

Rikard Blunck

List of Publications by Year in descending order

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Version: 2024-02-01

75
papers

2,160
citations

304602

22
h-index

233338

45
g-index

79
all docs

79
docs citations

79
times ranked

2278
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Gating charge displacement in voltage-gated ion channels involves limited transmembrane movement. <i>Nature</i> , 2005, 436, 852-856. | 13.7 | 263 |
| 2 | A hybrid approach to measuring electrical activity in genetically specified neurons. <i>Nature Neuroscience</i> , 2005, 8, 1619-1626. | 7.1 | 169 |
| 3 | Silicon chip-based patch-clamp electrodes integrated with PDMS microfluidics. <i>Biosensors and Bioelectronics</i> , 2004, 20, 509-517. | 5.3 | 163 |
| 4 | New Insights Into Endotoxin-Induced Activation of Macrophages: Involvement of a K ⁺ Channel in Transmembrane Signaling. <i>Journal of Immunology</i> , 2001, 166, 1009-1015. | 0.4 | 129 |
| 5 | Bilayer Reconstitution of Voltage-Dependent Ion Channels using a Microfabricated Silicon Chip. <i>Biophysical Journal</i> , 2001, 81, 2389-2394. | 0.2 | 128 |
| 6 | TACAN Is an Ion Channel Involved in Sensing Mechanical Pain. <i>Cell</i> , 2020, 180, 956-967.e17. | 13.5 | 120 |
| 7 | Detection of the Opening of the Bundle Crossing in KcsA with Fluorescence Lifetime Spectroscopy Reveals the Existence of Two Gates for Ion Conduction. <i>Journal of General Physiology</i> , 2006, 128, 569-581. | 0.9 | 97 |
| 8 | Dynamics of internal pore opening in K ^V channels probed by a fluorescent unnatural amino acid. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 8272-8277. | 3.3 | 95 |
| 9 | Automating Single Subunit Counting of Membrane Proteins in Mammalian Cells. <i>Journal of Biological Chemistry</i> , 2012, 287, 35912-35921. | 1.6 | 85 |
| 10 | Mechanism of Electromechanical Coupling in Voltage-Gated Potassium Channels. <i>Frontiers in Pharmacology</i> , 2012, 3, 166. | 1.6 | 78 |
| 11 | Black Lipid Membranes: Visualizing the Structure, Dynamics, and Substrate Dependence of Membranes. <i>Journal of Physical Chemistry B</i> , 2004, 108, 16040-16049. | 1.2 | 72 |
| 12 | An Intersubunit Interaction between S4-S5 Linker and S6 Is Responsible for the Slow Off-gating Component in Shaker K ⁺ Channels. <i>Journal of Biological Chemistry</i> , 2010, 285, 14005-14019. | 1.6 | 72 |
| 13 | Mode shift of the voltage sensors in Shaker K ⁺ channels is caused by energetic coupling to the pore domain. <i>Journal of General Physiology</i> , 2011, 137, 455-472. | 0.9 | 67 |
| 14 | Detecting Rearrangements of Shaker and NaChBac in Real-Time with Fluorescence Spectroscopy in Patch-Clamped Mammalian Cells. <i>Biophysical Journal</i> , 2004, 86, 3966-3980. | 0.2 | 57 |
| 15 | Fluorescence detection of the movement of single KcsA subunits reveals cooperativity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20263-20268. | 3.3 | 56 |
| 16 | S4-S5 linker movement during activation and inactivation in voltage-gated K ⁺ channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6751-E6759. | 3.3 | 48 |
| 17 | The isolated voltage sensing domain of the Shaker potassium channel forms a voltage-gated cation channel. <i>ELife</i> , 2016, 5, . | 2.8 | 41 |
| 18 | Distance measurements reveal a common topology of prokaryotic voltage-gated ion channels in the lipid bilayer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 15865-15870. | 3.3 | 39 |

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|----|--|-----|-----------|
| 19 | Single Molecule Fluorescence Study of the Bacillus thuringiensis Toxin Cry1Aa Reveals Tetramerization. <i>Journal of Biological Chemistry</i> , 2011, 286, 42274-42282. | 1.6 | 39 |
| 20 | Cell Activation by Ligands of the Toll-Like Receptor and Interleukin-1 Receptor Family Depends on the Function of the Large-Conductance Potassium Channel MaxiK in Human Macrophages. <i>Infection and Immunity</i> , 2006, 74, 4354-4356. | 1.0 | 31 |
| 21 | Double Mutant Cycle Analysis Identified a Critical Leucine Residue in the IIS4S5 Linker for the Activation of the CaV2.3 Calcium Channel. <i>Journal of Biological Chemistry</i> , 2011, 286, 27197-27205. | 1.6 | 31 |
| 22 | A Limited 4 Å... Radial Displacement of the S4-S5 Linker Is Sufficient for Internal Gate Closing in Kv Channels. <i>Journal of Biological Chemistry</i> , 2012, 287, 40091-40098. | 1.6 | 28 |
| 23 | Reinitiation at non-canonical start codons leads to leak expression when incorporating unnatural amino acids. <i>Scientific Reports</i> , 2015, 5, 11866. | 1.6 | 28 |
| 24 | Rapid topology probing using fluorescence spectroscopy in planar lipid bilayer: the pore-forming mechanism of the toxin Cry1Aa of <i>Bacillus thuringiensis</i> . <i>Journal of General Physiology</i> , 2010, 136, 497-513. | 0.9 | 23 |
| 25 | Full-length cellular $\hat{2}$ -secretase has a trimeric subunit stoichiometry, and its sulfur-rich transmembrane interaction site modulates cytosolic copper compartmentalization. <i>Journal of Biological Chemistry</i> , 2017, 292, 13258-13270. | 1.6 | 21 |
| 26 | Gating and permeation models of plant channels. <i>Journal of Experimental Botany</i> , 1997, 48, 365-382. | 2.4 | 20 |
| 27 | How Powerful is the Dwell-Time Analysis of Multichannel Records?. <i>Journal of Membrane Biology</i> , 1998, 165, 19-35. | 1.0 | 19 |
| 28 | Nano to Micro \hat{e} Fluorescence Measurements of Electric Fields in Molecules and Genetically Specified Neurons. <i>Journal of Membrane Biology</i> , 2005, 208, 91-102. | 1.0 | 19 |
| 29 | Structure of anthrax lethal toxin prepore complex suggests a pathway for efficient cell entry. <i>Journal of General Physiology</i> , 2016, 148, 313-324. | 0.9 | 16 |
| 30 | Determining the correct stoichiometry of Kv2.1/Kv6.4 heterotetramers, functional in multiple stoichiometrical configurations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 9365-9376. | 3.3 | 16 |
| 31 | Do Lipids Show State-dependent Affinity to the Voltage-gated Potassium Channel KvAP?. <i>Journal of Biological Chemistry</i> , 2014, 289, 16452-16461. | 1.6 | 11 |
| 32 | Disease-linked mutations alter the stoichiometries of HCN-KCNE2 complexes. <i>Scientific Reports</i> , 2019, 9, 9113. | 1.6 | 11 |
| 33 | A Novel KCNA2 Variant in a Patient with Non-Progressive Congenital Ataxia and Epilepsy: Functional Characterization and Sensitivity to 4-Aminopyridine. <i>International Journal of Molecular Sciences</i> , 2021, 22, 9913. | 1.8 | 9 |
| 34 | A Disease Mutation Causing Episodic Ataxia Type I in the S1 Links Directly to the Voltage Sensor and the Selectivity Filter in Kv Channels. <i>Journal of Neuroscience</i> , 2015, 35, 12198-12206. | 1.7 | 8 |
| 35 | Voltage-clamp Fluorometry in <i>Xenopus</i> Oocytes Using Fluorescent Unnatural Amino Acids. <i>Journal of Visualized Experiments</i> , 2017, , . | 0.2 | 7 |
| 36 | The Human Sodium-Glucose Cotransporter (hSGLT1) Is a Disulfide-Bridged Homodimer with a Re-Entrant C-Terminal Loop. <i>PLoS ONE</i> , 2016, 11, e0154589. | 1.1 | 5 |

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|----|---|-----|-----------|
| 37 | A Common Kinetic Property of Mutations Linked to Episodic Ataxia Type 1 Studied in the Shaker Kv Channel. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7602. | 1.8 | 5 |
| 38 | Musculoskeletal Features without Ataxia Associated with a Novel de novo Mutation in KCNA1 Impairing the Voltage Sensitivity of Kv1.1 Channel. <i>Biomedicines</i> , 2021, 9, 75. | 1.4 | 5 |
| 39 | Functional Characterization of Two Novel Mutations in SCN5A Associated with Brugada Syndrome Identified in Italian Patients. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6513. | 1.8 | 4 |
| 40 | A Step-by-Step Guide to Single-Subunit Counting of Membrane-Bound Proteins in Mammalian Cells. <i>Neuromethods</i> , 2016, , 15-30. | 0.2 | 3 |
| 41 | Movement of the S4-S5 Linker of KvAP during Gating. <i>Biophysical Journal</i> , 2012, 102, 13a. | 0.2 | 2 |
| 42 | Investigation of Ion Channel Structure Using Fluorescence Spectroscopy. , 2015, , 113-133. | | 2 |
| 43 | Studying Clustering of KcsA Channels using Single-Channel Voltage-Clamp Fluorescence Imaging. <i>Biophysical Journal</i> , 2015, 108, 440a. | 0.2 | 2 |
| 44 | A Variant in the Nicotinic Acetylcholine Receptor Alpha 3 Subunit Gene Is Associated With Hypertension Risks in Hypogonadic Patients. <i>Frontiers in Genetics</i> , 2020, 11, 539862. | 1.1 | 2 |
| 45 | Determining stoichiometry of ion channel complexes using single subunit counting. <i>Methods in Enzymology</i> , 2021, 653, 377-404. | 0.4 | 2 |
| 46 | Studying KcsA Channel Clustering Using Single Channel Voltage-Clamp Fluorescence Imaging*. <i>Frontiers in Physiology</i> , 2022, 13, . | 1.3 | 2 |
| 47 | Investigating the Electromechanical Coupling in voltage-gated K ⁺ channels. <i>Biophysical Journal</i> , 2009, 96, 369a. | 0.2 | 1 |
| 48 | Rapid Topology Determination of Membrane Proteins: Pore-Forming Mechanism of Bt toxin Cry1Aa. <i>Biophysical Journal</i> , 2009, 96, 535a. | 0.2 | 1 |
| 49 | Reply to Pisupati et al.: Evaluating single subunit counting data to find the correct stoichiometry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29290-29291. | 3.3 | 1 |
| 50 | Determining The Coupling Between Subunits In Kcsa Using Single Channel Fluorescence Spectroscopy. <i>Biophysical Journal</i> , 2009, 96, 24a. | 0.2 | 0 |
| 51 | Molecular Determinants of the Slow Off-Gating Component in Shaker K ⁺ Channels. <i>Biophysical Journal</i> , 2010, 98, 522a. | 0.2 | 0 |
| 52 | Towards Simultaneous Single Channel Current and Fluorescence Recordings in Planar Lipid Bilayer. <i>Biophysical Journal</i> , 2010, 98, 536a-537a. | 0.2 | 0 |
| 53 | Mode Shift of the Voltage Sensors in Shaker K ⁺ Channels is Caused by Energetic Coupling to the Pore Domain. <i>Biophysical Journal</i> , 2011, 100, 367a. | 0.2 | 0 |
| 54 | Gating and Stoichiometry of Heteromeric Kainate Receptors. <i>Biophysical Journal</i> , 2012, 102, 613a. | 0.2 | 0 |

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|----|---|-----|-----------|
| 55 | Single Molecule Fluorescence Study of the B. Thuringiensis Toxin Cry1Aa Reveals Tetramerization. Biophysical Journal, 2012, 102, 214a. | 0.2 | 0 |
| 56 | An Automated Method to Study Oligomerization of Single Membrane-Bound Proteins using Fluorescence Imaging. Biophysical Journal, 2012, 102, 114a-115a. | 0.2 | 0 |
| 57 | A Molecular Mechanics Model of a Closed Voltage-Gated Potassium Channel Generated from S4-S5 Linker LRET Measurements. Biophysical Journal, 2013, 104, 124a. | 0.2 | 0 |
| 58 | FRET Quenching by a Hybrid Voltage Sensor (Hvos) Reveals that the Na/Glucose Cotransporter (SGLT1) Is a Disulfide-Bridged Homodimer with Re-Entrant 12-13 Loop. Biophysical Journal, 2013, 104, 223a. | 0.2 | 0 |
| 59 | Occupancy of a Single Binding Site is Sufficient for AMPAR Activation. Biophysical Journal, 2014, 106, 30a. | 0.2 | 0 |
| 60 | Cytosolic Activation Dynamics in the KV Channel Probed by a Fluorescent Unnatural Amino Acid. Biophysical Journal, 2014, 106, 536a-537a. | 0.2 | 0 |
| 61 | Lipid Affinity to the Voltage-Gated Potassium Channel KvAP. Biophysical Journal, 2014, 106, 15a-16a. | 0.2 | 0 |
| 62 | Influence of Lipid Bilayer Thickness on Ion Channels Using Single-Channel Voltage-Clamp Fluorescence Imaging. Biophysical Journal, 2014, 106, 738a-739a. | 0.2 | 0 |
| 63 | Non-Canonical Start Codons Reinitiate Translation in N-Terminal Truncated Kv Channels. Biophysical Journal, 2015, 108, 118a. | 0.2 | 0 |
| 64 | A Point Mutation Causing Episodic Ataxia Reveals Functional Link between Voltage Sensor and Selectivity Filter in Shaker Kv Channels. Biophysical Journal, 2015, 108, 24a. | 0.2 | 0 |
| 65 | Role of the Voltage Sensing Domain S1-S4 in TRPV1 Channels. Biophysical Journal, 2015, 108, 427a. | 0.2 | 0 |
| 66 | Probing the S4-S5 Linker Movement During Activation in KV Channels. Biophysical Journal, 2016, 110, 104a. | 0.2 | 0 |
| 67 | Stoichiometries of HCN-KCNE2 Channel. Biophysical Journal, 2017, 112, 183a. | 0.2 | 0 |
| 68 | Molecular Interactions between Kv4.3 and DPP6 - The Biochemical Anatomy of Idiopathic Ventricular Fibrillation. Biophysical Journal, 2017, 112, 183a. | 0.2 | 0 |
| 69 | The Isolated Voltage Sensing Domain of the Shaker Potassium Channel forms a Cation Channel. Biophysical Journal, 2017, 112, 249a. | 0.2 | 0 |
| 70 | Probing the Movement of the Ball and Chain during N-type Inactivation in Kv Channels. Biophysical Journal, 2017, 112, 39a. | 0.2 | 0 |
| 71 | Mode Shift of Shaker Isolated-Voltage Sensing Domain. Biophysical Journal, 2018, 114, 546a. | 0.2 | 0 |
| 72 | Molecular Interactions that Contribute to the Regulation of HCN Channels by KCNE2. Biophysical Journal, 2018, 114, 120a. | 0.2 | 0 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 73 | Single Channel Studies of the Cation Permeation Pathway of the Shaker Kv Isolated Voltage-Sensing Domain (iVSD). Biophysical Journal, 2019, 116, 543a. | 0.2 | 0 |
| 74 | Choosing the Correct Stoichiometry from Single Subunit Counting Data. Biophysical Journal, 2020, 118, 262a. | 0.2 | 0 |
| 75 | Position of Inactivation Particle of Shaker Kv Channels in Resting State. Biophysical Journal, 2020, 118, 169a. | 0.2 | 0 |