Filip Van petegem

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8487588/publications.pdf

Version: 2024-02-01

126 papers	4,630 citations	101543 36 h-index	114465 63 g-index
133 all docs	133 docs citations	133 times ranked	4738 citing authors

#	Article	IF	Citations
1	Structure of a complex between a voltage-gated calcium channel Î²-subunit and an Î±-subunit domain. Nature, 2004, 429, 671-675.	27.8	402
2	Insights into voltage-gated calcium channel regulation from the structure of the CaV1.2 IQ domainâ€“Ca2+/calmodulin complex. Nature Structural and Molecular Biology, 2005, 12, 1108-1115.	8.2	221
3	Ryanodine Receptors: Structure and Function. Journal of Biological Chemistry, 2012, 287, 31624-31632.	3.4	205
4	The amino-terminal disease hotspot of ryanodine receptors forms a cytoplasmic vestibule. Nature, 2010, 468, 585-588.	27.8	190
5	Defining the stoichiometry of inositol 1,4,5-trisphosphate binding required to initiate Ca ²⁺ release. Science Signaling, 2016, 9, ra35.	3.6	140
6	Ryanodine Receptors: Allosteric Ion Channel Giants. Journal of Molecular Biology, 2015, 427, 31-53.	4.2	137
7	Crystallographic basis for calcium regulation of sodium channels. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3558-3563.	7.1	128
8	The Structure of a Cold-adapted Family 8 Xylanase at 1.3 Ã… Resolution. Journal of Biological Chemistry, 2003, 278, 7531-7539.	3.4	124
9	Crystal Structures of the N-Terminal Domains of Cardiac and Skeletal Muscle Ryanodine Receptors: Insights into Disease Mutations. Structure, 2009, 17, 1505-1514.	3.3	109
10	Crystal structures of a psychrophilic metalloprotease reveal new insights into catalysis by cold-adapted proteases. Proteins: Structure, Function and Bioinformatics, 2003, 50, 636-647.	2.6	106
11	Disease Mutations in the Ryanodine Receptor Central Region: Crystal Structures of a Phosphorylation Hot Spot Domain. Structure, 2012, 20, 1201-1211.	3.3	97
12	Structures of CaV2 Ca2+/CaM-IQ Domain Complexes Reveal Binding Modes that Underlie Calcium-Dependent Inactivation and Facilitation. Structure, 2008, 16, 1455-1467.	3.3	96
13	Calcium-release channels: structure and function of IP₃ receptors and ryanodine receptors. Physiological Reviews, 2022, 102, 209-268.	28.8	93
14	The clinical and genetic spectrum of catecholaminergic polymorphic ventricular tachycardia: findings from an international multicentre registry. Europace, 2018, 20, 541-547.	1.7	91
15	Crystallographic insights into sodium-channel modulation by the Î²4 subunit. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E5016-24.	7.1	79
16	Structural basis for diamide modulation of ryanodine receptor. Nature Chemical Biology, 2020, 16, 1246-1254.	8.0	75
17	Disease mutations in the ryanodine receptor N-terminal region couple to a mobile intersubunit interface. Nature Communications, 2013, 4, 1506.	12.8	74
18	Alanine-Scanning Mutagenesis Defines a Conserved Energetic Hotspot in the CaVÎ±1 AID-CaVÎ² Interaction Site that Is Critical for Channel Modulation. Structure, 2008, 16, 280-294.	3.3	73

#	Article	IF	Citations
19	Multiple C-terminal tail Ca2+/CaMs regulate CaV1.2 function but do not mediate channel dimerization. EMBO Journal, 2010, 29, 3924-3938.	7.8	66
20	A DNA ligase from the psychrophile Pseudoalteromonas haloplanktis gives insights into the adaptation of proteins to low temperatures. FEBS Journal, 2000, 267, 3502-3512.	0.2	63
21	Structural insights into binding of STAC proteins to voltage-gated calcium channels. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9520-E9528.	7.1	63
22	Crystal structures of wild type and disease mutant forms of the ryanodine receptor SPRY2 domain. Nature Communications, 2014, 5, 5397.	12.8	58
23	Synergy between Cell Surface Glycosidases and Glycan-Binding Proteins Dictates the Utilization of Specific Beta(1,3)-Glucans by Human Gut Bacteroides. MBio, 2020, 11, .	4.1	58
24	Crystal structures of ryanodine receptor SPRY1 and tandem-repeat domains reveal a critical FKBP12 binding determinant. Nature Communications, 2015, 6, 7947.	12.8	56
25	Deciphering the Binding of Caveolin-1 to Client Protein Endothelial Nitric-oxide Synthase (eNOS). Journal of Biological Chemistry, 2014, 289, 13273-13283.	3.4	54
26	Seeing the Forest through the Trees: towards a Unified View on Physiological Calcium Regulation of Voltage-Gated Sodium Channels. Biophysical Journal, 2012, 103, 2243-2251.	0.5	52
27	Ryanodine receptors under the magnifying lens: Insights and limitations of cryo-electron microscopy and X-ray crystallography studies. Cell Calcium, 2016, 59, 209-227.	2.4	52
28	The Cardiac Ryanodine Receptor N-Terminal Region Contains an Anion Binding Site that Is Targeted by Disease Mutations. Structure, 2013, 21, 1440-1449.	3.3	51
29	A Double Tyrosine Motif in the Cardiac Sodium Channel Domain III-IV Linker Couples Calcium-dependent Calmodulin Binding to Inactivation Gating. Journal of Biological Chemistry, 2009, 284, 33265-33274.	3.4	49
30	The Deletion of Exon 3 in the Cardiac Ryanodine Receptor Is Rescued by Î² Strand Switching. Structure, 2011, 19, 790-798.	3.3	47
31	A novel RYR2 loss-of-function mutation (I4855M) is associated with left ventricular non-compaction and atypical catecholaminergic polymorphic ventricular tachycardia. Journal of Electrocardiology, 2017, 50, 227-233.	0.9	47
32	Cardiac ryanodine receptor distribution is dynamic and changed by auxiliary proteins and post-translational modification. ELife, 2020, 9, .	6.0	44
33	Talin Autoinhibition Is Required for Morphogenesis. Current Biology, 2013, 23, 1825-1833.	3.9	43
34	Lobe-Specific Calmodulin Binding to Different Ryanodine Receptor Isoforms. Biochemistry, 2014, 53, 932-946.	2.5	43
35	STAC proteins associate to the IQ domain of Ca _V 1.2 and inhibit calcium-dependent inactivation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1376-1381.	7.1	40
36	The structural biology of voltage-gated calcium channel function and regulation. Biochemical Society Transactions, 2006, 34, 887-893.	3.4	39

#	Article	IF	Citations
37	The structural biology of ryanodine receptors. Science China Life Sciences, 2011, 54, 712-724.	4.9	39
38	Energetics of Cyclic AMP Binding to HCN Channel C Terminus Reveal Negative Cooperativity. Journal of Biological Chemistry, 2012, 287, 600-606.	3.4	39
39	Type 2 Ryanodine Receptor Domain A Contains a Unique and Dynamic Î±-Helix That Transitions to a Î²-Strand in a Mutant Linked with a Heritable Cardiomyopathy. Journal of Molecular Biology, 2013, 425, 4034-4046.	4.2	38
40	Pathological conformations of disease mutant Ryanodine Receptors revealed by cryo-EM. Nature Communications, 2021, 12, 807.	12.8	38
41	Binary architecture of the Nav1.2-Î²2 signaling complex. ELife, 2016, 5, .	6.0	37
42	Arrhythmia mutations in calmodulin cause conformational changes that affect interactions with the cardiac voltage-gated calcium channel. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10556-E10565.	7.1	36
43	The Arrhythmogenic Calmodulin p.Phe142Leu Mutation Impairs C-domain Ca2+ Binding but Not Calmodulin-dependent Inhibition of the Cardiac Ryanodine Receptor. Journal of Biological Chemistry, 2017, 292, 1385-1395.	3.4	35
44	Crystal structures of Ca ²⁺ â€“calmodulin bound to Na _V C-terminal regions suggest role for EF-hand domain in binding and inactivation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10763-10772.	7.1	35
45	Surface glycan-binding proteins are essential for cereal beta-glucan utilization by the human gut symbiont Bacteroides ovatus. Cellular and Molecular Life Sciences, 2019, 76, 4319-4340.	5.4	35
46	Trichoderma reesei Î±-1,2-mannosidase: structural basis for the cleavage of four consecutive mannose residues 1 1Edited by I. A. Wilson. Journal of Molecular Biology, 2001, 312, 157-165.	4.2	34
47	Paramagnetic Ligand Tagging To Identify Protein Binding Sites. Journal of the American Chemical Society, 2015, 137, 11391-11398.	13.7	34
48	Crystallographic insight into the evolutionary origins of xyloglucan endotransglycosylases and endohydrolases. Plant Journal, 2017, 89, 651-670.	5.7	33
49	Catecholaminergic polymorphic ventricular tachycardia patients with multiple genetic variants in the PACES CPVT Registry. PLoS ONE, 2018, 13, e0205925.	2.5	31
50	The Cardiac Ryanodine Receptor Phosphorylation Hotspot Embraces PKA in a Phosphorylation-Dependent Manner. Molecular Cell, 2019, 75, 39-52.e4.	9.7	31
51	AnhE, a Metallochaperone Involved in the Maturation of a Cobalt-dependent Nitrile Hydratase. Journal of Biological Chemistry, 2010, 285, 25126-25133.	3.4	30
52	Sorcin is an early marker of neurodegeneration, Ca2+ dysregulation and endoplasmic reticulum stress associated to neurodegenerative diseases. Cell Death and Disease, 2020, 11, 861.	6.3	29
53	Arrhythmia mutations in calmodulin can disrupt cooperativity of Ca2+binding and cause misfolding. Journal of Physiology, 2020, 598, 1169-1186.	2.9	26
54	Conformational Dynamics inside Amino-Terminal Disease Hotspot of Ryanodine Receptor. Structure, 2013, 21, 2051-2060.	3.3	25

#	Article	IF	Citations
55	The CPVT-associated RyR2 mutation G230C enhances store overloadinduced Ca2+ release and destabilizes the N-terminal domains. Biochemical Journal, 2013, 454, 123-131.	3.7	25
56	The voltage-gated sodium channel EF-hands form an interaction with the III-IV linker that is disturbed by disease-causing mutations. Scientific Reports, 2018, 8, 4483.	3.3	25
57	Calcium Channelopathies: Structural Insights into Disorders of the Muscle Excitationâ€“Contraction Complex. Annual Review of Genetics, 2018, 52, 373-396.	7.6	25
58	Cryo-EM structures of the ABCA4 importer reveal mechanisms underlying substrate binding and Stargardt disease. Nature Communications, 2021, 12, 5902.	12.8	25
59	Ca2+-dependent calmodulin binding to cardiac ryanodine receptor (RyR2) calmodulin-binding domains. Biochemical Journal, 2019, 476, 193-209.	3.7	24
60	Atomic resolution structure of the major endoglucanase from Thermoascus aurantiacus. Biochemical and Biophysical Research Communications, 2002, 296, 161-166.	2.1	22
61	The arrhythmogenic N53I variant subtly changes the structure and dynamics in the calmodulin N-terminal domain, altering its interaction with the cardiac ryanodine receptor. Journal of Biological Chemistry, 2020, 295, 7620-7634.	3.4	21
62	Interleukin-10 and Small Molecule SHIP1 Allosteric Regulators Trigger Anti-inflammatory Effects through SHIP1/STAT3 Complexes. IScience, 2020, 23, 101433.	4.1	20
63	Protein Dynamics in the Region of the Sixth Ligand Methionine Revealed by Studies of Imidazole Binding To Rhodobacter capsulatus Cytochrome c2 Hinge Mutants,. Biochemistry, 2004, 43, 7717-7724.	2.5	19
64	Catecholaminergic polymorphic ventricular tachycardia. Current Opinion in Cardiology, 2017, 32, 78-85.	1.8	19
65	Structure and function of STAC proteins: Calcium channel modulators and critical components of muscle excitationâ€“contraction coupling. Journal of Biological Chemistry, 2021, 297, 100874.	3.4	18
66	Cardiac hypertrophy and arrhythmia in mice induced by a mutation in ryanodine receptor 2. JCI Insight, 2019, 4, .	5.0	18
67	Roles of the NH2-terminal Domains of Cardiac Ryanodine Receptor in Ca2+ Release Activation and Termination. Journal of Biological Chemistry, 2015, 290, 7736-7746.	3.4	17
68	Multiple Sequence Variants in STAC3 Affect Interactions with CaV1.1 and Excitation-Contraction Coupling. Structure, 2020, 28, 922-932.e5.	3.3	17
69	Distinct protein architectures mediate species-specific beta-glucan binding and metabolism in the human gut microbiota. Journal of Biological Chemistry, 2021, 296, 100415.	3.4	17
70	Structures of the junctophilin/voltage-gated calcium channel interface reveal hot spot for cardiomyopathy mutations. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2120416119.	7.1	17
71	Characterization of Zebrafish Cardiac and Slow Skeletal Troponin C Paralogs by MD Simulation andÂITC. Biophysical Journal, 2016, 111, 38-49.	0.5	16
72	Identification of Avian Corticosteroid-binding Globulin (SerpinA6) Reveals the Molecular Basis of Evolutionary Adaptations in SerpinA6 Structure and Function as a Steroid-binding Protein. Journal of Biological Chemistry, 2016, 291, 11300-11312.	3.4	16

#	Article	IF	Citations
73	Cyclic Purine and Pyrimidine Nucleotides Bind to the HCN2 Ion Channel and Variably Promote C-Terminal Domain Interactions and Opening. Structure, 2016, 24, 1629-1642.	3.3	16
74	In vitro analyses of suspected arrhythmogenic thin filament variants as a cause of sudden cardiac death in infants. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6969-6974.	7.1	16
75	Type 8 long QT syndrome: pathogenic variants in CACNA1C-encoded Cav1.2 cluster in STAC protein binding site. Europace, 2019, 21, 1725-1732.	1.7	15
76	Structural and electrophysiological basis for the modulation of KCNQ1 channel currents by ML277. Nature Communications, 2022, 13, .	12.8	15
77	Crystallization and preliminary X-ray analysis of a xylanase from the psychrophilePseudoalteromonas haloplanktis. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1494-1496.	2.5	14
78	Folding properties of the hepatitis B core as a carrier protein for vaccination research. Amino Acids, 2010, 38, 1617-1626.	2.7	14
79	Common allosteric mechanisms between ryanodine and inositol-1,4,5-trisphosphate receptors. Channels, 2011, 5, 120-123.	2.8	14
80	A rare CACNA1H variant associated with amyotrophic lateral sclerosis causes complete loss of Cav3.2â€‰T-type channel activity. Molecular Brain, 2020, 13, 33.	2.6	14
81	Binding of calcium and magnesium to human cardiac troponin C. Journal of Biological Chemistry, 2021, 296, 100350.	3.4	13
82	Molecular interactions between sex hormoneâ€“binding globulin and nonsteroidal ligands that enhance androgen activity. Journal of Biological Chemistry, 2020, 295, 1202-1211.	3.4	13
83	CPVT-associated cardiac ryanodine receptor mutation G357S with reduced penetrance impairs Ca2+ release termination and diminishes protein expression. PLoS ONE, 2017, 12, e0184177.	2.5	12
84	Crystal Structure of T State Aspartate Carbamoyltransferase of the Hyperthermophilic Archaeon Sulfolobus acidocaldarius. Journal of Molecular Biology, 2004, 339, 887-900.	4.2	11
85	Nanodisc technology facilitates identification of monoclonal antibodies targeting multi-pass membrane proteins. Scientific Reports, 2020, 10, 1130.	3.3	11
86	Understanding Nicotinamide Dinucleotide Cofactor and Substrate Specificity in Class I Flavoprotein Disulfide Oxidoreductases: Crystallographic Analysis of a Glutathione Amide Reductase. Journal of Molecular Biology, 2007, 374, 883-889.	4.2	9
87	How to open a Ryanodine Receptor. Cell Research, 2016, 26, 1073-1074.	12.0	9
88	Homozygous SCN1B variants causing early infantile epileptic encephalopathy 52 affect voltageâ€gated sodium channel function. Epilepsia, 2021, 62, e82-e87.	5.1	9
89	Molecular and structural characterization of the <scp>SH</scp>3 domain of <scp>AHI</scp>â€1 in regulation of cellular resistance of <scp>BCR</scp>â€<scp>ABL</scp>⁺ chronic myeloid leukemia cells to tyrosine kinase inhibitors. Proteomics, 2012, 12, 2094-2106.	2.2	8
90	Molecular interactions between sex hormoneâ€“binding globulin and nonsteroidal ligands that enhance androgen activity. Journal of Biological Chemistry, 2020, 295, 1202-1211.	3.4	7

#	Article	IF	Citations
91	Crystal Structure of the Talin Integrin Binding Domain 2. Journal of Molecular Biology, 2009, 387, 787-793.	4.2	6
92	Orthogonal Active-Site Labels for Mixed-Linkage endo-Î²-Glucanases. ACS Chemical Biology, 2021, 16, 1968-1984.	3.4	6
93	Mapping the sevofluraneâ€binding sites of calmodulin. Pharmacology Research and Perspectives, 2014, 2, 5.	2.4	5
94	Slaying a giant: Structures of calmodulin and protein kinase a bound to the cardiac ryanodine receptor. Cell Calcium, 2019, 83, 102079.	2.4	5
95	Binding and structural asymmetry governs ligand sensitivity in a cyclic nucleotideâ€“gated ion channel. Journal of General Physiology, 2019, 151, 1190-1212.	1.9	5
96	A multi-dimensional analysis of genotypeâ€“phenotype discordance in malignant hyperthermia susceptibility. British Journal of Anaesthesia, 2020, 125, 995-1001.	3.4	5
97	Cell Surface Xyloglucan Recognition and Hydrolysis by the Human Gut Commensal Bacteroides uniformis. Applied and Environmental Microbiology, 2022, 88, AEM0156621.	3.1	5
98	Structures of PKAâ€“phospholamban complexes reveal a mechanism of familial dilated cardiomyopathy. ELife, 2022, 11, .	6.0	5
99	The H29D Mutation Does Not Enhance Cytosolic Ca2+ Activation of the Cardiac Ryanodine Receptor. PLoS ONE, 2015, 10, e0139058.	2.5	4
100	Ligand binding to Ryanodine Receptors revealed through cryo-electron microscopy. Cell Calcium, 2017, 61, 50-52.	2.4	4
101	Functional characterization of a cellulose synthase, CtCESA1, from the marine red alga Calliarthron tuberculosum (Corallinales). Journal of Experimental Botany, 2021, , .	4.8	4
102	Crystal structure of Sulfolobus acidocaldarius aspartate carbamoyltransferase in complex with its allosteric activator CTP. Biochemical and Biophysical Research Communications, 2008, 372, 40-44.	2.1	3
103	Cardiac arrest in a mother and daughter and the identification of a novel RYR2 variant, predisposing to low penetrant catecholaminergic polymorphic ventricular tachycardia in a fourâ€generation Canadian family. Molecular Genetics & Genomic Medicine, 2020, 8, e1151.	1.2	3
104	Multiple regions within junctin drive its interaction with calsequestrin-1 and its localization to triads in skeletal muscle. Journal of Cell Science, 2022, 135, .	2.0	3
105	Using hiPSCâ€CMs to Examine Mechanisms of Catecholaminergic Polymorphic Ventricular Tachycardia. Current Protocols, 2021, 1, e320.	2.9	3
106	Crystallization and preliminary X-ray crystallographic analysis of glutathione amide reductase fromChromatium gracile. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 339-340.	2.5	2
107	Subtle Changes in the Combining Site of the Chlamydiaceae-Specific mAb S25-23 Increase the Antibodyâ€“Carbohydrate Binding Affinity by an Order of Magnitude. Biochemistry, 2019, 58, 714-726.	2.5	2
108	Cardiac ryanodine receptor N-terminal region biosensors identify novel inhibitors via FRET-based high-throughput screening. Journal of Biological Chemistry, 2022, 298, 101412.	3.4	2

#	Article	IF	Citations
109	Multiple C-terminal tail Ca2+/CaMs regulate CaV1.2 function but do not mediate channel dimerization. EMBO Journal, 2010, 29, 4062-4062.	7.8	1
110	Conformational Dynamics Inside Amino-Terminal Disease Hotspot of Ryanodine Receptor. Biophysical Journal, 2012, 102, 304a.	0.5	1
111	The General Anaesthetic Binding Site of Calmodulin Disrupts Ryanodine Peptide Binding. Biophysical Journal, 2013, 104, 445a.	0.5	1
112	Biophysical Investigation of Sodium Channel Interaction with Î²-Subunit Variants Associated with Arrhythmias. Bioelectricity, 2020, 2, 269-278.	1.1	1
113	The role of phosphorylation in atrial fibrillation: a focus on mass spectrometry approaches. Cardiovascular Research, 2022, 118, 1205-1217.	3.8	1
114	Altered cyclic nucleotide binding and pore opening in a diseased human HCN4 channel. Biophysical Journal, 2022, 121, 1166-1183.	0.5	1
115	The Ryanodine Receptor N-Terminal Disease Hot Spot Intersubunit Interface is Disrupted by Channel Opening and Affected by Disease Mutations Acting via Long-Range Structural Changes. Biophysical Journal, 2012, 102, 304a.	0.5	0
116	Structural Insights into the STAC Adaptor Protein and Voltage-Gated Calcium Channel Interaction. Biophysical Journal, 2018, 114, 40a.	0.5	0
117	Structural Insights into Recognition of Ryanodine Receptors by PKA. Biophysical Journal, 2019, 116, 153a-154a.	0.5	0
118	Reply to Pitt and Lee: Occupancies of Ca2+in complexes of calmodulin with voltage-gated sodium channels. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26152-26152.	7.1	0
119	Crystal Structures of Calcium-Loaded Calmodulin in Complex with C-Terminal Domains of Voltage-Gated Sodium Channels. Biophysical Journal, 2020, 118, 576a.	0.5	0
120	Structural Insights into the Diamide Modulation of Ryanodine Receptor. Biophysical Journal, 2021, 120, 149a.	0.5	0
121	Molecular and Structural Characterization of the SH3 Domain of AHI-1 in Regulation of Cellular Resistance of BCR-ABL+ Chronic Myeloid Leukemia Cells to Tyrosine Kinase Inhibitors. Blood, 2011, 118, 966-966.	1.4	0
122	Structures and allosteric motions of Ryanodine Receptor Domains. FASEB Journal, 2013, 27, 590.6.	0.5	0
123	Ryanodine Receptor (RyR). , 2018, , 4786-4792.		0
124	Structural basis for diamide modulation of ryanodine receptor. Journal of General Physiology, 2022, 154, .	1.9	0
125	Cryo-EM studies of ryanodine receptor disease mutant and modulation by calmodulin. Biophysical Journal, 2022, 121, 175a.	0.5	0
126	It takes two to tango: Rycals and ATP snuggle up to bind ryanodine receptors. Structure, 2022, 30, 919-921.	3.3	0