Raimund J Ober

List of Publications by Citations

72 papers	4,620 citations	33 h-index	67 g-index
79 ext. papers	5,352 ext. citations	7.5 avg, IF	5.42 L-index

#	Paper	IF	Citations
72	Localization accuracy in single-molecule microscopy. *Biophysical Journal*, **2004**, 86, 1185-200	2.9	435
71	Differences in promiscuity for antibody-FcRn interactions across species: implications for therapeutic antibodies. *International Immunology*, **2001**, 13, 1551-9	4.9	387
70	Engineering the Fc region of immunoglobulin G to modulate in vivo antibody levels. *Nature Biotechnology*, **2005**, 23, 1283-8	44.5	265
69	The MHC class I-related receptor, FcRn, plays an essential role in the maternofetal transfer of gamma-globulin in humans. *International Immunology*, **2001**, 13, 993-1002	4.9	246
68	Visualizing the site and dynamics of IgG salvage by the MHC class I-related receptor, FcRn. *Journal of Immunology*, **2004**, 172, 2021-9	5.3	226
67	High accuracy 3D quantum dot tracking with multifocal plane microscopy for the study of fast intracellular dynamics in live cells. *Biophysical Journal*, **2008**, 95, 6025-43	2.9	207
66	Increasing the serum persistence of an IgG fragment by random mutagenesis. *Nature Biotechnology* , **1997**, 15, 637-40	44.5	202
65	Exocytosis of IgG as mediated by the receptor, FcRn: an analysis at the single-molecule level. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 11076-81	11.5	191
64	Beyond Rayleigh's criterion: a resolution measure with application to single-molecule microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 4457-62	11.5	180
63	Conditional deletion of the MHC class I-related receptor FcRn reveals the sites of IgG homeostasis in mice. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 2788-93	11.5	156
62	Evidence to support the cellular mechanism involved in serum IgG homeostasis in humans. *International Immunology*, **2003**, 15, 187-95	4.9	147
61	Elucidation of intracellular recycling pathways leading to exocytosis of the Fc receptor, FcRn, by using multifocal plane microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 5889-94	11.5	130
60	Simultaneous imaging of different focal planes in fluorescence microscopy for the study of cellular dynamics in three dimensions. *IEEE Transactions on Nanobioscience*, **2004**, 3, 237-42	3.4	130
59	Super-resolution fight club: assessment of 2D and 3D single-molecule localization microscopy software. *Nature Methods*, **2019**, 16, 387-395	21.6	123
58	Chapter 4: Multitasking by exploitation of intracellular transport functions the many faces of FcRn. *Advances in Immunology*, **2009**, 103, 77-115	5.6	122
57	Quantitative study of single molecule location estimation techniques. *Optics Express*, **2009**, 17, 23352-73	3.3	114
56	Divergent activities of an engineered antibody in murine and human systems have implications for therapeutic antibodies. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 18709-14	11.5	96

55	Neonatal Fc receptor antagonist efgartigimod safely and sustainably reduces IgGs in humans. *Journal of Clinical Investigation*, **2018**, 128, 4372-4386	15.9	86
54	Targeting the neonatal fc receptor for antigen delivery using engineered fc fragments. *Journal of Immunology*, **2008**, 181, 7550-61	5.3	76
53	Neonatal Fc receptor blockade by Fc engineering ameliorates arthritis in a murine model. *Journal of Immunology*, **2011**, 187, 1015-22	5.3	72
52	Fisher information theory for parameter estimation in single molecule microscopy: tutorial. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2016**, 33, B36-57	1.8	66
51	Analyses of the recycling receptor, FcRn, in live cells reveal novel pathways for lysosomal delivery. *Traffic*, **2009**, 10, 600-14	5.7	65
50	Targeting FcRn for the modulation of antibody dynamics. *Molecular Immunology*, **2015**, 67, 131-41	4.3	61
49	Conferring the binding properties of the mouse MHC class I-related receptor, FcRn, onto the human ortholog by sequential rounds of site-directed mutagenesis. *Journal of Molecular Biology*, **2005**, 345, 1071-81	6.5	58
48	Generation of mutated variants of the human form of the MHC class I-related receptor, FcRn, with increased affinity for mouse immunoglobulin G. *Journal of Molecular Biology*, **2003**, 332, 901-13	6.5	55
47	3D single molecule tracking with multifocal plane microscopy reveals rapid intercellular transferrin transport at epithelial cell barriers. *Biophysical Journal*, **2012**, 103, 1594-603	2.9	54
46	Improved single particle localization accuracy with dual objective multifocal plane microscopy. *Optics Express*, **2009**, 17, 6881-98	3.3	48
45	A Stochastic Analysis of Performance Limits for Optical Microscopes. *Multidimensional Systems and Signal Processing*, **2006**, 17, 27-57	1.8	48
44	Targeting FcRn to Generate Antibody-Based Therapeutics. *Trends in Pharmacological Sciences*, **2018**, 39, 892-904	13.2	42
43	Macrophage-Mediated Trogocytosis Leads to Death of Antibody-Opsonized Tumor Cells. *Molecular Cancer Therapeutics*, **2016**, 15, 1879-89	6.1	40
42	Autoantibody depletion ameliorates disease in murine experimental autoimmune encephalomyelitis. *MAbs*, **2013**, 5, 655-9	6.6	38
41	The effect of pH dependence of antibody-antigen interactions on subcellular trafficking dynamics. *MAbs*, **2013**, 5, 851-9	6.6	38
40	Engineering a HER2-specific antibody-drug conjugate to increase lysosomal delivery and therapeutic efficacy. *Nature Biotechnology*, **2019**, 37, 523-526	44.5	35
39	The level of HER2 expression is a predictor of antibody-HER2 trafficking behavior in cancer cells. *MAbs*, **2014**, 6, 1211-9	6.6	29
38	Loss of expression of the recycling receptor, FcRn, promotes tumor cell growth by increasing albumin consumption. *Oncotarget*, **2017**, 8, 3528-3541	3.3	29

37	Using multifocal plane microscopy to reveal novel trafficking processes in the recycling pathway. *Journal of Cell Science*, **2013**, 126, 1176-88	5.3	28
36	Limit of the Accuracy of Parameter Estimation for Moving Single Molecules Imaged by Fluorescence Microscopy. *IEEE Transactions on Signal Processing*, **2011**, 59, 895-911	4.8	25
35	Engineering multivalent antibodies to target heregulin-induced HER3 signaling in breast cancer cells. *MAbs*, **2014**, 6, 340-53	6.6	22
34	Antibody targeting of HER2/HER3 signaling overcomes heregulin-induced resistance to PI3K inhibition in prostate cancer. *International Journal of Cancer*, **2015**, 137, 267-77	7.5	21
33	Neonatal Fc receptor expression in macrophages is indispensable for IgG homeostasis. *MAbs*, **2019**, 11, 848-860	6.6	20
32	Use of Fc-Engineered Antibodies as Clearing Agents to Increase Contrast During PET. *Journal of Nuclear Medicine*, **2014**, 55, 1204-7	8.9	20
31	Engineered clearing agents for the selective depletion of antigen-specific antibodies. *Nature Communications*, **2017**, 8, 15314	17.4	16
30	Myelin oligodendrocyte glycoprotein-specific antibodies from multiple sclerosis patients exacerbate disease in a humanized mouse model. *Journal of Autoimmunity*, **2018**, 86, 104-115	15.5	15
29	A software framework for the analysis of complex microscopy image data. *IEEE Transactions on Information Technology in Biomedicine*, **2010**, 14, 1075-87		15
28	Compensation for loss of ligand activity in surface plasmon resonance experiments. *Analytical Biochemistry*, **2002**, 306, 228-36	3.1	15
27	A stochastic analysis of distance estimation approaches in single molecule microscopy - quantifying the resolution limits of photon-limited imaging systems. *Multidimensional Systems and Signal Processing*, **2013**, 24, 503-542	1.8	14
26	Analysis of exponential data using a noniterative technique: application to surface plasmon experiments. *Analytical Biochemistry*, **2003**, 312, 57-65	3.1	13
25	Achievable accuracy of parameter estimation for multidimensional NMR experiments. *Journal of Magnetic Resonance*, **2002**, 157, 1-16	3	11
24	Resolution limit of image analysis algorithms. *Nature Communications*, **2019**, 10, 793	17.4	10
23	Phagocytosis of antibody-opsonized tumor cells leads to the formation of a discrete vacuolar compartment in macrophages. *Traffic*, **2018**, 19, 273-284	5.7	8
22	Targeting Phosphatidylserine with Calcium-Dependent Protein-Drug Conjugates for the Treatment of Cancer. *Molecular Cancer Therapeutics*, **2018**, 17, 169-182	6.1	7
21	Targeting FcRn for therapy: from live cell imaging to in vivo studies in mice. *Immunology Letters*, **2014**, 160, 158-62	4.1	7
20	State Space Realization of a Three-dimensional Image Set with Application to Noise Reduction of Fluorescent Microscopy Images of Cells. *Multidimensional Systems and Signal Processing*, **2005**, 16, 7-47	1.8	7

19	Selective Depletion of Antigen-Specific Antibodies for the Treatment of Demyelinating Disease. *Molecular Therapy*, **2021**, 29, 1312-1323	11.7	7
18	State space approach to single molecule localization in fluorescence microscopy. *Biomedical Optics Express*, **2017**, 8, 1332-1355	3.5	5
17	Commentary: "There's been a Flaw in Our Thinking". *Frontiers in Immunology*, **2015**, 6, 351	8.4	5
16	A two-stage method for automated detection of ring-like endosomes in fluorescent microscopy images. *PLoS ONE*, **2019**, 14, e0218931	3.7	4
15	Two approximations for the geometric model of signal amplification in an electron-multiplying charge-coupled device detector. *Proceedings of SPIE*, **2013**, 8589, 858905	1.7	4
14	Localization accuracy in single molecule microscopy using electron-multiplying charge-coupled device cameras. *Proceedings of SPIE*, **2012**, 8227,	1.7	4
13	Antigen dynamics govern the induction of CD4(+) T cell tolerance during autoimmunity. *Journal of Autoimmunity*, **2016**, 72, 84-94	15.5	4
12	Hepatic function of FcRn revealed: Implications for overcoming drug-mediated hepatotoxicity. *Hepatology*, **2017**, 66, 2083-2085	11.2	3
11	Shooting for the moon: using tissue-mimetic hydrogels to gain new insight on cancer biology and screen therapeutics. *MRS Communications*, **2017**, 7, 427-441	2.7	2
10	Influence of Prior Knowledge on the Accuracy Limit of Parameter Estimation in Single-Molecule Fluorescence Microscopy **2013**, 2013, 1304-1307		2
9	3D single molecule tracking and superresolution microscopy using multifocal plane microscopy **2012**, 2012, 914-915	1.5	2
8	A state space based approach to localizing single molecules from multi-emitter images. *Proceedings of SPIE*, **2017**, 10070,	1.7	1
7	Automatic Endosomal Structure Detection And Localization in Fluorescence Microscopic Images **2017**, 2017,		1
6	Fluorescent Microspheres as Point Sources: A Localization Study. *PLoS ONE*, **2015**, 10, e0134112	3.7	1
5	Comparison of estimation algorithms in single-molecule localization. *Proceedings of SPIE*, **2010**, 7570, 757004	1.7	1
4	Effect of Pixelation on the Parameter Estimation of Single Molecule Trajectories. *IEEE Transactions on Computational Imaging*, **2021**, 7, 98-113	4.5	1
3	Selective depletion of radiolabeled HER2-specific antibody for contrast improvement during PET. *MAbs*, **2021**, 13, 1976705	6.6	0
2	Limit of the Accuracy of Parameter Estimation for Two Molecules Moving in Close Proximity **2015**, 2015, 441-444		

1 The Diverse Roles of FcRn: Implications for Antibody Engineering **2012**, 207-222