Scott J Hultgren

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1813897/publications.pdf

Version: 2024-02-01

135 papers	20,668 citations	21215 62 h-index	15698 129 g-index
140 all docs	140 docs citations	140 times ranked	14294 citing authors

#	Article	IF	Citations
1	Urinary tract infections: epidemiology, mechanisms of infection and treatment options. Nature Reviews Microbiology, 2015, 13, 269-284.	13.6	2,406
2	Role of Escherichia coli Curli Operons in Directing Amyloid Fiber Formation. Science, 2002, 295, 851-855.	6.0	1,127
3	Intracellular Bacterial Biofilm-Like Pods in Urinary Tract Infections. Science, 2003, 301, 105-107.	6.0	976
4	Induction and Evasion of Host Defenses by Type 1-Piliated Uropathogenic Escherichia coli. , 1998, 282, 1494-1497.		857
5	Establishment of a Persistent Escherichia coli Reservoir during the Acute Phase of a Bladder Infection. Infection and Immunity, 2001, 69, 4572-4579.	1.0	706
6	X-ray Structure of the FimC-FimH Chaperone-Adhesin Complex from Uropathogenic Escherichia coli. Science, 1999, 285, 1061-1066.	6.0	582
7	Differentiation and developmental pathways of uropathogenic Escherichia coli in urinary tract pathogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1333-1338.	3.3	551
8	Prevention of Mucosal Escherichia coli Infection by FimH-Adhesin-Based Systemic Vaccination. Science, 1997, 276, 607-611.	6.0	548
9	Identification of genes subject to positive selection in uropathogenic strains of Escherichia coli: A comparative genomics approach. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5977-5982.	3.3	509
10	Detection of Intracellular Bacterial Communities in Human Urinary Tract Infection. PLoS Medicine, 2007, 4, e329.	3.9	495
11	Mechanisms of uropathogenic Escherichia coli persistence and eradication from the urinary tract. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14170-14175.	3.3	445
12	Structural Basis of Chaperone Function and Pilus Biogenesis. Science, 1999, 285, 1058-1061.	6.0	396
13	Small-molecule inhibitors target Escherichia coli amyloid biogenesis and biofilm formation. Nature Chemical Biology, 2009, 5, 913-919.	3.9	381
14	Structural basis of tropism of Escherichia coli to the bladder during urinary tract infection. Molecular Microbiology, 2002, 44, 903-915.	1.2	360
15	P pili in uropathogenic E. coli are composite fibres with distinct fibrillar adhesive tips. Nature, 1992, 356, 252-255.	13.7	337
16	Structural biology of the chaperoneâ€“usher pathway of pilus biogenesis. Nature Reviews Microbiology, 2009, 7, 765-774.	13.6	298
17	Hostâ€“pathogen checkpoints and population bottlenecks in persistent and intracellular uropathogenicEscherichia colibladder infection. FEMS Microbiology Reviews, 2012, 36, 616-648.	3.9	296
18	Development of intracellular bacterial communities of uropathogenicEscherichia colidepends on type 1 pili. Cellular Microbiology, 2007, 9, 2230-2241.	1.1	288

#	Article	IF	Citations
19	Filamentation by Escherichia coli subverts innate defenses during urinary tract infection. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19884-19889.	3.3	283
20	Urinary tract infections: microbial pathogenesis, hostâ€“pathogen interactions and new treatment strategies. Nature Reviews Microbiology, 2020, 18, 211-226.	13.6	258
21	Rationally designed small compounds inhibit pilus biogenesis in uropathogenic bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17897-17902.	3.3	257
22	A murine model of urinary tract infection. Nature Protocols, 2009, 4, 1230-1243.	5.5	254
23	Treatment and Prevention of Urinary Tract Infection with Orally Active FimH Inhibitors. Science Translational Medicine, 2011, 3, 109ra115.	5.8	254
24	Structural Basis of the Interaction of the Pyelonephritic E. coli Adhesin to Its Human Kidney Receptor. Cell, 2001, 105, 733-743.	13.5	250
25	Chaperone Priming of Pilus Subunits Facilitates a Topological Transition that Drives Fiber Formation. Cell, 2002, 111, 543-551.	13.5	236
26	Selective depletion of uropathogenic E. coli from the gut by a FimH antagonist. Nature, 2017, 546, 528-532.	13.7	231
27	Early Severe Inflammatory Responses to Uropathogenic E. coli Predispose to Chronic and Recurrent Urinary Tract Infection. PLoS Pathogens, 2010, 6, e1001042.	2.1	223
28	Structure-Based Drug Design and Optimization of Mannoside Bacterial FimH Antagonists. Journal of Medicinal Chemistry, 2010, 53, 4779-4792.	2.9	220
29	Quantitative Metabolomics Reveals an Epigenetic Blueprint for Iron Acquisition in Uropathogenic Escherichia coli. PLoS Pathogens, 2009, 5, e1000305.	2.1	211
30	Uropathogenic Escherichia coli Flagella Aid in Efficient Urinary Tract Colonization. Infection and Immunity, 2005, 73, 7657-7668.	1.0	199
31	Fiber Formation across the Bacterial Outer Membrane by the Chaperone/Usher Pathway. Cell, 2008, 133, 640-652.	13.5	194
32	Crystal structure of the FimD usher bound to its cognate FimCâ€“FimH substrate. Nature, 2011, 474, 49-53.	13.7	170
33	Positive selection identifies an in vivo role for FimH during urinary tract infection in addition to mannose binding. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22439-22444.	3.3	165
34	Donor-Strand Exchange in Chaperone-Assisted Pilus Assembly Proceeds through a Concerted Î² Strand Displacement Mechanism. Molecular Cell, 2006, 22, 831-842.	4.5	159
35	Genomic Diversity and Fitness of E. coli Strains Recovered from the Intestinal and Urinary Tracts of Women with Recurrent Urinary Tract Infection. Science Translational Medicine, 2013, 5, 184ra60.	5.8	148
36	Bacterial Amyloid Formation: Structural Insights into Curli Biogensis. Trends in Microbiology, 2015, 23, 693-706.	3.5	148

#	Article	IF	Citations
37	Population Dynamics and Niche Distribution of Uropathogenic Escherichia coli during Acute and Chronic Urinary Tract Infection. Infection and Immunity, 2011, 79, 4250-4259.	1.0	146
38	Effect of Trimethoprim-Sulfamethoxazole on Recurrent Bacteriuria and Bacterial Persistence in Mice Infected with Uropathogenic Escherichia coli. Infection and Immunity, 2002, 70, 7042-7049.	1.0	145
39	Escherichia coli from Urine of Female Patients with Urinary Tract Infections Is Competent for Intracellular Bacterial Community Formation. Infection and Immunity, 2007, 75, 52-60.	1.0	145
40	Enterococcal Biofilm Formation and Virulence in an Optimized Murine Model of Foreign Body-Associated Urinary Tract Infections. Infection and Immunity, 2010, 78, 4166-4175.	1.0	142
41	QseCâ€mediated dephosphorylation of QseB is required for expression of genes associated with virulence in uropathogenic Escherichia coli. Molecular Microbiology, 2009, 73, 1020-1031.	1.2	139
42	Bacterial virulence phenotypes of Escherichia coli and host susceptibility determine risk for urinary tract infections. Science Translational Medicine, 2017, 9, .	5.8	139
43	Dysregulation of Escherichia coli Î±-hemolysin expression alters the course of acute and persistent urinary tract infection. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E871-80.	3.3	132
44	EbpA vaccine antibodies block binding of Enterococcus faecalis to fibrinogen to prevent catheter-associated bladder infection in mice. Science Translational Medicine, 2014, 6, 254ra127.	5.8	130
45	Functional Genomic Studies of Uropathogenic Escherichia coli and Host Urothelial Cells when Intracellular Bacterial Communities Are Assembled. Journal of Biological Chemistry, 2007, 282, 21259-21267.	1.6	129
46	The Metal Ion-Dependent Adhesion Site Motif of the Enterococcus faecalis EbpA Pilin Mediates Pilus Function in Catheter-Associated Urinary Tract Infection. MBio, 2012, 3, e00177-12.	1.8	118
47	G-CSF induction early in uropathogenicEscherichia coliinfection of the urinary tract modulates host immunity. Cellular Microbiology, 2008, 10, 2568-2578.	1.1	113
48	Lead Optimization Studies on FimH Antagonists: Discovery of Potent and Orally Bioavailable Ortho-Substituted Biphenyl Mannosides. Journal of Medicinal Chemistry, 2012, 55, 3945-3959.	2.9	112
49	Positively selected FimH residues enhance virulence during urinary tract infection by altering FimH conformation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15530-15537.	3.3	105
50	Catheterization alters bladder ecology to potentiate Staphylococcus aureus infection of the urinary tract. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8721-E8730.	3.3	93
51	Inhibition of Cyclooxygenase-2 Prevents Chronic and Recurrent Cystitis. EBioMedicine, 2014, 1, 46-57.	2.7	92
52	Metabolic Requirements of Escherichia coli in Intracellular Bacterial Communities during Urinary Tract Infection Pathogenesis. MBio, 2016, 7, e00104-16.	1.8	89
53	Structural and energetic basis of folded-protein transport by the FimD usher. Nature, 2013, 496, 243-246.	13.7	88
54	Drug and Vaccine Development for the Treatment and Prevention of Urinary Tract Infections. Microbiology Spectrum, 2016, 4, .	1.2	87

#	Article	IF	Citations
55	Enterococcus faecalis Overcomes Foreign Body-Mediated Inflammation To Establish Urinary Tract Infections. Infection and Immunity, 2013, 81, 329-339.	1.0	84
56	Antivirulence C-Mannosides as Antibiotic-Sparing, Oral Therapeutics for Urinary Tract Infections. Journal of Medicinal Chemistry, 2016, 59, 9390-9408.	2.9	84
57	Design and Synthesis of C-2 Substituted Thiazolo and Dihydrothiazolo Ring-Fused 2-Pyridones: Pilicides with Increased Antivirulence Activity. Journal of Medicinal Chemistry, 2010, 53, 5690-5695.	2.9	82
58	Strong cross-system interactions drive the activation of the QseB response regulator in the absence of its cognate sensor. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16592-16597.	3.3	81
59	Urinary tract colonization is enhanced by a plasmid that regulates uropathogenic Acinetobacter baumannii chromosomal genes. Nature Communications, 2019, 10, 2763.	5.8	80
60	Sticky fibers and uropathogenesis: bacterial adhesins in the urinary tract. Future Microbiology, 2006, 1, 75-87.	1.0	76
61	Insights into the Microbiome of Breast Implants and Periprosthetic Tissue in Breast Implant-Associated Anaplastic Large Cell Lymphoma. Scientific Reports, 2019, 9, 10393.	1.6	76
62	Bacterial Outer Membrane Ushers Contain Distinct Targeting and Assembly Domains for Pilus Biogenesis. Journal of Bacteriology, 2002, 184, 6260-6269.	1.0	74
63	Functional role of the type 1 pilus rod structure in mediating host-pathogen interactions. ELife, 2018, 7, .	2.8	70
64	Precision antimicrobial therapeutics: the path of least resistance?. Npj Biofilms and Microbiomes, 2018, 4, 4.	2.9	69
65	Fibrinogen Release and Deposition on Urinary Catheters Placed during Urological Procedures. Journal of Urology, 2016, 196, 416-421.	0.2	68
66	LeuX tRNAâ€dependent and â€independent mechanisms of Escherichia coli pathogenesis in acute cystitis. Molecular Microbiology, 2008, 67, 116-128.	1.2	67
67	A mucosal imprint left by prior Escherichia coli bladder infection sensitizes to recurrent disease. Nature Microbiology, 2017, 2, 16196.	5.9	67
68	Adhesive Pili in UTI Pathogenesis and Drug Development. Pathogens, 2016, 5, 30.	1.2	66
69	Structural requirements for the glycolipid receptor of human uropathogenic Escherichia coli. Molecular Microbiology, 1995, 16, 1021-1029.	1.2	65
70	From Physiology to Pharmacy: Developments in the Pathogenesis and Treatment of Recurrent Urinary Tract Infections. Current Urology Reports, 2013, 14, 448-456.	1.0	65
71	Pilicide ec240 Disrupts Virulence Circuits in Uropathogenic Escherichia coli. MBio, 2014, 5, e02038.	1.8	65
72	Structure-based discovery of glycomimetic FmlH ligands as inhibitors of bacterial adhesion during urinary tract infection. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2819-E2828.	3.3	63

#	Article	IF	Citations
73	Manganese acquisition is essential for virulence of Enterococcus faecalis. PLoS Pathogens, 2018, 14, e1007102.	2.1	63
74	Role of Hypoxia Inducible Factor-1Î± (HIF-1Î±) in Innate Defense against Uropathogenic Escherichia coli Infection. PLoS Pathogens, 2015, 11, e1004818.	2.1	62
75	Structure of a Chaperone-Usher Pilus Reveals the Molecular Basis of Rod Uncoiling. Cell, 2016, 164, 269-278.	13.5	61
76	Design and Parallel Solid-Phase Synthesis of Ring-Fused 2-Pyridinones That Target Pilus Biogenesis in Pathogenic Bacteria. ACS Combinatorial Science, 2002, 4, 630-639.	3.3	60
77	Human Urine Decreases Function and Expression of Type 1 Pili in Uropathogenic Escherichia coli. MBio, 2015, 6, e00820.	1.8	58
78	Longitudinal multi-omics analyses link gut microbiome dysbiosis with recurrent urinary tract infections in women. Nature Microbiology, 2022, 7, 630-639.	5.9	54
79	Antivirulence Isoquinolone Mannosides: Optimization of the Biaryl Aglycone for FimH Lectin Binding Affinity and Efficacy in the Treatment of Chronic UTI. ChemMedChem, 2016, 11, 367-373.	1.6	53
80	Inflammation-Induced Adhesin-Receptor Interaction Provides a Fitness Advantage to Uropathogenic E.Âcoli during Chronic Infection. Cell Host and Microbe, 2016, 20, 482-492.	5.1	53
81	Subinhibitory Antibiotic Therapy Alters Recurrent Urinary Tract Infection Pathogenesis through Modulation of Bacterial Virulence and Host Immunity. MBio, 2015, 6, .	1.8	52
82	Evolutionary fine-tuning of conformational ensembles in FimH during host-pathogen interactions. Science Advances, 2017, 3, e1601944.	4.7	50
83	Reaching the End of the Line: Urinary Tract Infections. Microbiology Spectrum, 2019, 7, .	1.2	50
84	Antibody-Based Therapy for Enterococcal Catheter-Associated Urinary Tract Infections. MBio, 2016, 7, .	1.8	48
85	Host and bacterial proteases influence biofilm formation and virulence in a murine model of enterococcal catheter-associated urinary tract infection. Npj Biofilms and Microbiomes, 2017, 3, 28.	2.9	48
86	Chemical disarming of isoniazid resistance in Mycobacterium tuberculosis. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10510-10517.	3.3	48
87	Uropathogenic Escherichia coli Superinfection Enhances the Severity of Mouse Bladder Infection. PLoS Pathogens, 2015, 11, e1004599.	2.1	46
88	Stereoselective Synthesis of Optically Active Î²-Lactams, Potential Inhibitors of Pilus Assembly in Pathogenic Bacteria. Organic Letters, 2000, 2, 2065-2067.	2.4	44
89	The Catabolite Repressor Protein-Cyclic AMP Complex Regulates csgD and Biofilm Formation in Uropathogenic Escherichia coli. Journal of Bacteriology, 2016, 198, 3329-3334.	1.0	44
90	Are you experienced? Understanding bladder innate immunity in the context of recurrent urinary tract infection. Current Opinion in Infectious Diseases, 2015, 28, 97-105.	1.3	42

#	Article	IF	Citations
91	Highly conserved type 1 pili promote enterotoxigenic E. coli pathogen-host interactions. PLoS Neglected Tropical Diseases, 2017, 11, e0005586.	1.3	42
92	Domain activities of PapC usher reveal the mechanism of action of an Escherichia coli molecular machine. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9563-9568.	3.3	38
93	Hydrogen Sulfide Sensing through Reactive Sulfur Species (RSS) and Nitroxyl (HNO) in Enterococcus faecalis. ACS Chemical Biology, 2018, 13, 1610-1620.	1.6	37
94	Narrowing the spectrum: the new frontier of precision antimicrobials. Genome Medicine, 2017, 9, 110.	3.6	36
95	StrainGE: a toolkit to track and characterize low-abundance strains in complex microbial communities. Genome Biology, 2022, 23, 74.	3.8	35
96	Probing conserved surfaces on PapD. Molecular Microbiology, 1999, 31, 773-783.	1.2	34
97	Fueling the Fire with Fibers: Bacterial Amyloids Promote Inflammatory Disorders. Cell Host and Microbe, 2015, 18, 1-2.	5.1	33
98	Structure-Function Analysis of the Curli Accessory Protein CsgE Defines Surfaces Essential for Coordinating Amyloid Fiber Formation. MBio, 2018, 9, .	1.8	33
99	Host restriction of Escherichia coli recurrent urinary tract infection occurs in a bacterial strain-specific manner. PLoS Pathogens, 2018, 14, e1007457.	2.1	32
100	Molecular dissection of PapD interaction with PapG reveals two chaperone-binding sites. Molecular Microbiology, 1995, 16, 1011-1020.	1.2	30
101	Molecular basis of usher pore gating in Escherichia coli pilus biogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20741-20746.	3.3	27
102	The pilus usher controls protein interactions via domain masking and is functional as an oligomer. Nature Structural and Molecular Biology, 2015, 22, 540-546.	3.6	27
103	The differential affinity of the usher for chaperoneâ€“subunit complexes is required for assembly of complete pili. Molecular Microbiology, 2010, 76, 159-172.	1.2	25
104	Adaptor Function of PapF Depends on Donor Strand Exchange in P-Pilus Biogenesis of Escherichia coli. Journal of Bacteriology, 2007, 189, 5276-5283.	1.0	24
105	The Detection of Bacteria and Matrix Proteins on Clinically Benign and Pathologic Implants. Plastic and Reconstructive Surgery - Global Open, 2019, 7, e2037.	0.3	24
106	Mucosal infection rewires TNFÉ‘ signaling dynamics to skew susceptibility to recurrence. ELife, 2019, 8, .	2.8	24
107	Establishment and Characterization of UTI and CAUTI in a Mouse Model. Journal of Visualized Experiments, 2015, , e52892.	0.2	22
108	A 2-Pyridone-Amide Inhibitor Targets the Glucose Metabolism Pathway of Chlamydia trachomatis. MBio, 2015, 6, e02304-14.	1.8	22

#	Article	IF	Citations
109	Solution NMR structure of CsgE: Structural insights into a chaperone and regulator protein important for functional amyloid formation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7130-7135.	3.3	22
110	High-resolution imaging reveals microbial biofilms on patient urinary catheters despite antibiotic administration. World Journal of Urology, 2020, 38, 2237-2245.	1.2	22
111	Deposition of Host Matrix Proteins on Breast Implant Surfaces Facilitates Staphylococcus Epidermidis Biofilm Formation: In Vitro Analysis. Aesthetic Surgery Journal, 2020, 40, 281-295.	0.9	21
112	Limited effects of long-term daily cranberry consumption on the gut microbiome in a placebo-controlled study of women with recurrent urinary tract infections. BMC Microbiology, 2021, 21, 53.	1.3	21
113	Impaired cytokine expression, neutrophil infiltration and bacterial clearance in response to urinary tract infection in diabetic mice. Pathogens and Disease, 2015, 73, .	0.8	19
114	A host receptor enables type 1 pilus-mediated pathogenesis of Escherichia coli pyelonephritis. PLoS Pathogens, 2021, 17, e1009314.	2.1	19
115	Biphenyl Gal and GalNAc FmlH Lectin Antagonists of Uropathogenic E. coli (UPEC): Optimization through Iterative Rational Drug Design. Journal of Medicinal Chemistry, 2019, 62, 467-479.	2.9	18
116	Advanced glycation end products facilitate bacterial adherence in urinary tract infection in diabetic mice. Pathogens and Disease, 2015, 73, .	0.8	17
117	Structural basis for usher activation and intramolecular subunit transfer in P pilus biogenesis in Escherichia coli. Nature Microbiology, 2018, 3, 1362-1368.	5.9	17
118	Fimbriae reprogram host gene expression â€“ Divergent effects of P and type 1 fimbriae. PLoS Pathogens, 2019, 15, e1007671.	2.1	17
119	Establishing the role of the gut microbiota in susceptibility to recurrent urinary tract infections. Journal of Clinical Investigation, 2022, 132, .	3.9	17
120	CELL BIOLOGY: Bacterial Spelunkers. Science, 2000, 289, 732-733.	6.0	16
121	Evidence for donor strand complementation in the biogenesis of Haemophilus influenzae haemagglutinating pili. Molecular Microbiology, 2002, 35, 1335-1347.	1.2	14
122	Differential Regulation ofEscherichia coli fimGenes following Binding to Mannose Receptors. Journal of Pathogens, 2018, 2018, 1-8.	0.9	13
123	Establishment and Characterization of Bacterial Infection of Breast Implants in a Murine Model. Aesthetic Surgery Journal, 2020, 40, 516-528.	0.9	13
124	Adaptation of Arginine Synthesis among Uropathogenic Branches of the Escherichia coli Phylogeny Reveals Adjustment to the Urinary Tract Habitat. MBio, 2020, 11, .	1.8	12
125	One size doesnâ€™t fit all: unraveling the diversity of factors and interactions that drive E. coli urovirulence. Annals of Translational Medicine, 2017, 5, 28-28.	0.7	11
126	Transferred nuclear Overhauser effect spectroscopy study of a peptide from the PapG pilus subunit bound by theEscherichia coliPapD chaperone. FEBS Letters, 1997, 412, 115-120.	1.3	6

#	Article	IF	Citations
127	Bacteria thread the needle. Nature, 2001, 414, 29-31.	13.7	6
128	Reaching the End of the Line. , 2020, , 83-99.		6
129	Chaos Controlled: Discovery of a Powerful Amyloid Inhibitor. Molecular Cell, 2015, 57, 391-393.	4.5	4
130	Innovative Solutions to Sticky Situations: Antiadhesive Strategies for Treating Bacterial Infections. Microbiology Spectrum, 2016, 4, .	1.2	4
131	Innovative Solutions to Sticky Situations: Antiadhesive Strategies for Treating Bacterial Infections. , 2016, , 753-795.		0
132	Correlative Light, Electron, and Ion Microscopy for the Study of Urinary Tract Infection Pathogenesis. Microscopy and Microanalysis, 2017, 23, 1308-1309.	0.2	0
133	The Chaperone-Usher Pathway of Pilus Fiber Biogenesis. , 0, , 69-79.		0
134	Sugar Recognition and Bacterial Attachment. , 0, , 37-48.		0
135	Uropathogenic Escherichia coli Virulence and Gene Regulation. , 0, , 133-155.		0