Holger Barth

List of Publications by Year in descending order

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120 papers	4,486 citations	87888 38 h-index	114465 63 g-index
123 all docs	123 docs citations	123 times ranked	2760 citing authors

#	Article	IF	Citations
1	Ephrin-A5 Induces Collapse of Growth Cones by Activating Rho and Rho Kinase. Journal of Cell Biology, 2000, 149, 263-270.	5.2	368
2	Binary Bacterial Toxins: Biochemistry, Biology, and Applications of Common Clostridium and Bacillus Proteins. Microbiology and Molecular Biology Reviews, 2004, 68, 373-402.	6.6	353
3	Cellular Uptake of Clostridium botulinum C2 Toxin Requires Oligomerization and Acidification. Journal of Biological Chemistry, 2000, 275, 18704-18711.	3.4	161
4	Low pH-induced Formation of Ion Channels by Clostridium difficile Toxin B in Target Cells. Journal of Biological Chemistry, 2001, 276, 10670-10676.	3.4	141
5	Characterization of the Enzymatic Component of the ADP-Ribosyltransferase Toxin CDTa from Clostridium difficile. Infection and Immunity, 2001, 69, 6004-6011.	2.2	124
6	The Host Cell Chaperone Hsp90 Is Essential for Translocation of the Binary Clostridium botulinum C2 Toxin into the Cytosol. Journal of Biological Chemistry, 2003, 278, 32266-32274.	3.4	123
7	Cellular Uptake of Clostridium difficile Toxin B. Journal of Biological Chemistry, 2003, 278, 44535-44541.	3.4	121
8	Structure and Action of the Binary C2 Toxin from Clostridium botulinum. Journal of Molecular Biology, 2006, 364, 705-715.	4.2	116
9	Binding of Clostridium botulinum C2 Toxin to Asparagine-linked Complex and Hybrid Carbohydrates. Journal of Biological Chemistry, 2000, 275, 2328-2334.	3.4	111
10	Characterization of the Catalytic Site of the ADP-Ribosyltransferase Clostridium botulinum C2 Toxin by Site-directed Mutagenesis. Journal of Biological Chemistry, 1998, 273, 29506-29511.	3.4	93
11	Membrane Translocation of Binary Actin-ADP-Ribosylating Toxins from Clostridium difficile and Clostridium perfringens Is Facilitated by Cyclophilin A and Hsp90. Infection and Immunity, 2011, 79, 3913-3921.	2.2	90
12	Cellular Uptake of the Clostridium perfringens Binary Iota-Toxin. Infection and Immunity, 2001, 69, 2980-2987.	2.2	86
13	Cyclophilin A facilitates translocation of theClostridium botulinumC2 toxin across membranes of acidified endosomes into the cytosol of mammalian cells. Cellular Microbiology, 2009, 11, 780-795.	2.1	74
14	Preclinical Characterization of Novel Chordoma Cell Systems and Their Targeting by Pharmocological Inhibitors of the CDK4/6 Cell-Cycle Pathway. Cancer Research, 2015, 75, 3823-3831.	0.9	73
15	Interaction ofClostridium botulinumC2â€toxin with lipid bilayer membranes and vero cells: inhibition of channel function by chloroquine and related compoundsin vitroand intoxificationin vivo. FASEB Journal, 2001, 15, 1658-1660.	0.5	72
16	The Binary Clostridium botulinum C2 Toxin as a Protein Delivery System. Journal of Biological Chemistry, 2002, 277, 5074-5081.	3.4	72
17	The Host Cell Chaperone Hsp90 Is Necessary for Cytotoxic Action of the Binary Iota-Like Toxins. Infection and Immunity, 2004, 72, 3066-3068.	2.2	69
18	Clostridium and Bacillus Binary Enterotoxins: Bad for the Bowels, and Eukaryotic Being. Toxins, 2014, 6, 2626-2656.	3.4	67

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19	The C Terminus of Component C2II of Clostridium botulinum C2 Toxin Is Essential for Receptor Binding. Infection and Immunity, 2000, 68, 4566-4573.	2.2	65
20	Clostridium botulinum C2 Toxin. Journal of Biological Chemistry, 2003, 278, 37360-37367.	3.4	63
21	Role of CypA and Hsp90 in membrane translocation mediated by anthrax protective antigen. Cellular Microbiology, 2011, 13, 359-373.	2.1	62
22	FK506â€binding protein 51 interacts withClostridium botulinumC2 toxin and FK506 inhibits membrane translocation of the toxin in mammalian cells. Cellular Microbiology, 2012, 14, 1193-1205.	2.1	61
23	Cellular Uptake ofClostridium botulinumC2 Toxin:Â Membrane Translocation of a Fusion Toxin Requires Unfolding of Its Dihydrofolate Reductase Domainâ€. Biochemistry, 2003, 42, 15284-15291.	2.5	59
24	Spatiotemporally Controlled Release of Rhoâ€Inhibiting C3 Toxin from a Proteinâ€“DNA Hybrid Hydrogel for Targeted Inhibition of Osteoclast Formation and Activity. Advanced Healthcare Materials, 2017, 6, 1700392.	7.6	57
25	Selective and specific internalization of clostridial C3 ADP-ribosyltransferases into macrophages and monocytes. Cellular Microbiology, 2010, 12, 233-247.	2.1	56
26	Salmonella enterica SpvB ADP-Ribosylates Actin at Position Arginine-177Characterization of the Catalytic Domain within the SpvB Protein and a Comparison to Binary Clostridial Actin-ADP-Ribosylating Toxins. Biochemistry, 2006, 45, 1271-1277.	2.5	55
27	ADP-Ribosylation of Actin by the Clostridium botulinum C2 Toxin in Mammalian Cells Results in Delayed Caspase-Dependent Apoptotic Cell Death. Infection and Immunity, 2008, 76, 4600-4608.	2.2	55
28	Neosynthesis and Activation of Rho by Escherichia coli Cytotoxic Necrotizing Factor (CNF1) Reverse Cytopathic Effects of ADP-ribosylated Rho. Journal of Biological Chemistry, 1999, 274, 27407-27414.	3.4	54
29	Channel Formation by the Binding Component ofClostridium botulinumC2 Toxin:Â Glutamate 307 of C2II Affects Channel Propertiesin Vitroand pH-Dependent C2I Translocationin Vivoâ€. Biochemistry, 2003, 42, 5368-5377.	2.5	52
30	Binary Actin-ADP-Ribosylating Toxins and their Use as Molecular Trojan Horses for Drug Delivery into Eukaryotic Cells. Current Medicinal Chemistry, 2008, 15, 459-469.	2.4	52
31	Clostridial Binary Toxins: Iota and C2 Family Portraits. Frontiers in Cellular and Infection Microbiology, 2011, 1, 11.	3.9	50
32	CD44 Promotes Intoxication by the Clostridial Iota-Family Toxins. PLoS ONE, 2012, 7, e51356.	2.5	47
33	Human Serum Albumin Is an Essential Component of the Host Defense Mechanism Against Clostridium difficile Intoxication. Journal of Infectious Diseases, 2018, 218, 1424-1435.	4.0	45
34	The chaperone Hsp90 and PPIases of the cyclophilin and FKBP families facilitate membrane translocation ofPhotorhabdus luminescensâ€¦ADP-ribosyltransferases. Cellular Microbiology, 2014, 16, 490-503.	2.1	43
35	Hsp70 facilitates trans-membrane transport of bacterial ADP-ribosylating toxins into the cytosol of mammalian cells. Scientific Reports, 2017, 7, 2724.	3.3	43
36	Cyclophilin-Facilitated Membrane Translocation as Pharmacological Target to Prevent Intoxication of Mammalian Cells by Binary Clostridial Actin ADP-Ribosylated Toxins. Journal of Molecular Biology, 2015, 427, 1224-1238.	4.2	42

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37	Clostridium botulinum C2 toxin is internalized by clathrin- and Rho-dependent mechanisms. Cellular Microbiology, 2010, 12, 1809-1820.	2.1	41
38	Cellular Uptake and Mode-of-Action of Clostridium difficile Toxins. Advances in Experimental Medicine and Biology, 2018, 1050, 77-96.	1.6	41
39	The uptake machinery of clostridial actin ADP-ribosylating toxins - a cell delivery system for fusion proteins and polypeptide drugs. Naunyn-Schmiedeberg's Archives of Pharmacology, 2002, 366, 501-512.	3.0	39
40	Mechanism of C2-toxin Inhibition by Fluphenazine and Related Compounds: Investigation of their Binding Kinetics to the C2II-channel using the Current Noise Analysis. Journal of Molecular Biology, 2003, 333, 527-540.	4.2	38
41	The Hsp90 machinery facilitates the transport of diphtheria toxin into human cells. Scientific Reports, 2017, 7, 613.	3.3	36
42	New insights into the mode of action of the actin ADP-ribosylating virulence factors Salmonella enterica SpvB and Clostridium botulinum C2 toxin. European Journal of Cell Biology, 2011, 90, 944-950.	3.6	35
43	Tailored ÃŸ-Cyclodextrin Blocks the Translocation Pores of Binary Exotoxins from C. Botulinum and C. Perfringens and Protects Cells from Intoxication. PLoS ONE, 2011, 6, e23927.	2.5	34
44	pH Responsive Janus-like Supramolecular Fusion Proteins for Functional Protein Delivery. Journal of the American Chemical Society, 2013, 135, 17254-17257.	13.7	33
45	Interactions of High-Affinity Cationic Blockers with the Translocation Pores of B.Âanthracis, C.Âbotulinum, and C.Âperfringens Binary Toxins. Biophysical Journal, 2012, 103, 1208-1217.	0.5	31
46	Formation of a Biologically Active Toxin Complex of the BinaryClostridium botulinumC2 Toxin without Cell Membrane Interactionâ€. Biochemistry, 2006, 45, 13361-13368.	2.5	29
47	A novel Hsp70 inhibitor prevents cell intoxication with the actin ADP-ribosylating Clostridium perfringens iota toxin. Scientific Reports, 2016, 6, 20301.	3.3	29
48	The Long-Lived Nature of Clostridium perfringens Iota Toxin in Mammalian Cells Induces Delayed Apoptosis. Infection and Immunity, 2009, 77, 5593-5601.	2.2	28
49	Interaction of the Rho-ADP-ribosylating C3 Exoenzyme with RalA. Journal of Biological Chemistry, 2002, 277, 14771-14776.	3.4	27
50	Genetically Engineered Clostridial C2 Toxin as a Novel Delivery System for Living Mammalian Cells. Bioconjugate Chemistry, 2010, 21, 130-139.	3.6	27
51	Phospholipase C Epsilon (PLCÎµ) Induced TRPC6 Activation: A Common but Redundant Mechanism in Primary Podocytes. Journal of Cellular Physiology, 2015, 230, 1389-1399.	4.1	27
52	C2-Streptavidin Mediates the Delivery of Biotin-Conjugated Tumor Suppressor Protein P53 into Tumor Cells. Bioconjugate Chemistry, 2013, 24, 595-603.	3.6	26
53	Designed Azolopyridinium Salts Block Protective Antigen Pores In Vitro and Protect Cells from Anthrax Toxin. PLoS ONE, 2013, 8, e66099.	2.5	25
54	Exploring the role of host cell chaperones/PPIases during cellular up-take of bacterial ADP-ribosylating toxins as basis for novel pharmacological strategies to protect mammalian cells against these virulence factors. Naunyn-Schmiedeberg's Archives of Pharmacology, 2011, 383, 237-245.	3.0	24

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55	Efficient Delivery of p53 and Cytochrome C by Supramolecular Assembly of a Dendritic Multiâ€Domain Delivery System. Advanced Healthcare Materials, 2013, 2, 1620-1629.	7.6	24
56	Human peptide Î±â€defensinâ€1 interferes withClostridioides difficiletoxins TcdA, TcdB, and CDT. FASEB Journal, 2020, 34, 6244-6261.	0.5	24
57	A Cell-permeable Fusion Toxin as a Tool to Study the Consequences of Actin-ADP-ribosylation Caused by the Salmonella enterica Virulence Factor SpvB in Intact Cells. Journal of Biological Chemistry, 2007, 282, 10272-10282.	3.4	23
58	Cationic PAMAM Dendrimers as Pore-Blocking Binary Toxin Inhibitors. Biomacromolecules, 2014, 15, 2461-2474.	5.4	23
59	Host Cell Chaperones Hsp70/Hsp90 and Peptidyl-Prolyl Cis/Trans Isomerases Are Required for the Membrane Translocation of Bacterial ADP-Ribosylating Toxins. Current Topics in Microbiology and Immunology, 2016, 406, 163-198.	1.1	23
60	Inhibitions of the translocation pore of Clostridium botulinum C2 toxin by tailored azolopyridinium salts protects human cells from intoxication. Toxicology, 2014, 316, 25-33.	4.2	22
61	Pharmacological Cyclophilin Inhibitors Prevent Intoxication of Mammalian Cells with Bordetella pertussis Toxin. Toxins, 2018, 10, 181.	3.4	22
62	Boosting Antitumor Drug Efficacy with Chemically Engineered Multidomain Proteins. Advanced Science, 2018, 5, 1701036.	11.2	22
63	Clostridial C3 Toxins Target Monocytes/Macrophages and Modulate Their Functions. Frontiers in Immunology, 2015, 6, 339.	4.8	19
64	The C2-streptavidin delivery system promotes the uptake of biotinylated molecules in macrophages and T-leukemia cells. Biological Chemistry, 2010, 391, 1315-25.	2.5	17
65	Clostridium botulinum C2 toxin: binding studies with fluorescence-activated cytometry. Toxicon, 2002, 40, 1135-1140.	1.6	16
66	Streptavidin-Conjugated C3 Protein Mediates the Delivery of Mono-Biotinylated RNAse A into Macrophages. Bioconjugate Chemistry, 2012, 23, 1426-1436.	3.6	16
67	Thioredoxin reductase inhibitor auranofin prevents membrane transport of diphtheria toxin into the cytosol and protects human cells from intoxication. Toxicon, 2016, 116, 23-28.	1.6	16
68	The Antibiotic Bacitracin Protects Human Intestinal Epithelial Cells and Stem Cell-Derived Intestinal Organoids fromClostridium difficileToxin TcdB. Stem Cells International, 2019, 2019, 1-8.	2.5	16
69	Clostridium botulinum C2 Toxin Delays Entry into Mitosis and Activation of p34 ^{cdc2} Kinase and cdc25-C Phosphatase in HeLa cells. Infection and Immunity, 1999, 67, 5083-5090.	2.2	16
70	Toxins of Locus of Enterocyte Effacement-Negative Shiga Toxin-Producing Escherichia coli. Toxins, 2018, 10, 241.	3.4	15
71	Tailored Cyclodextrin Pore Blocker Protects Mammalian Cells from Clostridium difficile Binary Toxin CDT. Toxins, 2014, 6, 2097-2114.	3.4	14
72	Chloroquine derivatives block the translocation pores and inhibit cellular entry of Clostridium botulinum C2 toxin and Bacillus anthracis lethal toxin. Archives of Toxicology, 2017, 91, 1431-1445.	4.2	13

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73	Human Î±-Defensin-5 Efficiently Neutralizes Clostridioides difficile Toxins TcdA, TcdB, and CDT. Frontiers in Pharmacology, 2020, 11, 1204.	3.5	13
74	Pharmacological targeting of host chaperones protects from pertussis toxin in vitro and in vivo. Scientific Reports, 2021, 11, 5429.	3.3	13
75	C3 Rho-Inhibitor for Targeted Pharmacological Manipulation of Osteoclast-Like Cells. PLoS ONE, 2013, 8, e85695.	2.5	13
76	A Cell-Permeable Fusion Protein Based on Clostridium botulinum C2 Toxin for Delivery of p53 Tumorsuppressor into Cancer Cells. PLoS ONE, 2013, 8, e72455.	2.5	12
77	The cytotoxic effect of Clostridioides difficile pore-forming toxin CDTb. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183603.	2.6	12
78	Semicarbazone EGA Inhibits Uptake of Diphtheria Toxin into Human Cells and Protects Cells from Intoxication. Toxins, 2016, 8, 221.	3.4	11
79	Regulation of endoâ€lysosomal pathway and autophagic flux by broadâ€spectrum antipathogen inhibitor ABMA. FEBS Journal, 2020, 287, 3184-3199.	4.7	11
80	Internalization of biotinylated compounds into cancer cells is promoted by a molecular Trojan horse based upon core streptavidin and clostridial C2 toxin. Naunyn-Schmiedeberg's Archives of Pharmacology, 2011, 383, 263-273.	3.0	10
81	A Recombinant Fusion Toxin Based on Enzymatic Inactive C3bot1 Selectively Targets Macrophages. PLoS ONE, 2013, 8, e54517.	2.5	10
82	Chloroquine Analog Interaction with C2- and Iota-Toxin in Vitro and in Living Cells. Toxins, 2016, 8, 237.	3.4	10
83	Intoxication of mammalian cells with binary clostridial enterotoxins is inhibited by the combination of pharmacological chaperone inhibitors. Naunyn-Schmiedeberg's Archives of Pharmacology, 2021, 394, 941-954.	3.0	10
84	Characterization and Pharmacological Inhibition of the Pore-Forming Clostridioides difficile CDTb Toxin. Toxins, 2021, 13, 390.	3.4	10
85	High Conservation of Tetanus and Botulinum Neurotoxins Cleavage Sites on Human SNARE Proteins Suggests That These Pathogens Exerted Little or No Evolutionary Pressure on Humans. Toxins, 2017, 9, 404.	3.4	9
86	Human alpha-defensin-1 protects cells from intoxication with Clostridium perfringens iota toxin. Pathogens and Disease, 2018, 76, .	2.0	9
87	Combined Pharmacological Inhibition of Cyclophilins, FK506-Binding Proteins, Hsp90, and Hsp70 Protects Cells From Clostridium botulinum C2 Toxin. Frontiers in Pharmacology, 2018, 9, 1287.	3.5	9
88	Revisiting an old antibiotic: bacitracin neutralizes binary bacterial toxins and protects cells from intoxication. FASEB Journal, 2019, 33, 5755-5771.	0.5	9
89	Toxin Transport by A-B Type of Toxins in Eukaryotic Target Cells and Its Inhibition by Positively Charged Heterocyclic Molecules. Current Topics in Microbiology and Immunology, 2017, 406, 229-256.	1.1	8
90	Inhibition of Clostridioides difficile Toxins TcdA and TcdB by Ambroxol. Frontiers in Pharmacology, 2021, 12, 809595.	3.5	8

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91	EGA Protects Mammalian Cells from Clostridium difficile CDT, Clostridium perfringens Iota Toxin and Clostridium botulinum C2 Toxin. Toxins, 2016, 8, 101.	3.4	7
92	A Supramolecular Approach toward Bioinspired PAMAMâ€Dendronized Fusion Toxins. Macromolecular Bioscience, 2016, 16, 803-810.	4.1	7
93	New potential peptide therapeutics perturbing CK1Î´/Î±-tubulin interaction. Cancer Letters, 2016, 375, 375-383.	7.2	7
94	Croconaineâ€Based Polymer Particles as Contrast Agents for Photoacoustic Imaging. Macromolecular Rapid Communications, 2020, 41, e2000418.	3.9	7
95	Chaperones and ADP-Ribosylating Bacterial Toxins. , 2016, , 1-22.		7
96	Recombinant streptavidin-C3bot for delivery of proteins into macrophages. Toxicon, 2013, 75, 144-147.	1.6	6
97	Rho-inhibiting C2IN-C3 fusion toxin inhibits chemotactic recruitment of human monocytes ex vivo and in mice in vivo. Archives of Toxicology, 2018, 92, 323-336.	4.2	6
98	Clostridial C3 Toxins Enter and Intoxicate Human Dendritic Cells. Toxins, 2020, 12, 563.	3.4	6
99	Super-resolution microscopy unveils transmembraneÂdomain-mediated internalization of cross-reacting material 197 into diphtheria toxin-resistant mouse J774A.1 cells and primary rat fibroblasts in vitro. Archives of Toxicology, 2020, 94, 1753-1761.	4.2	6
100	Variants of Escherichia coli Subtilase Cytotoxin Subunits Show Differences in Complex Formation In Vitro. Toxins, 2019, 11, 703.	3.4	5
101	Bacillus anthracisâ€™ PA63 Delivers the Tumor Metastasis Suppressor Protein NDPK-A/NME1 into Breast Cancer Cells. International Journal of Molecular Sciences, 2020, 21, 3295.	4.1	5
102	Human Î±-Defensin-6 Neutralizes Clostridioides difficile Toxins TcdA and TcdB by Direct Binding. International Journal of Molecular Sciences, 2022, 23, 4509.	4.1	5
103	ADP-ribosylating toxins modifying the actin cytoskeleton. , 2015, , 397-425.		4
104	Primary resistance of human patients to botulinum neurotoxins A and B. Annals of Clinical and Translational Neurology, 2018, 5, 971-975.	3.7	4
105	Supramolecular Toxin Complexes for Targeted Pharmacological Modulation of Polymorphonuclear Leukocyte Functions. Advanced Healthcare Materials, 2019, 8, 1900665.	7.6	4
106	The Pore-Forming Subunit C2IIa of the Binary Clostridium botulinum C2 Toxin Reduces the Chemotactic Translocation of Human Polymorphonuclear Leukocytes. Frontiers in Pharmacology, 2022, 13, 810611.	3.5	4
107	Auranofin Inhibits the Enzyme Activity of Pasteurella multocida Toxin PMT in Human Cells and Protects Cells from Intoxication. Toxins, 2017, 9, 32.	3.4	3
108	An Introduction to the Toxins Special Issue on â€œNovel Pharmacological Inhibitors for Bacterial Protein Toxinsâ€• Toxins, 2017, 9, 160.	3.4	3

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109	Are Compounds Membrane-Associated or Present in the Cytosol? A Study Using Polyphenols in a Colon Carcinoma Cell Line Model. Current Pharmacology Reports, 2020, 6, 451-456.	3.0	3
110	The enzyme subunit SubA of Shiga toxin-producing E. coli strains demonstrates comparable intracellular transport and cytotoxic activity as the holotoxin SubAB in HeLa and HCT116 cells in vitro. Archives of Toxicology, 2021, 95, 975-983.	4.2	3
111	Human Peptides Î±-Defensin-1 and -5 Inhibit Pertussis Toxin. Toxins, 2021, 13, 480.	3.4	3
112	CRISPA: A Non-viral, Transient Cas9 Delivery System Based on Reengineered Anthrax Toxin. Frontiers in Pharmacology, 2021, 12, 770283.	3.5	3
113	Cytotoxic Effects of Recombinant StxA2-His in the Absence of Its Corresponding B-Subunit. Toxins, 2021, 13, 307.	3.4	2
114	COVID-19 pandemicâ€“related adaptations of medical education in clinical pharmacology â€” impact on students and lecturers at a German university. Naunyn-Schmiedeberg's Archives of Pharmacology, 2022, , 1.	3.0	2
115	Role of Peptidyl-Prolyl cis/trans Isomerases in Cellular Uptake of Bacterial Protein Toxins. Heat Shock Proteins, 2013, , 251-265.	0.2	1
116	Mitotic entry elucidated with bacterial toxin toolbox. Cell Cycle, 2014, 13, 2159-2159.	2.6	0
117	Clostridium perfringens Iota Toxin: A Successfully Shared Template for Common Enteric Pathogens. , 2016, , 1-20.		0
118	Chaperones and ADP-Ribosylating Bacterial Toxins. Toxinology, 2018, , 331-352.	0.2	0
119	Clostridium perfringens Iota Toxin: A Successfully Shared Template for Common Enteric Pathogens. Toxinology, 2018, , 73-92.	0.2	0
120	Novel Aspects of the SubA Subunit of the Subtilase Cytotoxin. Toxins, 2022, 14, 156.	3.4	0