

List of Publications/Books/Patents

Publications 1997 - 2017

- “False Sugar Sequence Ions in Electrospray Tandem Mass Spectrometry of Underivatized Sialyl-Lewis Type Oligosaccharides”
B. Ernst, D. Müller, W. J. Richter, *Int. J. Mass Spectrom. Ion Processes*, **1997**, *160*, 283.
- “Investigation of the Chemo- and Stereoselectivity of the Ketene-Claisen Rearrangement”
B. Ernst, J. Gonda, R. Jeschke, U. Nubbemeyer, R. Öhrlein, D. Bellus, *Helv. Chim. Acta* **1997**, *80*, 876.
- “Development of Tools for the Design of Selectin Antagonists”
H. C. Kolb, B. Ernst, *Chem. Eur. J.* **1997**, *3*, 1571.
- “Application of Homonuclear 3D and Pseudo-3D NMR Experiments to Elucidate Fine Details in 2D-trNOESY Spectra of Sialyl Lewis^x Bound to E-Selectin”
K. Scheffler, J.-R. Brisson, R. Weisemann, J.L. Magnani, W.-T. Wang, B. Ernst, T. Peters, *J. Biomol. NMR* **1997**, *9*, 423.
- “Synthesis of Sialyl Lewis^x Mimics: Replacement of Galactose by Aromatic Spacers”
R. Bänteli, B. Ernst, *Tetrahedron Lett.* **1997**, *38*, 4059.
- “Enzymatic Large-Scale Production of 2-Keto-3-deoxy-D-glycero-D-galactooctopyranulosonic acid (KDN) in Enzyme Membrane Reactors”
C. Salagnad, A. Gödde, B. Ernst, U. Kragl, *Biotech. Prog.* **1997**, *13*, 810.
- “Synthesis of Oligosaccharide-Polylysine Conjugates: A Well Characterized Sialyl Lewis^a Polymer for ELISA”
G. Thoma, J.L. Magnani, R. Öhrlein, B. Ernst, F. Schwarzenbach, R.O. Duthaler, *J. Am. Chem. Soc.* **1997**, *119*, 7414.
- “Recent Progresses in the Glycodrug Area”
H.C. Kolb, B. Ernst, *Pure Appl. Chem.* **1997**, *69*, 1879.
- “Comparison of the Bioactive Conformations of Sialyl Lewis^x and a Potent Sialyl Lewis^x Mimic”
W. Jahnke, H. C. Kolb, M.J.J. Blommers, J.L. Magnani, B. Ernst, *Angew. Chem. Int. Ed. Engl.*, **1997**, *36*, 2603.
- “Design and Synthesis of Sialyl Le^x Mimetics based on Carbocyclic Scaffolds Derived from (-)Quinic Acid”
S. Hanessian, G.V. Reddy, H.K. Huynh, J. Pan, S. Pedatella, H. Kolb, B. Ernst, *Bioorg. Med. Chem. Lett.*, **1997**, *7*, 2729.
- “Synthesis of Sialyl Lewis^x Mimics: Replacement of Galactose by Aromatic Spacers”
R. Bänteli, B. Ernst. *Tetrahedron Lett.*, **1997**, *38*, 4059.
- “Synthesis and characterization of polyaspartic acid-carbohydrate conjugates: multivalent sialyl Lewis^x”
G. Thoma, B. Ernst, F. Schwarzenbach, R.O. Duthaler, *Bioorg. Med. Cem. Lett.* **1997**, *7*, 1705-1708.
- “Sialyl Lewis^x and the sLe^x Mimic CGP69669A Disrupt E-Selectin Dependent Leukocyte Rolling *in Vivo*”
K.E. Norman, G.P. Anderson, H.C. Kolb, K. Ley, B. Ernst, *Blood*, **1998**, *91*, 475.

- “Synthesis of Benzylated (*R*)- and (*S*)-Aminoethyl-C- α -D-Mannosides as Conformationally Restricted Building Blocks for the Preparation of E- and P-Selectin Antagonists”
D. Roche, R. Banteli, T. Winkler, F. Casset, B. Ernst, *Tetrahedron Lett.*, **1998**, *39*, 2545.
- “Exploration of β -Turn Scaffolding Motifs as Components of Sialyl Lewis^x Mimetics and their Relevance to P-Selectin”
S. Hanessian, H.K. Huynh, G.V. Reddy, G. McNaughton-Smith, B. Ernst, H. Kolb, J. Magnani, C. Sweeley, *Bioorg. Med. Chem. Lett.* **1998**, *8*, 2803.
- “Synthesis of Sialyl Lewis^x Mimetics Using the Ugi Four-Component Reaction”
C.-Y. Tsai, W.K.C. Park, G. Weitz-Schmidt, B. Ernst, C.-H. Wong, *Bioorg. Med. Chem. Lett.* **1998**, *8*, 2333.
- Oviposition Stimulants for the Cabbage Root Fly: Isolation from Cabbage Leaves”
J. Hurter, T. Ramp, B. Patrian, E. Städler, P. Roessingh, R. Baur, R. de Jong, J.N. Nielsen, T. Winkler, W.J. Richter, D. Müller, B. Ernst, *Phytochemistry* **1999**, *51*, 377.
- “Bio-Affinitäts NMR-Identifizierung eines E-Selectin-Antagonisten in einem Substanzgemisch durch Transfer-NOE”
D. Henrichsen, B. Ernst, J.L. Magnani, W.-T. Wang, B. Meyer, T. Peters, *Angew. Chem. Int. Ed. Engl.*, **1999**, *38*, 98-102.
- “Stable-Isotope-Assisted NMR Studies on ¹³C-Enriched Sialyl Lewis^x in Solution and Bound to E-Selectin”
R. Harris, G.R. Kiddle, R.A. Field, M.J. Milton, B. Ernst, J. Magnani, S. Homans, *J. Am. Chem. Soc.*, **1999**, *121*, 2546-2551.
- “Substrate and Donor Specificity of Glycosyl Transferases”
B. Ernst, R. Öhrlein, *Glycoconj. J.* **1999**, *16*, 161.
- “Versatile Functionalization of Polylysine: Synthesis, Characterization, and Use of Neoglycoconjugates”
G. Thoma, J.T. Patton, J.L. Magnani, B. Ernst, R. Öhrlein, R.O. Duthaler, *J. Am. Chem. Soc.* **1999**, *121*, 5919-5929.
- “Substrate Specificity of Fucosyl Transferase III: An Efficient Synthesis of Sialyl Lewis^x-, Sialyl Lewis^a-derivatives and Mimetics thereof”
B. Ernst, B. Wagner, G. Baisch, A. Katopodis, T. Winkler, R. Öhrlein, *Can. J. Chem.*, **2000**, *78*, 892.
- “NMR Binding Studies on the Interactions of sLe^x and sLe^a with E- and P-Selectin”
T. Biet, M. Vogtherr, M. Rinnbauer, G. Thoma, A. Katopodis, R. Öhrlein, B. Ernst, J.L. Magnani, T. Peters, Proceedings of the 15th European Experimental NMR Conference **2000**.
- “Design and Synthesis of E-Selectin Antagonists”
B. Ernst, Z. Dragic, S. Marti, C. Müller, B. Wagner, W. Jahnke, J.L. Magnani, K.E. Norman, R. Öhrlein, T. Peters, H.C. Kolb, *Chimia* **2001**, *55*, 268.
- “Synthesis of Sialyl Lewis^x Mimetics. 2. Modification of the 6-Position of Galactose”
R. Banteli, B. Ernst, *Bioorg. Med. Chem. Lett.* **2001**, *11*, 459.
- “Solid-phase Synthesis of Hydroxyproline-based Cyclic Hexapeptides”
Andrea Basso, B. Ernst, *Tetrahedron Lett.* **2001**, *42*, 6687.
- “Entropic Contributions to Ligand Binding: Pre-Organization of the Bioactive Conformation in Sialyl Lewis^x Analogs Correlates with their Affinity to E-Selectin”
G. Thoma, J.L. Magnani, J.T. Patton, W. Jahnke, B. Ernst, *Angew. Chem. Int. Ed.* **2001**, *40*, 1941.

- “1,2-Asymmetric Induction in the Ketene Claisen Rearrangement of (2S,3E)-5-(isopropylsulfanyl)-3-pentenes”
J. Gonda, M. Martinkova, B. Ernst, D. Bellus, *Tetrahedron* **2001**, *57*, 5607.
- ”New Trends of NMR in Drug Discovery”
O. Schwardt, H.C. Kolb, B. Ernst, *Curr. Top. Med. Chem.* **2002**, *2*, 1269-1277.
- “Self-Assessment in naturwissenschaftlichen Disziplinen”
S. Lichtsteiner, B. Ernst, T. Gyalog, M. Guggisberg, H.-J. Güntherodt, S. Rizzotti, H. Burkhart in *Campus 2002*, Vol. 18, G. Bachmann; Ed., Waxmann Verlag GmbH, Münster **2002**.
- “Towards a Virtual Education in Pharmaceutical Sciences”
V.V. Tran, S. Lichtsteiner, B. Ernst, M. Otto, G. Folkers in *Telemedicine and Teledermatology*, B. Burg; Ed., Karger Verlag, Basel **2002**.
- “Epitope Mapping of Sialyl Lewis^x Bound to E-Selectin using Saturation Transfer Difference NMR-Experiments”
M. Rinnbauer, B. Ernst, B. Wagner, J. Magnani, A.J. Benie, T. Peters, *Glycobiology* **2003**, *13*, 435-443.
- “Catalytic Glycosylation with Rhodium(III)-Triphos Catalysts”
B. Wagner, M. Heneghan, G. Schnabel, B. Ernst, *Synlett* **2003**, *9*, 1303.
- “Pharmasquare (pharma²)”
S. Lichtsteiner, S. Rizzotti, C. Weber, A. Vögli, H. Burkhart, R. Neier, V.V. Khov-Tran, G. Folkers, B. Ernst, *Chimia* **2003**, *57*, 116.
- “The Swiss virtual campus”
Cornelia Rizek-Pfister, Beat Ernst, *Chimia* **2003**, *57*, 93.
- “Towards a virtual education in pharmaceutical sciences”
Tran Van Van, Salome Lichtsteiner, Beat Ernst, Mark Otto, Gerd Folkers, *Current Problems in Dermatology* **2003**, *32*, 43-51.
- ” Drug Discovery Today”
O. Schwardt, H.C. Kolb, B. Ernst, *Curr. Top. Med. Chem.* **2003**, *3*, 1-9.
- “Substrate Specificity and Preparative Use of Recombinant Rat ST3Gal III”
O. Schwardt, G.-P. Gao, T. Visekruna, S. Rabbani, E. Gassmann, B. Ernst, *J. Carbohydr. Chem.* **2004**, *23*, 1-28.
- “Saturation Transfer Difference NMR Spectroscopy for Identifying Ligand Epitopes and Binding Specificities”
B. Meyer, J. Klein, M. Mayer, R. Meinecke, H. Moller, A. Neffe, O. Schuster, J. Wulfken, Y. Ding, O. Kanie, J. Labbe, M.M. Palcic, O. Hindsgaul, B. Wagner, B. Ernst, *Schering Res. Foundation Workshop* **2004**, *44*, 149-167.
- “Drug Discovery Today”
O. Schwardt, H. Kolb, B. Ernst, *Frontiers in Med. Chem.* **2004**, *4*, 1-11.
- “Chemo-enzymatic Synthesis of Antagonists of the Myelin-associated Glycoprotein (MAG)”
G. Gao, O. Schwardt, T. Visekruna, S. Rabbani, B. Ernst, *Chimia* **2004**, *58*, 215-218.
- “Synthesis of Aryl Sialosides Using Mitsunobu Conditions”
G. Gao, O. Schwardt, B. Ernst, *Carbohydr. Res.* **2004**, *339*, 2835-2840.
- “Drug Discovery Today”
O. Schwardt, B. Cutting, H. Kolb, B. Ernst, *Frontiers in Med. Chem.* **2005**, *2*, 533-543.
- “Carbohydrate mimics in drug discovery”

- O. Schwardt, H.C. Kolb, B. Ernst in *The Organic Chemistry of Sugars*, P. Fügedi, D.E. Levy; Eds., Marcel Dekker, New York, **2005**.
- “Systemic administration of a TLR7 ligand leads to transient immune incompetence due to peripheral leukocyte depletion”
M. Gunzer, H. Riemann, Y. Basoglu, A. Hillmer, C. Weishaupt, B. Benninghoff, B. Ernst, M. Steinert, T. Scholzen, C. Sunderkötter, S. Grabbe, *Blood* **2005**, *106*, 2424.
 - “Impact of induced fit on ligand binding to the androgen receptor: A multidimensional QSAR study to predict endocrine-disrupting effects of environmental chemicals”
Markus A. Lill, Fabienne Winiger, Angelo Vedani, B. Ernst, *J. Med. Chem.* **2005**, *48*, 5666.
 - “Comparative Epitope Mapping with STD NMR of sialyl Lewis^a Compounds and derivatives bound to a monoclonal antibody”
L. Herfurth, B. Ernst, R. Öhrlein, B. Wagner, J.L. Magnani, A.J. Benie, T. Peters, *J. Med. Chem.* **2005**, *48*, 6879-6886.
 - “PCR-Cloning, Expression and Characterization of a Novel *Helicobacter pylori* α -1,4 Fucosyltransferase”
S. Rabbani, V. Miksa, B. Wipf, B. Ernst, *Glycobiology* **2005**, *15*, 1076.
 - “Synthetic Potential of FucT III for the Synthesis of Fluorescent-labeled Milk Oligosaccharides”
S. Rabbani, F. Compostella, L. Franchini, B. Wagner, L. Panza, B. Ernst, *J. Carbohydr. Chem.* **2005**, *24*, 789.
 - “Glycosyltransferases: An Efficient Tool for the Enzymatic Synthesis of Oligosaccharides and Derivatives as well as Mimetics Thereof”
S. Rabbani, O. Schwardt, B. Ernst, *Chimia* **2006**, *60*, 23.
 - “A safe and convenient method for the preparation of triflyl azide, and its use in diazo transfer reactions to primary amines”
A. Titz, Z. Radic, O. Schwardt, B. Ernst, *Tetrahedron Lett.* **2006**, *47*, 2383.
 - “Bacterial sialyltransferases for carbohydrate synthesis”
O. Schwardt, Tamara Visekruna, S. Rabbani, B. Ernst, *Chimia* **2006**, *60*, 234-240.
 - “A Thorough Training in Modern Drug Design”
A. Vedani, O. Schwardt, S. Rabbani, B. Ernst, *Chimia* **2006**, *60*, 70-75.
 - “Antagonists of the Myelin-associated Glycoprotein: a New Class of Tetrasaccharide Mimics”
Daniel Schwizer, Heiko Gäthje, Soerge Kelm, Michele Porro, Oliver Schwardt, Beat Ernst, *Bioorg. Med. Chem.* **2006**, *14*, 4944-4957.
 - “Cloning, Expression and Preparative Application of a Mutated, Bifunctional α (2-3/8)-Sialyltransferase from *Camphylobacter jejuni*”
O. Schwardt, T. Visekruna, G. Zenhäusern, S. Rabbani, B. Ernst, *J. Carbohydr. Chem.* **2006**, *25*, 543-556.
 - “Preface”
Alex N. Eberle, Helma Wennemers, Oliver Naylor, Beat Ernst, Gerd Folkers, Vladimir Pliska, Ernst Burgisser, *J. Receptor Signaling Transduction* **2006**, *26*, 359-360.
 - “Simulating α/β -Selectivity at the Human Thyroid Hormone Receptor: Consensus Scoring Using Multidimensional QSAR”
A. Vedani, M. Zumstein, M.A. Lill, B. Ernst, *ChemMedChem* **2007**, *2*, 78-87.
 - “Mimetics of Sialyl Lewis^x: The Pre-organization of the Carboxylic Acid is Essential for Binding to Selectins”
A. Titz, B. Ernst, *Chimia* **2007**, *61*, 194-197.

- “Sensitivity Enhancement in Saturation Transfer Difference Experiments Through Optimized Excitation Schemes”
B. Cutting, S.V. Shelke, Z. Dragic, B. Wagner, H. Gathje, S. Kelm, B. Ernst, *Magnetic Resonance in Chemistry* **2007**, *45*, 720-724.
- “Simulating α/β Selectivity at the Human Thyroid Hormone Receptor: Consensus Scoring Using Multidimensional QSAR”
A. Vedani, M. Zumstein, M.A. Lill, B. Ernst, *ChemMedChem* **2007**, *2*, 78-87.
- “Synthesis of sialic acid derivatives as ligands for the myelin-associated glycoprotein (MAG)”
S.V. Shelke, G.-P. Gao, S. Mesch, H. G athje, S. Kelm, O. Schwardt, B. Ernst, *Bioorg. Med. Chem.* **2007**, *15*, 4951-4965.
- “Predicting the toxic potential of drugs and chemicals *in silico*: A model for the peroxisome proliferators-activated receptor γ (PPAR γ)”
A. Vedani, A.-V. Descloux, M. Spreafico, B. Ernst, *Toxicology Lett.* **2007**, *173*, 17-23.
- “Extraction and analysis of intact glucosinolates”
T. Mohn, B. Cutting, B. Ernst, M. Hamburger, *J. Chromatography A* **2007**, *1166*, 142-151.
- “Mimetics of the Tri- and Tetrasaccharide Epitope of GQ1b α as Myelin-associated Glycoprotein Ligands”
G.-P. Gao, M. Smiesko, O. Schwardt, H. G athje, S. Kelm, A. Vedani, B. Ernst, *Bioorg. Med. Chem.* **2007**, *15*, 7459-7469.
- “Peripheral lipopolysaccharide administration transiently affects expression of brain-derived neurotrophic factors, corticotropin and proopiomelanocortin in mouse brain”
S. Schnydrig, L. Korner, S. Landweer, B. Ernst, G. Walker, U. Otten, D. Kunz, *Neuroscience Lett.* **2007**, *429*, 69-72.
- “Is adamantane a suitable substituent to pre-organize the acid orientation in E-selectin antagonists?”
A. Titz, J. Patton, A.M. Alker, M. Porro, O. Schwardt, M. Hennig, E. Francotte, J. Magnani, B. Ernst, *Bioorg. Med. Chem.* **2008**, *16*, 1046.
- “Fluorescent Trivalent Gal/GalNAc-containing Ligands Designed for the Asialoglycoprotein Receptor”
O. Khorev, D. Stokmaier, O. Schwardt, B. Cutting, B. Ernst, *Bioorg. Med. Chem.* **2008**, *16*, 5216-5231.
- “New sialyl Lewis x mimic containing an α -substituted β 3-amino acid spacer”
S. Pedatella, M. De Nisco, B. Ernst, A. Guaragna, B. Wagner, R.J. Woods, G. Palumbo, *Carbohydr. Res.* **2008**, *343*, 31-38.
- “Consistent Bioactive Conformation of the Neu5Ac α (2 \rightarrow 3)Gal Epitope Upon Lectin Binding”
A. Bhunia, O. Schwardt, H. G athje, G.-P. Gao, S. Kelm, A.J. Benie, M. Hricovini, T. Peters, B. Ernst, *ChemBioChem* **2008**, *9*, 2941-2945.
- “Analysis of Binding of Gangliosides to Myelin-associated glycoprotein by Saturation Transfer Difference NMR”
S.-Y. Shin, H. G athje, O. Schwardt, G.-P. Gao, B. Ernst, S. Kelm, B. Meyer, *ChemBioChem* **2008**, *9*, 2946-2949.
- “A Consensus model for the Glucocorticoid Receptor by Means of Flexible Docking and mQSAR”
M. Spreafico, B. Ernst, M. Smiesko, M.A. Lill, A. Vedani, *ChemMedChem* **2009**, *4*, 100-109.
- “Examination of the biological role of the α (2-6)-linked sialic acid in gangliosides binding to the myelin-associated glycoprotein (MAG)”

- O. Schwardt, H. Gächje, G.-P. Gao, S. Mesch, J. von Orelli, M. Spreafico, A. Vedani, S. Kelm, B. Ernst, *J. Med. Chem.* **2009**, *52*, 989-1004; highlighted in C&EN Febr. 23, 2009, p50.
- “Oligohis-tags: mechanisms of binding to Ni²⁺-NTA surfaces”
S. Knecht, D. Ricklin, A.N. Eberle, B. Ernst, *J. Mol. Recognit.* **2009**, *22*, 270-279.
 - “Biochemical Characterization of *Helicobacter pylori* α -1-4 Fucosyltransferase: Metal Ion Requirement, Donor Substrate Specificity and Organic Solvent Stability”
S. Rabbani, F. Corona, B. Ernst, *Biomaterials* **2009**, *22*, 1011-1017.
 - “Mixed-model QSAR at the human mineralocorticoid receptor: Predicting binding mode and affinity of anabolic steroids”
Ourania Peristera, Morena Spreafico, Martin Smiesko, Beat Ernst and Angelo Vedani, *Tox. Lett.* **2009**, *189*, 219-224.
 - “Interpretation of ¹³C-NMR spectra by artificial neural network techniques (*NeuroCarb*)”
A. Stoeckli, M. Studer, B. Cutting, B. Ernst, in *Bioinformatics for Glycobiology and Glycomics*, Willi von der Lieth, Thomas Luetke, Martin Frank; Eds., John Wiley & Sons Ltd. **2009**.
 - “From Carbohydrate Leads to Drugs”
B. Ernst, J.L. Magnani, *Nat. Rev. Drug Discov.* **2009**, *8*, 661-677.
 - “The intrinsic conformation of a Lewis antigen: The Lewis^x trisaccharide”
Z. Su, B. Wagner, E.J. Cocinero, B. Ernst, J. Simons, *Chem. Phys. Lett.* **2009**, *477*, 365-368.
 - “Design, synthesis and evaluation of monovalent ligands for the asialoglycoprotein receptor (ASGP-R)”
D. Stokmaier, O. Khorev, F. Böni, M. Gentner, B. Cutting, R. Born, K. Schwingruber, T.O.G. Ernst, M. Wittwer, D. Ricklin, M. Spreafico, A. Vedani, S. Rabbani, O. Schwardt, B. Ernst, *Bioorg. Med. Chem.* **2009**, *17*, 7254-7264.
 - “Glycomimetic Drugs - A New Source of Therapeutic Opportunities”
J. L. Magnani, B. Ernst, *Discovery Medicine* **2009**, *8*, 247-252.
 - „Platelet-active substances in the venom of *Bothrops moojeni* snake – a novel evaluation method using whole blood aggregometry“
C. Demler, B. Bühler, L. Menin, R. Stöcklin, M. Wilmer, B. Ernst and A.M. Perchuc, *Platelets*, **2010**, *21*, 20-28.
 - “Probing the Carbohydrate Recognition Domain of E-Selectin: The Importance of the Acid Orientation in sLe^x Mimetics“
A. Titz, J. Patton, M. Smiesko, Z. Radic, O. Schwardt, J.L. Magnani, B. Ernst, *Bioorg. Med. Chem.* **2010**, *18*, 19-27.
 - “Isolation and characterization of two new Lys49 PLA₂s with heparin neutralizing properties from *Bothrops moojeni* snake venom”
A.M. Perchuc, L. Menin, P. Favreau, B. Bühler, P. Bulet, R. Schöni, M. Wilmer, B. Ernst, R. Stöcklin, *Toxicon*, **2010**, *55*, 1080-1092.
 - “Low Molecular Weight Antagonists of the Myelin-associated Glycoprotein: Synthesis, Docking and Biological Evaluation”
S. Mesch, D. Moser, D. Strasser, A. Kelm, B. Cutting, G. Rossato, A. Vedani, H. Koliwer-Brandl, M. Wittwer, S. Rabbani, O. Schwardt, S. Kelm, B. Ernst, *J. Med. Chem.* **2010**, *53*, 1597-1615.
 - “GMI-1070, a novel pan-selectin antagonist, reverses acute vascular occlusions in sickle cell mice”
J. Chang, J.T. Patton, A. Sarkar, B. Ernst, J.L. Magnani, P.S. Frenette, *Blood* **2010**, *116*, 1779-1786.

- “*In vivo* Neutralization of naturally Existing Antibodies against Linear (1,3)-Galactosidic Carbohydrate Epitopes by Multivalent Antigen Presentation: A Solution for the First Hurdle of Pig-to-Human Xenotransplantation”
R.O. Duthaler, B. Ernst, R. Fischer, A.G. Katopodis, W. Kinzy, W. Marterer, R. Oehrlein, M.B. Streiff, Gebhard Thoma, *Chimia* **2010**, 64, 23-28.
- “From the ganglioside GQ1b α to glycomimetic antagonists of the myelin-associated glycoprotein (MAG)”
B. Ernst, O. Schwaradt, S. Mesch, M. Wittwer, G. Rossato, A. Vedani, *Chimia* **2010**, 64, 17-22.
- “Kinetic and thermodynamic properties of MAG antagonists”
S. Mesch, K. Lemme, H. Koliwer-Brandl, D.S. Strasser, O. Schwaradt, S. Kelm, B. Ernst, *Carbohydr. Res.* **2010**, 345, 1348-1359.
- “A Fragment-Based In Situ Combinatorial Approach To Identify High-Affinity Ligands for Unknown Binding Sites”
Sachin V. Shelke, Brian Cutting, Xiaohua Jiang, Hendrik Koliwer-Brandl, Daniel S. Strasser, Oliver Schwaradt, Soerge Kelm, and Beat Ernst, *Angew. Chem. Int. Ed.* **2010**, 49, 5721-5725; highlighted in C&EN Aug. 9, 2010, p30.
- “Expression of the Carbohydrate Recognition Domain of FimH and Development of a Competitive Binding Assay”
Said Rabbani, Xiaohua Jiang, Oliver Schwaradt and Beat Ernst. *Anal. Biochem.* **2010**, 407, 188-195.
- “Development of an Aggregation Assay to Screen FimH Antagonists”
Daniela Abgottspon, Gina Rölli, Lucie Hosch, Andrea Steinhuber, Xiaohua Jiang, Oliver Schwaradt, Brian Cutting, Martin Smiesko, Urs Jenal, Beat Ernst, Andrej Trampuz, *J. Microbiol. Meth.* **2010**, 82, 249-255.
- “Probing small-molecule binding to Cytochrome P450 2D6 and 2C9: an *in silico* protocol for generating toxicity alerts”
Gianluca Rossato, Beat Ernst, Martin Smiesko, Morena Spreafico and Angelo Vedani, *ChemMedChem* **2010**, 5, 2088-2101.
- “Channels and transporters”
R. Dutzler, B. Ernst, M.A. Hediger, D. Keppler, P. Mohr, W. Neidhart, H.P. Märki, *Chimia* **2010**, 64, 662-668.
- “Design, synthesis, biological evaluation and modeling of a non-carbohydrate antagonist of the myelin-associated glycoprotein”
Oliver Schwaradt, Hendrik Koliwer-Brandl, Raphael Zimmerli, Stefanie Mesch, Gianluca Rossato, Morena Spreafico, Angelo Vedani, Soerge Kelm, Beat Ernst, *Bioorg. Med. Chem.* **2010**, 18, 7239-7251.
- “FimH Antagonists for the Oral Treatment of Urinary Tract Infections: From Design and Synthesis to *In Vitro* and *In Vivo* Evaluation”
Tobias Klein, Daniela Abgottspon, Matthias Wittwer, Said Rabbani, Janno Herold, Xiaohua Jiang, Simon Kleeb, Christine Lüthi, Meike Scharenberg, Jacqueline Bezençon, Erich Gubler, Lijuan Pang, Martin Smiesko, Brian Cutting, Oliver Schwaradt, Beat Ernst, *J. Med. Chem.* **2010**, 53, 8627-8641.
- “A Flow Cytometry-based Assay for Screening FimH Antagonists”
Meike Scharenberg, Daniela Abgottspon, Evelin Cicek, Xiaohua Jiang, Oliver Schwaradt, Said Rabbani, Beat Ernst, *Assays Drug Dev. Technol.* **2011**, 9, 455-464.
- “Epitope structure of the carbohydrate recognition domain of asialoglycoprotein receptor to a monoclonal antibody revealed by high resolution proteolytic excision mass spectrometry”

- R. Stefanescu, R. Born, A. Moise, B. Ernst, M. Przybylski, *J. Am. Soc Mass Spectr.* **2011**, *22*, 148-157.
- “E- and P-Selectin: Differences, Similarities and Implications for the Design of P-Selectin Antagonists”
Florian P. C. Binder, Beat Ernst, *Chimia* **2011**, *65*, 210-213.
 - “EUROCarbDB: An open-access platform for glycoinformatics”
C.-W. von der Lieth, A.A. Freire, D. Blank, M.P. Campbell, A. Ceroni, D.D. Damerell, A. Dell, R.A. Dwek, B. Ernst, M. Frank, H. Geyer, R. Geyer, M.J. Harrison, K. Henrick, S. Herget, W.E. Hull, J. Ionides, H. Joshi, J.P. Kamerling, B.R. Leeﬂang, T. Lütteke, M. Lundborg, K. Maass, A. Merry, R. Ranzinger, J. Rosen, L. Royle, P.M. Rudd, S. Schloissnig, R. Stenutz, W.F. Vrancken, G. Widmalm and S.M. Haslam, *Glycobiology* **2011**, *21*, 493-502.
 - “High affinity sialoside ligands of myelin associated glycoprotein”
Y. Zeng, C. Rademacher, C.M. Nycholat, S. Futakawa, K. Lemme, B. Ernst, J.C. Paulson, *Bioorg. Med. Chem. Lett.* **2011**, *21*, 5045-5049.
 - “AcquaAlta: A directional approach to the solvation of ligand-protein complexes”
G. Rossato, B. Ernst, A. Vedani, M. Smiesko, *J. Chem. Inf. Model.* **2011**, *51*, 1867-1881.
 - “Design, Synthesis and Biological Evaluation of Mannosyl Triazoles as FimH Antagonists”
Oliver Schwardt, Said Rabbani, Margrit Hartmann, Daniela Abgottspon, Matthias Wittwer, Simon Kleeb, Adam Zalewski, Martin Smiesko, Brian Cutting, and Beat Ernst, *Bioorg. Med. Chem.* **2011**, *19*, 6454-6473.
 - “Pfizer deal for selectin inhibitor highlights potential of glycomimetic drugs”
Deal watch, *Nat. Rev. Drug Discov.* **2011**, *10*, 890-891.
 - “From a Library of MAG Antagonists to Nanomolar CD22 Ligands”
Stefanie Mesch, Katrin Lemme, Matthias Wittwer, Hendrik Koliwer-Brandl, Oliver Schwardt, Sørge Kelm, Beat Ernst, *ChemMedChem* **2012**, *7*, 134-143 [selected as Very Important Paper (VIP)].
 - “Pre-organization of the Core Structure of E-Selectin Antagonists”
Daniel Schwizer, John T. Patton, Brian Cutting, Martin Smieško, Beatrice Wagner, Ako Kato, Céline Weckerle, Florian P.C. Binder, Said Rabbani, Oliver Schwardt, John L. Magnani, and Beat Ernst, *Chem. Eur. J.* **2012**, *18*, 1342-1351.
 - “Cutaneous iontophoretic delivery of CGP69669A, a sialyl Lewisx mimetic, in vitro”
Taís Gratieri, Beatrice Wagner, Dhaval Kalaria, Beat Ernst, Yogeshvar N. Kalia, *Experimental Dermatology*, **2012**, *21*, 226-228.
 - “Development and validation of a HPAE-PAD method for the quantification of CGP69669A, a sialyl Lewisx mimetic, in skin permeation studies”
Taís Gratieri, Beatrice Wagner, Dhaval Kalaria, Beat Ernst and Yogeshvar N. Kalia, *Biomed. Chromatogr.* **2012**, *26*, 507-511.
 - “Anti-Adhesion Therapy for Urinary Tract Infections - A Balanced PK/PD-Profile Proved to be Key for Success”
X. Jiang, D. Abgottspon, S. Kleeb, S. Rabbani, M. Scharenberg, M. Wittwer, M. Haug, O. Schwardt, B. Ernst. *J. Med. Chem.* **2012**, *55*, 4700-4713.
 - “In vivo Evaluation of FimH Antagonists – A Novel Class of Antimicrobials for the Treatment of Urinary Tract Infection”
Daniela Abgottspon, Beat Ernst. *Chimia* **2012**, *66*, 166-169.
 - “FimH Antagonists: Structure-Activity and Structure-Property Relationships for Biphenyl α -D-Mannopyranosides

- Lijuan Pang, Simon Kleeb, Katrin Lemme, Said Rabbani, Meike Scharenberg, Adam Zalewski, Florentina Schädler, Oliver Schwardt, Beat Ernst. *ChemMedChem* **2012**, *7*, 1404-1422 [selected as Very Important Paper (VIP)].
- “Sialyl Lewis^x – a “Pre-organized Water Oligomer”?”
Florian P.C. Binder, Katrin Lemme, Roland C. Preston and Beat Ernst. *Angew. Chem. Int. Ed.* **2012**, *51*, 7327-7331 [selected as Very Important Paper (VIP)].
 - “Conformational Constraints: Nature Does It Best With Sialyl Lewis^x”
Alexander Titz, Alberto Marra, Brian Cutting, Martin Smieško, George Papandreou, Alessandro Dondoni and Beat Ernst, *Eur. J. Org. Chem.* **2012**, 5534–5539.
 - “Alpine Drug Discovery Summit: 10th Swiss Course on Medicinal Chemistry”
G. Müller, B. Ernst, *ChemMedChem* **2012**, *7*, 2237-2240.
 - “A Molecular-Modeling Toolbox Aimed at Bridging the Gap between Medicinal Chemistry and Computational Sciences”
Sameh Eid, Adam Zalewski, Martin Smieško, Beat Ernst, Angelo Vedani, *Int. J. Mol. Sci.* **2013**, *14*, 684-700.
 - “Chemical Development of Intracellular Protein Heterodimerizers”
D. Erhart, M. Zimmermann, O. Jacques, M. Wittwer, B. Ernst, E. Constable, M. Zvelebil, F. Beaufils, M. P. Wymann, *Chem. Biol.* **2013**, *20*, 549-557.
 - “Nanomolar E-selectin Antagonists with Prolonged Half-lives by a Fragment-based Approach”
Jonas Egger, Céline Weckerle, Brian Cutting, Oliver Schwardt, Said Rabbani, Katrin Lemme, Beat Ernst, *J. Am. Chem. Soc.* **2013**, *135*, 9820-9828.
 - “Stabilization of branched oligosaccharides: Lewis^x benefits from a non-conventional C-H•••O hydrogen bond”
Mirko Zierke, Martin Smieško, Said Rabbani, Thomas Aeschbacher, Brian Cutting, Frédéric H.-T. Allain, Mario Schubert, Beat Ernst, *J. Am. Chem. Soc.* **2013**, *135*, 13464-13472.
 - “FimH-Antagonisten: eine neue Option für die Therapie von Harnwegsinfekten”
B. Ernst, A. Sigl, *Swiss Medical Forum* **2013**, *13*, 1045-1046.
 - “pK_a Determination by ¹H NMR Spectroscopy - An Old Methodology Revisited”
Jacqueline Bezençon, Matthias B. Wittwer, Brian Cutting, Martin Smieško, Bjoern Wagner, Manfred Kansy, Beat Ernst, *J. Pharmaceut. Biomed. Anal.* **2014**, *93*, 147-155.
 - “Kinetic Properties of Carbohydrate-Lectin Interactions: FimH Antagonists”
Meike Scharenberg, Xiaohua Jiang, Lijuan Pang, Giulio Navarra, Said Rabbani, Florian Binder, Oliver Schwardt, Beat Ernst, *ChemMedChem* **2014**, *9*, 78-83.
 - “Branched α-D-mannopyranosides: a new class of potent FimH antagonists”
T. Tomasic, S. Rabbani, M. Gobec, I. Mlinaric Rascan, C. Podlipnik, B. Ernst, M. Anderluh, *Med. Chem. Commun.* **2014**, *5*, 1247-1253.
 - “Implications of the E-selectin S128R mutation for drug discovery”
R.C. Preston, S. Rabbani, F.P.C. Binder, S. Moes, J.L. Magnani, B. Ernst, *Glycobiology* **2014**, *24*, 592-601.
 - “Functional siglec lectin domains from soluble expression in the cytoplasm of *Escherichia coli*”
Johannes M. Pröpster, Fan Yang, Beat Ernst, Frédéric H.-T. Allain, Mario Schubert, *Protein Exp. Purification* **2015**, *109*, 14-22.
 - “FimH Antagonists - Bioisosteres to Improve the *in vitro* and *in vivo* PK/PD Profile”
Simon Kleeb, Lijuan Pang, Katharina Mayer, Deniz Eris, Anja Sigl, Roland C. Preston, Pascal Zihlmann, Timothy Sharpe, Roman P. Jakob, Daniela Abgottspon, Aline S.

- Hutter, Meike Scharenberg, Xiaohua Jiang, Giulio Navarra, Said Rabbani, Martin Smiesko, Nathalie Lüdin, Jacqueline Bezençon, Oliver Schwardt, Timm Maier, Beat Ernst, *J. Med. Chem.* **2015**, *58*, 2221-2239.
- “Activities of N,N'-Diarylurea MMV665852 Analogs against *Schistosoma mansoni*”
Noemi Cowan, Philipp Dätwyler, Beat Ernst, Chunkai Wang, Jonathan L. Vennerstrom, Thomas Spangenberg, Jennifer Keiser, *Antimicrob. Agents Chemother.* **2015**, *59*, 1935-1941.
 - “The Tyrosine Gate of the Bacterial Lectin FimH: A Conformational Analysis by NMR and X-ray”
Brigitte Fiege, Said Rabbani, Roland C. Preston, Roman P. Jakob, Pascal Zihlmann, Oliver Schwardt, Xiaohua Jiang, Timm Maier, Beat Ernst, *ChemBioChem* **2015**, *16*, 1235-1246.
 - “Enantiomeric cyclic peptides with different Caco-2 permeability suggest carrier-mediated transport”
Udaya Kiran Marelli, Jacqueline Bezençon, Eduard Puig, Beat Ernst, Horst Kessler, *Chem. Eur. J.* **2015**, *21*, 1-6.
 - “E-Selectin Ligand Complexes Adopt an Extended High-Affinity Conformation”
Roland C. Preston, Roman P. Jakob, Florian P. C. Binder, Christoph P. Sager, Beat Ernst, Timm Maier, *J. Mol. Cell Biol.* **2015**, *290*, 21213-21230.
 - “SIGLEC-4 (MAG) Antagonists – From the Natural Carbohydrate Epitope to Glycomimetics”
Oliver Schwardt, Soerge Kelm, Beat Ernst, *Topics in Current Chemistry*, **2015**, *367*, 151-200.
 - “Application of lipid peroxidation products as biomarkers for flutamide-induced oxidative stress in vitro”
Marieke Teppner, Franziska Böss, Beat Ernst, Alex Pähler. *Toxicol. Lett.* **2015**, *238*, 53-9.
 - “FimH Antagonists – Phosphate Prodrugs Improve Oral Bioavailability”
Simon Kleeb, Xiaohua Jiang, Priska Frei, Anja Sigl, Jacqueline Bezençon, Karen Bamberger, Oliver Schwardt, Beat Ernst, *J. Med. Chem.* **2016**, *59*, 3163-3182.
 - “Prodruggability of Carbohydrates – Oral FimH Antagonists”
Wojciech Schönemann, Simon Kleeb, Philipp Dätwyler, Oliver Schwardt, Beat Ernst, *Can. J. Chem.* **2016**, *94*, 909-919.
 - “The Conformational Variability of FimH - Which Conformation Represents the Therapeutic Target?”
Deniz Eris, Roland C. Preston, Meike Scharenber, Fabian Hilliger, Daniela Abgottspon, Lijuan Pang, Xiaohua Jiang, Oliver Schwardt, Beat Ernst, *ChemBioChem*, **2016**, *11*, 1012-1020.
 - “Label-Free FimH Protein Interaction Analysis Using Silicon Nanoribbon BioFETs”
Mathias Wipf, Ralph L. Stoop, Giulio Navarra, Said Rabbani, Beat Ernst, Kristine Bedner, Christian Schönenberger, Michel Calame, *ACS Sens* **2016**, *6*, 781-788
 - “Catch-bond mechanism of the bacterial adhesion FimH”
Maximilian M. Sauer, Roman P. Jakob, Jonathan Eras, Sefer Baday, Deniz Eris, Giulio Navarra, Simon Bernèche, Beat Ernst, Timm Maier, Rudi Glockhuber, *Nature Commun.* **2016**, *7*, 10738.
 - “Structural basis for sulfation-dependent self-glycan recognition by the human immune-inhibitory receptor Siglec-8”
Johannes M. Pröpster, Fan Yang, Said Rabbani, Beat Ernst, Frédéric H.-T. Allain and

Mario Schubert. *PNAS* **2016**, *113*, E4170-E4179.

- “2-C-Branched mannosides as a novel family of FimH antagonists—Synthesis and biological evaluation”
Wojciech Schönemann, Marcel Lindegger, Said Rabbani, Pascal Zihlmann, Oliver Schwardt, Beat Ernst, *Perspectives in Science* 2016,
<http://dx.doi.org/10.1016/j.pisc.2016.10.002>
- “Biomarkers of Flutamide-Bioactivation and Oxidative Stress In Vitro and In Vivo”
Marieke Teppner, Franziska Boess, Beat Ernst, Alex Pähler. *Drug Metab. Dispos.* **2016** *44*, 560-569.
- “Quantitative profiling of prostaglandins as oxidative stress biomarkers in vitro and in vivo by negative ion online solid phase extraction - Liquid chromatography-tandem mass spectrometry”
Marieke Teppner, Manfred Zell, Christophe Husser, Beat Ernst, Alex Pähler. *Anal. Biochem.* **2016**, *498*, 68-77.
- “FimH antagonists - solubility vs permeability”
Lijuan Pang, Jacqueline Bezençon, Simon Kleeb, Said Rabbani, Anja Sigl, Martin Smiesko, Christoph P. Sager, Deniz Eris, Oliver Schwardt, Beat Ernst. In Rauter, A.P., Lindhorst, T., Queneau, Y. (Eds). *Carbohydr. Chem.* **2017**, *42*, 248-273. Royal Society of Chemistry.
- “Mutation of Tyr137 of the universal Escherichia coli fimbrial adhesin FimH relaxes the tyrosine gate prior to mannose binding”
S. Rabbani, E.-M. Krammer, G. Roos, A. Zalewski, R.C. Preston, S. Eid, P. Zihlmann, M. Prevost, M.F. Lensink, A. Thompson, B. Ernst, J. Bouckaert, *IUCrJ* **2017**, *4*, 7-23.
- “What contributes to an effective mannose recognition domain”
Christoph P. Sager, Deniz Eriş, Martin Smieško, Rachel Hevey, Beat Ernst. *Beilstein J. Org. Chem.* in press.
- “Carbohydrate-Lectin Interactions – An Unexpected Contribution to Affinity”
Giulio Navarra, Pascal Zihlmann, Roman P. Jakob, Katja Stangier, Roland C. Preston, Said Rabbani, Martin Smiesko, Bea Wagner, Timm Maier, Beat Ernst, *ChemBioChem* 2017, *18*, 539-544.
- “Target-directed Dynamic Combinatorial Chemistry: A Study on Potentials and Pitfalls as Exemplified on a Bacterial Target”
Priska Frei, Lijuan Pang, Marleen Silbermann, Deniz Eris, Tobias Mühlethaler, Oliver Schwardt, Beat Ernst, *Chem. Eur. J.* 2017, *23*, 11570-11577.
- “Urinary Tract Infection: Which Conformation of the Bacterial Lectin FimH Is Therapeutically Relevant?”
Katharina Mayer, Deniz Eris, Oliver Schwardt, Christoph P. Sager, Said Rabbani, Simon Kleeb, Beat Ernst, *J. Med. Chem.* 2017, *60*, 5646-5662.
- “A Secondary Structural Element in a Wide Range of Fucosylated Glycoepitopes”
Thomas Aeschbacher, Mirko Zierke, Martin Smiesko, Mayeul Collot, Jean-Maurice Mallet, Beat Ernst, Frédéric H.-T. Allain, Mario Schubert, *Chem. Eur. J.* 2017, *23*, 11598-11610.
- “Selective in vivo removal of pathogenic anti-MAG autoantibodies, an antigen-specific treatment option for anti-MAG neuropathy”
Herrendorff R, Hänggi P, Pfister H, Yang F, Demeestere D, Hunziker F, Frey S, Schaeren-Wiemers N, Steck AJ, Ernst B. *PNAS* 2017, *114*, E3689-E3698.
- “Conformational Switch of the Bacterial Adhesin FimH in the Absence of the Regulatory Domain – Engineering a Minimalistic Allosteric System”

Said Rabbani, Brigitte Fiege, Deniz Eris, Marleen Silbermann, Roman Peter Jakob, Giulio Navarra, Timm Maier, Beat Ernst. *J. Biol. Chem.* in press.

- “2-C-Branched Mannosides as A Novel Family of FimH Antagonists – Synthesis and Biological Evaluation“
Wojciech Schönemann, Marcel Lindegger, Said Rabbani, Pascal Zihlmann, Oliver Schwardt, Beat Ernst *Perspectives in Science* **2017**, *11*, 53-61.
- “The price of flexibility – a case study on septanoses as pyranose mimetics“
Christoph P. Sager, Brigitte Fiege, Pascal Zihlmann, Raghu Vannam, Said Rabbani, Roman P. Jakob, Roland C. Preston, Adam Zalewski, Tim Maier, Mark W. Peczuh, Beat Ernst. *Chemical Science* in press.

Patent applications

- Preparation of hetero-bifunctional pan-selectin antagonists having a triazole linker trisaccharides, Ernst, Beat; Wagner, Beatrice, PCT Int. Appl. (2017), WO 2017095904 A1 20170608.
- Preparation of carbohydrate ligands that bind to antibodies against glycoepitopes of glycosphingolipids, Herrendorff, Ruben; Ernst, Beat; Steck, Andreas; Pfister, Helene; Navarra, Giulio, PCT Int. Appl. (2017), WO 2017046172 A1 20170323.
- E-selectin antagonists, Ernst, Beat; Weckerle, Celine E.; Egger, Jonas K. U.S. (2014), US 8921328 B2 20141230.
- Carbohydrate ligands that bind to IgM antibodies against myelin-associated glycoprotein, Ernst, Beat; Herrendorff, Ruben; Steck, Andreas; Yang, Fan, PCT Int. Appl. (2015), WO 2015136027 A1 20150917.
- E-selectin antagonists modified by macrocycle formation to the galactose, Magnani, John L.; Peterson, John M.; Zierke, Mirko; Smiesko, Martin; Ernst, Beat, PCT Int. Appl. (2015), WO 2015109049 A1 20150723.
- Preparation of mannose derivatives as antagonists of bacterial adhesion, Ernst, Beat, PCT Int. Appl. (2012), WO 2012164074 A1 20121206.
- Antioxidant additives for mammalian cell culture , Kaufmann, Franz; Hafner, Andreas; Rabbani, Said; Ernst, Beat, PCT Int. Appl. (2012), WO 2012110435 A1 20120823.
- Preparation of disaccharide glycomimetic as E-selectin antagonists, Ernst, Beat; Weckerle, Celine E.; Egger, Jonas K. PCT Int. Appl. (2012), WO 2012037034 A1 20120322.
- Preparation of mannose derivatives as antagonists of bacterial adhesion, Ernst, Beat; Herold, Janno, PCT Int. Appl. (2011), WO 2011073112 A2 20110623.
- Preparation of glycomimetic pseudo-oligosaccharides and replacements for hexoses and N-acetyl Hexosamines, Ernst, Beat; Schwizer, Daniel; Sarkar, Arun K.; Magnani, John L. PCT Int. Appl. (2008), WO 2008060378 A2 20080522.
- Process for the preparation of myelin associated glycoprotein antagonists based on neuraminic acid scaffolds, Ernst, Beat; Cutting, Brian; Shelke, Sachin V. PCT Int. Appl. (2007), WO 2007105094 A1 20070920.

- Preparation of hetero-bifunctional pseudo-oligosaccharides as pan-selectin inhibitors and anti-inflammatory agents, Magnani, John L.; Patton, John T., Jr.; Sarkar, Arun K.; Svarovsky, Sergei A.; Ernst, Beat, PCT Int. Appl. (2007), WO 2007028050 A1 20070308.
- Preparation of multivalent polymers as agents for preparing biologically active compounds, Thoma, Gebhard; Duthaler, Rudolf; Ernst, Beat; Magnani, Louis; Patton, John Tinsman Jr., PCT Int. Appl. (1997), WO 9719105 A1 19970529.
- Process for the preparation of oligosaccharide mixtures. Hindsgaul, Ole; Kanie, Osamu; Palcic, Monica; Ernst, Beat, PCT Int. Appl. (1996), WO 9606102 A1 19960229.
- Preparation of taurine derivatives for control of cherry fruit flies, Beat Ernst; Beatrice Wagner, Eur. Pat. Appl. 1992/474590 A2.
- Method for preparing glycosides, Ernst, Beat; Heneghan, Michael; Hafner, Andreas, Eur. Pat. Appl. (1993), EP 531256 A1 19930310.
- Preparation of taurine derivatives for control of cherry fruit flies. Ernst, Beat; Heneghan, Michael; Wagner, Beatrice; Boller, Ernst; Hurter, Jakob; Staedler, Erich, Eur. Pat. Appl. (1992), EP 474590 A2 19920311.
- Preparation of glycosyl halides of protected mono- and oligo-saccharides, Ernst, Beat, Eur. Pat. Appl. (1990), EP 373118 A2 19900613.
- Preparation of optically active palmityl glucopyranosides for protection of cherries from cherry fruit flies, Ernst, Beat, Eur. Pat. Appl. (1990), EP 352230 A2 19900124.
- Procedure for preparing β -lactams useful as intermediates for penems and carbapenems, Ernst, Beat; Bellus, Daniel, Ger. Offen. (1987), DE 3620467 A1 19870102.

Books and Special Issues

- Modern Synthetic Methods, Eds. Beat Ernst, Christian Leumann, VCH 1995, ISBN 3-906390-12-8.
- Carbohydrates in Chemistry and Biology: A Handbook in 4 Volumes, Part 1: Chemistry of Saccharides, Volume 1: Chemical Synthesis of Glycosides and Glycomimetics, Eds. B. Ernst, G. Hart, P. Sinay, Wiley-VCH 2000.
- Carbohydrates in Chemistry and Biology: A Handbook in 4 Volumes, Part 1: Chemistry of Saccharides, Volume 2: Enzymatic Synthesis of Glycosides and Glycomimetics, Eds. B. Ernst, G. Hart, P. Sinay, Wiley-VCH 2000.
- Carbohydrates in Chemistry and Biology: A Handbook in 4 Volumes, Part 2: Biology of Saccharides, Volume 3: Biosynthesis and Degradation of Glycoconjugates, Eds. B. Ernst, G. Hart, P. Sinay, Wiley-VCH 2000.
- Carbohydrates in Chemistry and Biology: A Handbook in 4 Volumes, Part 2: Biology of Saccharides, Volume 4: Lectins and Saccharide Biology, Eds. B. Ernst, G. Hart, P. Sinay, Wiley-VCH 2000.
- Chimia, Special Issue on Pharmaceutical Sciences at the University of Basel, *Chimia* **2006**, 1-2.

- Wissenschaftliche Bilder, eine Bildkritik, A. Vöggtli, B. Ernst, Schwabe Verlag 2007, ISBN 978-3-7965-2313-7.
- Chimia, Special Issue in Honor of Daniel Bellus, *Chimia* **2010**, 1-2.
- Moderne Pharmakokinetik: Transport durch Membranen, A. Vöggtli, B. Ernst, Wiley-VCH 2010. "... [I]m Rahmen einer biopharmazeutischen Synopse erläutert es mit den physikochemischen Eigenschaften verschiedener Arzneistoffmoleküle in Zusammenhang stehende Aspekte der Arzneimittelwirkung, die anderswo kaum auf diesem eingängigen und leicht verständlichen Niveau beschrieben sind. Die Autoren verstehen es zu abstrahieren und den Leser durch eine Vielzahl konkreter Beispiele bei Laune zu halten, was angesichts der komplexen Thematik eine nicht zu unterschätzende Leistung ist." Deutsche Apotheker Zeitung (23.09.2010, Nr.38)