Toshiro Sato

List of Publications by Year
in descending order

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134	29,997	22132	14736
papers	citations	59 h-index	127 g-index

138	138	138	29979
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Single Lgr5 stem cells build crypt-villus structures in vitro without a mesenchymal niche. Nature, 2009, 459, 262-265.	13.7	5,339
2	Long-term Expansion of Epithelial Organoids From Human Colon, Adenoma, Adenocarcinoma, and Barrett's Epithelium. Gastroenterology, 2011, 141, 1762-1772.	0.6	2,835
3	Paneth cells constitute the niche for Lgr5 stem cells in intestinal crypts. Nature, 2011, 469, 415-418.	13.7	2,054
4	Intestinal Crypt Homeostasis Results from Neutral Competition between Symmetrically Dividing Lgr5 Stem Cells. Cell, 2010, 143, 134-144.	13.5	1,679
5	Lgr5+ve Stem Cells Drive Self-Renewal in the Stomach and Build Long-Lived Gastric Units In Vitro. Cell Stem Cell, 2010, 6, 25-36.	5.2	1,315
6	In vitro expansion of single Lgr5+ liver stem cells induced by Wnt-driven regeneration. Nature, 2013, 494, 247-250.	13.7	1,239
7	Growing Self-Organizing Mini-Guts from a Single Intestinal Stem Cell: Mechanism and Applications. Science, 2013, 340, 1190-1194.	6.0	954
8	Modeling colorectal cancer using CRISPR-Cas9â€“mediated engineering of human intestinal organoids. Nature Medicine, 2015, 21, 256-262.	15.2	887
9	Tissue-specific mutation accumulation in human adult stem cells during life. Nature, 2016, 538, 260-264.	13.7	759
10	Functional engraftment of colon epithelium expanded in vitro from a single adult Lgr5+ stem cell. Nature Medicine, 2012, 18, 618-623.	15.2	681
11	Dll1+ secretory progenitor cells revert to stem cells upon crypt damage. Nature Cell Biology, 2012, 14, 1099-1104.	4.6	647
12	Isolation and in vitro expansion of human colonic stem cells. Nature Medicine, 2011, 17, 1225-1227.	15.2	616
13	A Colorectal Tumor Organoid Library Demonstrates Progressive Loss of Niche Factor Requirements during Tumorigenesis. Cell Stem Cell, 2016, 18, 827-838.	5.2	593
14	Unlimited in vitro expansion of adult bi-potent pancreas progenitors through the Lgr5/R-spondin axis. EMBO Journal, 2013, 32, 2708-2721.	3.5	562
15	Unique CD14+ intestinal macrophages contribute to the pathogenesis of Crohn disease via IL-23/IFN-Î³ axis. Journal of Clinical Investigation, 2008, 118, 2269-80.	3.9	559
16	Visualization and targeting of LGR5+ human colon cancer stem cells. Nature, 2017, 545, 187-192.	13.7	544
17	Human Pancreatic Tumor Organoids Reveal Loss of Stem Cell Niche Factor Dependence during Disease Progression. Cell Stem Cell, 2018, 22, 454-467.e6.	5.2	426
18	PTEN-deficient intestinal stem cells initiate intestinal polyposis. Nature Genetics, 2007, 39, 189-198.	9.4	391

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19	Current View: Intestinal Stem Cells and Signaling. Gastroenterology, 2008, 134, 849-864.	0.6	365
20	Human Intestinal Organoids Maintain Self-Renewal Capacity and Cellular Diversity in Niche-Inspired Culture Condition. Cell Stem Cell, 2018, 23, 787-793.e6.	5.2	334
21	Controlled gene expression in primary Lgr5 organoid cultures. Nature Methods, 2012, 9, 81-83.	9.0	295
22	Gut pathobionts underlie intestinal barrier dysfunction and liver T helper 17 cell immune response in primary sclerosing cholangitis. Nature Microbiology, 2019, 4, 492-503.	5.9	270
23	Efficient genetic engineering of human intestinal organoids using electroporation. Nature Protocols, 2015, 10, 1474-1485.	5.5	260
24	Establishment of Gastrointestinal Epithelial Organoids. Current Protocols in Mouse Biology, 2013, 3, 217-240.	1.2	253
25	A Single Strain of Clostridium butyricum Induces Intestinal IL-10-Producing Macrophages to Suppress Acute Experimental Colitis in Mice. Cell Host and Microbe, 2013, 13, 711-722.	5.1	241
26	Divergent Routes toward Wnt and R-spondin Niche Independency during Human Gastric Carcinogenesis. Cell, 2018, 174, 856-869.e17.	13.5	222
27	Primary Mouse Small Intestinal Epithelial Cell Cultures. Methods in Molecular Biology, 2012, 945, 319-328.	0.4	215
28	Th1/Th17 Immune Response Is Induced by Mesenteric Lymph Node Dendritic Cells in Crohn's Disease. Gastroenterology, 2009, 137, 1736-1745.	0.6	211
29	Somatic inflammatory gene mutations in human ulcerative colitis epithelium. Nature, 2020, 577, 254-259.	13.7	202
30	Abnormally Differentiated Subsets of Intestinal Macrophage Play a Key Role in Th1-Dominant Chronic Colitis through Excess Production of IL-12 and IL-23 in Response to Bacteria. Journal of Immunology, 2005, 175, 6900-6908.	0.4	192
31	Cytomegalovirus Is Frequently Reactivated and Disappears Without Antiviral Agents in Ulcerative Colitis Patients. American Journal of Gastroenterology, 2007, 102, 331-337.	0.2	183
32	Macrophage-derived IL-18â€“mediated intestinal inflammation in the murine model of Crohn's disease. Gastroenterology, 2001, 121, 875-888.	0.6	182
33	Cell competition with normal epithelial cells promotes apical extrusion of transformed cells through metabolicÂchanges. Nature Cell Biology, 2017, 19, 530-541.	4.6	172
34	Mini-Gut Organoids: Reconstitution of the Stem Cell Niche. Annual Review of Cell and Developmental Biology, 2015, 31, 269-289.	4.0	162
35	<scp>TGR</scp>5 signalling inhibits the production of proâ€inflammatory cytokines by in vitro differentiated inflammatory and intestinal macrophages in Crohn's disease. Immunology, 2013, 139, 19-29.	2.0	156
36	Reconstruction of the Human Colon Epithelium InÂVivo. Cell Stem Cell, 2018, 22, 171-176.e5.	5.2	146

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37	Active and water-soluble form of lipidated Wnt protein is maintained by a serum glycoprotein afamin/Î±-albumin. ELife, 2016, 5, .	2.8	144
38	Contrasting Action of IL-12 and IL-18 in the Development of Dextran Sodium Sulphate Colitis in Mice. Scandinavian Journal of Gastroenterology, 2003, 38, 837-844.	0.6	142
39	Building consensus on definition and nomenclature of hepatic, pancreatic, and biliary organoids. Cell Stem Cell, 2021, 28, 816-832.	5.2	133
40	T-bet upregulation and subsequent interleukin 12 stimulation are essential for induction of Th1 mediated immunopathology in Crohn's disease. Gut, 2004, 53, 1303-1308.	6.1	125
41	Differential pre-malignant programs and microenvironment chart distinct paths to malignancy in human colorectal polyps. Cell, 2021, 184, 6262-6280.e26.	13.5	125
42	SnapShot: Growing Organoids from Stem Cells. Cell, 2015, 161, 1700-1700.e1.	13.5	123
43	Osteopontin/Eta-1 upregulated in Crohn's disease regulates the Th1 immune response. Gut, 2005, 54, 1254-1262.	6.1	113
44	An Organoid Biobank of Neuroendocrine Neoplasms Enables Genotype-Phenotype Mapping. Cell, 2020, 183, 1420-1435.e21.	13.5	111
45	Expansion of Adult Human Pancreatic Tissue Yields Organoids Harboring Progenitor Cells with Endocrine Differentiation Potential. Stem Cell Reports, 2018, 10, 712-724.	2.3	106
46	Somatic cell-derived organoids as prototypes of human epithelial tissues and diseases. Nature Materials, 2021, 20, 156-169.	13.3	105
47	Modeling Human Digestive Diseases With CRISPR-Cas9â€“Modified Organoids. Gastroenterology, 2019, 156, 562-576.	0.6	104
48	Advancing Intestinal Organoid Technology Toward RegenerativeÂMedicine. Cellular and Molecular Gastroenterology and Hepatology, 2018, 5, 51-60.	2.3	94
49	Intestinal Dysbiosis and Biotin Deprivation Induce Alopecia through Overgrowth of Lactobacillus murinus in Mice. Cell Reports, 2017, 20, 1513-1524.	2.9	93
50	Transformation of intestinal stem cells into gastric stem cells on loss of transcription factor Cdx2. Nature Communications, 2014, 5, 5728.	5.8	90
51	SETD7 Controls Intestinal Regeneration and Tumorigenesis by Regulating Wnt/Î²-Catenin and Hippo/YAP Signaling. Developmental Cell, 2016, 37, 47-57.	3.1	87
52	Cdx2 determines the fate of postnatal intestinal endoderm. Development (Cambridge), 2012, 139, 465-474.	1.2	85
53	On the biomechanics of stem cell niche formation in the gut â€“ modelling growing organoids. FEBS Journal, 2012, 279, 3475-3487.	2.2	83
54	Suppressing TGFÎ² Signaling in Regenerating Epithelia in an Inflammatory Microenvironment Is Sufficient to Cause Invasive Intestinal Cancer. Cancer Research, 2015, 75, 766-776.	0.4	80

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55	Zinc Transporter SLC39A7/ZIP7 Promotes Intestinal Epithelial Self-Renewal by Resolving ER Stress. PLoS Genetics, 2016, 12, e1006349.	1.5	80
56	Lamina Propria c-kit+ Immune Precursors Reside in Human Adult Intestine and Differentiate Into Natural Killer Cells. Gastroenterology, 2007, 133, 559-573.	0.6	77
57	Development of intestinal M cells and follicle-associated epithelium is regulated by TRAF6-mediated NF-Î²B signaling. Journal of Experimental Medicine, 2018, 215, 501-519.	4.2	69
58	Inhibition of neutrophil elastase prevents the development of murine dextran sulfate sodium-induced colitis. Journal of Gastroenterology, 2006, 41, 318-324.	2.3	67
59	KLF5 Regulates the Integrity and Oncogenicity of Intestinal Stem Cells. Cancer Research, 2014, 74, 2882-2891.	0.4	66
60	Nonpathogenic Escherichia coli Strain Nissle1917 Prevents Murine Acute and Chronic Colitis. Inflammatory Bowel Diseases, 2005, 11, 455-463.	0.9	62
61	Cellâ€“matrix interface regulates dormancy in human colon cancer stem cells. Nature, 2022, 608, 784-794.	13.7	60
62	Comprehensive Genomic Profiling of Neuroendocrine Carcinomas of the Gastrointestinal System. Cancer Discovery, 2022, 12, 692-711.	7.7	58
63	An organoid-based organ-repurposing approach to treat short bowel syndrome. Nature, 2021, 592, 99-104.	13.7	57
64	Chromosome Engineering of Human Colon-Derived Organoids to Develop a Model of Traditional Serrated Adenoma. Gastroenterology, 2020, 158, 638-651.e8.	0.6	55
65	Development of a Scalable Coculture System for Gut Anaerobes and Human Colon Epithelium. Gastroenterology, 2020, 159, 388-390.e5.	0.6	55
66	Cross-talk Between RORÎ³t+ Innate Lymphoid Cells and Intestinal Macrophages Induces Mucosal IL-22 Production in CrohnÊ¼s Disease. Inflammatory Bowel Diseases, 2014, 20, 1426-1434.	0.9	53
67	Human intestinal epithelial cell-derived interleukin (IL)-18, along with IL-2, IL-7 and IL-15, is a potent synergistic factor for the proliferation of intraepithelial lymphocytes. Clinical and Experimental Immunology, 2004, 136, 269-276.	1.1	52
68	Hyperexpression of inducible costimulator and its contribution on lamina propria T cells in inflammatory bowel disease. Gastroenterology, 2004, 126, 829-839.	0.6	52
69	IL-22BP dictates characteristics of Peyerâ€™s patch follicle-associated epithelium for antigen uptake. Journal of Experimental Medicine, 2017, 214, 1607-1618.	4.2	51
70	Establishment of 3D Intestinal Organoid Cultures from Intestinal Stem Cells. Methods in Molecular Biology, 2017, 1612, 97-105.	0.4	48
71	Mucosal healing with oral tacrolimus is associated with favorable medium- and long-term prognosis in steroid-refractory/dependent ulcerative colitis patients. Journal of Crohn's and Colitis, 2013, 7, e609-e614.	0.6	47
72	Dephosphorylated parafibromin is a transcriptional coactivator of the Wnt/Hedgehog/Notch pathways. Nature Communications, 2016, 7, 12887.	5.8	45

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73	EHBP1L1 coordinates Rab8 and Bin1 to regulate apical-directed transport in polarized epithelial cells. Journal of Cell Biology, 2016, 212, 297-306.	2.3	44
74	Gastroenteropancreatic neuroendocrine neoplasms: genes, therapies and models. DMM Disease Models and Mechanisms, 2018, 11, .	1.2	39
75	Direct derivation of human alveolospheres for SARS-CoV-2 infection modeling and drug screening. Cell Reports, 2021, 35, 109218.	2.9	38
76	Wnt Signaling Shapes the Histologic Variation in Diffuse Gastric Cancer. Gastroenterology, 2021, 160, 823-830.	0.6	37
77	A pilot open-labeled prospective randomized study between weekly and intensive treatment of granulocyte and monocyte adsorption apheresis for active ulcerative colitis. Journal of Gastroenterology, 2008, 43, 51-56.	2.3	34
78	An individual based computational model of intestinal crypt fission and its application to predicting unrestrictive growth of the intestinal epithelium. Integrative Biology (United Kingdom), 2015, 7, 213-228.	0.6	33
79	Induction of differentiation of intrahepatic cholangiocarcinoma cells to functional hepatocytes using an organoid culture system. Scientific Reports, 2018, 8, 2821.	1.6	30
80	IL-22-Producing RORÎ³t-Dependent Innate Lymphoid Cells Play a Novel Protective Role in Murine Acute Hepatitis. PLoS ONE, 2013, 8, e62853.	1.1	30
81	Interleukin-18 and Crohnâ€™s Disease. Digestion, 2001, 63, 37-42.	1.2	29
82	Establishment of Novel Prediction System of Intestinal Absorption in Humans Using Human Intestinal Tissues. Journal of Pharmaceutical Sciences, 2013, 102, 2564-2571.	1.6	29
83	Mathematical model of cardiovascular mechanics for diagnostic analysis and treatment of heart failure: Part 1 model description and theoretical analysis. Medical and Biological Engineering and Computing, 1994, 32, 3-11.	1.6	27
84	Nasal delivery of single-domain antibody improves symptoms of SARS-CoV-2 infection in an animal model. PLoS Pathogens, 2021, 17, e1009542.	2.1	27
85	Interleukinâ€13 and its signaling pathway is associated with obesityâ€related colorectal tumorigenesis. Cancer Science, 2019, 110, 2156-2165.	1.7	24
86	Organoid screening reveals epigenetic vulnerabilities in human colorectal cancer. Nature Chemical Biology, 2022, 18, 605-614.	3.9	24
87	Inhibition of DNA Methylation Suppresses Intestinal Tumor Organoids by Inducing an Anti-Viral Response. Scientific Reports, 2016, 6, 25311.	1.6	23
88	Difference equation model of the entrainment of myocardial pacemaker cells based on the phase response curve. Biological Cybernetics, 1981, 42, 117-128.	0.6	21
89	Intestinal Tumor in a Dish. Frontiers in Medicine, 2014, 1, 14.	1.2	21
90	Mule Regulates the Intestinal Stem Cell Niche via the Wnt Pathway and Targets EphB3 for Proteasomal and Lysosomal Degradation. Cell Stem Cell, 2016, 19, 205-216.	5.2	21

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91	Regulated IFN signalling preserves the stemness of intestinal stem cells by restricting differentiation into secretory-cell lineages. Nature Cell Biology, 2020, 22, 919-926.	4.6	21
92	The use of infliximab in the prevention of postsurgical recurrence in polysurgery Crohn's disease patients: a pilot open-labeled prospective study. International Journal of Colorectal Disease, 2012, 27, 947-952.	1.0	20
93	Restricted VH Gene Usage in Lamina Propria B Cells Producing Anticolon Antibody From Patients With Ulcerative Colitis. Gastroenterology, 2001, 121, 15-23.	0.6	19
94	Macrophages and Dendritic Cells Emerge in the Liver during Intestinal Inflammation and Predispose the Liver to Inflammation. PLoS ONE, 2014, 9, e84619.	1.1	18
95	LSD1 represses a neonatal/reparative gene program in adult intestinal epithelium. Science Advances, 2020, 6, .	4.7	18
96	Characterization of radioresistant epithelial stem cell heterogeneity in the damaged mouse intestine. Scientific Reports, 2020, 10, 8308.	1.6	17
97	Spatiotemporal reprogramming of differentiated cells underlies regeneration and neoplasia in the intestinal epithelium. Nature Communications, 2022, 13, 1500.	5.8	17
98	Dysregulated balance of retinoid-related orphan receptor Î³t-dependent innate lymphoid cells is involved in the pathogenesis of chronic DSS-induced colitis. Biochemical and Biophysical Research Communications, 2012, 427, 694-700.	1.0	16
99	Granulocyte and Monocyte Adsorption Apheresis Therapy Modulates Monocyteâ€Derived Dendritic Cell Function in Patients With Ulcerative Colitis. Therapeutic Apheresis and Dialysis, 2009, 13, 138-146.	0.4	14
100	Cnnm4 deficiency suppresses Ca2+ signaling and promotes cell proliferation in the colon epithelia. Oncogene, 2019, 38, 3962-3969.	2.6	13
101	Ink4a/Arf-Dependent Loss of Parietal Cells Induced by Oxidative Stress Promotes CD44-Dependent Gastric Tumorigenesis. Cancer Prevention Research, 2015, 8, 492-501.	0.7	12
102	Combination Therapy with Infliximab and Thiopurine Compared to Infliximab Monotherapy in Maintaining Remission of Postoperative Crohn's Disease. Digestion, 2015, 91, 233-238.	1.2	12
103	Organoid Medicine for Inflammatory Bowel Disease. Stem Cells, 2022, 40, 123-132.	1.4	12
104	Intermittent Granulocyte and Monocyte Apheresis Versus Mercaptopurine for Maintaining Remission of Ulcerative Colitis: A Pilot Study. Therapeutic Apheresis and Dialysis, 2012, 16, 213-218.	0.4	11
105	Defining the role of Lgr5+ stem cells in colorectal cancer: from basic research to clinical applications. Genome Medicine, 2017, 9, 66.	3.6	11
106	Organoid vs In Vivo Mouse Model: Which is Better Research Tool to Understand the Biologic Mechanisms of Intestinal Epithelium?. Cellular and Molecular Gastroenterology and Hepatology, 2022, 13, 195-197.	2.3	11
107	Mathematical model of cardiovascular mechanics for diagnostic analysis and treatment of heart failure: Part 2 analysis of vasodilator therapy and planning of optimal drug therapy. Medical and Biological Engineering and Computing, 1994, 32, 12-18.	1.6	10
108	Lectin ZG16p inhibits proliferation of human colorectal cancer cells via its carbohydrate-binding sites. Glycobiology, 2018, 28, 21-31.	1.3	9

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109	Culturing intestinal stem cells: applications for colorectal cancer research. Frontiers in Genetics, 2014, 5, 169.	1.1	8
110	CCR9+ macrophages are required for eradication of peritoneal bacterial infections and prevention of polymicrobial sepsis. Immunology Letters, 2012, 147, 75-79.	1.1	6
111	Continuous low-dose irradiation by I-125 seeds induces apoptosis of gastric cancer cells regardless of histological origin. Cancer Biology and Therapy, 2014, 15, 81-88.	1.5	6
112	Organoid Derivation and Orthotopic Xenotransplantation for Studying Human Intestinal Stem Cell Dynamics. Methods in Molecular Biology, 2020, 2171, 303-320.	0.4	6
113	Back to 2D Culture for Ground State of Intestinal Stem Cells. Cell Stem Cell, 2015, 17, 5-7.	5.2	5
114	Classical Th1 Cells Obtain Colitogenicity by Co-existence of RORÎ³t-expressing T Cells in Experimental Colitis. Inflammatory Bowel Diseases, 2014, 20, 1820-1827.	0.9	4
115	Linking human intestinal scaffolds and organoids to combat intestinal failure. Nature Medicine, 2020, 26, 1517-1518.	15.2	4
116	Epithelium Replacement Contributes to Field Expansion of Squamous Epithelium and Ulcerative Colitisâ€“Associated Neoplasia. Gastroenterology, 2022, 162, 334-337.e5.	0.6	4
117	Novel intestinal stem cell culture system. Inflammation and Regeneration, 2012, 32, 043-047.	1.5	4
118	Phenotypic screening system using three-dimensional (3D) culture models for natural product screening. Journal of Antibiotics, 2021, 74, 660-666.	1.0	3
119	Estimation of Body Water and Salt Contents from Plasma Sodium, Protein Concentrations, and Hematocrit. International Heart Journal, 1979, 20, 853-866.	0.6	2
120	Reentrant arrhythmias generated by a computer-based model of the modulated parasystole in an open-chest dog.. International Heart Journal, 1989, 30, 885-894.	0.6	2
121	A CRITICAL STUDY OF HAMILTON-STEWART'S PRINCIPLE FOR THE ANALYSIS OF HEMODYNAMICS. The Japanese Journal of Physiology, 1963, 13, 260-286.	0.9	2
122	Hemodynamic Parameters of the Isolated Dog Kidney as Determined by a Frequency Response Method. The Japanese Journal of Physiology, 1980, 30, 393-413.	0.9	2
123	Rebuttal to: In Vivo Studies Should Take Priority When Defining Mechanisms of Intestinal Crypt Morphogenesis. Cellular and Molecular Gastroenterology and Hepatology, 2021, 13, 5.	2.3	2
124	Intestinal Epithelial Lgr5 + Stem Cell Niche andÂOrganoids. , 2017, , 111-125.		1
125	A case of ileal anisakiasis removed by colonoscopy. Progress of Digestive Endoscopy, 2001, 58, 112-113.	0.0	1
126	Dysregulated Immune Response in Mesenteric Lymph Nodes of CrohnÊ¼s Disease. American Journal of Gastroenterology, 2005, 100, S321.	0.2	1

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127	Computer assisted instruction for therapy of heart failure based on simulation of cardiovascular system. ACM SIGBIO Newsletter, 1987, 9, 57-61.	0.1	1
128	Macrophage-derived IL-18 mediated colitis in the murine model of Crohn's disease. Gastroenterology, 2000, 118, A110.	0.6	0
129	Contribution of the cAMPâ€Dependent Signal Pathway to Circadian Synchrony of Motility and Resting Membrane Potential in Paramecium. Photochemistry and Photobiology, 1998, 67, 256-262.	1.3	0
130	PS18 - 88. Expansion of human beta cell progenitors using a three-dimensional culture system. Nederlands Tijdschrift Voor Diabetologie, 2011, 9, 151-152.	0.0	0
131	Dendritic cells administered intrarectally penetrate the intestinal barrier to break intestinal tolerance via Th2-medeiated colitis in mice. Immunology Letters, 2013, 150, 123-129.	1.1	0
132	The role of IL-18 on the pathogenesis of Crohn's disease. Japanese Journal of Clinical Immunology, 2000, 23, 607-610.	0.0	0
133	Balneotherapy for Hypertension with Special Reference to the Factor Analysis of the Effects of Spa Treatment on Hypertensive Patients. International Heart Journal, 1960, 1, 361-374.	0.6	0
134	Comparison of the effects of calcium channel blockers and antiarrhythmic drugs on digitalis-induced oscillatory afterpotentials on canine purkinje fiber.. International Heart Journal, 1987, 28, 719-735.	0.6	0