

# Arthur S Sherman

## List of Publications by Year in descending order

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142  
papers

5,985  
citations

50276

46  
h-index

82547

72  
g-index

148  
all docs

148  
docs citations

148  
times ranked

5129  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Do oscillations in pancreatic islets require pacemaker cells?. <i>Journal of Biosciences</i> , 2022, 47, 1.   | 1.1 | 10        |
| 2  | Oscillations in K(ATP) conductance drive slow calcium oscillations in pancreatic $\beta$ -cells. <i>Biophysical Journal</i> , 2022, 121, 1449-1464.   | 0.5 | 16        |
| 3  | The Relationship Between Lipoproteins and Insulin Sensitivity in Youth With Obesity and Abnormal Glucose Tolerance. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2022, 107, 1541-1551.                       | 3.6 | 9         |
| 4  | Pulsatile Basal Insulin Secretion Is Driven by Glycolytic Oscillations. <i>Physiology</i> , 2022, 37, 216-223.  | 3.1 | 6         |
| 5  | Pituitary corticotroph identity and receptor-mediated signaling: a transcriptomics perspective. <i>Current Opinion in Endocrine and Metabolic Research</i> , 2022, , 100364.  | 1.4 | 1         |
| 6  | When MINMOD Artificially Interprets Strong Insulin Secretion as Weak Insulin Action. <i>Frontiers in Physiology</i> , 2021, 12, 601894.   | 2.8 | 5         |
| 7  | 1089-P: Abnormal Glucose Tolerance Consequences Depend on Etiology: Insulin Resistance vs. $\beta$ -Cell Failure. <i>Diabetes</i> , 2021, 70, .   | 0.6 | 0         |
| 8  | 17-OR: Mathematical Model Disposition Index (mDI) Predicts Dysglycemia in Obese Youth. <i>Diabetes</i> , 2021, 70, .  | 0.6 | 0         |
| 9  | 588-P: Model-Derived Beta-Cell Function and One-Hour Glucose Best Predict Future Diabetes in a 14-year Longitudinal Large Cohort Study in South Korea. <i>Diabetes</i> , 2021, 70, .                                      | 0.6 | 0         |
| 10 | Beta-cell failure rather than insulin resistance is the major cause of abnormal glucose tolerance in Africans: insight from the Africans in America study. <i>BMJ Open Diabetes Research and Care</i> , 2021, 9, e002447. | 2.8 | 11        |
| 11 | Symbiosis of Electrical and Metabolic Oscillations in Pancreatic $\beta$ -Cells. <i>Frontiers in Physiology</i> , 2021, 12, 781581.   | 2.8 | 14        |
| 12 | Calcium-Prolactin Secretion Coupling in Rat Pituitary Lactotrophs Is Controlled by PI4-Kinase Alpha. <i>Frontiers in Endocrinology</i> , 2021, 12, 790441.  | 3.5 | 5         |
| 13 | Type 2 diabetes: one disease, many pathways. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020, 319, E410-E426.   | 3.5 | 33        |
| 14 | Cell-Type-Specific Expression Pattern of Proton-Sensing Receptors and Channels in Pituitary Gland. <i>Biophysical Journal</i> , 2020, 119, 2335-2348.   | 0.5 | 3         |
| 15 | Endothelial dysfunction due to selective insulin resistance in vascular endothelium: insights from mechanistic modeling. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020, 319, E629-E646.     | 3.5 | 43        |
| 16 | Improved Detection of Abnormal Glucose Tolerance in Africans: The Value of Combining Hemoglobin A1c With Glycated Albumin. <i>Diabetes Care</i> , 2020, 43, 2607-2613.  | 8.6 | 10        |
| 17 | The OGTT is highly reproducible in Africans for the diagnosis of diabetes: Implications for treatment and protocol design. <i>Diabetes Research and Clinical Practice</i> , 2020, 170, 108523.                            | 2.8 | 8         |
| 18 | Multiple Feedback Mechanisms Underlying Beta Cell Secretory Oscillations. <i>Biophysical Journal</i> , 2020, 118, 562a.   | 0.5 | 0         |

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|----|---|-----|-----------|
| 19 | Metabolic characteristics of Africans with normal glucose tolerance and elevated 1-hour glucose: insight from the Africans in America study. <i>BMJ Open Diabetes Research and Care</i> , 2020, 8, e000837.                       | 2.8 | 5         |
| 20 | Intact pancreatic islets and dispersed beta-cells both generate intracellular calcium oscillations but differ in their responsiveness to glucose. <i>Cell Calcium</i> , 2019, 83, 102081.   | 2.4 | 35        |
| 21 | Cell Type- and Sex-Dependent Transcriptome Profiles of Rat Anterior Pituitary Cells. <i>Frontiers in Endocrinology</i> , 2019, 10, 623.   | 3.5 | 74        |
| 22 | A1C Underperforms as a Diagnostic Test in Africans Even in the Absence of Nutritional Deficiencies, Anemia and Hemoglobinopathies: Insight From the Africans in America Study. <i>Frontiers in Endocrinology</i> , 2019, 10, 533. | 3.5 | 22        |
| 23 | Detecting Early Risk of Type 2 Diabetes During an Oral Glucose Tolerance Test. <i>Biophysical Journal</i> , 2019, 116, 525a.  | 0.5 | 0         |
| 24 | Divergent expression patterns of pituitary gonadotropin subunit and GnRH receptor genes to continuous GnRH in vitro and in vivo. <i>Scientific Reports</i> , 2019, 9, 20098.  | 3.3 | 16        |
| 25 | Postprandial Insulin Response and Clearance Among Black and White Women: The Federal Women's Study. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2019, 104, 181-192.   | 3.6 | 26        |
| 26 | 1490-P: Using Longitudinal Modeling to Find One-Hour Glucose Alternatives to Two-Hour Glucose for Prediction and Diagnosis of Glucose Tolerance. <i>Diabetes</i> , 2019, 68, .  | 0.6 | 1         |
| 27 | Abstract P115: Prevalence of Undiagnosed Diabetes Decreases by Eighty Percent When A1C Replaces the OGTT: The Africans in America Study. <i>Circulation</i> , 2019, 139, .  | 1.6 | 0         |
| 28 | Abstract P116: The Oral Glucose Tolerance Test is Highly Reproducible for the Diagnosis of Diabetes in Africans: The Africans in America Study. <i>Circulation</i> , 2019, 139, .   | 1.6 | 0         |
| 29 | Abstract P117: Prediction of Undiagnosed Diabetes in Africans is Optimized by Using Fasting Plasma Glucose at a Threshold of 100 mg/dL: The Africans in America Study. <i>Circulation</i> , 2019, 139, .                          | 1.6 | 0         |
| 30 | 1600-P: Duplicate Oral Glucose Tolerance Tests Reveal Excellent Reproducibility for Detection of Diabetes but Inconsistent Results for Prediabetes: A Study of Africans. <i>Diabetes</i> , 2019, 68, 1600-P.                      | 0.6 | 0         |
| 31 | 1510-P: A1C-Modified Atherosclerosis Risk in Communities Prediction Equation for Diabetes Can Be Replaced in Africans by Fasting Glucose. <i>Diabetes</i> , 2019, 68, 1510-P.   | 0.6 | 0         |
| 32 | 1493-P: Sickle Cell Trait, Hemoglobin C Trait, and Glucose-6-Phosphate Dehydrogenase Deficiency Contribute to Decreased Detection of Hyperglycemia by A1C. <i>Diabetes</i> , 2019, 68, 1493-P.                                    | 0.6 | 0         |
| 33 | Closing in on the Mechanisms of Pulsatile Insulin Secretion. <i>Diabetes</i> , 2018, 67, 351-359.   | 0.6 | 70        |
| 34 | Common and diverse elements of ion channels and receptors underlying electrical activity in endocrine pituitary cells. <i>Molecular and Cellular Endocrinology</i> , 2018, 463, 23-36.  | 3.2 | 34        |
| 35 | Predicting Future Glycemic Trajectories with a Mathematical Model. <i>Diabetes</i> , 2018, 67, .  | 0.6 | 1         |
| 36 | Hemoglobin Glycation Index Is Associated With Cardiovascular Diseases in People With Impaired Glucose Metabolism. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2017, 102, 2905-2913.                                 | 3.6 | 55        |

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|----|--|-----|-----------|
| 37 | Modeling the diversity of spontaneous and agonist-induced electrical activity in anterior pituitary corticotrophs. <i>Journal of Neurophysiology</i> , 2017, 117, 2298-2311.   | 1.8 | 16        |
| 38 | Time to glucose peak during an oral glucose tolerance test identifies prediabetes risk. <i>Clinical Endocrinology</i> , 2017, 87, 484-491.   | 2.4 | 51        |
| 39 | How Adaptation Makes Low Firing Rates Robust. <i>Journal of Mathematical Neuroscience</i> , 2017, 7, 4.  | 2.4 | 1         |
| 40 | Ca <sup>2+</sup> channel clustering with insulin-containing granules is disturbed in type 2 diabetes. <i>Journal of Clinical Investigation</i> , 2017, 127, 2353-2364.   | 8.2 | 70        |
| 41 | Deciphering the regulation of P2X <sub>4</sub> receptor channel gating by ivermectin using Markov models. <i>PLoS Computational Biology</i> , 2017, 13, e1005643.  | 3.2 | 10        |
| 42 | Paracrine regulation of glucagon secretion: the $\hat{I}^2/\hat{I}_{\pm}/\hat{I}^*$ model. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2016, 310, E597-E611.  | 3.5 | 40        |
| 43 | Islets Transplanted Into the Eye: Do They Improve Our Insight Into Islet Adaptation to Insulin Resistance?. <i>Diabetes</i> , 2016, 65, 2470-2472.   | 0.6 | 1         |
| 44 | Chronic Glucose Exposure Systematically Shifts the Oscillatory Threshold of Mouse Islets: Experimental Evidence for an Early Intrinsic Mechanism of Compensation for Hyperglycemia. <i>Endocrinology</i> , 2016, 157, 611-623. | 2.8 | 32        |
| 45 | Ca <sup>2+</sup> Effects on ATP Production and Consumption Have Regulatory Roles on Oscillatory Islet Activity. <i>Biophysical Journal</i> , 2016, 110, 733-742.   | 0.5 | 35        |
| 46 | Phase Analysis of Metabolic Oscillations and Membrane Potential in Pancreatic Islet $\hat{I}^2$ -Cells. <i>Biophysical Journal</i> , 2016, 110, 691-699.   | 0.5 | 52        |
| 47 | A Mathematical Model of the Pathogenesis, Prevention, and Reversal of Type 2 Diabetes. <i>Endocrinology</i> , 2016, 157, 624-635.  | 2.8 | 66        |
| 48 | Investigating How Calcium Diffusion Affects Metabolic Oscillations and Synchronization of Pancreatic Beta Cells. <i>Spora: A Journal of Biomathematics</i> , 2016, 2, .  | 0.1 | 0         |
| 49 | Glucose-Induced Cyclic-AMP Oscillations: Modeling Incretin Impact on Pancreatic Beta Cell Secretion. <i>Biophysical Journal</i> , 2015, 108, 614a.   | 0.5 | 0         |
| 50 | Ethnic Differences in Insulin Granule Exocytosis. <i>Biophysical Journal</i> , 2015, 108, 102a.  | 0.5 | 0         |
| 51 | Pulsatile insulin secretion, impaired glucose tolerance and type 2 diabetes. <i>Molecular Aspects of Medicine</i> , 2015, 42, 61-77.   | 6.4 | 186       |
| 52 | Modeling of Glucose-Induced cAMP Oscillations in Pancreatic $\hat{I}^2$ Cells: cAMP Rocks when Metabolism Rolls. <i>Biophysical Journal</i> , 2015, 109, 439-449.  | 0.5 | 12        |
| 53 | Electrical, Calcium, and Metabolic Oscillations in Pancreatic Islets. , 2015, , 453-474.   |     | 2         |
| 54 | Kir2.1 Channels Compensate for the Loss of KATP Channels in SUR1 Null Islets. <i>Biophysical Journal</i> , 2015, 108, 435a.  | 0.5 | 0         |

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|----|---|-----|-----------|
| 55 | Allosteric regulation of the P2X4 receptor channel pore dilation. Pflugers Archiv European Journal of Physiology, 2015, 467, 713-726.   | 2.8 | 24        |
| 56 | <b>Dynamics of Computational Islet Simulations: Islets with majority mutated open</b>K<sub>ATP</sub><b>channels retain bursting</b>. Letters in Biomathematics, 2014, 1, 3-15.  | 0.1 | 1         |
| 57 | Amelioration of insulin resistance by rosiglitazone is associated with increased adipose cell size in obese type 2 diabetic patients. Adipocyte, 2014, 3, 314-321.  | 2.8 | 15        |
| 58 | Calcium and Metabolic Oscillations in Pancreatic Islets: Who's Driving the Bus?. SIAM Journal on Applied Dynamical Systems, 2014, 13, 683-703.  | 1.6 | 19        |
| 59 | Subcutaneous adipose cell size and distribution: Relationship to insulin resistance and body fat. Obesity, 2014, 22, 673-680.   | 3.0 | 100       |
| 60 | Modeling the Pancreatic $\beta$ -Cell: Dual Mechanisms of Glucose Suppression of Glucagon Secretion. Biophysical Journal, 2014, 106, 741-751.   | 0.5 | 36        |
| 61 | Dynamics of Computational Islet Simulations: Islets with Majority Mutated Open. Letters in Biomathematics, 2014, 1, .   | 0.1 | 0         |
| 62 | Electrical, Calcium, and Metabolic Oscillations in Pancreatic Islets. , 2014, , 1-20.   |     | 0         |
| 63 | Deciphering the Kinetic and Gating Properties of Purinergic P2X7 Receptor Channels. Athens Journal of Sciences, 2014, 1, 43-56.   | 0.2 | 0         |
| 64 | Dual Gating Mechanism and Function of P2X7 Receptor Channels. Biophysical Journal, 2013, 104, 2612-2621.  | 0.5 | 47        |
| 65 | Slow oscillations of KATP conductance in mouse pancreatic islets provide support for electrical bursting driven by metabolic oscillations. American Journal of Physiology - Endocrinology and Metabolism, 2013, 305, E805-E817. | 3.5 | 33        |
| 66 | Gating properties of the P2X2a and P2X2b receptor channels: Experiments and mathematical modeling. Journal of General Physiology, 2012, 139, 333-348.   | 1.9 | 32        |
| 67 | The Size of Large Adipose Cells Is a Predictor of Insulin Resistance in Firstâ€Degree Relatives of Type 2 Diabetic Patients. Obesity, 2012, 20, 932-938.  | 3.0 | 89        |
| 68 | Phosphofructo-2-kinase/Fructose-2,6-bisphosphatase Modulates Oscillations of Pancreatic Islet Metabolism. PLoS ONE, 2012, 7, e34036.  | 2.5 | 28        |
| 69 | Cross-currents between biology and mathematics: The codimension of pseudo-plateau bursting. Discrete and Continuous Dynamical Systems, 2012, 32, 2853-2877.   | 0.9 | 37        |
| 70 | Amelioration of insulin resistance by rosiglitazone is associated with increased adipose cell size in obese type 2 diabetics. FASEB Journal, 2012, 26, 869.1.   | 0.5 | 0         |
| 71 | 6-Phosphofructo-2-Kinase/Fructose-2,6-Bisphosphatase (PFKFB) Modulates Slow Oscillations in Pancreatic Islets. Biophysical Journal, 2011, 100, 380a-381a.   | 0.5 | 0         |
| 72 | Testing a Computational Model of Pancreatic Beta-Cell Oscillations Using Live-Cell Imaging of Islet Oscillatory Behavior. Microscopy and Microanalysis, 2011, 17, 208-209.  | 0.4 | 0         |

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|----|---|-----|-----------|
| 73 | Calcium cooperativity of exocytosis as a measure of Ca <sup>2+</sup> channel domain overlap. <i>Brain Research</i> , 2011, 1398, 126-138.   | 2.2 | 49        |
| 74 | Slow variable dominance and phase resetting in phantom bursting. <i>Journal of Theoretical Biology</i> , 2011, 276, 218-228.  | 1.7 | 34        |
| 75 | Effect of spatial arrangement of presynaptic calcium channels on the calcium current cooperativity of neurotransmitter release. <i>BMC Neuroscience</i> , 2011, 12, .                                     | 1.9 | 0         |
| 76 | Calcium-dependent block of P2X7 receptor channel function is allosteric. <i>Journal of General Physiology</i> , 2011, 138, 437-452.   | 1.9 | 68        |
| 77 | Dynamical systems theory in physiology. <i>Journal of General Physiology</i> , 2011, 138, 13-19.  | 1.9 | 26        |
| 78 | Investigating the Role of T-Cell Avidity and Killing Efficacy in Relation to Type 1 Diabetes Prediction. <i>PLoS ONE</i> , 2011, 6, e14796.   | 2.5 | 12        |
| 79 | Inflammation in subcutaneous adipose tissue: relationship to adipose cell size. <i>Diabetologia</i> , 2010, 53, 369-377.  | 6.3 | 92        |
| 80 | Full system bifurcation analysis of endocrine bursting models. <i>Journal of Theoretical Biology</i> , 2010, 264, 1133-1146.  | 1.7 | 84        |
| 81 | Pioglitazone Increases the Proportion of Small Cells in Human Abdominal Subcutaneous Adipose Tissue. <i>Obesity</i> , 2010, 18, 926-931.  | 3.0 | 69        |
| 82 | Cellularity and Adipogenic Profile of the Abdominal Subcutaneous Adipose Tissue From Obese Adolescents: Association With Insulin Resistance and Hepatic Steatosis. <i>Diabetes</i> , 2010, 59, 2288-2296. | 0.6 | 117       |
| 83 | Differential adipogenic and inflammatory properties of small adipocytes in Zucker Obese and Lean rats. <i>Diabetes and Vascular Disease Research</i> , 2010, 7, 311-318.                                  | 2.0 | 21        |
| 84 | Experimental Characterization and Mathematical Modeling of P2X7 Receptor Channel Gating. <i>Journal of Neuroscience</i> , 2010, 30, 14213-14224.  | 3.6 | 116       |
| 85 | Metabolic Oscillations in Pancreatic Islets Depend on the Intracellular Ca <sup>2+</sup> Level but Not Ca <sup>2+</sup> Oscillations. <i>Biophysical Journal</i> , 2010, 99, 76-84.                       | 0.5 | 50        |
| 86 | How Pancreatic $\beta$ -Cells Discriminate Long and Short Timescale cAMP Signals. <i>Biophysical Journal</i> , 2010, 99, 398-406.   | 0.5 | 5         |
| 87 | Lessons from models of pancreatic $\beta$ cells for engineering glucose-sensing cells. <i>Mathematical Biosciences</i> , 2010, 227, 12-19.  | 1.9 | 13        |
| 88 | P2X7 Receptor-Mediated Disruption of the Plasma Membrane and Endoplasmic Reticulum Morphology and Cell Survival. <i>Biophysical Journal</i> , 2010, 98, 701a-702a.  | 0.5 | 0         |
| 89 | Electrical Bursting, Calcium Oscillations, and Synchronization of Pancreatic Islets. <i>Advances in Experimental Medicine and Biology</i> , 2010, 654, 261-279.   | 1.6 | 57        |
| 90 | Glucose Metabolism, Islet Architecture, and Genetic Homogeneity in Imprinting of [Ca <sup>2+</sup> ] <sub>i</sub> and Insulin Rhythms in Mouse Islets. <i>PLoS ONE</i> , 2009, 4, e8428.                  | 2.5 | 45        |

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|-----|---|-----|-----------|
| 91  | The Geometry of Bursting in the Dual Oscillator Model of Pancreatic $\beta$ -cells. SIAM Journal on Applied Dynamical Systems, 2009, 8, 1664-1693.  | 1.6 | 21        |
| 92  | $Ca^{2+}$ Current versus $Ca^{2+}$ Channel Cooperativity of Exocytosis. Journal of Neuroscience, 2009, 29, 12196-12209.   | 3.6 | 25        |
| 93  | Newcomer insulin secretory granules as a highly calcium-sensitive pool. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7432-7436.  | 7.1 | 94        |
| 94  | Differential Intra-abdominal Adipose Tissue Profiling in Obese, Insulin-resistant Women. Obesity Surgery, 2009, 19, 1564-1573.  | 2.1 | 43        |
| 95  | Accounting for Near-Normal Glucose Sensitivity in Kir6.2[AAA] Transgenic Mice. Biophysical Journal, 2009, 97, 2409-2418.  | 0.5 | 8         |
| 96  | Multiscale Modeling of Electrical and Intracellular Activity in the Pancreas: The Islet Tridomain Equations. Multiscale Modeling and Simulation, 2009, 7, 1609-1642.  | 1.6 | 1         |
| 97  | Computational Study Of The Effect Of Calcium Buffers On The Calcium Current Cooperativity Of Exocytosis. Biophysical Journal, 2009, 96, 659a-660a.  | 0.5 | 0         |
| 98  | Insulin resistance is associated with a modest increase in inflammation in subcutaneous adipose tissue of moderately obese women. Diabetologia, 2008, 51, 2303-2308.  | 6.3 | 58        |
| 99  | Resetting Behavior in a Model of Bursting in Secretory Pituitary Cells: Distinguishing Plateaus from Pseudo-Plateaus. Bulletin of Mathematical Biology, 2008, 70, 68-88.  | 1.9 | 43        |
| 100 | Identifying the Targets of the Amplifying Pathway for Insulin Secretion in Pancreatic $\beta$ -Cells by Kinetic Modeling of Granule Exocytosis. Biophysical Journal, 2008, 95, 2226-2241.                                     | 0.5 | 57        |
| 101 | Long Lasting Synchronization of Calcium Oscillations by Cholinergic Stimulation in Isolated Pancreatic Islets. Biophysical Journal, 2008, 95, 4676-4688.  | 0.5 | 40        |
| 102 | Response to the Comment by F. Diederichs. Biophysical Journal, 2008, 94, 5080.  | 0.5 | 0         |
| 103 | Metabolic and electrical oscillations: partners in controlling pulsatile insulin secretion. American Journal of Physiology - Endocrinology and Metabolism, 2007, 293, E890-E900.  | 3.5 | 155       |
| 104 | Relocalization of STIM1 for Activation of Store-operated $Ca^{2+}$ Entry Is Determined by the Depletion of Subplasma Membrane Endoplasmic Reticulum $Ca^{2+}$ Store. Journal of Biological Chemistry, 2007, 282, 12176-12185. | 3.4 | 53        |
| 105 | Interaction of Glycolysis and Mitochondrial Respiration in Metabolic Oscillations of Pancreatic Islets. Biophysical Journal, 2007, 92, 1544-1555.   | 0.5 | 104       |
| 106 | Mechanism of Spontaneous and Receptor-Controlled Electrical Activity in Pituitary Somatotrophs: Experiments and Theory. Journal of Neurophysiology, 2007, 98, 131-144.  | 1.8 | 96        |
| 107 | Enhanced proportion of small adipose cells in insulin-resistant vs insulin-sensitive obese individuals implicates impaired adipogenesis. Diabetologia, 2007, 50, 1707-1715.   | 6.3 | 321       |
| 108 | Diffusion of Calcium and Metabolites in Pancreatic Islets: Killing Oscillations with a Pitchfork. Biophysical Journal, 2006, 90, 3434-3446.   | 0.5 | 85        |

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|-----|--|-----|-----------|
| 109 | Glucose Modulates $[Ca^{2+}]_i$ Oscillations in Pancreatic Islets via Ionic and Glycolytic Mechanisms. Biophysical Journal, 2006, 91, 2082-2096.                     | 0.5 | 102       |
| 110 | Residual Bound $Ca^{2+}$ Can Account for the Effects of $Ca^{2+}$ Buffers on Synaptic Facilitation. Journal of Neurophysiology, 2006, 96, 3389-3397.                 | 1.8 | 31        |
| 111 | A simplified model for mitochondrial ATP production. Journal of Theoretical Biology, 2006, 243, 575-586.   | 1.7 | 145       |
| 112 | NEGATIVE CALCIUM FEEDBACK: THE ROAD FROM CHAY-KEIZER. , 2005, , 19-48.   |     | 32        |
| 113 | BEYOND SYNCHRONIZATION: MODULATORY AND EMERGENT EFFECTS OF COUPLING IN SQUARE-WAVE BURSTING. , 2005, , 243-272.  |     | 6         |
| 114 | Integrative modeling of the pancreatic $\beta$ -cell. , 2005, , .  |     | 1         |
| 115 | Individual Mice Can Be Distinguished by the Period of Their Islet Calcium Oscillations. Diabetes, 2005, 54, 3517-3522.   | 0.6 | 89        |
| 116 | Intra- and Inter-Islet Synchronization of Metabolically Driven Insulin Secretion. Biophysical Journal, 2005, 89, 107-119.  | 0.5 | 129       |
| 117 | A calcium-based phantom bursting model for pancreatic islets. Bulletin of Mathematical Biology, 2004, 66, 1313-1344.   | 1.9 | 97        |
| 118 | Three Roads to Islet Bursting: Emergent Oscillations in Coupled Phantom Bursters. Biophysical Journal, 2004, 87, 193-206.  | 0.5 | 33        |
| 119 | Calcium and Glycolysis Mediate Multiple Bursting Modes in Pancreatic Islets. Biophysical Journal, 2004, 87, 3074-3087.   | 0.5 | 147       |
| 120 | Filtering of Calcium Transients by the Endoplasmic Reticulum in Pancreatic $\beta$ -Cells. Biophysical Journal, 2004, 87, 3775-3785.                                 | 0.5 | 31        |
| 121 | Facilitation through Buffer Saturation: Constraints on Endogenous Buffering Properties. Biophysical Journal, 2004, 86, 2691-2709.                                    | 0.5 | 94        |
| 122 | The $Ca^{2+}$ Dynamics of Isolated Mouse $\beta$ -Cells and Islets: Implications for Mathematical Models. Biophysical Journal, 2003, 84, 2852-2870.                  | 0.5 | 141       |
| 123 | Calcium-activated $K^+$ Channels of Mouse $\beta$ -cells are Controlled by Both Store and Cytoplasmic $Ca^{2+}$ . Journal of General Physiology, 2002, 120, 307-322. | 1.9 | 62        |
| 124 | New and Corrected Simulations of Synaptic Facilitation. Biophysical Journal, 2002, 83, 1368-1373.  | 0.5 | 83        |
| 125 | A mathematical model of metabolic insulin signaling pathways. American Journal of Physiology - Endocrinology and Metabolism, 2002, 283, E1084-E1101.                 | 3.5 | 177       |
| 126 | Asymptotic Analysis of Buffered Calcium Diffusion near a Point Source. SIAM Journal on Applied Mathematics, 2001, 61, 1816-1838.                                     | 1.8 | 104       |



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|-----|---|-----|-----------|
| 127 | From Spikers to Bursters Via Coupling: Help From Heterogeneity. Bulletin of Mathematical Biology, 2001, 63, 371-391.  | 1.9 | 43        |
| 128 | Channel Sharing in Pancreatic $\hat{I}^2$ -Cells Revisited: Enhancement of Emergent Bursting by Noise. Journal of Theoretical Biology, 2000, 207, 513-530.  | 1.7 | 79        |
| 129 | Modeling of Membrane Excitability in Gonadotropin-Releasing Hormone-Secreting Hypothalamic Neurons Regulated by $Ca^{2+}$ -Mobilizing and Adenylyl Cyclase-Coupled Receptors. Journal of Neuroscience, 2000, 20, 9290-9297. | 3.6 | 59        |
| 130 | Dynamical complexity and temporal plasticity in pancreatic $g\hat{I}^2$ b-cells. Journal of Biosciences, 2000, 25, 197-209.   | 1.1 | 28        |
| 131 | The Phantom Burster Model for Pancreatic $\hat{I}^2$ -Cells. Biophysical Journal, 2000, 79, 2880-2892.  | 0.5 | 97        |
| 132 | Modeling Study of the Effects of Overlapping $Ca^{2+}$ Microdomains on Neurotransmitter Release. Biophysical Journal, 1999, 76, 735-750.  | 0.5 | 99        |
| 133 | Diffusively Coupled Bursters: Effects of Cell Heterogeneity. Bulletin of Mathematical Biology, 1998, 60, 1167-1200.   | 1.9 | 79        |
| 134 | Evidence That Calcium Release-activated Current Mediates the Biphasic Electrical Activity of Mouse Pancreatic $\hat{I}^2$ -Cells. Journal of Membrane Biology, 1997, 155, 47-59.  | 2.1 | 32        |
| 135 | Computer Modeling of Heterogeneous $\hat{I}^2$ -Cell Populations. Advances in Experimental Medicine and Biology, 1997, 426, 275-284.  | 1.6 | 2         |
| 136 | Estimating and eliminating junctional current in coupled cell populations by leak subtraction. A computational study. Journal of Membrane Biology, 1995, 143, 79-87.  | 2.1 | 11        |
| 137 | Topological and phenomenological classification of bursting oscillations. Bulletin of Mathematical Biology, 1995, 57, 413-439.  | 1.9 | 235       |
| 138 | Phase Independent Resetting in Relaxation and Bursting Oscillators. Journal of Theoretical Biology, 1994, 169, 339-348.   | 1.7 | 10        |
| 139 | Anti-phase, asymmetric and aperiodic oscillations in excitable cells. Coupled bursters. Bulletin of Mathematical Biology, 1994, 56, 811-835.  | 1.9 | 78        |
| 140 | Channels, Coupling, and Synchronized Rhythmic Bursting Activity. , 1992, , 29-46.   |     | 9         |
| 141 | Modulation of the frequency of glucose-dependent bursts of electrical activity by $HCO_3/CO_2$ in rodent pancreatic B-cells: experimental and theoretical results. European Biophysics Journal, 1990, 18, 71-7.             | 2.2 | 5         |
| 142 | An introduction to beta cell electrophysiology and modeling. , 0, , .   |     | 1         |