

Patrick Scheerer

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/13520/publications.pdf>

Version: 2024-02-01

107
papers

6,759
citations

94433

37
h-index

64796

79
g-index

118
all docs

118
docs citations

118
times ranked

6753
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Crystal structure of opsin in its G-protein-interacting conformation. Nature, 2008, 455, 497-502. | 27.8 | 1,019 |
| 2 | Crystal structure of the ligand-free G-protein-coupled receptor opsin. Nature, 2008, 454, 183-187. | 27.8 | 870 |
| 3 | Crystal structure of metarhodopsin II. Nature, 2011, 471, 651-655. | 27.8 | 620 |
| 4 | The crystal structure of an oxygen-tolerant hydrogenase uncovers a novel iron-sulphur centre. Nature, 2011, 479, 249-252. | 27.8 | 342 |
| 5 | A G protein-coupled receptor at work: the rhodopsin model. Trends in Biochemical Sciences, 2009, 34, 540-552. | 7.5 | 328 |
| 6 | MC4R agonism promotes durable weight loss in patients with leptin receptor deficiency. Nature Medicine, 2018, 24, 551-555. | 30.7 | 219 |
| 7 | Structural Snapshots of Actively Translating Human Ribosomes. Cell, 2015, 161, 845-857. | 28.9 | 161 |
| 8 | Crystal structure of pre-activated arrestin p44. Nature, 2013, 497, 142-146. | 27.8 | 156 |
| 9 | Crystal structure of a common GPCR-binding interface for G protein and arrestin. Nature Communications, 2014, 5, 4801. | 12.8 | 149 |
| 10 | Structural Basis for Catalytic Activity and Enzyme Polymerization of Phospholipid Hydroperoxide Glutathione Peroxidase-4 (GPx4). Biochemistry, 2007, 46, 9041-9049. | 2.5 | 138 |
| 11 | Highly Conserved Residues Asp-197 and His-250 in Agp1 Phytochrome Control the Proton Affinity of the Chromophore and Pfr Formation. Journal of Biological Chemistry, 2007, 282, 2116-2123. | 3.4 | 106 |
| 12 | Position of Transmembrane Helix 6 Determines Receptor G Protein Coupling Specificity. Journal of the American Chemical Society, 2014, 136, 11244-11247. | 13.7 | 105 |
| 13 | A Ligand Channel through the G Protein Coupled Receptor Opsin. PLoS ONE, 2009, 4, e4382. | 2.5 | 102 |
| 14 | Double-flow focused liquid injector for efficient serial femtosecond crystallography. Scientific Reports, 2017, 7, 44628. | 3.3 | 90 |
| 15 | Crystal structure of a prokaryotic (6-4) photolyase with an Fe-S cluster and a 6,7-dimethyl-8-ribityllumazine antenna chromophore. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7217-7222. | 7.1 | 89 |
| 16 | Reversible [4Fe-3S] cluster morphing in an O ₂ -tolerant [NiFe] hydrogenase. Nature Chemical Biology, 2014, 10, 378-385. | 8.0 | 85 |
| 17 | Molecular architecture of the ribosome-bound Hepatitis C Virus internal ribosomal entry site. EMBO Journal, 2015, 34, 3042-3058. | 7.8 | 80 |
| 18 | The complex of tmRNA-SmpB and EF-G on translocating ribosomes. Nature, 2012, 485, 526-529. | 27.8 | 76 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | A protonation-coupled feedback mechanism controls the signalling process in bathy phytochromes. <i>Nature Chemistry</i> , 2015, 7, 423-430. | 13.6 | 74 |
| 20 | Structural and Functional Features of the Thyrotropin Receptor: A Class A G-Protein-Coupled Receptor at Work. <i>Frontiers in Endocrinology</i> , 2017, 8, 86. | 3.5 | 73 |
| 21 | Effect of channel mutations on the uptake and release of the retinal ligand in opsin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 5247-5252. | 7.1 | 71 |
| 22 | Human endogenous retrovirus HERV-K(HML-2) RNA causes neurodegeneration through Toll-like receptors. <i>JCI Insight</i> , 2020, 5, . | 5.0 | 68 |
| 23 | Chromophore Structure of Cyanobacterial Phytochrome Cph1 in the Pr State: Reconciling Structural and Spectroscopic Data by QM/MM Calculations. <i>Biophysical Journal</i> , 2009, 96, 4153-4163. | 0.5 | 66 |
| 24 | Chromophore Heterogeneity and Photoconversion in Phytochrome Crystals and Solution Studied by Resonance Raman Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 4753-4755. | 13.8 | 64 |
| 25 | Structural snapshot of a bacterial phytochrome in its functional intermediate state. <i>Nature Communications</i> , 2018, 9, 4912. | 12.8 | 62 |
| 26 | Structural Basis for Two-component System Inhibition and Pilus Sensing by the Auxiliary CpxP Protein. <i>Journal of Biological Chemistry</i> , 2011, 286, 9805-9814. | 3.4 | 59 |
| 27 | Structures of ribosome-bound initiation factor 2 reveal the mechanism of subunit association. <i>Science Advances</i> , 2016, 2, e1501502. | 10.3 | 59 |
| 28 | Recurrent convergent evolution at amino acid residue 261 in fish rhodopsin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18473-18478. | 7.1 | 59 |
| 29 | Structure of the Biliverdin Cofactor in the Pfr State of Bathy and Prototypical Phytochromes. <i>Journal of Biological Chemistry</i> , 2013, 288, 16800-16814. | 3.4 | 58 |
| 30 | Structural mechanism of arrestin activation. <i>Current Opinion in Structural Biology</i> , 2017, 45, 160-169. | 5.7 | 55 |
| 31 | Assembly of Synthetic Locked Chromophores with Agrobacterium Phytochromes Agp1 and Agp2. <i>Journal of Biological Chemistry</i> , 2006, 281, 28162-28173. | 3.4 | 50 |
| 32 | Structural and kinetic modeling of an activating helix switch in the rhodopsin-transducin interface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10660-10665. | 7.1 | 47 |
| 33 | The Class III Cyclobutane Pyrimidine Dimer Photolyase Structure Reveals a New Antenna Chromophore Binding Site and Alternative Photoreduction Pathways. <i>Journal of Biological Chemistry</i> , 2015, 290, 11504-11514. | 3.4 | 46 |
| 34 | Structural and functional basis of phospholipid oxygenase activity of bacterial lipoyxygenase from <i>Pseudomonas aeruginosa</i> . <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2016, 1861, 1681-1692. | 2.4 | 46 |
| 35 | Crystal structure and functional characterization of selenocysteine-containing glutathione peroxidase 4 suggests an alternative mechanism of peroxide reduction. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2018, 1863, 1095-1107. | 2.4 | 45 |
| 36 | Krypton Derivatization of an O ₂ -Tolerant Membrane-Bound [NiFe] Hydrogenase Reveals a Hydrophobic Tunnel Network for Gas Transport. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 5586-5590. | 13.8 | 42 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 37 | The Crystal Structures of the N-terminal Photosensory Core Module of Agrobacterium Phytochrome Agp1 as Parallel and Anti-parallel Dimers. <i>Journal of Biological Chemistry</i> , 2016, 291, 20674-20691. | 3.4 | 41 |
| 38 | Tracking the route of molecular oxygen in O ₂ -tolerant membrane-bound [NiFe] hydrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E2229-E2237. | 7.1 | 41 |
| 39 | Structures of active melanocortin-4 receptor Gs-protein complexes with NDP-MSH and setmelanotide. <i>Cell Research</i> , 2021, 31, 1176-1189. | 12.0 | 40 |
| 40 | Light-Induced Conformational Changes of the Chromophore and the Protein in Phytochromes: Bacterial Phytochromes as Model Systems. <i>ChemPhysChem</i> , 2010, 11, 1090-1105. | 2.1 | 39 |
| 41 | Key Amino Acids in the Bacterial (6-4) Photolyase PhrB from Agrobacterium fabrum. <i>PLoS ONE</i> , 2015, 10, e0140955. | 2.5 | 32 |
| 42 | Light-Induced Activation of Bacterial Phytochrome Agp1 Monitored by Static and Time-Resolved FTIR Spectroscopy. <i>ChemPhysChem</i> , 2010, 11, 1207-1214. | 2.1 | 31 |
| 43 | Conserved Tyr223 ^{5.58} Plays Different Roles in the Activation and G-Protein Interaction of Rhodopsin. <i>Journal of the American Chemical Society</i> , 2011, 133, 7159-7165. | 13.7 | 30 |
| 44 | Resonance Raman Spectroscopic Analysis of the [NiFe] Active Site and the Proximal [4Fe-3S] Cluster of an O ₂ -Tolerant Membrane-Bound Hydrogenase in the Crystalline State. <i>Journal of Physical Chemistry B</i> , 2015, 119, 13785-13796. | 2.6 | 30 |
| 45 | Crystallization and preliminary X-ray crystallographic analysis of the N-terminal photosensory module of phytochrome Agp1, a biliverdin-binding photoreceptor from Agrobacterium tumefaciens. <i>Journal of Structural Biology</i> , 2006, 153, 97-102. | 2.8 | 29 |
| 46 | The crystal structure of Pseudomonas aeruginosa lipoxygenase Ala420Gly mutant explains the improved oxygen affinity and the altered reaction specificity. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2017, 1862, 463-473. | 2.4 | 26 |
| 47 | The Axonal Membrane Protein PRG2 Inhibits PTEN and Directs Growth to Branches. <i>Cell Reports</i> , 2019, 29, 2028-2040.e8. | 6.4 | 25 |
| 48 | Signal Transduction and Pathogenic Modifications at the Melanocortin-4 Receptor: A Structural Perspective. <i>Frontiers in Endocrinology</i> , 2019, 10, 515. | 3.5 | 24 |
| 49 | Design of a light-gated proton channel based on the crystal structure of <i>Coccomyxa</i> rhodopsin. <i>Science Signaling</i> , 2019, 12, . | 3.6 | 24 |
| 50 | Differential Signaling Profiles of MC4R Mutations with Three Different Ligands. <i>International Journal of Molecular Sciences</i> , 2020, 21, 1224. | 4.1 | 24 |
| 51 | Phytochromes from <i>Agrobacterium fabrum</i> . <i>Photochemistry and Photobiology</i> , 2017, 93, 642-655. | 2.5 | 23 |
| 52 | The Trace Amine-Associated Receptor 1 Agonist 3-Iodothyronamine Induces Biased Signaling at the Serotonin 1b Receptor. <i>Frontiers in Pharmacology</i> , 2018, 9, 222. | 3.5 | 22 |
| 53 | The structure of the anti-c-myc antibody 9E10 Fab fragment/epitope peptide complex reveals a novel binding mode dominated by the heavy chain hypervariable loops. <i>Proteins: Structure, Function and Bioinformatics</i> , 2008, 73, 552-565. | 2.6 | 21 |
| 54 | Common Structural Elements in the Chromophore Binding Pocket of the Pfr State of Bathy Phytochromes. <i>Photochemistry and Photobiology</i> , 2017, 93, 724-732. | 2.5 | 21 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 55 | Tight association of N-terminal and catalytic subunits of rabbit 12/15-lipoxygenase is important for protein stability and catalytic activity. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2011, 1811, 1001-1010. | 2.4 | 19 |
| 56 | Structure-Based Biophysical Analysis of the Interaction of Rhodopsin with G Protein and Arrestin. <i>Methods in Enzymology</i> , 2015, 556, 563-608. | 1.0 | 19 |
| 57 | Melanocortin Receptor Accessory Protein 2-Induced Adrenocorticotrophic Hormone Response of Human Melanocortin 4 Receptor. <i>Journal of the Endocrine Society</i> , 2019, 3, 314-323. | 0.2 | 19 |
| 58 | MicroRNA-100-5p and microRNA-298-5p released from apoptotic cortical neurons are endogenous Toll-like receptor 7/8 ligands that contribute to neurodegeneration. <i>Molecular Neurodegeneration</i> , 2021, 16, 80. | 10.8 | 18 |
| 59 | Insights into Basal Signaling Regulation, Oligomerization, and Structural Organization of the Human G-Protein Coupled Receptor 83. <i>PLoS ONE</i> , 2016, 11, e0168260. | 2.5 | 16 |
| 60 | Dynein light chain 8a of <i>Toxoplasma gondii</i> , a unique conoid-localized β -strand-swapped homodimer, is required for an efficient parasite growth. <i>FASEB Journal</i> , 2013, 27, 1034-1047. | 0.5 | 15 |
| 61 | The intramolecular agonist is obligate for activation of glycoprotein hormone receptors. <i>FASEB Journal</i> , 2020, 34, 11243-11256. | 0.5 | 15 |
| 62 | Insights into functional aspects of centrioles from the structure of N-terminally extended mouse centriole 1. <i>Vision Research</i> , 2006, 46, 4568-4574. | 1.4 | 14 |
| 63 | The Activation Pathway of Human Rhodopsin in Comparison to Bovine Rhodopsin. <i>Journal of Biological Chemistry</i> , 2015, 290, 20117-20127. | 3.4 | 14 |
| 64 | A New Multisystem Disorder Caused by the β -Mutation p.F376V. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2019, 104, 1079-1089. | 3.6 | 14 |
| 65 | Intramolecular Proton Transfer Controls Protein Structural Changes in Phytochrome. <i>Biochemistry</i> , 2020, 59, 1023-1037. | 2.5 | 14 |
| 66 | Intersubunit distances in full-length, dimeric, bacterial phytochrome Agp1, as measured by pulsed electron-electron double resonance (PELDOR) between different spin label positions, remain unchanged upon photoconversion. <i>Journal of Biological Chemistry</i> , 2017, 292, 7598-7606. | 3.4 | 13 |
| 67 | Mechanistic insights into the role of prenyl-binding protein PrBP in membrane dissociation of phosphodiesterase 6. <i>Nature Communications</i> , 2018, 9, 90. | 12.8 | 13 |
| 68 | An incretin-based tri-agonist promotes superior insulin secretion from murine pancreatic islets via PLC activation. <i>Cellular Signalling</i> , 2018, 51, 13-22. | 3.6 | 13 |
| 69 | Role of the Propionic Side Chains for the Photoconversion of Bacterial Phytochromes. <i>Biochemistry</i> , 2019, 58, 3504-3519. | 2.5 | 13 |
| 70 | Role of Structural Dynamics at the Receptor G Protein Interface for Signal Transduction. <i>PLoS ONE</i> , 2015, 10, e0143399. | 2.5 | 12 |
| 71 | Crystal Structures of Bacterial (γ) Photolyase Mutants with Impaired DNA Repair Activity. <i>Photochemistry and Photobiology</i> , 2017, 93, 304-314. | 2.5 | 12 |
| 72 | Structural Complexity and Plasticity of Signaling Regulation at the Melanocortin-4 Receptor. <i>International Journal of Molecular Sciences</i> , 2020, 21, 5728. | 4.1 | 12 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 73 | Ultrafast proton-coupled isomerization in the phototransformation of phytochrome. <i>Nature Chemistry</i> , 2022, 14, 823-830. | 13.6 | 12 |
| 74 | The Lumi-R Intermediates of Prototypical Phytochromes. <i>Journal of Physical Chemistry B</i> , 2020, 124, 4044-4055. | 2.6 | 10 |
| 75 | Local Electric Field Changes during the Photoconversion of the Bathy Phytochrome Agp2. <i>Biochemistry</i> , 2021, 60, 2967-2977. | 2.5 | 10 |
| 76 | The arrestin-1 finger loop interacts with two distinct conformations of active rhodopsin. <i>Journal of Biological Chemistry</i> , 2018, 293, 4403-4410. | 3.4 | 9 |
| 77 | Binding, Thermodynamics, and Selectivity of a Non-peptide Antagonist to the Melanocortin-4 Receptor. <i>Frontiers in Pharmacology</i> , 2018, 9, 560. | 3.5 | 9 |
| 78 | Divalent Cations Increase DNA Repair Activities of Bacterial (6â€4) Photolyases. <i>Photochemistry and Photobiology</i> , 2017, 93, 323-330. | 2.5 | 8 |
| 79 | Light- and temperature-dependent dynamics of chromophore and protein structural changes in bathy phytochrome Agp2. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 18197-18205. | 2.8 | 8 |
| 80 | On the Role of the Conserved Histidine at the Chromophore Isomerization Site in Phytochromes. <i>Journal of Physical Chemistry B</i> , 2021, 125, 13696-13709. | 2.6 | 8 |
| 81 | Autoantibodies Targeting AT1- and ETA-Receptors Link Endothelial Proliferation and Coagulation via Ets-1 Transcription Factor. <i>International Journal of Molecular Sciences</i> , 2022, 23, 244. | 4.1 | 8 |
| 82 | A coleopteran triosephosphate isomerase: Xâ€ray structure and phylogenetic impact of insect sequences. <i>Insect Molecular Biology</i> , 2010, 19, 35-48. | 2.0 | 7 |
| 83 | Phytochromes in <i>Agrobacterium fabrum</i> . <i>Frontiers in Plant Science</i> , 2021, 12, 642801. | 3.6 | 7 |
| 84 | Angiotensin and Endothelin Receptor Structures With Implications for Signaling Regulation and Pharmacological Targeting. <i>Frontiers in Endocrinology</i> , 2022, 13, 880002. | 3.5 | 7 |
| 85 | Structure of an antiâ€cholera toxin antibody Fab in complex with an epitopeâ€derived peptide: a case of polyspecific recognition. <i>Journal of Molecular Recognition</i> , 2007, 20, 263-274. | 2.1 | 6 |
| 86 | Crystallization and preliminary X-ray crystallographic analysis of the [NiFe]-hydrogenase maturation factor HypF1 from <i>Ralstonia eutropha</i> H16. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2010, 66, 452-455. | 0.7 | 6 |
| 87 | Use of a sequential high throughput screening assay to identify novel inhibitors of the eukaryotic SRP-Sec61 targeting/translocation pathway. <i>PLoS ONE</i> , 2018, 13, e0208641. | 2.5 | 6 |
| 88 | Photoinduced reaction mechanisms in prototypical and bathy phytochromes. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 11967-11978. | 2.8 | 6 |
| 89 | Crystallization and preliminary X-ray studies of mouse centrin1. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2005, 61, 510-513. | 0.7 | 5 |
| 90 | Functional differences between TSHR alleles associate with variation in spawning season in Atlantic herring. <i>Communications Biology</i> , 2021, 4, 795. | 4.4 | 5 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 91 | Molecular Effects of Auto-Antibodies on Angiotensin II Type 1 Receptor Signaling and Cell Proliferation. <i>International Journal of Molecular Sciences</i> , 2022, 23, 3984. | 4.1 | 5 |
| 92 | Molecular basis for the catalytic inactivity of a naturally occurring near-null variant of human ALOX15. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2013, 1831, 1702-1713. | 2.4 | 4 |
| 93 | Ein Netzwerk aus hydrophoben Tunneln zum Transport gasförmiger Reaktanten in einer O ₂ -toleranten, membrangebundenen [NiFe]-Hydrogenase, aufgedeckt durch Derivatisierung mit Krypton. <i>Angewandte Chemie</i> , 2016, 128, 5676-5680. | 2.0 | 4 |
| 94 | The Pathogenic TSH Î²-subunit Variant C105Vfs114X Causes a Modified Signaling Profile at TSHR. <i>International Journal of Molecular Sciences</i> , 2019, 20, 5564. | 4.1 | 4 |
| 95 | Phytochrome Mediated Responses in <i>Agrobacterium fabrum</i> : Growth, Motility and Plant Infection. <i>Current Microbiology</i> , 2021, 78, 2708-2719. | 2.2 | 4 |
| 96 | Resonance Raman spectroscopic analysis of the iron-sulfur cluster redox chain of the <i>Ralstonia eutropha</i> membrane-bound [NiFe]-hydrogenase. <i>Journal of Raman Spectroscopy</i> , 0, , . | 2.5 | 4 |
| 97 | Zebrafish Bioassay for Screening Therapeutic Candidates Based on Melanotrophic Activity. <i>International Journal of Molecular Sciences</i> , 2021, 22, 9313. | 4.1 | 2 |
| 98 | Crystallization and Preliminary X-ray Analysis of Complexes of Porcine Pancreatic Elastase with two Natural Inhibitors. <i>Protein and Peptide Letters</i> , 2004, 11, 393-399. | 0.9 | 2 |
| 99 | Expression and Characterization of Relaxin Family Peptide Receptor 1 Variants. <i>Frontiers in Pharmacology</i> , 2021, 12, 826112. | 3.5 | 2 |
| 100 | Evaluation of a rare glucose-dependent insulinotropic polypeptide receptor variant in a patient with diabetes. <i>Diabetes, Obesity and Metabolism</i> , 2019, 21, 1168-1176. | 4.4 | 1 |
| 101 | Two photolyases in <i>Agrobacterium tumefaciens</i> . <i>FASEB Journal</i> , 2015, 29, 879.22. | 0.5 | 1 |
| 102 | A cytosolic disulfide bridge-supported dimerization is crucial for stability and cellular distribution of Coxsackievirus B3 protein 3A. <i>FEBS Journal</i> , 2022, 289, 3826-3838. | 4.7 | 1 |
| 103 | Dynamics of C-Terminal GtÎ± and GsÎ± Peptides in the Binding Cavity of Active GPCRs. <i>Biophysical Journal</i> , 2013, 104, 538a. | 0.5 | 0 |
| 104 | Conformational Dynamics During GPCR - G Protein Coupling. <i>Biophysical Journal</i> , 2014, 106, 37a. | 0.5 | 0 |
| 105 | Protein structures guide the design of a much-needed tool for neuroscience. <i>Nature</i> , 2018, 561, 312-313. | 27.8 | 0 |
| 106 | Structures of the photosensory core module of bacteriophytochrome Agp1 from two crystal forms reveal plasticity of the Pr state. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2016, 72, s228-s229. | 0.1 | 0 |
| 107 | Methodical tools for the structural elucidation of G-protein coupled receptors. <i>Endocrine Abstracts</i> , 0, , . | 0.0 | 0 |