

# Joel Alan Hirsch

## List of Publications by Year in descending order

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60  
papers

3,246  
citations

201674

27  
h-index

161849

54  
g-index

63  
all docs

63  
docs citations

63  
times ranked

3962  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | A Model for Arrestin's Regulation: The 2.8 Å... Crystal Structure of Visual Arrestin. <i>Cell</i> , 1999, 97, 257-269.   | 28.9 | 396       |
| 2  | Differential Interactions Between Beclin 1 and Bcl-2 Family Members. <i>Autophagy</i> , 2007, 3, 561-568.  | 9.1  | 263       |
| 3  | Structural Analysis of the Voltage-Dependent Calcium Channel $\alpha_1$ Subunit Functional Core and Its Complex with the $\beta_1$ Interaction Domain. <i>Neuron</i> , 2004, 42, 387-399.                                | 8.1  | 258       |
| 4  | Structure of the multimodular endonuclease FokI bound to DNA. <i>Nature</i> , 1997, 388, 97-100.   | 27.8 | 256       |
| 5  | Calmodulin Is Essential for Cardiac I <sub>K</sub> S Channel Gating and Assembly. <i>Circulation Research</i> , 2006, 98, 1055-1063.   | 4.5  | 182       |
| 6  | How Does Arrestin Respond to the Phosphorylated State of Rhodopsin?. <i>Journal of Biological Chemistry</i> , 1999, 274, 11451-11454.  | 3.4  | 164       |
| 7  | The KCNQ1 (Kv7.1) COOH Terminus, a Multitiered Scaffold for Subunit Assembly and Protein Interaction. <i>Journal of Biological Chemistry</i> , 2008, 283, 5815-5830.   | 3.4  | 123       |
| 8  | The NAP motif of activity-dependent neuroprotective protein (ADNP) regulates dendritic spines through microtubule end binding proteins. <i>Molecular Psychiatry</i> , 2014, 19, 1115-1124.                               | 7.9  | 111       |
| 9  | APP Homodimers Transduce an Amyloid- $\beta$ -Mediated Increase in Release Probability at Excitatory Synapses. <i>Cell Reports</i> , 2014, 7, 1560-1576.   | 6.4  | 109       |
| 10 | Structure of the even-skipped homeodomain complexed to AT-rich DNA: new perspectives on homeodomain specificity.. <i>EMBO Journal</i> , 1995, 14, 6280-6291.   | 7.8  | 108       |
| 11 | Transition of Arrestin into the Active Receptor-binding State Requires an Extended Interdomain Hinge. <i>Journal of Biological Chemistry</i> , 2002, 277, 43961-43967.   | 3.4  | 91        |
| 12 | Structural Basis of a Kv7.1 Potassium Channel Gating Module: Studies of the Intracellular C-Terminal Domain in Complex with Calmodulin. <i>Structure</i> , 2014, 22, 1582-1594.  | 3.3  | 88        |
| 13 | Evidence that the glucose transporter serves as a water channel in J774 macrophages.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1989, 86, 8397-8401.                      | 7.1  | 79        |
| 14 | The Voltage-dependent Calcium Channel $\alpha_1$ Subunit Contains Two Stable Interacting Domains. <i>Journal of Biological Chemistry</i> , 2003, 278, 52323-52332.   | 3.4  | 76        |
| 15 | An S-Acylation Switch of Conserved G Domain Cysteines Is Required for Polarity Signaling by ROP GTPases. <i>Current Biology</i> , 2010, 20, 914-920.   | 3.9  | 74        |
| 16 | Visual Arrestin Activity May Be Regulated by Self-association. <i>Journal of Biological Chemistry</i> , 1999, 274, 21186-21190.  | 3.4  | 68        |
| 17 | The <i>Arabidopsis</i> COP9 Signalosome Subunit 7 Is a Model PCI Domain Protein with Subdomains Involved in COP9 Signalosome Assembly. <i>Plant Cell</i> , 2008, 20, 2815-2834.  | 6.6  | 59        |
| 18 | Competition of calcified calmodulin N lobe and PIP <sub>2</sub> to an LQT mutation site in Kv7.1 channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E869-E878. | 7.1  | 46        |

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|----|---|------|-----------|
| 19 | Intracellular domains interactions and gated motions of IKS potassium channel subunits. EMBO Journal, 2009, 28, 1994-2005.  | 7.8  | 45        |
| 20 | Structural basis for active single and double ring complexes in human mitochondrial Hsp60-Hsp10 chaperonin. Nature Communications, 2020, 11, 1916.  | 12.8 | 44        |
| 21 | Long QT mutations disrupt <i>I<sub>K</sub>S</i> regulation by PKA and PIP2 at the same KCNQ1 helix C-KCNE1 interface. Journal of Cell Science, 2014, 127, 3943-55.  | 2.0  | 38        |
| 22 | A Common Ca <sup>2+</sup> -Driven Interdomain Module Governs Eukaryotic NCX Regulation. PLoS ONE, 2012, 7, e39985.  | 2.5  | 36        |
| 23 | A novel Ca <sup>2+</sup> -binding protein that can rapidly transduce auxin responses during root growth. PLoS Biology, 2019, 17, e3000085.  | 5.6  | 35        |
| 24 | The Role of a Voltage-Dependent Ca <sup>2+</sup> Channel Intracellular Linker: A Structure-Function Analysis. Journal of Neuroscience, 2012, 32, 7602-7613.   | 3.6  | 34        |
| 25 | Competitive and Non-competitive Regulation of Calcium-dependent Inactivation in CaV1.2 L-type Ca <sup>2+</sup> Channels by Calmodulin and Ca <sup>2+</sup> -binding Protein 1. Journal of Biological Chemistry, 2013, 288, 12680-12691. | 3.4  | 34        |
| 26 | Two missense mutations in KCNQ1 cause pituitary hormone deficiency and maternally inherited gingival fibromatosis. Nature Communications, 2017, 8, 1289.  | 12.8 | 33        |
| 27 | RGK Family G-Domain:GTP Analog Complex Structures and Nucleotide-Binding Properties. Journal of Molecular Biology, 2011, 413, 372-389.  | 4.2  | 31        |
| 28 | Beclin 1 self-association is independent of autophagy induction by amino acid deprivation and rapamycin treatment. Journal of Cellular Biochemistry, 2010, 110, 1262-1271.  | 2.6  | 30        |
| 29 | Regulation of Neuronal M-Channel Gating in an Isoform-Specific Manner: Functional Interplay between Calmodulin and Syntaxin 1A. Journal of Neuroscience, 2011, 31, 14158-14171.   | 3.6  | 28        |
| 30 | Ca <sup>2+</sup> -Calmodulin and PIP2 interactions at the proximal C-terminus of Kv7 channels. Channels, 2017, 11, 686-695.   | 2.8  | 28        |
| 31 | Population Shift Underlies Ca <sup>2+</sup> -induced Regulatory Transitions in the Sodium-Calcium Exchanger (NCX). Journal of Biological Chemistry, 2013, 288, 23141-23149.   | 3.4  | 26        |
| 32 | Structural Insights into the M-Channel Proximal C-Terminus/Calmodulin Complex. Biochemistry, 2016, 55, 5353-5365.   | 2.5  | 26        |
| 33 | The Organization of a CSN5-containing Subcomplex of the COP9 Signalosome. Journal of Biological Chemistry, 2012, 287, 42031-42041.  | 3.4  | 25        |
| 34 | Structure-function studies of the G-domain from human gem, a novel small G-protein. FEBS Letters, 2006, 580, 5959-5964.   | 2.8  | 24        |
| 35 | Characterization of the calmodulin-binding site in the N terminus of CaV1.2. Channels, 2009, 3, 337-342.  | 2.8  | 23        |
| 36 | The C2B Domain Is the Primary Ca <sup>2+</sup> Sensor in DOC2B: A Structural and Functional Analysis. Journal of Molecular Biology, 2013, 425, 4629-4641.   | 4.2  | 20        |

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|----|---|------|-----------|
| 37 | Drosophila COP9 signalosome subunit 7 interacts with multiple genomic loci to regulate development. <i>Nucleic Acids Research</i> , 2014, 42, 9761-9770.  | 14.5 | 18        |
| 38 | Reconstitution of $\beta$ -adrenergic regulation of Ca <sub>v</sub> 1.2: Rad-dependent and Rad-independent protein kinase A mechanisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .   | 7.1  | 17        |
| 39 | Ancient Origins of RGC Protein Function: Modulation of Voltage-Gated Calcium Channels Preceded the Protostome and Deuterostome Split. <i>PLoS ONE</i> , 2014, 9, e100694.   | 2.5  | 12        |
| 40 | Interactions between N and C termini of $\beta$ 1C subunit regulate inactivation of Ca <sub>v</sub> 1.2 L-type Ca <sup>2+</sup> channel. <i>Channels</i> , 2016, 10, 55-68.   | 2.8  | 12        |
| 41 | COP9 signalosome subunit 7 from Arabidopsis interacts with and regulates the small subunit of ribonucleotide reductase (RNR2). <i>Plant Molecular Biology</i> , 2011, 77, 77-89.  | 3.9  | 11        |
| 42 | A unique mechanism of inactivation gating of the Kv channel family member Kv7.1 and its modulation by PIP2 and calmodulin. <i>Science Advances</i> , 2020, 6, .   | 10.3 | 10        |
| 43 | A novel point mutation (I137T) in the conserved 5-phosphoribosyl-1-pyrophosphate binding motif of hypoxanthine-guanine phosphoribosyltransferase (HPRT <sup>Jerusalem</sup> ) in a variant of Lesch- $\text{N}$ yan syndrome. <i>Molecular Genetics and Metabolism</i> , 2003, 78, 158-161. | 1.1  | 9         |
| 44 | Ca <sub>v</sub> 1.2 I-II linker structure and Timothy syndrome. <i>Channels</i> , 2012, 6, 468-472.   | 2.8  | 8         |
| 45 | Crystallization and preliminary X-ray analysis of restriction endonuclease Fok I bound to DNA. <i>FEBS Letters</i> , 1997, 403, 136-138.  | 2.8  | 7         |
| 46 | Expression, purification and crystallization of a functional core of the voltage-dependent calcium channel $\beta$ subunit. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2004, 60, 1301-1303.  | 2.5  | 6         |
| 47 | Structural Flexibility of CaV1.2 and CaV2.2 I-II Proximal Linker Fragments in Solution. <i>Biophysical Journal</i> , 2013, 104, 2392-2400.  | 0.5  | 5         |
| 48 | Purification, crystallization, and preliminary X-ray diffraction analysis of even-skipped homeodomain complexed to DNA. <i>Proteins: Structure, Function and Bioinformatics</i> , 1995, 21, 268-271.  | 2.6  | 4         |
| 49 | An S-Acylation Switch of Conserved G Domain Cysteines Is Required for Polarity Signaling by ROP GTPases. <i>Current Biology</i> , 2010, 20, 1326.   | 3.9  | 4         |
| 50 | Characterization of the Calmodulin-Binding Site in the N Terminus of Cav1.2. <i>Biophysical Journal</i> , 2010, 98, 518a.   | 0.5  | 4         |
| 51 | The Role of KCNQ1 Mutations and Maternal Beta Blocker Use During Pregnancy in the Growth of Children With Long QT Syndrome. <i>Frontiers in Endocrinology</i> , 2018, 9, 194.   | 3.5  | 3         |
| 52 | Clinical and Biochemical Manifestations and Molecular Characterization of the Mutation HPRT <sup>Jerusalem</sup> . <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2004, 23, 1165-1168.   | 1.1  | 2         |
| 53 | Expression, purification and crystallization of a PCI domain from the COP9 signalosome subunit 7 (CSN7). <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 1138-1140.  | 0.7  | 2         |
| 54 | The Distal Kcne1 C-Terminus is Crucial for Yotiao Mediated Pka-Dependent Phosphorylation of KCNQ1. <i>Biophysical Journal</i> , 2013, 104, 210a.  | 0.5  | 1         |

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|----|--|-----|-----------|
| 55 | RK Proteins are not Ras-Like Molecular Switches. A Prespective from Voltage-Dependent Calcium Channels Inhibition. Biophysical Journal, 2013, 104, 461a.           | 0.5 | 0         |
| 56 | A Novel Site of Competitive PIP2 and Calmodulin Interaction to KCNQ1 C-Terminus Helix B is Crucial for IKs Channel Activity. Biophysical Journal, 2016, 110, 186a. | 0.5 | 0         |
| 57 | A Structural Characterization of the Kv7.2-Kv7.3 M Channel Proximal C-Terminus/Cam Complex. Biophysical Journal, 2016, 110, 528a.                                  | 0.5 | 0         |
| 58 | Direct Interaction Between N and C Termini of $\hat{I}\pm 1C$ Subunit of CaV1.2 L-Type Calcium Channel. Biophysical Journal, 2016, 110, 443a.                      | 0.5 | 0         |
| 59 | Phosphate Sensor and Construction of Phosphorylation-Independent Arrestins. , 2017, , 69-82.   |     | 0         |
| 60 | Initial Crystallographic Studies of Visual Arrestin: Insights and Perspectives. , 2017, , 33-42.   |     | 0         |