Jessica R Castle

List of Publications by Year
in descending order

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61	2,301	186209	223716
papers	citations	28 h-index	46 g-index

62	62	62	1901
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Novel Use of Glucagon in a Closed-Loop System for Prevention of Hypoglycemia in Type 1 Diabetes. Diabetes Care, 2010, 33, 1282-1287.	4.3	209
2	Outcome Measures for Artificial Pancreas Clinical Trials: A Consensus Report. Diabetes Care, 2016, 39, 1175-1179.	4.3	195
3	Randomized Outpatient Trial of Single- and Dual-Hormone Closed-Loop Systems That Adapt to Exercise Using Wearable Sensors. Diabetes Care, 2018, 41, 1471-1477.	4.3	123
4	Accuracy of Wrist-Worn Activity Monitors During Common Daily Physical Activities and Types of Structured Exercise: Evaluation Study. JMIR MHealth and UHealth, 2018, 6, e10338.	1.8	117
5	Modeling the Glucose Sensor Error. IEEE Transactions on Biomedical Engineering, 2014, 61, 620-629.	2.5	104
6	Incorporating an Exercise Detection, Grading, and Hormone Dosing Algorithm Into the Artificial Pancreas Using Accelerometry and Heart Rate. Journal of Diabetes Science and Technology, 2015, 9, 1175-1184.	1.3	89
7	An artificial intelligence decision support system for the management of type 1 diabetes. Nature Metabolism, 2020, 2, 612-619.	5.1	89
8	Amperometric Glucose Sensors: Sources of Error and Potential Benefit of Redundancy. Journal of Diabetes Science and Technology, 2010, 4, 221-225.	1.3	80
9	Automated Control of an Adaptive Bihormonal, Dual-Sensor Artificial Pancreas and Evaluation During Inpatient Studies. IEEE Transactions on Biomedical Engineering, 2014, 61, 2569-2581.	2.5	75
10	A Glycemia Risk Index (GRI) of Hypoglycemia and Hyperglycemia for Continuous Glucose Monitoring Validated by Clinician Ratings. Journal of Diabetes Science and Technology, 2023, 17, 1226-1242.	1.3	69
11	A Review of Closed-Loop Algorithms for Glycemic Control in the Treatment of Type 1 Diabetes. Algorithms, 2009, 2, 518-532.	1.2	54
12	Effect of Aerobic and Resistance Exercise on Glycemic Control in Adults With Type 1 Diabetes. Canadian Journal of Diabetes, 2019, 43, 406-414.e1.	0.4	52
13	Quantification of the Glycemic Response to Microdoses of Subcutaneous Glucagon at Varying Insulin Levels. Diabetes Care, 2014, 37, 3054-3060.	4.3	47
14	Stable Liquid Glucagon: Beyond Emergency Hypoglycemia Rescue. Journal of Diabetes Science and Technology, 2018, 12, 847-853.	1.3	47
15	Prediction of Hypoglycemia During Aerobic Exercise in Adults With Type 1 Diabetes. Journal of Diabetes Science and Technology, 2019, 13, 919-927.	1.3	47
16	A statistical virtual patient population for the glucoregulatory system in type 1 diabetes with integrated exercise model. PLoS ONE, 2019, 14, e0217301.	1.1	46
17	Nonadjunctive Use of Continuous Glucose Monitoring for Diabetes Treatment Decisions. Journal of Diabetes Science and Technology, 2016, 10, 1169-1173.	1.3	45
18	Factors Influencing the Effectiveness of Glucagon for Preventing Hypoglycemia. Journal of Diabetes Science and Technology, 2010, 4, 1305-1310.	1.3	43

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19	Development of a Highly Stable, Nonaqueous Glucagon Formulation for Delivery via Infusion Pump Systems. Journal of Diabetes Science and Technology, 2015, 9, 24-33.	1.3	42
20	Control of Postprandial Hyperglycemia in Type 1 Diabetes by 24-Hour Fixed-Dose Coadministration of Pramlintide and Regular Human Insulin: A Randomized, Two-Way Crossover Study. Diabetes Care, 2018, 41, 2346-2352.	4.3	39
21	Mechanisms of glucagon degradation at alkaline pH. Peptides, 2013, 45, 40-47.	1.2	38
22	A Controlled Study of the Effectiveness of an Adaptive Closed-Loop Algorithm to Minimize Corticosteroid-Induced Stress Hyperglycemia in Type 1 Diabetes. Journal of Diabetes Science and Technology, 2011, 5, 1312-1326.	1.3	34
23	Stable Liquid Glucagon Formulations for Rescue Treatment and Bi-Hormonal Closed-Loop Pancreas. Current Diabetes Reports, 2012, 12, 705-710.	1.7	33
24	Comparative Pharmacokinetic/Pharmacodynamic Study of Liquid Stable Glucagon Versus Lyophilized Glucagon in Type 1 Diabetes Subjects. Journal of Diabetes Science and Technology, 2016, 10, 1101-1107.	1.3	33
25	Dual-Hormone Closed-Loop System Using a Liquid Stable Glucagon Formulation Versus Insulin-Only Closed-Loop System Compared With a Predictive Low Glucose Suspend System: An Open-Label, Outpatient, Single-Center, Crossover, Randomized Controlled Trial. Diabetes Care, 2020, 43, 2721-2729.	4.3	32
26	Future of Automated Insulin Delivery Systems. Diabetes Technology and Therapeutics, 2017, 19, S-67-S-72.	2.4	31
27	Safe Glycemic Management during Closed-Loop Treatment of Type 1 Diabetes: The Role of Glucagon, Use of Multiple Sensors, and Compensation for Stress Hyperglycemia. Journal of Diabetes Science and Technology, 2011, 5, 1373-1380.	1.3	30
28	The Accuracy Benefit of Multiple Amperometric Glucose Sensors in People With Type 1 Diabetes. Diabetes Care, 2012, 35, 706-710.	4.3	30
29	The effect of exercise on sleep in adults with type 1 diabetes. Diabetes, Obesity and Metabolism, 2018, 20, 443-447.	2.2	29
30	More Time in Glucose Range During Exercise Days than Sedentary Days in Adults Living with Type 1 Diabetes. Diabetes Technology and Therapeutics, 2021, 23, 376-383.	2.4	27
31	Effect of Repeated Glucagon Doses on Hepatic Glycogen in Type 1 Diabetes: Implications for a Bihormonal Closed-Loop System. Diabetes Care, 2015, 38, 2115-2119.	4.3	26
32	Fabrication of a Flexible Amperometric Glucose Sensor Using Additive Processes. ECS Journal of Solid State Science and Technology, 2015, 4, P3069-P3074.	0.9	25
33	Adaptive Control of an Artificial Pancreas Using Model Identification, Adaptive Postprandial Insulin Delivery, and Heart Rate and Accelerometry as Control Inputs. Journal of Diabetes Science and Technology, 2019, 13, 1044-1053.	1.3	23
34	Accuracy of the Dexcom G6 Glucose Sensor during Aerobic, Resistance, and Interval Exercise in Adults with Type 1 Diabetes. Biosensors, 2020, 10, 138.	2.3	23
35	A Novel, Stable, Aqueous Glucagon Formulation Using Ferulic Acid as an Excipient. Journal of Diabetes Science and Technology, 2015, 9, 17-23.	1.3	20
36	Recent Advances in Insulin Therapy. Diabetes Technology and Therapeutics, 2020, 22, 929-936.	2.4	19

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37	Predicting and Preventing Nocturnal Hypoglycemia in Type 1 Diabetes Using Big Data Analytics and Decision Theoretic Analysis. Diabetes Technology and Therapeutics, 2020, 22, 801-811.	2.4	19
38	Separating insulin-mediated and non-insulin-mediated glucose uptake during and after aerobic exercise in type 1 diabetes. American Journal of Physiology - Endocrinology and Metabolism, 2021, 320, E425-E437.	1.8	17
39	Long-Term Safety and Tolerability of Dasiglucagon, a Stable-in-Solution Glucagon Analogue. Diabetes Technology and Therapeutics, 2019, 21, 94-96.	2.4	17
40	Continuous Glucose Monitoring in Subjects with Type 1 Diabetes: Improvement in Accuracy by Correcting for Background Current. Diabetes Technology and Therapeutics, 2010, 12, 921-928.	2.4	16
41	Role of Glucagon in Automated Insulin Delivery. Endocrinology and Metabolism Clinics of North America, 2020, 49, 179-202.	1.2	16
42	Quantifying the impact of physical activity on future glucose trends using machine learning. IScience, 2022, 25, 103888.	1.9	16
43	Development of a fully automated closed loop artificial pancreas control system with dual pump delivery of insulin and glucagon. , 2011, 2011, 397-400.		14
44	Biochemical Stabilization of Glucagon at Alkaline pH. Diabetes Technology and Therapeutics, 2014, 16, 747-758.	2.4	14
45	Opportunities and challenges in closed-loop systems in type 1 diabetes. Lancet Diabetes and Endocrinology,the, 2022, 10, 6-8.	5.5	14
46	Modeling Glucagon Action in Patients With Type 1 Diabetes. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 1163-1171.	3.9	12
47	Adaptive tuning of basal and bolus insulin to reduce postprandial hypoglycemia in a hybrid artificial pancreas. Journal of Process Control, 2019, 80, 247-254.	1.7	12
48	Discomfort from an Alkaline Formulation Delivered Subcutaneously in Humans. Clinical Drug Investigation, 2012, 32, 433-438.	1.1	10
49	Can Glucose Be Monitored Accurately at the Site of Subcutaneous Insulin Delivery?. Journal of Diabetes Science and Technology, 2014, 8, 568-574.	1.3	9
50	An Amperometric Glucose Sensor Integrated into an Insulin Delivery Cannula: In Vitro and In Vivo Evaluation. Diabetes Technology and Therapeutics, 2017, 19, 226-236.	2.4	9
51	How Well Do Continuous Glucose Monitoring Systems Perform During Exercise?. Diabetes Technology and Therapeutics, 2019, 21, 305-309.	2.4	8
52	How COVID-19 Rapidly Transformed Clinical Practice at the Harold Schnitzer Diabetes Health Center Now and for the Future. Journal of Diabetes Science and Technology, 2020, 14, 721-722.	1.3	8
53	Measuring glucose at the site of insulin delivery with a redox-mediated sensor. Biosensors and Bioelectronics, 2020, 165, 112221.	5.3	6
54	Is glucagon needed in type 1 diabetes?. Lancet Diabetes and Endocrinology,the, 2015, 3, 578-579.	5.5	5

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55	Patient Input for Design of a Decision Support Smartphone Application for Type 1 Diabetes. Journal of Diabetes Science and Technology, 2020, 14, 1081-1087.	1.3	5
56	Where Do We Stand with Closed-Loop Systems and Their Challenges?. Diabetes Technology and Therapeutics, 2020, 22, 485-491.	2.4	4
57	Will the First Approved Automated Insulin Delivery System Be a Game-Changer in Type 1 Diabetes Management?. Diabetes Technology and Therapeutics, 2017, 19, 137-139.	2.4	3
58	Is Mini-Dose Glucagon the Answer to Preventing Exercise-Related Dysglycemia?. Diabetes Care, 2018, 41, 1842-1843.	4.3	1
59	Diabetes Technology Meeting 2020. Journal of Diabetes Science and Technology, 2021, 15, 916-960.	1.3	1
60	Advances in Subcutaneous Glucose Sensing. Diabetes Technology and Therapeutics, 2017, 19, 441-442.	2.4	0
61	Editorial Cycles and Continuity of Diabetes Care. Diabetes Care, 2022, 45, 1493-1494.	4.3	0