# Diomedes E Logothetis

List of Publications by Year
in descending order



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|---|---|---|---|
| 92 papers | 7,610 citations | 66343 42 h-index | 51608 86 g-index |
| 96 all docs | 96 docs citations | 96 times ranked | 5377 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The Î²Î³ subunits of GTP-binding proteins activate the muscarinic K+ channel in heart. Nature, 1987, 325, 321-326. | 27.8 | 1,173 |
| 2 | PI(4,5)P2 regulates the activation and desensitization of TRPM8 channels through the TRP domain. Nature Neuroscience, 2005, 8, 626-634. | 14.8 | 535 |
| 3 | PIP2 Activates KCNQ Channels, and Its Hydrolysis Underlies Receptor-Mediated Inhibition of M Currents. Neuron, 2003, 37, 963-975. | 8.1 | 474 |
| 4 | Activation of inwardly rectifying K+ channels by distinct PtdIns(4,5)P2 interactions. Nature Cell Biology, 1999, 1, 183-188. | 10.3 | 444 |
| 5 | Alterations in Conserved Kir Channel-PIP2 Interactions Underlie Channelopathies. Neuron, 2002, 34, 933-944. | 8.1 | 368 |
| 6 | Decoding the Signaling of a GPCR Heteromeric Complex Reveals a Unifying Mechanism of Action of Antipsychotic Drugs. Cell, 2011, 147, 1011-1023. | 28.9 | 271 |
| 7 | A region of adenylyl cyclase 2 critical for regulation by G protein beta gamma subunits. Science, 1995, 268, 1166-1169. | 12.6 | 261 |
| 8 | Receptor-mediated hydrolysis of plasma membrane messenger PIP2 leads to K+-current desensitization. Nature Cell Biology, 2000, 2, 507-514. | 10.3 | 219 |
| 9 | Specificity of activation by phosphoinositides determines lipid regulation of Kir channels. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 745-750. | 7.1 | 206 |
| 10 | Distinct Specificities of Inwardly Rectifying K+Channels for Phosphoinositides. Journal of Biological Chemistry, 1999, 274, 36065-36072. | 3.4 | 179 |
| 11 | PIP2hydrolysis underlies agonist-induced inhibition and regulates voltage gating of two-pore domain K+channels. Journal of Physiology, 2005, 564, 117-129. | 2.9 | 164 |
| 12 | Characteristic Interactions with Phosphatidylinositol 4,5-Bisphosphate Determine Regulation of Kir Channels by Diverse Modulators. Journal of Biological Chemistry, 2004, 279, 37271-37281. | 3.4 | 162 |
| 13 | Probing the G-protein Regulation of GIRK1 and GIRK4, the Two Subunits of the KACh Channel, Using Functional Homomeric Mutants. Journal of Biological Chemistry, 1997, 272, 31553-31560. | 3.4 | 149 |
| 14 | Incremental reductions of positive charge within the S4 region of a voltage-gated K+ channel result in corresponding decreases in gating charge. Neuron, 1992, 8, 531-540. | 8.1 | 142 |
| 15 | Identification of a Potassium Channel Site That Interacts with G Protein Î²Î³ Subunits to Mediate Agonist-induced Signaling. Journal of Biological Chemistry, 1999, 274, 12517-12524. | 3.4 | 106 |
| 16 | Phosphoinositide-mediated gating of inwardly rectifying K+ channels. Pflugers Archiv European Journal of Physiology, 2007, 455, 83-95. | 2.8 | 106 |
| 17 | Identification of Critical Residues Controlling G Protein-gated Inwardly Rectifying K+ Channel Activity through Interactions with the Î²Î³ Subunits of G Proteins. Journal of Biological Chemistry, 2002, 277, 6088-6096. | 3.4 | 92 |
| 18 | Allosteric signaling through an mGlu2 and 5-HT <sub>2A</sub> heteromeric receptor complex and its potential contribution to schizophrenia. Science Signaling, 2016, 9, ra5. | 3.6 | 91 |

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|---|---|---|---|
| 19 | Channelopathies linked to plasma membrane phosphoinositides. Pflugers Archiv European Journal of Physiology, 2010, 460, 321-341. | 2.8 | 87 |
| 20 | Synergistic Activation of G Proteinâ€“Gated Inwardly Rectifying Potassium Channels by the Î²Î³ Subunits of G Proteins and Na+ and Mg2+ Ions. Journal of General Physiology, 1999, 114, 673-684. | 1.9 | 84 |
| 21 | PIP <sub>2</sub> controls voltage-sensor movement and pore opening of Kv channels through the S4â€“S5 linker. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2399-408. | 7.1 | 84 |
| 22 | Phosphoinositide Control of Membrane Protein Function: A Frontier Led by Studies on Ion Channels. Annual Review of Physiology, 2015, 77, 81-104. | 13.1 | 84 |
| 23 | Phosphoinositides Regulate P2X<sub>4</sub>ATP-Gated Channels through Direct Interactions. Journal of Neuroscience, 2008, 28, 12938-12945. | 3.6 | 78 |
| 24 | Molecular characteristics of phosphoinositide binding. Pflugers Archiv European Journal of Physiology, 2007, 455, 45-53. | 2.8 | 73 |
| 25 | Essential Control of the Function of the Striatopallidal Neuron by Pre-coupled Complexes of Adenosine A2A-Dopamine D2 Receptor Heterotetramers and Adenylyl Cyclase. Frontiers in Pharmacology, 2018, 9, 243. | 3.5 | 73 |
| 26 | Phosphatidylinositol-4,5-bisphosphate regulates epidermal growth factor receptor activation. Pflugers Archiv European Journal of Physiology, 2011, 461, 387-397. | 2.8 | 71 |
| 27 | The RCK2 Domain Uses a Coordination Site Present in Kir Channels to Confer Sodium Sensitivity to Slo2.2 Channels. Journal of Neuroscience, 2010, 30, 7554-7562. | 3.6 | 60 |
| 28 | Epilepsy-Related Slack Channel Mutants Lead to Channel Over-Activity by Two Different Mechanisms. Cell Reports, 2016, 14, 129-139. | 6.4 | 60 |
| 29 | Selective phosphorylation modulates the PIP2 sensitivity of the CaMâ€“SK channel complex. Nature Chemical Biology, 2014, 10, 753-759. | 8.0 | 59 |
| 30 | Specific Regions of Heteromeric Subunits Involved in Enhancement of G Protein-gated K+ Channel Activity. Journal of Biological Chemistry, 1997, 272, 6548-6555. | 3.4 | 54 |
| 31 | Protein Kinase A Modulates PLC-Dependent Regulation and PIP<sub>2</sub>-Sensitivity of K<sup>+</sup>Channels. Channels, 2007, 1, 124-134. | 2.8 | 53 |
| 32 | The Molecular Mechanism by which PIP2 Opens the Intracellular G-Loop Gate of a Kir3.1 Channel. Biophysical Journal, 2012, 102, 2049-2059. | 0.5 | 53 |
| 33 | Gating charge differences between two voltagegated K+ channels are due to the specific charge content of their respective S4 regions. Neuron, 1993, 10, 1121-1129. | 8.1 | 52 |
| 34 | Cholesterol Sensitivity of KIR2.1 Is Controlled by a Belt of Residues around the Cytosolic Pore. Biophysical Journal, 2011, 100, 381-389. | 0.5 | 52 |
| 35 | Phosphatidylinositol-4,5-Bisphosphate Regulates NMDA Receptor Activity through Â-Actinin. Journal of Neuroscience, 2007, 27, 5523-5532. | 3.6 | 50 |
| 36 | Diverse Kir modulators act in close proximity to residues implicated in phosphoinositide binding. Journal of Physiology, 2007, 582, 953-965. | 2.9 | 49 |

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| 37 | GÎ² Residues That Do Not Interact with GÎ± Underlie Agonist-independent Activity of K+ Channels. Journal of Biological Chemistry, 2002, 277, 7348-7355. | 3.4 | 48 |
| 38 | A sodium-mediated structural switch that controls the sensitivity of Kir channels to PtdIns(4,5)P2. Nature Chemical Biology, 2008, 4, 624-631. | 8.0 | 48 |
| 39 | Positive allosteric modulators of metabotropic glutamate 2 receptors in schizophrenia treatment. Trends in Neurosciences, 2015, 38, 506-516. | 8.6 | 48 |
| 40 | Competition of calcified calmodulin N lobe and PIP <sub>2</sub> to an LQT mutation site in Kv7.1 channel. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E869-E878. | 7.1 | 46 |
| 41 | Mechanism of PLC-Mediated Kir3 Current Inhibition. Channels, 2007, 1, 113-123. | 2.8 | 45 |
| 42 | Dual Regulation of Voltage-Sensitive Ion Channels by PIP2. Frontiers in Pharmacology, 2012, 3, 170. | 3.5 | 45 |
| 43 | Exploring the Nanotoxicology of MoS<sub>2</sub>: A Study on the Interaction of MoS<sub>2</sub> Nanoflakes and K<sup>+</sup> Channels. ACS Nano, 2018, 12, 705-717. | 14.6 | 44 |
| 44 | Assaying Phosphatidylinositol Bisphosphate Regulation of Potassium Channels. Methods in Enzymology, 2002, 345, 71-92. | 1.0 | 43 |
| 45 | PIP<sub>2</sub>Â-Regulates the Ionic Current of P2X Receptors and P2X<sub>Â7</sub>Receptor-Mediated Cell Death. Channels, 2007, 1, 47-56. | 2.8 | 41 |
| 46 | Subtype-Specific Regulation of P2X3 and P2X2/3 Receptors by Phosphoinositides in Peripheral Nociceptors. Molecular Pain, 2009, 5, 1744-8069-5-47. | 2.1 | 40 |
| 47 | Structural Determinants of Phosphatidylinositol 4,5-Bisphosphate (PIP2) Regulation of BK Channel Activity through the RCK1 Ca2+ Coordination Site. Journal of Biological Chemistry, 2014, 289, 18860-18872. | 3.4 | 37 |
| 48 | Direct Modulation of P2X1 Receptor-Channels by the Lipid Phosphatidylinositol 4,5-Bisphosphate. Molecular Pharmacology, 2008, 74, 785-792. | 2.3 | 35 |
| 49 | Gating of a G protein-sensitive Mammalian Kir3.1 Prokaryotic Kir Channel Chimera in Planar Lipid Bilayers. Journal of Biological Chemistry, 2010, 285, 39790-39800. | 3.4 | 34 |
| 50 | Gating of G protein-sensitive inwardly rectifying K+channels through phosphatidylinositol 4,5-bisphosphate. Journal of Physiology, 1999, 520, 630-630. | 2.9 | 33 |
| 51 | PIP(2) regulates the ionic current of P2X receptors and P2X(7) receptor-mediated cell death. Channels, 2007, 1, 46-55. | 2.8 | 31 |
| 52 | A Computational Model Predicts That GÎ²Î³ Acts at a Cleft Between Channel Subunits to Activate GIRK1 Channels. Science Signaling, 2013, 6, ra69. | 3.6 | 30 |
| 53 | PIP2 regulation of TRPC5 channel activation and desensitization. Journal of Biological Chemistry, 2021, 296, 100726. | 3.4 | 30 |
| 54 | Characterization of a Ca2+-activated K+current in insulin-secreting murine Î²TC-3 cells. Journal of Physiology, 1998, 509, 355-370. | 2.9 | 28 |

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| 55 | Ca<sup>2+</sup>-Calmodulin and PIP2 interactions at the proximal C-terminus of Kv7 channels. Channels, 2017, 11, 686-695. | 2.8 | 28 |
| 56 | G protein-coupled receptor-effector macromolecular membrane assemblies (GEMMAs). , 2022, 231, 107977. | | 28 |
| 57 | Phosphatidylinositol 4,5-Bisphosphate Activates Slo3 Currents and Its Hydrolysis Underlies the Epidermal Growth Factor-induced Current Inhibition. Journal of Biological Chemistry, 2010, 285, 19259-19266. | 3.4 | 27 |
| 58 | The Molecular Mechanism of Opening the Helix Bundle Crossing (HBC) Gate of a Kir Channel. Scientific Reports, 2016, 6, 29399. | 3.3 | 26 |
| 59 | Cross-signaling in metabotropic glutamate 2 and serotonin 2A receptor heteromers in mammalian cells. Pflugers Archiv European Journal of Physiology, 2016, 468, 775-793. | 2.8 | 26 |
| 60 | On the mechanism of GIRK2 channel gating by phosphatidylinositol bisphosphate, sodium, and the Gî²î³ dimer. Journal of Biological Chemistry, 2019, 294, 18934-18948. | 3.4 | 26 |
| 61 | Glycosylation of GIRK1 at Asn119 and ROMK1 at Asn117 Has Different Consequences in Potassium Channel Function. Journal of Biological Chemistry, 2000, 275, 30677-30682. | 3.4 | 25 |
| 62 | Identification of the Conformational transition pathway in PIP2 Opening Kir Channels. Scientific Reports, 2015, 5, 11289. | 3.3 | 24 |
| 63 | The ICl,swell inhibitor DCPIB blocks Kir channels that possess weak affinity for PIP2. Pflugers Archiv European Journal of Physiology, 2016, 468, 817-824. | 2.8 | 23 |
| 64 | A Critical Gating Switch at a Modulatory Site in Neuronal Kir3 Channels. Journal of Neuroscience, 2015, 35, 14397-14405. | 3.6 | 22 |
| 65 | Regulation of ATP-gated P2X receptors by phosphoinositides. Pflugers Archiv European Journal of Physiology, 2007, 455, 181-185. | 2.8 | 21 |
| 66 | Kir Channel Molecular Physiology, Pharmacology, and Therapeutic Implications. Handbook of Experimental Pharmacology, 2021, 267, 277-356. | 1.8 | 21 |
| 67 | Unifying Mechanism of Controlling Kir3 Channel Activity by G Proteins and Phosphoinositides. International Review of Neurobiology, 2015, 123, 1-26. | 2.0 | 20 |
| 68 | The small molecule GAT1508 activates brain-specific GIRK1/2 channel heteromers and facilitates conditioned fear extinction in rodents. Journal of Biological Chemistry, 2020, 295, 3614-3634. | 3.4 | 20 |
| 69 | PKC regulation of ion channels: The involvement of PIP2. Journal of Biological Chemistry, 2022, 298, 102035. | 3.4 | 19 |
| 70 | Regulation of Kv2.1 channel inactivation by phosphatidylinositol 4,5-bisphosphate. Scientific Reports, 2018, 8, 1769. | 3.3 | 18 |
| 71 | Structural-Functional Analysis of the Third Transmembrane Domain of the Corticotropin-releasing Factor Type 1 Receptor. Journal of Biological Chemistry, 2014, 289, 18966-18977. | 3.4 | 16 |
| 72 | Hydrogen sulfide inhibits Kir2 and Kir3 channels by decreasing sensitivity to the phospholipid phosphatidylinositol 4,5-bisphosphate (PIP2). Journal of Biological Chemistry, 2018, 293, 3546-3561. | 3.4 | 15 |

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| 73 | G Protein-Coupled Receptor Signaling to Kir Channels in Xenopus Oocytes. Current Pharmaceutical Biotechnology, 2014, 15, 987-995. | 1.6 | 15 |
| 74 | Activation of specific bitter taste receptors by olive oil phenolics and secoiridoids. Scientific Reports, 2021, 11, 22340. | 3.3 | 15 |
| 75 | Mass spectrometric analysis reveals a functionally important PKA phosphorylation site in a Kir3 channel subunit. Pflugers Archiv European Journal of Physiology, 2009, 458, 303-314. | 2.8 | 13 |
| 76 | Stoichiometry of Kir channels with phosphatidylinositol bisphosphate. Channels, 2008, 2, 19-33. | 2.8 | 12 |
| 77 | Mutations in Nature Conferred a High Affinity Phosphatidylinositol 4,5-Bisphosphate-binding Site in Vertebrate Inwardly Rectifying Potassium Channels. Journal of Biological Chemistry, 2015, 290, 16517-16529. | 3.4 | 12 |
| 78 | Cloning and Characterization of G Protein-Gated Inward Rectifier K<sup>+</sup> Channel (GIRK1) Isoforms from Heart and Brain. Journal of Molecular Neuroscience, 2001, 16, 21-32. | 2.3 | 11 |
| 79 | SLO-2 isoforms with unique Ca2+- and voltage-dependence characteristics confer sensitivity to hypoxia inC. elegans. Channels, 2013, 7, 194-205. | 2.8 | 11 |
| 80 | Molecular overlap in the regulation of SK channels by small molecules and phosphoinositides. Science Advances, 2015, 1, e1500008. | 10.3 | 11 |
| 81 | A novel small-molecule selective activator of homomeric GIRK4 channels. Journal of Biological Chemistry, 2022, 298, 102009. | 3.4 | 11 |
| 82 | Structure-based analysis of CysZ-mediated cellular uptake of sulfate. ELife, 2018, 7, . | 6.0 | 10 |
| 83 | A molecular switch controls the impact of cholesterol on a Kir channel. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2109431119. | 7.1 | 9 |
| 84 | Reformulating a Pharmacophore for 5-HT<sub>2A</sub> Serotonin Receptor Antagonists. ACS Chemical Neuroscience, 2016, 7, 1292-1299. | 3.5 | 8 |
| 85 | Lack of Negatively Charged Residues at the External Mouth of Kir2.2 Channels Enable the Voltage-Dependent Block by External Mg2+. PLoS ONE, 2014, 9, e111372. | 2.5 | 8 |
| 86 | Protein Binding Pocket Optimization for Virtual High-Throughput Screening (vHTS) Drug Discovery. ACS Omega, 2020, 5, 14297-14307. | 3.5 | 7 |
| 87 | A benzopyran with antiarrhythmic activity is an inhibitor of Kir3.1-containing potassium channels. Journal of Biological Chemistry, 2021, 296, 100535. | 3.4 | 7 |
| 88 | Three pairs of weak interactions precisely regulate the G-loop gate of Kir2.1 channel. Proteins: Structure, Function and Bioinformatics, 2016, 84, 1929-1937. | 2.6 | 5 |
| 89 | An optogenetic tool to recruit individual PKC isozymes to the cell surface and promote specific phosphorylation of membrane proteins. Journal of Biological Chemistry, 2022, 298, 101893. | 3.4 | 5 |
| 90 | Lick Rate and the Circadian Rhythm of Water Intake in the Rat: Effects of Deuterium Oxide. Annals of the New York Academy of Sciences, 1984, 423, 614-617. | 3.8 | 3 |

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| 91 | The where and how of PIP regulation of cone photoreceptor CNG channels. Journal of General Physiology, 2013, 141, 403-407. | 1.9 | 1 |
| 92 | Elucidation of molecular kinetic schemes from macroscopic traces using system identification. PLoS Computational Biology, 2017, 13, e1005376. | 3.2 | 1 |