach. <i>Journal of Physiology</i> , <b>1999</b> , 518, 257-69	3.9	178
103	Loss of interstitial cells of Cajal and development of electrical dysfunction in murine small bowel obstruction. <i>Journal of Physiology</i> , <b>2001</b> , 536, 555-68	3.9	159
102	A functional role for the fibroblast-like cells in gastrointestinal smooth muscles. <i>Journal of Physiology</i> , <b>2011</b> , 589, 697-710	3.9	153
101	Interstitial cells of Cajal: primary targets of enteric motor innervation. <i>The Anatomical Record</i> , <b>2001</b> , 262, 125-35		149
100	Physiology and pathophysiology of the interstitial cell of Cajal: from bench to bedside. I. Functional development and plasticity of interstitial cells of Cajal networks. <i>American Journal of Physiology - Renal Physiology</i> , <b>2001</b> , 281, G602-11	5.1	145
99	Molecular markers expressed in cultured and freshly isolated interstitial cells of Cajal. <i>American Journal of Physiology - Cell Physiology</i> , <b>2000</b> , 279, C529-39	5.4	144

98	Interstitial cells of Cajal mediate mechanosensitive responses in the stomach. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 14913-8	11.5	131
97	Development of electrical rhythmicity in the murine gastrointestinal tract is specifically encoded in the tunica muscularis. <i>Journal of Physiology</i> , <b>1997</b> , 505 ( Pt 1), 241-58	3.9	117
96	Loss of enteric motor neurotransmission in the gastric fundus of SI/SI(d) mice. <i>Journal of Physiology</i> , <b>2002</b> , 543, 871-87	3.9	117
95	Involvement of intramuscular interstitial cells of Cajal in neuroeffector transmission in the gastrointestinal tract. <i>Journal of Physiology</i> , <b>2006</b> , 576, 675-82	3.9	113
94	Neuroeffector apparatus in gastrointestinal smooth muscle organs. <i>Journal of Physiology</i> , <b>2010</b> , 588, 4621-39	3.9	103
93	Differential gene expression in functional classes of interstitial cells of Cajal in murine small intestine. <i>Physiological Genomics</i> , <b>2007</b> , 31, 492-509	3.6	92
92	Interstitial cells of Cajal in the deep muscular plexus mediate enteric motor neurotransmission in the mouse small intestine. <i>Journal of Physiology</i> , <b>2006</b> , 573, 147-59	3.9	91
91	Spatial and temporal mapping of pacemaker activity in interstitial cells of Cajal in mouse ileum in situ. <i>American Journal of Physiology - Cell Physiology</i> , <b>2006</b> , 290, C1411-27	5.4	89
90	The mechanism and spread of pacemaker activity through myenteric interstitial cells of Cajal in human small intestine. <i>Gastroenterology</i> , <b>2007</b> , 132, 1852-65	13.3	85
89	Involvement of cyclic GMP in non-adrenergic, non-cholinergic inhibitory neurotransmission in dog proximal colon. <i>British Journal of Pharmacology</i> , <b>1992</b> , 107, 1075-82	8.6	82
88	Distribution of pacemaker function through the tunica muscularis of the canine gastric antrum. <i>Journal of Physiology</i> , <b>2001</b> , 537, 237-50	3.9	80
87	Response from Sean M. Ward and Kenton M. Sanders. <i>Journal of Physiology</i> , <b>2012</b> , 590, 1301-1302	3.9	78
86	The significance of interstitial cells in neurogastroenterology. <i>Journal of Neurogastroenterology and Motility</i> , <b>2014</b> , 20, 294-317	4.4	77
85	Kit signaling is essential for development and maintenance of interstitial cells of Cajal and electrical rhythmicity in the embryonic gastrointestinal tract. <i>Developmental Dynamics</i> , <b>2007</b> , 236, 60-72	2.9	76
84	Synaptic specializations exist between enteric motor nerves and interstitial cells of Cajal in the murine stomach. <i>Journal of Comparative Neurology</i> , <b>2005</b> , 493, 193-206	3.4	75
83	Pacemaker potentials generated by interstitial cells of Cajal in the murine intestine. <i>American Journal of Physiology - Cell Physiology</i> , <b>2005</b> , 288, C710-20	5.4	75
82	Anoctamins and gastrointestinal smooth muscle excitability. <i>Experimental Physiology</i> , <b>2012</b> , 97, 200-6	2.4	74
81	Relationship between interstitial cells of Cajal and enteric motor neurons in the murine proximal colon. <i>Cell and Tissue Research</i> , <b>2000</b> , 302, 331-42	4.2	72

80	Chlamydia infection causes loss of pacemaker cells and inhibits oocyte transport in the mouse oviduct. <i>Biology of Reproduction</i> , <b>2009</b> , 80, 665-73	3.9	65
79	Distribution and Ca(2+) signalling of fibroblast-like (PDGFR(+)) cells in the murine gastric fundus. <i>Journal of Physiology</i> , <b>2013</b> , 591, 6193-208	3.9	63
78	Pacing of interstitial cells of Cajal in the murine gastric antrum: neurally mediated and direct stimulation. <i>Journal of Physiology</i> , <b>2003</b> , 553, 545-59	3.9	63
77	Analysis of pacemaker activity in the human stomach. <i>Journal of Physiology</i> , <b>2011</b> , 589, 6105-18	3.9	61
76	Enteric motor neurons form synaptic-like junctions with interstitial cells of Cajal in the canine gastric antrum. <i>Cell and Tissue Research</i> , <b>2003</b> , 311, 299-313	4.2	61
75	Role of nitric oxide in non-adrenergic, non-cholinergic inhibitory junction potentials in canine ileocolonic sphincter. <i>British Journal of Pharmacology</i> , <b>1992</b> , 105, 776-82	8.6	57
74	A model to study the phenotypic changes of interstitial cells of Cajal in gastrointestinal diseases. <i>Gastroenterology</i> , <b>2010</b> , 138, 1068-78.e1-2	13.3	56
73	Ser1928 phosphorylation by PKA stimulates the L-type Ca <sup>2+</sup> channel CaV1.2 and vasoconstriction during acute hyperglycemia and diabetes. <i>Science Signaling</i> , <b>2017</b> , 10,	8.8	54
72	Immunohistochemical identification of cholecystokinin A receptors on interstitial cells of Cajal, smooth muscle, and enteric neurons in rat pylorus. <i>Cell and Tissue Research</i> , <b>2001</b> , 305, 11-23	4.2	51
71	Voltage-dependent calcium entry underlies propagation of slow waves in canine gastric antrum. <i>Journal of Physiology</i> , <b>2004</b> , 561, 793-810	3.9	47
70	Transcriptome of interstitial cells of Cajal reveals unique and selective gene signatures. <i>PLoS ONE</i> , <b>2017</b> , 12, e0176031	3.7	47
69	Regulation of pacemaker currents in interstitial cells of Cajal from murine small intestine by cyclic nucleotides. <i>Journal of Physiology</i> , <b>2000</b> , 527 Pt 1, 149-62	3.9	46
68	Spontaneous Ca(2+) transients in interstitial cells of Cajal located within the deep muscular plexus of the murine small intestine. <i>Journal of Physiology</i> , <b>2016</b> , 594, 3317-38	3.9	43
67	Propagation of slow waves requires IP <sub>3</sub> receptors and mitochondrial Ca <sup>2+</sup> uptake in canine colonic muscles. <i>Journal of Physiology</i> , <b>2003</b> , 549, 207-18	3.9	42
66	Temporal sequence of activation of cells involved in purinergic neurotransmission in the colon. <i>Journal of Physiology</i> , <b>2015</b> , 593, 1945-63	3.9	40
65	Nitric oxide and its role as a non-adrenergic, non-cholinergic inhibitory neurotransmitter in the gastrointestinal tract. <i>British Journal of Pharmacology</i> , <b>2019</b> , 176, 212-227	8.6	40
64	Voltage-gated Ca <sup>2+</sup> currents are necessary for slow-wave propagation in the canine gastric antrum. <i>American Journal of Physiology - Cell Physiology</i> , <b>2007</b> , 293, C1645-59	5.4	40
63	Constitutive expression and function of cyclooxygenase-2 in murine gastric muscles. <i>Gastroenterology</i> , <b>2002</b> , 122, 1442-54	13.3	39

62	Clustering of Ca transients in interstitial cells of Cajal defines slow wave duration. <i>Journal of General Physiology</i> , <b>2017</b> , 149, 703-725	3.4	38
61	Interstitial cells of Cajal and electrical activity in ganglionic and aganglionic colons of mice. <i>American Journal of Physiology - Renal Physiology</i> , <b>2002</b> , 283, G445-56	5.1	34
60	The cells and conductance mediating cholinergic neurotransmission in the murine proximal stomach. <i>Journal of Physiology</i> , <b>2018</b> , 596, 1549-1574	3.9	32
59	Regulation of pacemaker frequency in the murine gastric antrum. <i>Journal of Physiology</i> , <b>2002</b> , 538, 145-579	3.9	31
58	Effects of new-generation inhibitors of the calcium-activated chloride channel anoctamin 1 on slow waves in the gastrointestinal tract. <i>British Journal of Pharmacology</i> , <b>2016</b> , 173, 1339-49	8.6	30
57	Calcium signalling in Cajal-like interstitial cells of the lower urinary tract. <i>Nature Reviews Urology</i> , <b>2014</b> , 11, 555-64	5.5	29
56	Role of PI3-kinase in the development of interstitial cells and pacemaking in murine gastrointestinal smooth muscle. <i>Journal of Physiology</i> , <b>1999</b> , 516 ( Pt 3), 835-46	3.9	29
55	Hyperpolarization and inhibition of contraction mediated by nitric oxide released from enteric inhibitory neurones in guinea-pig taenia coli. <i>British Journal of Pharmacology</i> , <b>1996</b> , 118, 49-56	8.6	29
54	Use of rhodamine 123 to label and lesion interstitial cells of Cajal in canine colonic circular muscle. <i>Anatomy and Embryology</i> , <b>1990</b> , 182, 215-24		29
53	Changes in the structure and function of ICC networks in ICC hyperplasia and gastrointestinal stromal tumors. <i>Gastroenterology</i> , <b>2009</b> , 136, 630-9	13.3	28
52	Regulation of ATP-sensitive K(+) channels by protein kinase C in murine colonic myocytes. <i>American Journal of Physiology - Cell Physiology</i> , <b>2001</b> , 281, C857-64	5.4	28
51	Uridine adenosine tetraphosphate is a novel neurogenic P2Y1 receptor activator in the gut. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 15821-6	11.5	26
50	Ultrastructural analysis of the transdifferentiation of smooth muscle to skeletal muscle in the murine esophagus. <i>Cell and Tissue Research</i> , <b>2000</b> , 301, 283-98	4.2	24
49	Problems with extracellular recording of electrical activity in gastrointestinal muscle. <i>Nature Reviews Gastroenterology and Hepatology</i> , <b>2016</b> , 13, 731-741	24.2	23
48	Time-dependent disruption of oviduct pacemaker cells by Chlamydia infection in mice. <i>Biology of Reproduction</i> , <b>2010</b> , 83, 244-53	3.9	23
47	Electrical slow waves in the mouse oviduct are dependent upon a calcium activated chloride conductance encoded by Tmem16a. <i>Biology of Reproduction</i> , <b>2012</b> , 86, 1-7	3.9	23
46	Responses to enteric motor neurons in the gastric fundus of mice with reduced intramuscular interstitial cells of cajal. <i>Journal of Neurogastroenterology and Motility</i> , <b>2014</b> , 20, 171-84	4.4	21
45	Relationships of endocrine cells to each other and to other cell types in the human gastric fundus and corpus. <i>Cell and Tissue Research</i> , <b>2019</b> , 376, 37-49	4.2	21

44	Interstitial cells of Cajal: Primary targets of enteric motor innervation <b>2001</b> , 262, 125		21
43	Impaired BK channel function in native vascular smooth muscle from humans with type 2 diabetes. <i>Scientific Reports</i> , <b>2017</b> , 7, 14058	4.9	20
42	Interstitial cells in the primate gastrointestinal tract. <i>Cell and Tissue Research</i> , <b>2012</b> , 350, 199-213	4.2	20
41	Inactivation of inducible nitric oxide synthase protects intestinal pacemaker cells from postoperative damage. <i>Journal of Physiology</i> , <b>2007</b> , 582, 755-65	3.9	20
40	A G-coupled purinergic receptor boosts Ca influx and vascular contractility during diabetic hyperglycemia. <i>ELife</i> , <b>2019</b> , 8,	8.9	20
39	Expression of nitric oxide synthase in mucosal cells of the canine colon. <i>Histochemistry and Cell Biology</i> , <b>1996</b> , 105, 33-41	2.4	19
38	Characterization of slow waves generated by myenteric interstitial cells of Cajal of the rabbit small intestine. <i>American Journal of Physiology - Renal Physiology</i> , <b>2015</b> , 308, G378-88	5.1	18
37	Immunoelectron-microscopic study of Kit-expressing cells in the jejunum of wildtype and Ws/Ws rats. <i>Cell and Tissue Research</i> , <b>2001</b> , 304, 21-30	4.2	18
36	The Mystery of the Interstitial Cells in the Urinary Bladder. <i>Annual Review of Pharmacology and Toxicology</i> , <b>2018</b> , 58, 603-623	17.9	17
35	A novel class of interstitial cells in the mouse and monkey female reproductive tracts. <i>Biology of Reproduction</i> , <b>2015</b> , 92, 102	3.9	15
34	Regulation of gastric electrical and mechanical activity by cholinesterases in mice. <i>Journal of Neurogastroenterology and Motility</i> , <b>2015</b> , 21, 200-16	4.4	15
33	Impacts of Caffeine during Pregnancy. <i>Trends in Endocrinology and Metabolism</i> , <b>2020</b> , 31, 218-227	8.8	15
32	Differential sensitivity of gastric and small intestinal muscles to inducible knockdown of anoctamin 1 and the effects on gastrointestinal motility. <i>Journal of Physiology</i> , <b>2019</b> , 597, 2337-2360	3.9	13
31	Electrical slow waves in the mouse oviduct are dependent on extracellular and intracellular calcium sources. <i>American Journal of Physiology - Cell Physiology</i> , <b>2011</b> , 301, C1458-69	5.4	13
30	Inhibitory responses mediated by vagal nerve stimulation are diminished in stomachs of mice with reduced intramuscular interstitial cells of Cajal. <i>Scientific Reports</i> , <b>2017</b> , 7, 44759	4.9	12
29	Ca signalling behaviours of intramuscular interstitial cells of Cajal in the murine colon. <i>Journal of Physiology</i> , <b>2019</b> , 597, 3587-3617	3.9	12
28	Spontaneous transient hyperpolarizations in the rabbit small intestine. <i>Journal of Physiology</i> , <b>2014</b> , 592, 4733-45	3.9	12
27	CrossTalk proposal: Interstitial cells are involved and physiologically important in neuromuscular transmission in the gut. <i>Journal of Physiology</i> , <b>2016</b> , 594, 1507-9	3.9	12

26	Contractile Protein Expression and Phosphorylation and Contractility of Gastric Smooth Muscles from Obese Patients and Patients with Obesity and Diabetes. <i>Journal of Diabetes Research</i> , <b>2018</b> , 2018, 8743874	3.9	11
25	Oviductal motile cilia are essential for oocyte pickup but dispensable for sperm and embryo transport. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	10
24	Serum response factor regulates smooth muscle contractility via myotonic dystrophy protein kinases and L-type calcium channels. <i>PLoS ONE</i> , <b>2017</b> , 12, e0171262	3.7	8
23	Identification and classification of interstitial cells in the mouse renal pelvis. <i>Journal of Physiology</i> , <b>2020</b> , 598, 3283-3307	3.9	7
22	Mice that express farnesylated versions of prelamin A in neurons develop achalasia. <i>Human Molecular Genetics</i> , <b>2015</b> , 24, 2826-40	5.6	7
21	Bone Marrow Derived Kit-positive Cells Colonize the Gut but Fail to Restore Pacemaker Function in Intestines Lacking Interstitial Cells of Cajal. <i>Journal of Neurogastroenterology and Motility</i> , <b>2014</b> , 20, 326-347	4.7	7
20	Convergence of inhibitory neural inputs regulate motor activity in the murine and monkey stomach. <i>American Journal of Physiology - Renal Physiology</i> , <b>2016</b> , 311, G838-G851	5.1	6
19	AKAP5 complex facilitates purinergic modulation of vascular L-type Ca channel Ca1.2. <i>Nature Communications</i> , <b>2020</b> , 11, 5303	17.4	6
18	The Role of Prostaglandins in Disrupted Gastric Motor Activity Associated With Type 2 Diabetes. <i>Diabetes</i> , <b>2019</b> , 68, 637-647	0.9	6
17	Ca signaling driving pacemaker activity in submucosal interstitial cells of Cajal in the murine colon. <i>ELife</i> , <b>2021</b> , 10,	8.9	6
16	Caffeine consumption during early pregnancy impairs oviductal embryo transport, embryonic development and uterine receptivity in mice. <i>Biology of Reproduction</i> , <b>2018</b> , 99, 1266-1275	3.9	5
15	The identification of neuronal control pathways supplying effector tissues in the stomach. <i>Cell and Tissue Research</i> , <b>2020</b> , 382, 433-445	4.2	5
14	Myosalpinx Contractions Are Essential for Egg Transport Along the Oviduct and Are Disrupted in Reproductive Tract Diseases. <i>Advances in Experimental Medicine and Biology</i> , <b>2019</b> , 1124, 265-294	3.6	4
13	A novel intramuscular Interstitial Cell of Cajal is a candidate for generating pacemaker activity in the mouse internal anal sphincter. <i>Scientific Reports</i> , <b>2020</b> , 10, 10378	4.9	4
12	Effects of Gangliosides on Spermatozoa, Oocytes, and Preimplantation Embryos. <i>International Journal of Molecular Sciences</i> , <b>2019</b> , 21,	6.3	4
11	Active peer-mentored learning can improve student understanding of physiological concepts in an undergraduate journal club. <i>American Journal of Physiology - Advances in Physiology Education</i> , <b>2019</b> , 43, 359-364	1.9	3
10	Extracellular gastrointestinal electrical recordings: movement not electrophysiology. <i>Nature Reviews Gastroenterology and Hepatology</i> , <b>2017</b> , 14, 372	24.2	2
9	Rebuttal from Kenton M. Sanders, Sean M. Ward and Andreas Friebe. <i>Journal of Physiology</i> , <b>2016</b> , 594, 1515	3.9	2



8	Power comes from technical fidelity, not from ease of use. <i>Nature Reviews Gastroenterology and Hepatology</i> , <b>2017</b> , 14, 372	24.2	1
7	Reply to OGrady et al. <i>Physiological Reviews</i> , <b>2015</b> , 95, 693-4	47.9	1
6	Ca transients in ICC-MY define the basis for the dominance of the corpus in gastric pacemaking. <i>Cell Calcium</i> , <b>2021</b> , 99, 102472	4	1
5	Postjunctional M2 Muscarinic Receptors Augment Neurally Mediated Cholinergic Contractions of Murine Airway Smooth Muscle.. <i>Function</i> , <b>2022</b> , 3, zqab067	6.1	1
4	Propulsive colonic contractions are mediated by inhibition-driven poststimulus responses that originate in interstitial cells of Cajal.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2123020119	11.5	0
3	Functional Role of Pacemaking Cells in the Female Reproductive Tract in Health and Disease. <i>FASEB Journal</i> , <b>2008</b> , 22, 1206.8	0.9	
2	Anchored Gs-coupled purinergic receptor regulation of L-type CaV1.2 and vascular tone in diabetic hyperglycemia. <i>FASEB Journal</i> , <b>2018</b> , 32, 569.10	0.9	
1	Elucidating the physiological role of platelet-derived growth factor receptor-alpha+ cells and characterization of ANO1 in the murine upper urinary tract.. <i>FASEB Journal</i> , <b>2018</b> , 32, 770.15	0.9	