

Publication List Bernhard K. Keppler, 2023

1. Papers (peer-reviewed)

- [631] A. Tialiou, Z.H. Athab, R.T. Woodward, V. Biegler, B.K. Keppler, A.F. Halbus, M.R. Reithofer, J.M. Chin, Fabrication of graded porous structure of hydroxypropyl cellulose hydrogels via temperature-induced phase separation, *Carbohydr Polym*, 315 (2023) doi: 10.1016/j.carbpol.2023.120984
- [630] A. Szuplewska, J. Sikorski, M. Matczuk, L. Ruzik, B.K. Keppler, A.R. Timerbaev, M. Jarosz, Enhanced edible plant production using nano-manganese and nano-iron fertilizers: Current status, detection methods and risk assessment, *Plant Physiol. Biochem.*, 199 (2023) 107745 doi: 10.1016/j.plaphy.2023.107745
- [629] E. Petrova, Y. Gluhcheva, E. Pavlova, I. Vladov, P. Dorkov, M. Schaier, I. Pashkunova-Martic, T.H. Helbich, B. Keppler, J. Ivanova, Effects of Salinomycin and Deferiprone on Lead-Induced Changes in the Mouse Brain, *International Journal of Molecular Sciences*, 24 (2023) 2871 doi: 10.3390/ijms24032871
- [628] J.P. Mészáros, W. Kandioller, G. Spengler, A. Prado-Roller, B.K. Keppler, É.A. Enyedy, Half-Sandwich Rhodium Complexes with Releasable N-Donor Monodentate Ligands: Solution Chemical Properties and the Possibility for Acidosis Activation, *Pharmaceutics*, 15 (2023) 356 doi: 10.3390/pharmaceutics15020356
- [627] T. Mendrina, I. Poetsch, H. Schueffl, D. Baier, C. Pirker, A. Ries, B.K. Keppler, C.R. Kowol, D. Gibson, M. Grusch, W. Berger, P. Heffeter, Influence of the Fatty Acid Metabolism on the Mode of Action of a Cisplatin(IV) Complex with Phenylbutyrate as Axial Ligands, *Pharmaceutics*, 15 (2023) 677 doi: 10.3390/pharmaceutics15020677
- [626] X. Liu, D. Wenisch, P. Dahlke, P.M. Jordan, M.A. Jakupec, C.R. Kowol, P. Liebing, O. Werz, B.K. Keppler, W. Weigand, Multi-action platinum(IV) prodrugs conjugated with COX-inhibiting NSAIDs, *European Journal of Medicinal Chemistry*, 257 (2023) 115515 doi: 10.1016/j.ejmech.2023.115515
- [625] Y. Lerchbammer-Kreith, N.S. Sommerfeld, K. Cseh, X. Weng-Jiang, U. Odunze, A.G. Schätzlein, I.F. Uchegbu, M.S. Galanski, M.A. Jakupec, B.K. Keppler, Platinum(IV)-Loaded Degraded Glycol Chitosan as Efficient Platinum(IV) Drug Delivery Platform, *Pharmaceutics*, 15 (2023) 1050 doi: 10.3390/pharmaceutics15041050
- [624] Y. Lerchbammer-Kreith, M. Hejl, P. Vician, M.A. Jakupec, W. Berger, M.S. Galanski, B.K. Keppler, Combination of Drug Delivery Properties of PAMAM Dendrimers and Cytotoxicity of Platinum(IV) Complexes—A More Selective Anticancer Treatment?, *Pharmaceutics*, 15 (2023) 1515 doi: 10.3390/pharmaceutics15051515
- [623] O.V. Kuznetsova, B.K. Keppler, A.R. Timerbaev, Analysis of Engineered Nanoparticles in Seawater Using ICP-MS-Based Technology: From Negative to Positive Samples, *Molecules*, 28 (2023) 994 doi: 10.3390/molecules28030994
- [622] O.V. Kuznetsova, B.K. Keppler, A.R. Timerbaev, Seawater analysis of engineered nanoparticles using ICP-MS-based technology: Addressing challenges with the development of reliable monitoring strategy, *Talanta*, 252 (2023) 123846 doi: 10.1016/j.talanta.2022.123846
- [621] M.S. Galanski, B.K. Keppler, Corrigendum to: Searching for the Magic Bullet: Anticancer Platinum Drugs Which Can Be Accumulated or Activated in the Tumor Tissue (*Anti-Cancer Agents in Medicinal Chemistry*, 7(01), 2007, 55-73), *Anti-Cancer Agents in Medicinal Chemistry*, 23 (2023) 1350 doi: 10.2174/187152062311230607155929
- [620] M.S. Galanski, M.A. Jakupec, B.K. Keppler, Corrigendum to: Update of the Preclinical Situation of Anticancer Platinum Complexes: Novel Design Strategies and Innovative Analytical Approaches, *Current medicinal chemistry*, 30 (2023) 4167 doi: 10.2174/092986733036230530164546
- [619] M.S. Galanski, V.B. Arion, M.A. Jakupec, B.K. Keppler, Corrigendum to: Recent Developments in the Field of Tumor-Inhibiting Metal Complexes (*Current Pharmaceutical Design*, 9(10), 2003, 2078-2089), *Current Pharmaceutical Design*, 29 (2023) 1067 doi: 10.2174/138161282913230505162540

- [618] V. Fuchs, K. Cseh, M. Hejl, P. Vician, B. Neuditschko, S.M. Meier-Menches, L. Janker, A. Bileck, N. Gajic, J. Kronberger, M. Schaier, S. Neumayer, G. Köllensperger, C. Gerner, W. Berger, M.A. Jakupec, M.S. Malarek, B.K. Keppler, Highly Cytotoxic Molybdenocenes with Strong Metabolic Effects Inhibit Tumour Growth in Mice, *Chemistry - A European Journal*, 29 (2023) e202202648 doi: 10.1002/chem.202202648
- [617] M. Caban, B. Koblmüller, D. Groza, H.H. Schueffl, A. Terenzi, A. Tolios, T. Mohr, M. Mathuber, K. Kryeziu, C. Jaunecker, C. Pirker, B.K. Keppler, W. Berger, C.R. Kowol, P. Heffeter, A novel EGFR inhibitor acts as potent tool for hypoxia-activated prodrug systems and exerts strong synergistic activity with VEGFR inhibition in vitro and in vivo, *Cancer Letters*, 565 (2023) 216237 doi: 10.1016/j.canlet.2023.216237
- [616] N.L. Wilke, L.O. Abodo, C. Frias, J. Frias, J. Baas, M.A. Jakupec, B.K. Keppler, A. Prokop, The gallium complex KP46 sensitizes resistant leukemia cells and overcomes Bcl-2-induced multidrug resistance in lymphoma cells via upregulation of Harakiri and downregulation of XIAP in vitro, *Biomed Pharmacother*, 156 (2022) 113974 doi: 10.1016/j.biopha.2022.113974
- [615] A. Tialiou, J. Chin, B.K. Keppler, M.R. Reithofer, Current Developments of N-Heterocyclic Carbene Au(I)/Au(III) Complexes toward Cancer Treatment, *Biomedicines*, 10 (2022) 1417 doi: 10.3390/biomedicines10061417
- [614] A. Schweikert, S. Theiner, D. Wernitznig, A. Schoeberl, M. Schaier, S. Neumayer, B.K. Keppler, G. Koellensperger, Micro-droplet-based calibration for quantitative elemental bioimaging by LA-ICPMS, *Anal Bioanal Chem*, 414 (2022) 485-495 doi: 10.1007/s00216-021-03357-w
- [613] A. Schweikert, S. Theiner, M. Šála, P. Vician, W. Berger, B.K. Keppler, G. Koellensperger, Quantification in bioimaging by LA-ICPMS - Evaluation of isotope dilution and standard addition enabled by micro-droplets, *Analytica Chimica Acta*, 1223 (2022) 340200 doi: 10.1016/j.aca.2022.340200
- [612] V. Pósa, A. Stefanelli, J.H.B. Nunes, S. Hager, M. Mathuber, N.V. May, W. Berger, B.K. Keppler, C.R. Kowol, É.A. Enyedy, P. Heffeter, Thiosemicarbazone Derivatives Developed to Overcome COTI-2 Resistance, *Cancers*, 14 (2022) 4455 doi: 10.3390/cancers14184455
- [611] V. Pósa, B. Hajdu, G. Tóth, O. Dömötör, C.R. Kowol, B.K. Keppler, G. Spengler, B. Gyurcsik, É.A. Enyedy, The coordination modes of (thio)semicarbazone copper(II) complexes strongly modulate the solution chemical properties and mechanism of anticancer activity, *Journal of Inorganic Biochemistry*, 231 (2022) 111786 doi: 10.1016/j.jinorgbio.2022.111786
- [610] E. Petrova, I. Pashkunova-Martic, M. Schaier, Y. Gluhcheva, E. Pavlova, T.H. Helbich, B. Keppler, J. Ivanova, Effects of subacute cadmium exposure and subsequent deferiprone treatment on cadmium accumulation and on the homeostasis of essential elements in the mouse brain, *J Trace Elem Med Biol*, 74 (2022) 127062 doi: 10.1016/j.jtemb.2022.127062
- [609] I. Pashkunova-Martic, R. Kukeva, R. Stoyanova, I. Pantcheva, P. Dorkov, J. Friske, M. Hejl, M. Jakupec, M. Hohagen, A. Legin, W. Lubitz, B.K. Keppler, T.H. Helbich, J. Ivanova, Novel Salinomycin-Based Paramagnetic Complexes—First Evaluation of Their Potential Theranostic Properties, *Pharmaceutics*, 14 (2022) 2319 doi: 10.3390/pharmaceutics14112319
- [608] X. Liu, D. Wenisch, M.C. Barth, K. Cseh, C.R. Kowol, M.A. Jakupec, D. Gibson, B.K. Keppler, W. Weigand, Novel oxaliplatin(IV) complexes conjugated with ligands bearing pendant 1,2-dithiolane/1,2-diselenolane/cyclopentyl motifs, *Dalton Trans*, 51 (2022) 16824-16835 doi: 10.1039/d2dt02217f
- [607] X. Liu, M.C. Barth, K. Cseh, C.R. Kowol, M.A. Jakupec, B.K. Keppler, D. Gibson, W. Weigand, Oxoplatin-Based Pt(IV) Lipoate Complexes and Their Biological Activity, *Chem Biodivers*, 19 (2022) e202200695 doi: 10.1002/cbdv.202200695
- [606] W. Kandioller, J. Theiner, B.K. Keppler, C.R. Kowol, Elemental analysis: an important purity control but prone to manipulations, *Inorganic Chemistry Frontiers*, 9 (2022) 412-416 doi: 10.1039/D1QI01379C
- [605] M. Jarosz, B.K. Keppler, A.R. Timerbaev, Current and emerging mass spectrometry methods for the preclinical development of metal-based drugs: a critical appraisal, *Analytical and bioanalytical chemistry*, 414 (2022) 95-102 doi: 10.1007/s00216-021-03718-5

- [604] Y. Gluhcheva, I. Pashkunova-Martic, M. Schaier, I. Vladov, S. Stoykova, E. Petrova, E. Pavlova, P. Dorkov, T.H. Helbich, B. Keppler, J. Ivanova, Comparative Effects of Deferiprone and Salinomycin on Lead-Induced Disturbance in the Homeostasis of Intrarenal Essential Elements in Mice, *International Journal of Molecular Sciences*, 23 (2022) 4368 doi: 10.3390/ijms23084368
- [603] H. Geisler, S. Harringer, D. Wenisch, R. Urban, M.A. Jakupec, W. Kandioller, B.K. Keppler, Systematic Study on the Cytotoxic Potency of Commonly Used Dimeric Metal Precursors in Human Cancer Cell Lines, *ChemistryOpen*, (2022) e202200019 doi: 10.1002/open.202200019
- [602] V. Fuchs, K. Cseh, M. Hejl, P. Vician, B. Neuditschko, S.M. Meier-Menches, L. Janker, A. Bileck, N. Gajic, J. Kronberger, M. Schaier, S. Neumayer, G. Köllensperger, C. Gerner, W. Berger, M.A. Jakupec, M.S. Malarek, B.K. Keppler, Highly Cytotoxic Molybdenocenes with Strong Metabolic Effects Inhibit Tumour Growth in Mice, *Chemistry*, 29 (2022) e202202648 doi: 10.1002/chem.202202648
- [601] P. Fronik, M. Gutmann, P. Vician, M. Stojanovic, A. Kastner, P. Heffeter, C. Pirker, B.K. Keppler, W. Berger, C.R. Kowol, A platinum(IV) prodrug strategy to overcome glutathione-based oxaliplatin resistance, *Communications Chemistry*, 5 (2022) doi: 10.1038/s42004-022-00661-z
- [600] L.S. Foteeva, Y.N. Nosova, A.A. Nazarov, B.K. Keppler, A.R. Timerbaev, Versatile analytical methodology for evaluation of drug-like properties of potentially multi-targeting anticancer metallodrugs, *Analytical sciences : the international journal of the Japan Society for Analytical Chemistry*, 38 (2022) 627-632 doi: 10.1007/s44211-022-00076-9
- [599] O. Dömötör, B.K. Keppler, É.A. Enyedy, Solution speciation and human serum protein binding of indium(III) complexes of 8-hydroxyquinoline, deferiprone and maltol, *Journal of Biological Inorganic Chemistry*, (2022) 315–328 doi: 10.1007/s00775-022-01935-6
- [598] D. Baier, B. Schoenhacker-Alte, M. Rusz, C. Pirker, T. Mohr, T. Mendrina, D. Kirchhofer, S.M. Meier-Menches, K. Hohenwallner, M. Schaier, E. Rampler, G. Koellensperger, P. Heffeter, B. Keppler, W. Berger, The Anticancer Ruthenium Compound BOLD-100 Targets Glycolysis and Generates a Metabolic Vulnerability towards Glucose Deprivation, *Pharmaceutics*, 14 (2022) 238 doi: 10.3390/pharmaceutics14020238
- [597] A.R. Timerbaev, O.V. Kuznetsova, B.K. Keppler, Current trends and challenges in analysis and characterization of engineered nanoparticles in seawater, *Talanta*, 226 (2021) 122201 doi: 10.1016/j.talanta.2021.122201
- [596] S. Theiner, A. Schoeberl, A. Schweikert, B.K. Keppler, G. Koellensperger, Mass spectrometry techniques for imaging and detection of metallodrugs, *Current Opinion in Chemical Biology*, 61 (2021) 123-134 doi: 10.1016/j.cbpa.2020.12.005
- [595] H. Schueffl, S. Theiner, G. Hermann, J. Mayr, P. Fronik, D. Groza, S. van Schonhoven, L. Galvez, N.S. Sommerfeld, A. Schintlmeister, S. Reipert, M. Wagner, R.M. Mader, G. Koellensperger, B.K. Keppler, W. Berger, C.R. Kowol, A. Legin, P. Heffeter, Albumin-targeting of an oxaliplatin-releasing platinum(IV) prodrug results in pronounced anticancer activity due to endocytotic drug uptake in vivo, *Chemical Science*, 12 (2021) 12587-12599 doi: 10.1039/D1SC03311E
- [594] M. Rusz, G. Del Favero, Y. El Abiead, C. Gerner, B.K. Keppler, M.A. Jakupec, G. Koellensperger, Morpho-metabotyping the oxidative stress response, *Scientific Reports*, 11 (2021) 15471 doi: 10.1038/s41598-021-94585-8
- [593] C.A. Riedl, A. Rosner, S. Harringer, P. Salomon, M. Hejl, M.A. Jakupec, W. Kandioller, B.K. Keppler, Water-soluble trithiolato-bridged dinuclear ruthenium(II) and osmium(II) arene complexes with bisphosphonate functionalized ligands as anticancer organometallics, *Journal of Inorganic Biochemistry*, 225 (2021) 111618 doi: <https://doi.org/10.1016/j.jinorgbio.2021.111618>
- [592] T.V. Petrasheuskaya, D. Wernitznig, M.A. Kiss, N.V. May, D. Wenisch, B.K. Keppler, É. Frank, A. Enyedy É, Estrone-salicylaldehyde N-methylated thiosemicarbazone hybrids and their copper complexes: solution structure, stability and anticancer activity in tumour spheroids, *J Biol Inorg Chem*, 26 (2021) 775-791 doi: 10.1007/s00775-021-01891-7

- [591] E. Pavlova, I. Pashkunova-Martic, M. Schaier, E. Petrova, Y. Gluhcheva, P. Dorkov, T.H. Helbich, B. Keppler, G. Koellensperger, J. Ivanova, Ameliorative effects of deferiprone and tetraethylammonium salt of salinomycin acid on lead-induced toxicity in mouse testes, *Environmental Science and Pollution Research*, 28 (2021) 6784-6795 doi: 10.1007/s11356-020-10960-4
- [590] I. Pashkunova-Martic, K. Manzano-Szalai, J. Friske, O. Aszmann, S. Theiner, M.H.M. Klose, D. Baurecht, S. Trattnig, B.K. Keppler, T.H. Helbich, Modified amino-dextran as carriers of Gd-chelates for retrograde transport and visualization of peripheral nerves by magnetic resonance imaging (MRI), *Journal of Inorganic Biochemistry*, 222 (2021) doi: 10.1016/j.jinorgbio.2021.111495
- [589] I. Pashkunova-Martic, C. Kremser, H. Talasz, K. Mistlberger, B. Bechter-Hugl, K. Pfaller, D. Baurecht, P. Debbage, W. Jaschke, T.H. Helbich, B. Keppler, Doubly derivatized poly(lactide)-albumin nanoparticles as blood vessel-targeted transport device for magnetic resonance imaging (MRI), *Journal of Nanoparticle Research*, 23 (2021) doi: 10.1007/s11051-021-05157-w
- [588] B. Neuditschko, A.A. Legin, D. Baier, A. Schintlmeister, S. Reipert, M. Wagner, B.K. Keppler, W. Berger, S.M. Meier-Menches, C. Gerner, Interaction with Ribosomal Proteins Accompanies Stress Induction of the Anticancer Metallo-drug BOLD-100/KP1339 in the Endoplasmic Reticulum, *Angewandte Chemie - International Edition*, 60 (2021) 5063-5068 doi: 10.1002/anie.202015962
- [587] M. Mathuber, S. Hager, B.K. Keppler, P. Heffeter, C.R. Kowol, Liposomal formulations of anticancer copper(ii) thiosemicarbazone complexes, *Dalton Transactions*, 50 (2021) 16053-16066 doi: 10.1039/D1DT02763H
- [586] M. Mathuber, M. Gutmann, M. La Franca, P. Vician, A. Laemmerer, P. Moser, B.K. Keppler, W. Berger, C.R. Kowol, Development of a cobalt(iii)-based ponatinib prodrug system, *Inorganic Chemistry Frontiers*, 8 (2021) 2468-2485 doi: 10.1039/d1qi00211b
- [585] A.A. Legin, A. Schintlmeister, N.S. Sommerfeld, M. Eckhard, S. Theiner, S. Reipert, D. Strohhofer, M.A. Jakupec, M. Galanski, M. Wagner, B.K. Keppler, Nano-scale imaging of dual stable isotope labeled oxaliplatin in human colon cancer cells reveals the nucleolus as a putative node for therapeutic effect, *Nanoscale Advances*, 3 (2021) 249-262 doi: 10.1039/d0na00685h
- [584] O.V. Kuznetsova, M. Jarosz, B.K. Keppler, A.R. Timerbaev, Toward a deeper and simpler understanding of serum protein-mediated transformations of magnetic nanoparticles by ICP-MS, *Talanta*, 229 (2021) 122287 doi: 10.1016/j.talanta.2021.122287
- [583] K. Kiakos, V. Satam, P.C. Patil, J. Sweers, M. Bowerman, S. Tzou, K. Olsen, M. Lee, H. Schaschl, B.K. Keppler, D. Hochhauser, M. Lee, J.A. Hartley, L. Pett, Effects of N-terminus modified Hx-amides on DNA binding affinity, sequence specificity, cellular uptake, and gene expression, *Bioorg. Med. Chem. Lett.*, 47 (2021) 128158 doi: 10.1016/j.bmcl.2021.128158
- [582] L. Kater, B. Kater, M.A. Jakupec, B.K. Keppler, A. Prokop, KP772 overcomes multiple drug resistance in malignant lymphoma and leukemia cells in vitro by inducing Bcl-2-independent apoptosis and upregulation of Harakiri, *JBIC Journal of Biological Inorganic Chemistry*, 26 (2021) 897-907 doi: 10.1007/s00775-021-01900-9
- [581] H.A. Herrmann, M. Rusz, D. Baier, M.A. Jakupec, B.K. Keppler, W. Berger, G. Koellensperger, J. Zanghellini, Thermodynamic Genome-Scale Metabolic Modeling of Metallo-drug Resistance in Colorectal Cancer, *Cancers*, 13 (2021) 4130 doi: 10.3390/cancers13164130
- [580] S. Harringer, M. Hejl, E.A. Enyedy, M.A. Jakupec, M.S. Galanski, B.K. Keppler, P.J. Dyson, H.P. Varbanov, Multifunctional Pt(IV) prodrug candidates featuring the carboplatin core and deferoxamine, *Dalton Trans.*, 50 (2021) 8167-8178 doi: 10.1039/d1dt00214g
- [579] T. Gruene, J.J. Holstein, G.H. Clever, B. Keppler, Establishing electron diffraction in chemical crystallography, *Nature Reviews Chemistry*, 5 (2021) 660-668 doi: 10.1038/s41570-021-00302-4
- [578] P. Fronik, I. Poetsch, A. Kastner, T. Mendrina, S. Hager, K. Hohenwallner, H. Schueffl, D. Herndler-Brandstetter, G. Koellensperger, E. Rampler, J. Kopecka, C. Riganti, W. Berger, B.K. Keppler, P. Heffeter, C.R. Kowol, Structure-Activity Relationships of Triple-Action Platinum(IV) Prodrugs with Albumin-Binding Properties and Immunomodulating Ligands, *Journal of Medicinal Chemistry*, 64 (2021) 12132-12151 doi: 10.1021/acs.jmedchem.1c00770

- [577] É.A. Enyedy, T.V. Petrasheuskaya, M.A. Kiss, D. Wernitznig, D. Wenisch, B.K. Keppler, G. Spengler, N.V. May, É. Frank, O. Dömötör, Complex formation of an estrone-salicylaldehyde semicarbazone hybrid with copper(II) and gallium(III): Solution equilibria and biological activity, *Journal of Inorganic Biochemistry*, 220 (2021) 111468 doi: 10.1016/j.jinorgbio.2021.111468
- [576] D. Bukvicki, N.K. Kovtonyuk, A.A. Legin, B.K. Keppler, L. Brecker, Y. Asakawa, K. Valant-Vetschera, Hunting for bis-benzyls in *Primula veris* subsp. *macrocalyx* (Bunge) Lüdi: Organ-specific accumulation and cytotoxic activity, *Phytochemistry Letters*, 44 (2021) 90-97 doi: <https://doi.org/10.1016/j.phytol.2021.06.014>
- [575] J. Windisch, B.K. Keppler, F. Jirsa, Aluminum in Coffee, *ACS Omega*, 5 (2020) 15335-15343 doi: 10.1021/acsomega.0c01410
- [574] D. Wernitznig, S.M. Meier-Menches, K. Cseh, S. Theiner, D. Wenisch, A. Schweikert, M.A. Jakupec, G. Koellensperger, A. Wernitznig, W. Sommergruber, B.K. Keppler, Plecstatin-1 induces an immunogenic cell death signature in colorectal tumour spheroids, *Metallomics*, 12 (2020) 2121-2133 doi: 10.1039/d0mt00227e
- [573] V. Tereshenko, I. Pashkunova-Martic, K. Manzano-Szalai, J. Friske, K.D. Bergmeister, C. Festin, M. Aman, L.A. Hruby, J. Klepetko, S. Theiner, M.H.M. Klose, B. Keppler, T.H. Helbich, O.C. Aszmann, MR Imaging of Peripheral Nerves Using Targeted Application of Contrast Agents: An Experimental Proof-of-Concept Study, *Frontiers in Medicine*, 7 (2020) 613138 doi: 10.3389/fmed.2020.613138
- [572] G.M.D.M. Rúbio, B.K. Keppler, J.M. Chin, M.R. Reithofer, Synthetically Versatile Nitrogen Acyclic Carbene Stabilized Gold Nanoparticles, *Chemistry - A European Journal*, 26 (2020) 15859-15862 doi: 10.1002/chem.202003679
- [571] P. Pirkwieser, J.A. López-López, M. Schagerl, W. Kandioller, B.K. Keppler, C. Moreno, F. Jirsa, Heavy Metal Extraction under Environmentally Relevant Conditions Using 3-Hydroxy-2-Naphthoate- Based Ionic Liquids: Extraction Capabilities vs. Acute Algal Toxicity, *Applied Sciences*, 10 (2020) 3157 doi: 10.3390/app10093157
- [570] B. Neuditschko, L. Niederstaetter, J. Brunmair, K. Krivanek, L. Janker, C. Gerner, S. Izraely, O. Sagi-Assif, I.P. Witz, T. Meshel, B. Keppler, F.G. Del, The challenge of classifying metastatic cell properties by molecular profiling exemplified with cutaneous melanoma cells and their cerebral metastasis from patient derived mouse xenografts, *Molecular & Cellular Proteomics*, 19 (2020) 478-489 doi: 10.1074/mcp.RA119.001886
- [569] S. Mokesch, K. Cseh, H. Geisler, M. Hejl, M.H.M. Klose, A. Roller, S.M. Meier-Menches, M.A. Jakupec, W. Kandioller, B.K. Keppler, Investigations on the anticancer potential of benzothiazole-based metallacycles, *Frontiers in Chemistry*, 8 (2020) 209 doi: 10.3389/fchem.2020.00209
- [568] J.P. Meszaros, H. Geisler, J.M. Poljarevic, A. Roller, M.S. Legina, M. Hejl, M.A. Jakupec, B.K. Keppler, W. Kandioller, E.A. Enyedy, Naphthoquinones of natural origin: Aqueous chemistry and coordination to half-sandwich organometallic cations, *Journal of Organometallic Chemistry*, 907 (2020) 121070 doi: 10.1016/j.jorgchem.2019.121070
- [567] M. Mathuber, H. Schueffl, O. Dömötör, C. Karthaler, É. Enyedy, P. Heffeter, B.K. Keppler, C.R. Kowol, Improving the Stability of EGFR Inhibitor Cobalt(III) Prodrugs, *Inorganic Chemistry*, 59 (2020) 17794-17810 doi: 10.1021/acs.inorgchem.0c03083
- [566] T. Ma, P. Yang, I. Dammann, Z. Lin, A.S. Mougharbel, M.X. Li, F. Adăscăliței, R. Mitea, C. Silvestru, C. Thorstenson, M.S. Ullrich, K. Cseh, M.A. Jakupec, B.K. Keppler, M. Donalizio, R. Cavalli, D. Lembo, U. Kortz, Tetra-(p-tolyl)antimony(III)-containing heteropolytungstates, $[(p\text{-tolyl})\text{Sb}(\text{III})_4(\text{A}-\alpha\text{-XW}_9\text{O}_{34})_2]^{n-}$ (X = P, As, or Ge): Synthesis, structure, and study of antibacterial and antitumor activity, *Inorganic Chemistry*, 59 (2020) 2978-2987 doi: 10.1021/acs.inorgchem.9b03322
- [565] M.S. Legina, J.J. Nogueira, W. Kandioller, M.A. Jakupec, L. González, B.K. Keppler, Biological evaluation of novel thiomaltol-based organometallic complexes as topoisomerase II α inhibitors, *Journal of Biological Inorganic Chemistry*, 25 (2020) 451-465 doi: 10.1007/s00775-020-01775-2
- [564] M. Lahnsteiner, A. Kastner, J. Mayr, A. Roller, B.K. Keppler, C.R. Kowol, Improving the Stability of Maleimide-Thiol Conjugation for Drug Targeting, *Chemistry - A European Journal*, 26 (2020) 15867-15870 doi: 10.1002/chem.202003951

- [563] O.V. Kuznetsova, G.M.D.M. Rubio, B.K. Keppler, J.M. Chin, M.R. Reithofer, A.R. Timerbaev, An ICP-MS-based assay for characterization of gold nanoparticles with potential biomedical use, *Analytical Biochemistry*, 611 (2020) 114003 doi: 10.1016/j.ab.2020.114003
- [562] S. Harringer, D. Wernitznig, N. Gajic, A. Diridl, D. Wenisch, M. Hejl, M.A. Jakupec, S. Theiner, G. Koellensperger, W. Kandioller, B.K. Keppler, Introducing: N-, P-, and S-donor leaving groups: An investigation of the chemical and biological properties of ruthenium, rhodium and iridium thiopyridone piano stool complexes, *Dalton Transactions*, 49 (2020) 15693-15711 doi: 10.1039/d0dt03165h
- [561] S. Harringer, M. Matzinger, N. Gajic, M. Hejl, M.A. Jakupec, W. Kandioller, B.K. Keppler, First insights into the novel class of organometallic compounds bearing a bidentate selenopyridone coordination motif: Synthesis, characterization, stability and biological investigations, *Inorganica Chimica Acta*, 513 (2020) 119919 doi: 10.1016/j.ica.2020.119919
- [560] S. Harringer, B. Happl, M. Ozenil, C. Kast, M. Hejl, D. Wernitznig, A.A. Legin, A. Schweikert, N. Gajic, A. Roller, G. Koellensperger, M.A. Jakupec, W. Kandioller, B.K. Keppler, Synthesis, modification, and biological evaluation of a library of novel water-soluble thiopyridone-based organometallic complexes and their unexpected (biological) behavior, *Chemistry - A European Journal*, 26 (2020) 5419-5433 doi: 10.1002/chem.201905546
- [559] S. Hager, V.F.S. Pape, V. Pósa, B. Montsch, L. Uhlik, G. Szakács, S. Tóth, N. Jabronka, B.K. Keppler, C.R. Kowol, E.A. Enyedy, P. Heffeter, High Copper Complex Stability and Slow Reduction Kinetics as Key Parameters for Improved Activity, Paraptosis Induction, and Impact on Drug-Resistant Cells of Anticancer Thiosemicarbazones, *Antioxidants and Redox Signaling*, 33 (2020) 395-414 doi: 10.1089/ars.2019.7854
- [558] H. Geisler, D. Wernitznig, M. Hejl, N. Gajic, M.A. Jakupec, W. Kandioller, B.K. Keppler, Novel phthiocol-based organometallics with tridentate coordination motif and their unexpected cytotoxic behaviour, *Dalton Transactions*, 49 (2020) 1393-1397 doi: 10.1039/c9dt04462k
- [557] L.S. Foteeva, O.V. Kuznetsova, B.K. Keppler, How versatile is the use of ultrafiltration to study biointeractions of therapeutic metallodrugs?, *Analytical Biochemistry*, 598 (2020) 113697 doi: 10.1016/j.ab.2020.113697
- [556] É.A. Enyedy, N.V. May, V.F.S. Pape, P. Heffeter, G. Szakács, B.K. Keppler, C.R. Kowol, Complex formation and cytotoxicity of Triapine derivatives: A comparative solution study on the effect of the chalcogen atom and NH-methylation, *Dalton Transactions*, 49 (2020) 16887-16902 doi: 10.1039/d0dt03465g
- [555] J.H. Bormio Nunes, S. Hager, M. Mathuber, V. Pósa, A. Roller, É.A. Enyedy, A. Stefanelli, W. Berger, B.K. Keppler, P. Heffeter, C.R. Kowol, Cancer Cell Resistance against the Clinically Investigated Thiosemicarbazone COTI-2 Is Based on Formation of Intracellular Copper Complex Glutathione Adducts and ABCC1-Mediated Efflux, *Journal of Medicinal Chemistry*, 63 (2020) 13719-13732 doi: 10.1021/acs.jmedchem.0c01277
- [554] B. Bielec, H. Schueffl, A. Terenzi, W. Berger, P. Heffeter, B.K. Keppler, C.R. Kowol, Development and biological investigations of hypoxia-sensitive prodrugs of the tyrosine kinase inhibitor crizotinib, *Bioorganic Chemistry*, 99 (2020) 103778 doi: 10.1016/j.bioorg.2020.103778
- [553] B. Bielec, I. Poetsch, E. Ahmed, P. Heffeter, B.K. Keppler, C.R. Kowol, Reactive oxygen species (ROS)-sensitive prodrugs of the tyrosine kinase inhibitor crizotinib, *Molecules*, 25 (2020) 1149 doi: 10.3390/molecules25051149
- [552] I. Berasaluce, K. Cseh, A. Roller, M. Hejl, P. Heffeter, W. Berger, M.A. Jakupec, W. Kandioller, B.K. Keppler, M.S. Malarek, The first anticancer tris(pyrazolyl)borate molybdenum(IV) complexes: tested in vitro and in vivo - a comparison of O,O-, S,O-, and N,N-chelate effects, *Chemistry - A European Journal*, 26 (2020) 2211-2221 doi: 10.1002/chem.201903605
- [551] A.M. Afanasenko, T.G. Chulkova, I.A. Boyarskaya, R.M. Islamova, A.A. Legin, B.K. Keppler, S.I. Selivanov, A.N. Vereshchagin, M.N. Elinson, M. Haukka, C,N-chelated diaminocarbene platinum(II) complexes derived from 3,4-diaryl-1H-pyrrol-2,5-diimines and cis-dichlorobis(isonitrile)platinum(II): Synthesis, cytotoxicity, and catalytic activity in hydrosilylation reactions, *Journal of Organometallic Chemistry*, 923 (2020) 121435 doi: 10.1016/j.jorganchem.2020.121435

- [550] D. Wernitznig, K. Kiakos, G. Del Favero, N. Harrer, H. Machat, A. Osswald, M.A. Jakupec, A. Wernitznig, W. Sommergruber, B.K. Keppler, First-in-class ruthenium anticancer drug (KP1339/IT-139) induces an immunogenic cell death signature in colorectal spheroids in vitro, *Metallomics*, 11 (2019) 1044-1048 doi: 10.1039/c9mt00051h
- [549] A. Terenzi, H. Gattuso, A. Spinello, B.K. Keppler, C. Chipot, F. Dehez, G. Barone, A. Monari, Targeting G-quadruplexes with organic dyes: chelerythrine-DNA binding elucidated by combining molecular modeling and optical spectroscopy, *Antioxidants*, 8 (2019) 472 doi: 10.3390/antiox8100472
- [548] M. Ruzs, E. Rampler, B.K. Keppler, M.A. Jakupec, G. Koellensperger, Single spheroid metabolomics: Optimizing sample preparation of three-dimensional multicellular tumor spheroids, *Metabolites*, 9 (2019) 304 doi: 10.3390/metabo9120304
- [547] C. Plessl, B.M. Gilbert, M.F. Sigmund, S. Theiner, A. Avenant-Oldewage, B.K. Keppler, F. Jirsa, Mercury, silver, selenium and other trace elements in three cyprinid fish species from the Vaal Dam, South Africa, including implications for fish consumers, *Science of the Total Environment*, 659 (2019) 1158-1167 doi: 10.1016/j.scitotenv.2018.12.442
- [546] S. Mokesch, D. Schwarz, M. Hejl, M.H.M. Klose, A. Roller, M.A. Jakupec, W. Kandiolle, B.K. Keppler, Fine-tuning the activation mode of an 1,3-indandione-based ruthenium(II)-cymene half-sandwich complex by variation of its leaving group, *Molecules*, 24 (2019) 2373 doi: 10.3390/molecules24132373
- [545] M. Matczuk, L. Ruzik, S.S. Aleksenko, B.K. Keppler, M. Jarosz, A.R. Timerbaev, Analytical methodology for studying cellular uptake, processing and localization of gold nanoparticles, *Analytica Chimica Acta*, 1052 (2019) 1-9 doi: 10.1016/j.aca.2018.10.027
- [544] O.V. Kuznetsova, I.S. Reshetnikova, S.N. Shtykov, V.K. Karandashev, B.K. Keppler, A.R. Timerbaev, A simple assay for probing transformations of superparamagnetic iron oxide nanoparticles in human serum, *Chemical Communications*, 55 (2019) 4270-4272 doi: 10.1039/c9cc01642b
- [543] J. Kruszewska, A. Kur, D. Kulpinska, I. Grabowska-Jadach, M. Matczuk, B.K. Keppler, A.R. Timerbaev, M. Jarosz, An improved protocol for ICP-MS-based assessment of the cellular uptake of metal-based nanoparticles, *Journal of Pharmaceutical and Biomedical Analysis*, 174 (2019) 300-304 doi: 10.1016/j.jpba.2019.06.006
- [542] R. Krachler, R. Krachler, A. Valda, B.K. Keppler, Natural iron fertilization of the coastal ocean by "blackwater rivers", *Science of the Total Environment*, 656 (2019) 952-958 doi: 10.1016/j.scitotenv.2018.11.423
- [541] A. Kastner, I. Poetsch, J. Mayr, J.V. Burda, A. Roller, P. Heffeter, B.K. Keppler, C.R. Kowol, A dogma in doubt: Hydrolysis of equatorial ligands of PtIV complexes under physiological conditions, *Angewandte Chemie - International Edition*, 58 (2019) 7464-7469 doi: 10.1002/anie.201900682
- [540] C. Karnthaler-Benbakka, B. Koblmüller, M. Mathuber, K. Holste, W. Berger, P. Heffeter, C.R. Kowol, B.K. Keppler, Synthesis, characterization and in vitro studies of a cathepsin B-cleavable prodrug of the VEGFR inhibitor sunitinib, *Chemistry & Biodiversity*, 16 (2019) e18005 doi: 10.1002/cbdv.201800520
- [539] S. Kallus, L. Uhlík, S. van Schoonhoven, K. Pelivan, W. Berger, E.A. Enyedy, T. Hofmann, P. Heffeter, C.R. Kowol, B.K. Keppler, Synthesis and biological evaluation of biotin-conjugated anticancer thiosemicarbazones and their iron(III) and copper(II) complexes, *Journal of Inorganic Biochemistry*, 190 (2019) 85-97 doi: 10.1016/j.jinorgbio.2018.10.006
- [538] D. Höfer, K. Cseh, M. Hejl, A. Roller, M.A. Jakupec, M. Galanski, B.K. Keppler, Synthesis, characterization, cytotoxic activity, and ¹⁹F NMR spectroscopic investigations of (OC-6-33)-diacetato(ethane-1,2-diamine)bis(3,3,3-trifluoropropanoato)platinum(IV) and its platinum(II) counterpart, *Inorganica Chimica Acta*, 490 (2019) 190-199 doi: 10.1016/j.ica.2019.02.017
- [537] S. Hizal, M. Hejl, C. Jungmann, M.A. Jakupec, M. Galanski, B.K. Keppler, Synthesis, characterization, cytotoxicity, and time-dependent NMR spectroscopic studies of (SP-4-3)-oxalato[(1R,2R,4R/1S,2S,4S)-(4-trifluoromethyl-cyclohexane-1,2-diamine)]platinum(II), *European Journal of Inorganic Chemistry*, 2019 (2019) 856-864 doi: 10.1002/ejic.201801370

- [536] S. Hizal, M. Hejl, M.A. Jakupec, M. Galanski, B.K. Keppler, Synthesis, characterization, lipophilicity and cytotoxic properties of novel bis(carboxylato)oxalatobis(1-propylamine)platinum(IV) complexes, *Inorganica Chimica Acta*, 491 (2019) 76-83 doi: 10.1016/j.ica.2019.03.036
- [535] P. Heffeter, V.F.S. Pape, E.A. Enyedy, B.K. Keppler, G. Szakacs, C.R. Kowol, Anticancer thiosemicarbazones: Chemical properties, interaction with iron metabolism, and resistance development, *Antioxidants & Redox Signaling*, 30 (2019) 1062-1082 doi: 10.1089/ars.2017.7487
- [534] L.A. Hager, S. Mokesch, C. Kieler, S. Alonso-de Castro, D. Baier, A. Roller, W. Kandioller, B.K. Keppler, W. Berger, L. Salassa, A. Terenzi, Ruthenium-arene complexes bearing naphthyl-substituted 1,3-dioxindan-2-carboxamides ligands for G-quadruplex DNA recognition, *Dalton Transactions*, 48 (2019) 12040-12049 doi: 10.1039/c9dt02078k
- [533] L. Galvez, M. Rusz, M. Schwaiger-Haber, Y. El Abiead, G. Hermann, U. Jungwirth, W. Berger, B.K. Keppler, M.A. Jakupec, G. Koellensperger, Preclinical studies on metal based anticancer drugs as enabled by integrated metallomics and metabolomics, *Metallomics*, 11 (2019) 1716-1728 doi: 10.1039/c9mt00141g
- [532] B. Englinger, C. Pirker, P. Heffeter, A. Terenzi, C.R. Kowol, B.K. Keppler, W. Berger, Metal drugs and the anticancer immune response, *Chemical Reviews*, 119 (2019) 1519-1624 doi: 10.1021/acs.chemrev.8b00396
- [531] A.E. Egger, G. Grabmann, C. Gollmann-Tepekoelyue, E.J. Pechriggl, C. Artner, A. Tuerkcan, C.G. Hartinger, H. Fritsch, B.K. Keppler, E. Brenner, M. Grimm, B. Messner, D. Bernhard, Chemical imaging and assessment of cadmium distribution in the human body, *Metallomics*, 11 (2019) 2010-2019 doi: 10.1039/c9mt00178f
- [530] C. Ducani, G. Bernardinelli, B. Hoegberg, B.K. Keppler, A. Terenzi, Interplay of three G-quadruplex units in the KIT promoter, *Journal of the American Chemical Society*, 141 (2019) 10205-10213 doi: 10.1021/jacs.8b12753
- [529] O. Domarco, C. Kieler, C. Pirker, C. Dinhof, B. Englinger, J.M. Reisecker, G. Timelthaler, M.D. Garcia, C. Peinador, B.K. Keppler, W. Berger, A. Terenzi, Subcellular duplex DNA and G-quadruplex interaction profiling of a hexagonal PtII metallacycle, *Angewandte Chemie - International Edition*, 58 (2019) 8007-8012 doi: 10.1002/anie.201900934
- [528] S. Theiner, M. Grabarics, L. Galvez, H.P. Varbanov, N.S. Sommerfeld, M. Galanski, B.K. Keppler, G. Koellensperger, The impact of whole human blood on the kinetic inertness of platinum(IV) prodrugs - an HPLC-ICP-MS study, *Dalton Transactions*, 47 (2018) 5252-5258 doi: 10.1039/c7dt04537a
- [527] W. Streciwilk, A. Terenzi, F. Lo Nardo, P. Prochnow, J.E. Bandow, B.K. Keppler, I. Ott, Synthesis and biological evaluation of organometallic complexes bearing bis-1,8-naphthalimide ligands, *European Journal of Inorganic Chemistry*, 2018 (2018) 3104-3112 doi: 10.1002/ejic.201800384
- [526] W. Streciwilk, A. Terenzi, X. Cheng, L. Hager, Y. Dabiri, P. Prochnow, J.E. Bandow, S. Woelfl, B.K. Keppler, I. Ott, Fluorescent organometallic rhodium(I) and ruthenium(II) metallodrugs with 4-ethylthio-1,8-naphthalimide ligands: Antiproliferative effects, cellular uptake and DNA-interaction, *European Journal of Medicinal Chemistry*, 156 (2018) 148-161 doi: 10.1016/j.ejmech.2018.06.056
- [525] C.A. Riedl, M. Hejl, M.H.M. Klose, A. Roller, M.A. Jakupec, W. Kandioller, B.K. Keppler, N- and S-donor leaving groups in triazole-based ruthena(II)cycles: Potent anticancer activity, selective activation, and mode of action studies, *Dalton Transactions*, 47 (2018) 4625-4638 doi: 10.1039/C8DT00449H
- [524] P. Pirkwieser, J.A. Lopez-Lopez, W. Kandioller, B.K. Keppler, C. Moreno, F. Jirsa, Solvent bar micro-extraction of heavy metals from natural water samples using 3-hydroxy-2-naphthoate-based ionic liquids, *Molecules*, 23 (2018) 3011/3011-3011/3014 doi: 10.3390/molecules23113011
- [523] P. Pirkwieser, W. Kandioller, B.K. Keppler, F. Jirsa, P. Pirkwieser, J.A. Lopez-Lopez, C. Moreno, F. Jirsa, Novel 3-hydroxy-2-naphthoate-based task-specific ionic liquids for an efficient extraction of heavy metals, *Frontiers in Chemistry*, 6 (2018) 172 doi: 10.3389/fchem.2018.00172
- [522] K. Pelivan, L.M. Frensemeier, U. Karst, G. Koellensperger, P. Heffeter, B.K. Keppler, C.R. Kowol, Comparison of metabolic pathways of different α -N-heterocyclic thiosemicarbazones, *Analytical and Bioanalytical Chemistry*, 410 (2018) 2343-2361 doi: 10.1007/s00216-018-0889-x

- [521] I. Pashkunova-Martic, B.C. Losantos, N. Kandler, B. Keppler, Studies of KP46 and KP1019 and the hydrolysis product of KP1019 in lipiodol emulsions: Preparation and initial characterizations as potential theragnostic agents, *Current Drug Delivery*, 15 (2018) 134-142 doi: 10.2174/1567201813666161220153702
- [520] A.A. Nazarov, M.-G. Mendoza-Ferri, M. Hanif, B.K. Keppler, P.J. Dyson, C.G. Hartinger, Understanding the interactions of diruthenium anticancer agents with amino acids, *Journal of Biological Inorganic Chemistry*, 23 (2018) 1159-1164 doi: 10.1007/s00775-018-1597-x
- [519] J.P. Meszaros, O. Dömötör, C.M. Hackl, A. Roller, B.K. Keppler, W. Kandioller, E.A. Enyedy, Structural and solution equilibrium studies on half-sandwich organorhodium complexes of (N,N) donor bidentate ligands, *New Journal of Chemistry*, 42 (2018) 11174-11184 doi: 10.1039/C8NJ01681J
- [518] S.M. Meier-Menches, C. Gerner, W. Berger, C.G. Hartinger, B.K. Keppler, Structure-activity relationships for ruthenium and osmium anticancer agents - towards clinical development, *Chemical Society Reviews*, 47 (2018) 909-928 doi: 10.1039/c7cs00332c
- [517] J.A. Lopez-Lopez, P. Pirkwieser, R. Leyma, W. Kandioller, R. Krachler, B.K. Keppler, F. Jirsa, C. Moreno, Solvent bar micro-extraction for greener application of task specific ionic liquids in multi-elemental extraction, *J Clean Prod*, 201 (2018) 22-27 doi: 10.1016/j.jclepro.2018.08.008
- [516] R. Krachler, R. Krachler, F. Guelce, B.K. Keppler, G. Wallner, Uranium concentrations in sediment pore waters of Lake Neusiedl, Austria, *Science of the Total Environment*, 633 (2018) 981-988 doi: 10.1016/j.scitotenv.2018.03.259
- [515] M.H.M. Klose, S. Theiner, H.P. Varbanov, D. Hoefler, V. Pichler, M. Galanski, S.M. Meier-Menches, B.K. Keppler, Development and validation of liquid chromatography-based methods to assess the lipophilicity of cytotoxic platinum(IV) complexes, *Inorganics*, 6 (2018) 130 doi: 10.3390/inorganics6040130
- [514] M.H.M. Klose, S. Theiner, C. Kornauth, S.M. Meier-Menches, P. Heffeter, W. Berger, G. Koellensperger, B.K. Keppler, Bioimaging of isosteric osmium and ruthenium anticancer agents by LA-ICP-MS, *Metallomics*, 10 (2018) 388-396 doi: 10.1039/C8MT00012C
- [513] M.H.M. Klose, A. Schoeberl, P. Heffeter, W. Berger, C.G. Hartinger, G. Koellensperger, S.M. Meier-Menches, B.K. Keppler, Serum-binding properties of isosteric ruthenium and osmium anticancer agents elucidated by SEC-ICP-MS, *Monatshefte für Chemie*, 149 (2018) 1719-1726 doi: 10.1007/s00706-018-2280-1
- [512] K. Kiakos, B. Englinger, S.K. Yanow, D. Wernitznig, M.A. Jakupec, W. Berger, B.K. Keppler, J.A. Hartley, M. Lee, P.C. Patil, Design, synthesis, nuclear localization, and biological activity of a fluorescent duocarmycin analog, HxTfA, *Bioorganic & Medicinal Chemistry Letters*, 28 (2018) 1342-1347 doi: 10.1016/j.bmcl.2018.03.016
- [511] W. Kandioller, M. Reikersdorfer, S. Theiner, A. Roller, M. Hejl, M.A. Jakupec, M.S. Malarek, B.K. Keppler, The impact of leaving group variation on the anticancer activity of molybdenocenes, *Organometallics*, 37 (2018) 3909-3916 doi: 10.1021/acs.organomet.8b00582
- [510] S. Kallus, B. Englinger, J. Senkiv, A. Laemmerer, P. Heffeter, W. Berger, C.R. Kowol, B.K. Keppler, Nanoformulations of anticancer FGFR inhibitors with improved therapeutic index, *Nanomedicine: Nanotechnology, Biology, and Medicine*, 14 (2018) 2632-2643 doi: 10.1016/j.nano.2018.08.001
- [509] T. Jakusch, K. Kozma, É.A. Enyedy, N.V. May, A. Roller, C.R. Kowol, B.K. Keppler, T. Kiss, Complexes of pyridoxal thiosemicarbazones formed with vanadium(IV/V) and copper(II): Solution equilibrium and structure, *Inorganica Chimica Acta*, 472 (2018) 243-253 doi: 10.1016/j.ica.2017.08.018
- [508] S. Hager, K. Korbula, B. Bielec, M. Grusch, C. Pirker, M. Schosserer, L. Liendl, M. Lang, J. Grillari, K. Nowikovsky, V.F.S. Pape, T. Mohr, G. Szakacs, B.K. Keppler, W. Berger, C.R. Kowol, P. Heffeter, The thiosemicarbazone Me₂NNMe₂ induces paraptosis by disrupting the ER thiol redox homeostasis based on protein disulfide isomerase inhibition, *Cell Death and Disease* 9(2018) 1-17 doi: 10.1038/s41419-018-1102-z
- [507] D. Groza, S. Gehrig, P. Kudela, M. Holcman, C. Pirker, C. Dinhof, H.H. Schueffl, M. Sramko, J. Hoebart, F. Alioglu, M. Grusch, M. Ogris, W. Lubitz, B.K. Keppler, I. Pashkunova-Martic, C.R. Kowol, M. Sibia, W. Berger, P. Heffeter, Bacterial ghosts as adjuvant to oxaliplatin chemotherapy in colorectal carcinomatosis, *Oncolmmunology*, 7 (2018) e1424676 doi: 10.1080/2162402x.2018.1424676

- [506] L. Galvez, S. Theiner, M. Grabarics, C.R. Kowol, B.K. Keppler, S. Hann, G. Koellensperger, Critical assessment of different methods for quantitative measurement of metallo-drug-protein associations, *Anal. Bioanal. Chem.*, 410 (2018) 7211-7220 doi: 10.1007/s00216-018-1328-8
- [505] L.M. Frensemeier, J. Mayr, G. Koellensperger, B.K. Keppler, C.R. Kowol, U. Karst, Structure elucidation and quantification of the reduction products of anticancer Pt(IV) prodrugs by electrochemistry/mass spectrometry (EC-MS), *Analyst*, 143 (2018) 1997-2001 doi: 10.1039/C8AN00258D
- [504] O. Dömötör, K. Pelivan, A. Borics, B.K. Keppler, C.R. Kowol, E.A. Enyedy, Comparative studies on the human serum albumin binding of the clinically approved EGFR inhibitors gefitinib, erlotinib, afatinib, osimertinib and the investigational inhibitor KP2187, *Journal of Pharmaceutical and Biomedical Analysis*, 154 (2018) 321-331 doi: 10.1016/j.jpba.2018.03.011
- [503] O. Dömötör, N.V. May, K. Pelivan, T. Kiss, B.K. Keppler, C.R. Kowol, É.A. Enyedy, A comparative study of α -N-pyridyl thiosemicarbazones: Spectroscopic properties, solution stability and copper(II) complexation, *Inorganica Chimica Acta*, 472 (2018) 264-275 doi: 10.1016/j.ica.2017.07.001
- [502] S. Carboni, A. Zucca, S. Stoccoro, L. Maiore, M. Arca, F. Ortu, C. Artner, B.K. Keppler, S.M. Meier-Menches, A. Casini, M.A. Cinellu, New variations on the theme of gold(III) CNN cyclometalated complexes as anticancer agents: Synthesis and biological characterization, *Inorganic Chemistry*, 57 (2018) 14852-14865 doi: 10.1021/acs.inorgchem.8b02604
- [501] R. Bonsignore, F. Russo, A. Terenzi, A. Spinello, A. Lauria, G. Gennaro, A.M. Almerico, B.K. Keppler, G. Barone, The interaction of Schiff base complexes of nickel(II) and zinc(II) with duplex and G-quadruplex DNA, *Journal of Inorganic Biochemistry*, 178 (2018) 106-114 doi: 10.1016/j.jinorgbio.2017.10.010
- [500] M.V. Babak, M. Pfaffeneder-Kmen, S.M. Meier-Menches, M.S. Legina, S. Theiner, C. Licon, C. Orvain, M. Hejl, M. Hanif, M.A. Jakupec, B.K. Keppler, C. Gaiddon, C.G. Hartinger, Rollover cyclometalated bipyridine platinum complexes as potent anticancer agents: Impact of the ancillary ligands on the mode of action, *Inorganic Chemistry*, 57 (2018) 2851-2864 doi: 10.1021/acs.inorgchem.7b03210
- [499] S. Alonso-de Castro, A. Terenzi, S. Hager, B. Englinger, A. Faraone, J.C. Martínez, M. Galanski, B.K. Keppler, W. Berger, L. Salassa, Biological activity of Pt(IV) prodrugs triggered by riboflavin-mediated bioorthogonal photocatalysis, *Scientific Reports*, 8 (2018) 17198 doi: 10.1038/s41598-018-35655-2
- [498] H.P. Varbanov, D. Ortiz, D. Hofer, L. Menin, M. Galanski, B.K. Keppler, P.J. Dyson, Oxaliplatin reacts with DMSO only in the presence of water, *Dalton Transactions*, 46 (2017) 8929-8932 doi: 10.1039/C7DT01628J
- [497] S. Theiner, S.J.M. Van Malderen, T. Van Acker, A. Legin, B.K. Keppler, F. Vanhaecke, G. Koellensperger, Fast high-resolution laser ablation-inductively coupled plasma mass spectrometry imaging of the distribution of platinum-based anticancer compounds in multicellular tumor spheroids, *Analytical Chemistry*, 89 (2017) 12641-12645 doi: 10.1021/acs.analchem.7b02681
- [496] G. Tamasi, A. Merlino, F. Scaletti, P. Heffeter, A.A. Legin, M.A. Jakupec, W. Berger, L. Messori, B.K. Keppler, R. Cini, {Ru(CO)(x)}-core complexes with benzimidazole ligands: Synthesis, X-ray structure and evaluation of anticancer activity in vivo, *Dalton Transactions*, 46 (2017) 3025-3040 doi: 10.1039/c6dt04295c
- [495] W. Streciwilk, A. Terenzi, R. Misgeld, C. Frias, P.G. Jones, A. Prokop, B.K. Keppler, I. Ott, Metal NHC complexes with naphthalimide ligands as DNA-interacting antiproliferative agents, *ChemMedChem*, 12 (2017) 214-225 doi: 10.1002/cmdc.201600557
- [494] N.S. Sommerfeld, D. Strohhofer, K. Cseh, S. Theiner, M.A. Jakupec, G. Koellensperger, M. Galanski, B.K. Keppler, Platinum(IV) complexes featuring axial Michael acceptor ligands - Synthesis, characterization, and cytotoxicity, *European Journal of Inorganic Chemistry*, (2017) 4049-4054 doi: 10.1002/ejic.201700753
- [493] N.S. Sommerfeld, M. Hejl, M.H.M. Klose, E. Schreiber-Brynzak, A. Bileck, S.M. Meier, C. Gerner, M.A. Jakupec, M. Galanski, B.K. Keppler, Low-generation polyamidoamine dendrimers as drug carriers for platinum(IV) complexes, *European Journal of Inorganic Chemistry*, (2017) 1713-1720 doi: 10.1002/ejic.201601205

- [492] N.S. Sommerfeld, J. Guelzow, A. Roller, K. Cseh, M.A. Jakupec, A. Grohmann, M. Galanski, B.K. Keppler, Antiproliferative copper(II) and platinum(II) complexes with bidentate N,N-donor ligands, *European Journal of Inorganic Chemistry*, 2017 (2017) 3115-3124 doi: 10.1002/ejic.201700416
- [491] B. Schoenhacker-Alte, T. Mohr, C. Pirker, K. Kryeziu, P.-S. Kuhn, A. Buck, T. Hofmann, C. Gerner, G. Hermann, G. Koellensperger, B.K. Keppler, W. Berger, P. Heffeter, Sensitivity towards the GRP78 inhibitor KP1339/IT-139 is characterized by apoptosis induction via caspase 8 upon disruption of ER homeostasis, *Cancer Letters*, 404 (2017) 79-88 doi: 10.1016/j.canlet.2017.07.009
- [490] C.A. Riedl, L.S. Flocke, M. Hejl, A. Roller, M.H.M. Klose, M.A. Jakupec, W. Kandioller, B.K. Keppler, Introducing the 4-phenyl-1,2,3-triazole moiety as a versatile scaffold for the development of cytotoxic ruthenium(II) and osmium(II) arene cyclometalates, *Inorganic Chemistry*, 56 (2017) 528-541 doi: 10.1021/acs.inorgchem.6b02430
- [489] C. Plessl, P. Jandrisits, R. Krachler, B.K. Keppler, F. Jirsa, Heavy metals in the mallard *Anas platyrhynchos* from eastern Austria, *Science of the Total Environment*, 580 (2017) 670-676 doi: 10.1016/j.scitotenv.2016.12.013
- [488] S. Platzer, R. Leyma, S. Wolske, W. Kandioller, E. Heid, C. Schroder, M. Schagerl, R. Krachler, F. Jirsa, B.K. Keppler, Thioglycolate-based task-specific ionic liquids: Metal extraction abilities vs acute algal toxicity, *Journal of Hazardous Materials*, 340 (2017) 113-119 doi: 10.1016/j.jhazmat.2017.06.053
- [487] S. Platzer, M. Kar, R. Leyma, S. Chib, A. Roller, F. Jirsa, R. Krachler, D.R. MacFarlane, W. Kandioller, B.K. Keppler, Task-specific thioglycolate ionic liquids for heavy metal extraction: Synthesis, extraction efficacies and recycling properties, *Journal of Hazardous Materials*, 324 (2017) 241-249 doi: 10.1016/j.jhazmat.2016.10.054
- [486] K. Pelivan, L. Frensemeier, U. Karst, G. Koellensperger, B. Bielec, S. Hager, P. Heffeter, B.K. Keppler, C.R. Kowol, Understanding the metabolism of the anticancer drug Triapine: electrochemical oxidation, microsomal incubation and in vivo analysis using LC-HRMS, *Analyst*, 142 (2017) 3165-3176 doi: 10.1039/c7an00902j
- [485] E. Orłowska, A. Roller, M. Pignitter, F. Jirsa, R. Krachler, W. Kandioller, B.K. Keppler, Synthetic iron complexes as models for natural iron-humic compounds: Synthesis, characterization and algal growth experiments, *Science of the Total Environment*, 577 (2017) 94-104 doi: 10.1016/j.scitotenv.2016.10.109
- [484] E. Orłowska, E.A. Enyedy, D. Pignitter, F. Jirsa, R. Krachler, W. Kandioller, B.K. Keppler, β -O-4 type dilignol compounds and their iron complexes for modeling of iron binding to humic acids: synthesis, characterization, electrochemical studies and algal growth experiments, *New Journal of Chemistry*, 41 (2017) 11546-11555 doi: 10.1039/c7nj02328f
- [483] Y.N. Nosova, I.V. Zenin, V.P. Maximova, E.M. Zhidkova, K.I. Kirsanov, E.A. Lesovaya, A.A. Lobas, M.V. Gorshkov, O.N. Kovaleva, E.R. Milaeva, M. Galanski, B.K. Keppler, A.A. Nazarov, Influence of the number of axial bexarotene ligands on the cytotoxicity of Pt(IV) analogs of oxaliplatin, *Bioinorganic Chemistry and Applications*, (2017) 4736321/4736321-4736321/4736326 doi: 10.1155/2017/4736321
- [482] Y.N. Nosova, L.S. Foteeva, I.V. Zenin, T.I. Fetisov, K.I. Kirsanov, M.G. Yakubovskaya, T.A. Antonenko, V.A. Tafeenko, L.A. Aslanov, A.A. Lobas, M.V. Gorshkov, M. Galanski, B.K. Keppler, A.R. Timerbaev, E.R. Milaeva, A.A. Nazarov, Enhancing the cytotoxic activity of anticancer Pt(IV) complexes by introduction of Ionidamine as an axial ligand, *European Journal of Inorganic Chemistry*, (2017) 1785-1791 doi: 10.1002/ejic.201600857
- [481] S.M. Meier, D. Kreutz, L. Winter, M.H.M. Klose, K. Cseh, T. Weiss, A. Bileck, B. Alte, J.C. Mader, S. Jana, A. Chatterjee, A. Bhattacharyya, M. Hejl, M.A. Jakupec, P. Heffeter, W. Berger, C.G. Hartinger, B.K. Keppler, G. Wiche, C. Gerner, An organoruthenium anticancer agent shows unexpected target selectivity for plectin, *Angewandte Chemie-International Edition*, 56 (2017) 8267-8271 doi: 10.1002/anie.201702242
- [480] J. Mayr, P. Heffeter, D. Groza, L. Galvez, G. Koellensperger, A. Roller, B. Alte, M. Haider, W. Berger, C.R. Kowol, B.K. Keppler, An albumin-based tumor-targeted oxaliplatin prodrug with distinctly improved anticancer activity in vivo, *Chemical Science*, 8 (2017) 2241-2250 doi: 10.1039/c6sc03862j
- [479] J. Mayr, S. Hager, B. Koblmüller, M.H.M. Klose, K. Holste, B. Fischer, K. Pelivan, W. Berger, P. Heffeter, C.R. Kowol, B.K. Keppler, EGFR-targeting peptide-coupled platinum(IV) complexes, *Journal of Biological Inorganic Chemistry*, 22 (2017) 591-603 doi: 10.1007/s00775-017-1450-7

- [478] R.F.S. Lee, S. Theiner, A. Meibom, G. Koellensperger, B.K. Keppler, P.J. Dyson, Application of imaging mass spectrometry approaches to facilitate metal-based anticancer drug research, *Metallomics*, 9 (2017) 365-381 doi: 10.1039/c6mt00231e
- [477] B. Kubista, T. Schoefl, L. Mayr, S. van Schoonhoven, P. Heffeter, R. Windhager, B.K. Keppler, W. Berger, Distinct activity of the bone-targeted gallium compound KP46 against osteosarcoma cells - synergism with autophagy inhibition, *Journal of Experimental & Clinical Cancer Research*, 36 (2017) 52 doi: 10.1186/s13046-017-0527-z
- [476] D. Kreutz, A. Bileck, K. Plessl, D. Wolrab, M. Groessl, B.K. Keppler, S.M. Meier, C. Gerner, Response profiling using shotgun proteomics enables global metallodrug mechanisms of action to be established, *Chemistry - A European Journal*, 23 (2017) 1881-1890 doi: 10.1002/chem.201604516
- [475] M.H.M. Klose, M. Hejl, P. Heffeter, M.A. Jakupec, S.M. Meier-Menches, W. Berger, B.K. Keppler, Post-digestion stabilization of osmium enables quantification by ICP-MS in cell culture and tissue, *Analyst*, 142 (2017) 2327-2332 doi: 10.1039/c7an00350a
- [474] D. Höfer, H.P. Varbanov, M. Hejl, M.A. Jakupec, A. Roller, M. Galanski, B.K. Keppler, Impact of the equatorial coordination sphere on the rate of reduction, lipophilicity and cytotoxic activity of platinum(IV) complexes, *Journal of Inorganic Biochemistry*, 174 (2017) 119-129 doi: 10.1016/j.jinorgbio.2017.06.005
- [473] D. Höfer, M. Galanski, B.K. Keppler, Synthesis, characterization, and time-dependent NMR spectroscopy studies of (SP-4-2)- [(trans-1R,2R/1S,2S-15N2)-cyclohexane-1,2-diamine] [(13C2)oxalato]platinum(II), *European Journal of Inorganic Chemistry*, 2017 (2017) 2347-2354 doi: 10.1002/ejic.201601503
- [472] M. Hanif, S.M. Meier, Z. Adhireksan, H. Henke, S. Martic, S. Movassaghi, M. Labib, W. Kandioller, S.M.F. Jamieson, M. Hejl, M.A. Jakupec, H.-B. Kraatz, C.A. Davey, B.K. Keppler, C.G. Hartinger, Functionalization of ruthenium(II)(η^6 -p-cymene)(3-hydroxy-2-pyridone) complexes with (thio)morpholine: Synthesis and bioanalytical studies, *ChemPlusChem*, 82 (2017) 841-847 doi: 10.1002/cplu.201700176
- [471] C.M. Hackl, B. Schoenhacker-Alte, M.H.M. Klose, H. Henke, M.S. Legina, M.A. Jakupec, W. Berger, B.K. Keppler, O. Bruggemann, I. Teasdale, P. Heffeter, W. Kandioller, Synthesis and in vivo anticancer evaluation of poly(organo) phosphazene-based metallodrug conjugates, *Dalton Transactions*, 46 (2017) 12114-12124 doi: 10.1039/c7dt01767g
- [470] S. Göschl, E. Schreiber-Brynzak, V. Pichler, K. Cseh, P. Heffeter, U. Jungwirth, M.A. Jakupec, W. Berger, B.K. Keppler, Comparative studies of oxaliplatin-based platinum(IV) complexes in different in vitro and in vivo tumor models, *Metallomics*, 9 (2017) 309-322 doi: 10.1039/c6mt00226a
- [469] B. Englinger, M. Mair, W. Miklos, C. Pirker, T. Mohr, S. van Schoonhoven, D. Lotsch, W. Korner, F. Ferk, S. Knasmüller, P. Heffeter, B.K. Keppler, M. Grusch, W. Berger, Loss of CUL4A expression is underlying cisplatin hypersensitivity in colorectal carcinoma cells with acquired trabectedin resistance, *British Journal of Cancer*, 116 (2017) 489-500 doi: 10.1038/bjc.2016.449
- [468] O. Dömötör, C.M. Hackl, K. Bali, A. Roller, M. Hejl, M.A. Jakupec, B.K. Keppler, W. Kandioller, E.A. Enyedy, Comparative equilibrium and structural studies of new pentamethylcyclopentadienyl rhodium complexes bearing (O, N) donor bidentate ligands, *Journal of Organometallic Chemistry*, 846 (2017) 287-295 doi: 10.1016/j.jorganchem.2017.06.027
- [467] O. Domarco, D. Lötsch, J. Schreiber, C. Dinhof, S. Van Schoonhoven, M.D. Garcia, C. Peinador, B.K. Keppler, W. Berger, A. Terenzi, Self-assembled Pt2L2 boxes strongly bind G-quadruplex DNA and influence gene expression in cancer cells, *Dalton Transactions*, 46 (2017) 329-332 doi: 10.1039/c6dt03876j
- [466] A.C. Conibear, S. Hager, J. Mayr, M.H.M. Klose, B.K. Keppler, C.R. Kowol, P. Heffeter, C.F.W. Becker, Multifunctional $\alpha\beta 6$ integrin-specific peptide-Pt(IV) conjugates for cancer cell targeting, *Bioconjugate Chemistry*, 28 (2017) 2429-2439 doi: 10.1021/acs.bioconjchem.7b00421
- [465] D.S. Bolotin, M.Y. Demakova, A.A. Legin, V.V. Suslonov, A.A. Nazarov, M.A. Jakupec, B.K. Keppler, V.Y. Kukushkin, Amidoxime platinum(II) complexes: pH-dependent highly selective generation and cytotoxic activity, *New Journal of Chemistry*, 41 (2017) 6840-6848 doi: 10.1039/c7nj00982h

- [464] A. Blazevic, A.A. Hummer, P. Heffeter, W. Berger, M. Filipits, G. Cibin, B.K. Keppler, A. Rompel, Electronic state of sodium trans-[tetrachloridobis(1H-indazole)ruthenate(III)] (NKP-1339) in tumor, liver and kidney tissue of a SW480-bearing mouse, *Scientific Reports*, 7 (2017) 40966 doi: 10.1038/srep40966
- [463] C. Artner, H.U. Holtkamp, W. Kandioller, C.G. Hartinger, S.M. Meier-Menches, B.K. Keppler, DNA or protein? Capillary zone electrophoresis-mass spectrometry rapidly elucidates metallodrug binding selectivity, *Chemical Communications*, 53 (2017) 8002-8005 doi: 10.1039/C7CC04582D
- [462] N. Wilfinger, S. Austin, B. Scheiber-Mojdekar, W. Berger, S. Reipert, M. Praschberger, J. Paur, R. Trondl, B.K. Keppler, C.C. Zielinski, K. Nowikovskiy, Novel p53-dependent anticancer strategy by targeting iron signaling and BNIP3L-induced mitophagy, *Oncotarget*, 7 (2016) 1242-1261 doi: 10.18632/oncotarget.6233
- [461] S. Theiner, E. Schreiber-Brynzak, M.A. Jakupec, M. Galanski, G. Koellensperger, B.K. Keppler, LA-ICP-MS imaging in multicellular tumor spheroids - a novel tool in the preclinical development of metal-based anticancer drugs, *Metallomics*, 8 (2016) 398-402 doi: 10.1039/c5mt00276a
- [460] A. Terenzi, C. Pirker, B.K. Keppler, W. Berger, Anticancer metal drugs and immunogenic cell death, *Journal of Inorganic Biochemistry*, 165 (2016) 71-79 doi: 10.1016/j.jinorgbio.2016.06.021
- [459] A. Terenzi, D. Lotsch, S. van Schoonhoven, A. Roller, C.R. Kowol, W. Berger, B.K. Keppler, G. Barone, Another step toward DNA selective targeting: NiII and CuII complexes of a Schiff base ligand able to bind gene promoter G-quadruplexes, *Dalton Transactions*, 45 (2016) 7758-7767 doi: 10.1039/c6dt00648e
- [458] A. Spinello, R. Bonsignore, G. Barone, B.K. Keppler, A. Terenzi, Metal ions and metal complexes in Alzheimer's disease, *Current Pharmaceutical Design*, 22 (2016) 3996-4010 doi: 10.2174/1381612822666160520115248
- [457] E. Schreiber-Brynzak, V. Pichler, P. Heffeter, B. Hanson, S. Theiner, I. Lichtscheidl-Schultz, C. Kornauth, L. Bamonti, V. Dhery, D. Groza, D. Berry, W. Berger, M. Galanski, M.A. Jakupec, B.K. Keppler, Behavior of platinum(IV) complexes in models of tumor hypoxia: Cytotoxicity, compound distribution and accumulation, *Metallomics*, 8 (2016) 422-433 doi: 10.1039/c5mt00312a
- [456] M. Schmidlehner, L.S. Flocke, A. Roller, M. Hejl, M.A. Jakupec, W. Kandioller, B.K. Keppler, Cytotoxicity and preliminary mode of action studies of novel 2-aryl-4-thiopyrone-based organometallics, *Dalton Transactions*, 45 (2016) 724-733 doi: 10.1039/c5dt02722e
- [455] K. Pelivan, W. Miklos, S. van Schoonhoven, G. Koellensperger, L. Gille, W. Berger, P. Heffeter, C.R. Kowol, B.K. Keppler, Differences in protein binding and excretion of triapine and its Fe(III) complex, *Journal of Inorganic Biochemistry*, 160 (2016) 61-69 doi: 10.1016/j.jinorgbio.2015.10.006
- [454] E. Orlowska, A. Roller, H. Wiesinger, M. Pignitter, F. Jirsa, R. Krachler, W. Kandioller, B.K. Keppler, Benzoic hydroxamate-based iron complexes as model compounds for humic substances: synthesis, characterization and algal growth experiments, *RSC Advances*, 6 (2016) 40238-40249 doi: 10.1039/c5ra25256c
- [453] M.S. Novak, G.E. Buchel, B.K. Keppler, M.A. Jakupec, Biological properties of novel ruthenium- and osmium-nitrosyl complexes withazole heterocycles, *Journal of Biological Inorganic Chemistry*, 21 (2016) 347-356 doi: 10.1007/s00775-016-1345-z
- [452] W. Miklos, P. Heffeter, C. Pirker, S. Hager, C.R. Kowol, S. van Schoonhoven, M. Stojanovic, B.K. Keppler, W. Berger, Loss of phosphodiesterase 4D mediates acquired triapine resistance via Epac-Rap1-Integrin signaling, *Oncotarget*, 7 (2016) 84556-84574 doi: 10.18632/oncotarget.11821
- [451] S.M. Meier, C. Gerner, B.K. Keppler, M.A. Cinellu, A. Casini, Mass spectrometry uncovers molecular reactivities of coordination and organometallic gold(III) drug candidates in competitive experiments that correlate with their biological effects, *Inorganic Chemistry*, 55 (2016) 4248-4259 doi: 10.1021/acs.inorgchem.5b03000
- [450] R. Leyma, S. Platzer, F. Jirsa, W. Kandioller, R. Krachler, B.K. Keppler, Novel thiosalicylate-based ionic liquids for heavy metal extractions, *Journal of Hazardous Materials*, 314 (2016) 164-171 doi: 10.1016/j.jhazmat.2016.04.038
- [449] A.A. Legin, S. Theiner, A. Schintlmeister, S. Reipert, P. Heffeter, M.A. Jakupec, J. Mayr, H.P. Varbanov, C.R. Kowol, M. Galanski, W. Berger, M. Wagner, B.K. Keppler, Multi-scale imaging of anticancer platinum(IV) compounds in murine tumor and kidney, *Chemical Science*, 7 (2016) 3052-3061 doi: 10.1039/c5sc04383b

- [448] A. Kurzwernhart, S. Mokesch, E. Klapproth, M.S. Adib-Ravazi, M.A. Jakupec, C.G. Hartinger, W. Kandioller, B.K. Keppler, Flavonoid-based organometallics with different metal centers - Investigations of the effects on reactivity and cytotoxicity, *European Journal of Inorganic Chemistry*, (2016) 240-246 doi: 10.1002/ejic.201501020
- [447] M. Kubanik, W. Kandioller, K. Kim, R.F. Anderson, E. Klapproth, M.A. Jakupec, A. Roller, T. Sohnel, B.K. Keppler, C.G. Hartinger, Towards targeting anticancer drugs: Ruthenium(II)-arene complexes with biologically active naphthoquinone-derived ligand systems, *Dalton Transactions*, 45 (2016) 13091-13103 doi: 10.1039/c6dt01110a
- [446] R. Krachler, R.F. Krachler, G. Wallner, P. Steier, Y. El Abiead, H. Wiesinger, F. Jirsa, B.K. Keppler, Sphagnum-dominated bog systems are highly effective yet variable sources of bio-available iron to marine waters, *Science of the Total Environment*, 556 (2016) 53-62 doi: 10.1016/j.scitotenv.2016.03.012
- [445] C.R. Kowol, W. Miklos, S. Pfaff, S. Hager, S. Kallus, K. Pelivan, M. Kubanik, E.A. Enyedy, W. Berger, P. Heffeter, B.K. Keppler, Impact of stepwise NH₂-methylation of triapine on the physicochemical properties, anticancer activity, and resistance circumvention, *Journal of Medicinal Chemistry*, 59 (2016) 6739-6752 doi: 10.1021/acs.jmedchem.6b00342
- [444] G. Koellensperger, M. Galanski, B.K. Keppler, S. Hann, Turbulent flow chromatography in combination with HPLC-ICP-MS for high-throughput analysis of free, intact metal based drugs in biomedical samples, *Journal of Analytical Atomic Spectrometry*, 31 (2016) 1811-1817 doi: 10.1039/c6ja00108d
- [443] C. Karnthaler-Benbakka, D. Groza, B. Koblmüller, A. Terenzi, K. Holste, M. Haider, D. Baier, W. Berger, P. Heffeter, C.R. Kowol, B.K. Keppler, Targeting a targeted drug: An approach toward hypoxia-activatable tyrosine kinase inhibitor prodrugs, *ChemMedChem*, 11 (2016) 2410-2421 doi: 10.1002/cmdc.201600417
- [442] H. Henke, K. Kryeziu, J. Banfic, S. Theiner, W. Korner, O. Bruggemann, W. Berger, B.K. Keppler, P. Heffeter, I. Teasdale, Macromolecular Pt(IV) prodrugs from poly(organo)phosphazenes, *Macromolecular Bioscience*, 16 (2016) 1239-1249 doi: 10.1002/mabi.201600035
- [441] C.M. Hackl, M.S. Legina, V. Pichler, M. Schmidlehner, A. Roller, O. Dömötör, E.A. Enyedy, M.A. Jakupec, W. Kandioller, B.K. Keppler, Thiomaltol-based organometallic complexes with 1-methylimidazole as leaving group: Synthesis, stability, and biological behavior, *Chemistry - A European Journal*, 22 (2016) 17269-17281 doi: 10.1002/chem.201603206
- [440] S. Göschl, H.P. Varbanov, S. Theiner, M.A. Jakupec, M. Galanski, B.K. Keppler, The role of the equatorial ligands for the redox behavior, mode of cellular accumulation and cytotoxicity of platinum(IV) prodrugs, *Journal of Inorganic Biochemistry*, 160 (2016) 264-274 doi: 10.1016/j.jinorgbio.2016.03.005
- [439] K.B. Garbutcheon-Singh, M. Galanski, B.K. Keppler, J.R. Aldrich-Wright, Synthesis, characterisation and cytotoxicity of [(1,10-phenanthroline) (1R,2R,4R/1S,2S,4S)-4-methyl-1,2-cyclohexanediamine]platinum(II)]²⁺ (PHEN-4-MeDACH), *Inorganica Chimica Acta*, 441 (2016) 152-156 doi: 10.1016/j.ica.2015.10.048
- [438] L.S. Flocke, R. Trondl, M.A. Jakupec, B.K. Keppler, Molecular mode of action of NKP-1339-a clinically investigated ruthenium-based drug - involves ER- and ROS-related effects in colon carcinoma cell lines, *Investigational New Drugs*, 34 (2016) 261-268 doi: 10.1007/s10637-016-0337-8
- [437] B. Fischer, K. Kryeziu, S. Kallus, P. Heffeter, W. Berger, C.R. Kowol, B.K. Keppler, Nanoformulations of anticancer thiosemicarbazones to reduce methemoglobin formation and improve anticancer activity, *RSC Advances*, 6 (2016) 55848-55859 doi: 10.1039/c6ra07659a
- [436] A.K. Bytzek, G. Koellensperger, B.K. Keppler, C.G. Hartinger, Biodistribution of the novel anticancer drug sodium trans-[tetrachloridobis(1H-indazole)ruthenate(III)] KP-1339/IT139 in nude BALB/c mice and implications on its mode of action, *Journal of Inorganic Biochemistry*, 160 (2016) 250-255 doi: 10.1016/j.jinorgbio.2016.02.037
- [435] R. Bonsignore, A. Terenzi, A. Spinello, A. Martorana, A. Lauria, A.M. Almerico, B.K. Keppler, G. Barone, G-quadruplex vs. duplex-DNA binding of nickel(II) and zinc(II) Schiff base complexes, *Journal of Inorganic Biochemistry*, 161 (2016) 115-121 doi: 10.1016/j.jinorgbio.2016.05.010

- [434] R. Bonsignore, A. Notaro, A.M.P. Salvo, A. Spinello, G. Fiasconaro, A. Terenzi, F. Giacalone, B.K. Keppler, M. Giuliano, M. Gruttadauria, G. Barone, DNA-binding and anticancer activity of pyrene-imidazolium derivatives, *ChemistrySelect*, 1 (2016) 6755-6761 doi: 10.1002/slct.201601502
- [433] A. Blazevic, E. Orlowska, W. Kandioller, F. Jirsa, B.K. Keppler, M. Tafili-Kryeziu, W. Linert, R.F. Krachler, R. Krachler, A. Rompel, Photoreduction of terrigenous Fe-humic substances leads to bioavailable iron in oceans, *Angewandte Chemie-International Edition*, 55 (2016) 6417-6422 doi: 10.1002/anie.201600852
- [432] A. Bijelic, S. Theiner, B.K. Keppler, A. Rompel, X-ray structure analysis of indazolium trans-[tetrachlorobis(1H-indazole)ruthenate(III)] (KP1019) bound to human serum albumin reveals two ruthenium binding sites and provides insights into the drug binding mechanism, *Journal of Medicinal Chemistry*, 59 (2016) 5894-5903 doi: 10.1021/acs.jmedchem.6b00600
- [431] L. Bamonti, S. Theiner, N. Rohr-Udilova, B.K. Keppler, G. Koellensperger, Accurate high throughput quantification of selenium in biological samples - the potential of combining isotope dilution ICP-tandem mass spectrometry with flow injection, *Journal of Analytical Atomic Spectrometry*, 31 (2016) 2227-2232 doi: 10.1039/c6ja00209a
- [430] A. Türkcan, B. Scharinger, G. Grabmann, B.K. Keppler, G. Laufer, D. Bernhard, B. Messner, Combination of cadmium and high cholesterol levels as a risk factor for heart fibrosis, *Toxicological Sciences*, 145 (2015) 360-371 doi: 10.1093/toxsci/kfv057
- [429] S. Theiner, H.P. Varbanov, M. Galanski, A.E. Egger, W. Berger, P. Heffeter, B.K. Keppler, Comparative in vitro and in vivo pharmacological investigation of platinum(IV) complexes as novel anticancer drug candidates for oral application, *Journal of Biological Inorganic Chemistry*, 20 (2015) 89-99 doi: 10.1007/s00775-014-1214-6
- [428] S. Theiner, C. Kornauth, H.P. Varbanov, M. Galanski, S. Van Schoonhoven, P. Heffeter, W. Berger, A.E. Egger, B.K. Keppler, Tumor microenvironment in focus: LA-ICP-MS bioimaging of a preclinical tumor model upon treatment with platinum(IV)-based anticancer agents, *Metallomics*, 7 (2015) 1256-1264 doi: 10.1039/c5mt00028a
- [427] E. Schreiber-Brynzak, E. Klapproth, C. Unger, I. Lichtscheidl-Schultz, S. Göschl, S. Schweighofer, R. Trondl, H. Dolznig, M.A. Jakupec, B.K. Keppler, Three-dimensional and co-culture models for preclinical evaluation of metal-based anticancer drugs, *Investigational New Drugs*, 33 (2015) 835-847 doi: 10.1007/s10637-015-0260-4
- [426] M. Schmidlehner, V. Pichler, A. Roller, M.A. Jakupec, W. Kandioller, B.K. Keppler, Organometallic complexes of (thio)allomaltol-based Mannich-products: Synthesis, stability and preliminary biological investigations, *Journal of Organometallic Chemistry*, 782 (2015) 69-76 doi: 10.1016/j.jorganchem.2014.10.044
- [425] S. Platzer, O. Sap, R. Leyma, G. Wallner, F. Jirsa, W. Kandioller, R. Krachler, B.K. Keppler, Extraction of natural radionuclides from aqueous solutions by novel maltolate-based task-specific ionic liquids, *Journal of Radioanalytical and Nuclear Chemistry*, 303 (2015) 2483-2488 doi: 10.1007/s10967-014-3782-x
- [424] V. Pichler, S. Göschl, E. Schreiber-Brynzak, M.A. Jakupec, M. Galanski, B.K. Keppler, Influence of reducing agents on the cytotoxic activity of platinum(IV) complexes: induction of G2/M arrest, apoptosis and oxidative stress in A2780 and cisplatin resistant A2780cis cell lines, *Metallomics*, 7 (2015) 1078-1090 doi: 10.1039/c5mt00116a
- [423] L. Oehninger, S. Spreckelmeyer, P. Holenya, S.M. Meier, S. Can, H. Alborzina, J. Schur, B.K. Keppler, S. Wolf, I. Ott, Rhodium(I) N-heterocyclic carbene bioorganometallics as in vitro antiproliferative agents with distinct effects on cellular signaling, *Journal of Medicinal Chemistry*, 58 (2015) 9591-9600 doi: 10.1021/acs.jmedchem.5b01159
- [422] S. Mokesch, M.S. Novak, A. Roller, M.A. Jakupec, W. Kandioller, B.K. Keppler, 1,3-dioxindan-2-carboxamides as bioactive ligand scaffolds for the development of novel organometallic anticancer drugs, *Organometallics*, 34 (2015) 848-857 doi: 10.1021/om501032s
- [421] W. Miklos, K. Pelivan, C.R. Kowol, C. Pirker, R. Dornetshuber-Fleiss, M. Spitzwieser, B. Englinger, S. van Schoonhoven, M. Cichna-Markl, G. Koellensperger, B.K. Keppler, W. Berger, P. Heffeter, Triapine-mediated ABCB1 induction via PKC induces widespread therapy unresponsiveness but is not underlying acquired triapine resistance, *Cancer Letters*, 361 (2015) 112-120 doi: 10.1016/j.canlet.2015.02.049

- [420] M. Matczuk, K. Anecka, F. Scaletti, L. Messori, B.K. Keppler, A.R. Timerbaev, M. Jarosz, Speciation of metal-based nanomaterials in human serum characterized by capillary electrophoresis coupled to ICP-MS: A case study of gold nanoparticles, *Metallomics*, 7 (2015) 1364-1370 doi: 10.1039/c5mt00109a
- [419] P.S. Kuhn, V. Pichler, A. Roller, M. Hejl, M.A. Jakupec, W. Kandioller, B.K. Keppler, Improved reaction conditions for the synthesis of new NKP-1339 derivatives and preliminary investigations on their anticancer potential, *Dalton Transactions*, 44 (2015) 659-668 doi: 10.1039/c4dt01645a
- [418] M. Kubanik, K.Y. Tu Jason, T. Söhnel, M. Hejl, A. Jakupec Michael, W. Kandioller, B.K. Keppler, G. Hartinger Christian, Expanding on the structural diversity of flavone-derived rutheniumII(η^6 -arene) anticancer agents, *Metallodrugs*, 1 (2015) 24 doi: 10.1515/medr-2015-0001
- [417] R. Krachler, R.F. Krachler, G. Wallner, S. Hann, M. Laux, M.F.C. Recalde, F. Jirsa, E. Neubauer, F. von der Kammer, T. Hofmann, B.K. Keppler, River-derived humic substances as iron chelators in seawater, *Marine Chemistry*, 174 (2015) 85-93 doi: 10.1016/j.marchem.2015.05.009
- [416] C.R. Kowol, N.V. Nagy, T. Jakusch, A. Roller, P. Heffeter, B.K. Keppler, E.A. Enyedy, Vanadium(IV/V) complexes of triapine and related thiosemicarbazones: Synthesis, solution equilibrium and bioactivity, *Journal of Inorganic Biochemistry*, 152 (2015) 62-73 doi: 10.1016/j.jinorgbio.2015.08.023
- [415] W. Kandioller, M. Kubanik, A.K. Bytzek, M.A. Jakupec, A. Roller, B.K. Keppler, C.G. Hartinger, The rearrangement of tosylated flavones to 1'-(alkylamino)aurones with primary amines, *Tetrahedron*, 71 (2015) 8953-8959 doi: 10.1016/j.tet.2015.09.062
- [414] B.R. Hoffmeister, M. Hejl, M.A. Jakupec, M. Galanski, B.K. Keppler, Bis- and tris(carboxylato)platinum(IV) complexes with mixed am(m)ine ligands in the trans position exhibiting exceptionally high cytotoxicity, *European Journal of Inorganic Chemistry*, (2015) 1700-1708 doi: 10.1002/ejic.201403226
- [413] B.R. Hoffmeister, M. Hejl, M.S. Adib-Razavi, M.A. Jakupec, M. Galanski, B.K. Keppler, Bis- and tetrakis(carboxylato)platinum(IV) complexes with mixed axial ligands - synthesis, characterization, and cytotoxicity, *Chemistry & Biodiversity*, 12 (2015) 559-574 doi: 10.1002/cbdv.201400291
- [412] D. Höfer, H.P. Varbanov, A. Legin, M.A. Jakupec, A. Roller, M. Galanski, B.K. Keppler, Tetracarboxylatoplatinum(IV) complexes featuring monodentate leaving groups - A rational approach toward exploiting the platinum(IV) prodrug strategy, *Journal of Inorganic Biochemistry*, 153 (2015) 259-271 doi: 10.1016/j.jinorgbio.2015.08.018
- [411] L. Habala, C. Bartel, G. Giester, M.A. Jakupec, B.K. Keppler, A. Rompel, Complexes of N-hydroxyethyl-N-benzimidazolylmethylethylenediaminediacetic acid with group 12 metals and vanadium - synthesis, structure and bioactivity of the vanadium complex, *Journal of Inorganic Biochemistry*, 147 (2015) 147-152 doi: 10.1016/j.jinorgbio.2015.04.004
- [410] E.A. Enyedy, J.P. Meszaros, O. Dömötör, C.M. Hackl, A. Roller, B.K. Keppler, W. Kandioller, Comparative solution equilibrium studies on pentamethylcyclopentadienyl rhodium complexes of 2,2'-bipyridine and ethylenediamine and their interaction with human serum albumin, *Journal of Inorganic Biochemistry*, 152 (2015) 93-103 doi: 10.1016/j.jinorgbio.2015.08.025
- [409] E.A. Enyedy, O. Dömötör, C.M. Hackl, A. Roller, M.S. Novak, M.A. Jakupec, B.K. Keppler, W. Kandioller, Solution equilibria and antitumor activities of pentamethylcyclopentadienyl rhodium complexes of picolinic acid and deferiprone, *Journal of Coordination Chemistry*, 68 (2015) 1583-1601 doi: 10.1080/00958972.2015.1023195
- [408] E.A. Enyedy, O. Dömötör, K. Bali, A. Hetenyi, T. Tuccinardi, B.K. Keppler, Interaction of the anticancer gallium(III) complexes of 8-hydroxyquinoline and maltol with human serum proteins, *Journal of Biological Inorganic Chemistry*, 20 (2015) 77-88 doi: 10.1007/s00775-014-1211-9
- [407] A.E. Egger, C. Kornauth, W. Haslik, S. Hann, S. Theiner, G. Bayer, C.G. Hartinger, B.K. Keppler, U. Pluschnigh, R.M. Mader, Extravasation of Pt-based chemotherapeutics - bioimaging of their distribution in resectates using laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS), *Metallomics*, 7 (2015) 508-515 doi: 10.1039/c4mt00308j

- [406] M.V. Babak, D. Plazuk, S.M. Meier, H.J. Arabshahi, J. Reynisson, B. Rychlik, A. Blauz, K. Szulc, M. Hanif, S. Strobl, A. Roller, B.K. Keppler, C.G. Hartinger, Half-sandwich ruthenium(II) biotin conjugates as biological vectors to cancer cells, *Chemistry - A European Journal*, 21 (2015) 5110-5117 doi: 10.1002/chem.201403974
- [405] M.V. Babak, S.M. Meier, K.V.M. Huber, J. Reynisson, A.A. Legin, M.A. Jakupec, A. Roller, A. Stukalov, M. Gridling, K.L. Bennett, J. Colinge, W. Berger, P.J. Dyson, G. Superti-Furga, B.K. Keppler, C.G. Hartinger, Target profiling of an antimetastatic RAPTA agent by chemical proteomics: relevance to the mode of action, *Chemical Science*, 6 (2015) 2449-2456 doi: 10.1039/c4sc03905j
- [404] H.P. Varbanov, S. Göschl, P. Heffeter, S. Theiner, A. Roller, F. Jensen, M.A. Jakupec, W. Berger, M. Galanski, B.K. Keppler, A novel class of bis- and tris-chelate diam(m)inebis(dicarboxylato)platinum(IV) complexes as potential anticancer prodrugs, *Journal of Medicinal Chemistry*, 57 (2014) 6751-6764 doi: 10.1021/jm500791c
- [403] R. Trondl, P. Heffeter, C.R. Kowol, M.A. Jakupec, W. Berger, B.K. Keppler, NKP-1339, the first ruthenium-based anticancer drug on the edge to clinical application, *Chemical Science*, 5 (2014) 2925-2932 doi: 10.1039/c3sc53243g
- [402] R. Trondl, L.S. Flocke, C.R. Kowol, P. Heffeter, U. Jungwirth, G.E. Mair, R. Steinborn, E.A. Enyedy, M.A. Jakupec, W. Berger, B.K. Keppler, Triapine and a more potent dimethyl derivative induce endoplasmic reticulum stress in cancer cells, *Molecular Pharmacology*, 85 (2014) 451-459 doi: 10.1124/mol.113.090605
- [401] G. Tamasi, A. Carpini, D. Valensin, L. Messori, A. Pratesi, F. Scaletti, M. Jakupec, B. Keppler, R. Cini, {Ru(CO)_x}-core complexes with selected azoles: Synthesis, X-ray structure, spectroscopy, DFT analysis and evaluation of cytotoxic activity against human cancer cells, *Polyhedron*, 81 (2014) 227-237 doi: 10.1016/j.poly.2014.05.067
- [400] E. Sija, C.G. Hartinger, B.K. Keppler, T. Kiss, E.A. Enyedy, Solution equilibrium studies of anticancer ruthenium(II)- η^6 -p-cymene complexes of pyridinecarboxylic acids, *Polyhedron*, 67 (2014) 51-58 doi: 10.1016/j.poly.2013.08.057
- [399] M. Schmidlehner, P.S. Kuhn, C.M. Hackl, A. Roller, W. Kandioller, B.K. Keppler, Microwave-assisted synthesis of N-heterocycle-based organometallics, *Journal of Organometallic Chemistry*, 772 (2014) 93-99 doi: 10.1016/j.jorganchem.2014.08.013
- [398] K. Ossipov, Y.Y. Scaffidi-Domianello, I.F. Seregina, M. Galanski, B.K. Keppler, A.R. Timerbaev, M.A. Bolshov, Inductively coupled plasma mass spectrometry for metallodrug development: Albumin binding and serum distribution of cytotoxic cis- and trans-isomeric platinum(II) complexes, *Journal of Inorganic Biochemistry*, 137 (2014) 40-45 doi: 10.1016/j.jinorgbio.2014.04.008
- [397] S.M. Meier, M.S. Novak, W. Kandioller, M.A. Jakupec, A. Roller, B.K. Keppler, C.G. Hartinger, Aqueous chemistry and antiproliferative activity of a pyrone-based phosphoramidate Ru(arene) anticancer agent, *Dalton Transactions*, 43 (2014) 9851-9855 doi: 10.1039/c4dt00569d
- [396] S.M. Meier, M.V. Babak, B.K. Keppler, C.G. Hartinger, Efficiently Detecting Metallodrug-Protein Adducts: Ion Trap versus Time-of-Flight Mass Analyzers, *ChemMedChem*, 9 (2014) 1351-1355 doi: 10.1002/cmdc.201400020
- [395] M. Matczuk, L.S. Foteeva, M. Jarosz, M. Galanski, B.K. Keppler, T. Hirokawa, A.R. Timerbaev, Can neutral analytes be concentrated by transient isotachopheresis in micellar electrokinetic chromatography and how much?, *Journal of Chromatography A*, 1345 (2014) 212-218 doi: 10.1016/j.chroma.2014.04.022
- [394] A. Martincic, R. Milacic, J. Vidmar, I. Turel, B.K. Keppler, J. Scancar, New method for the speciation of ruthenium-based chemotherapeutics in human serum by conjoint liquid chromatography on affinity and anion-exchange monolithic disks, *Journal of Chromatography A*, 1371 (2014) 168-176 doi: 10.1016/j.chroma.2014.10.054
- [393] A.A. Legin, A. Schintlmeister, M.A. Jakupec, M. Galanski, I. Lichtscheidl, M. Wagner, B.K. Keppler, NanoSIMS combined with fluorescence microscopy as a tool for subcellular imaging of isotopically labeled platinum-based anticancer drugs, *Chemical Science*, 5 (2014) 3135-3143 doi: 10.1039/c3sc53426j
- [392] A.A. Legin, M.A. Jakupec, N.A. Bokach, M.R. Tyan, V.Y. Kukushkin, B.K. Keppler, Guanidine platinum(II) complexes: Synthesis, in vitro antitumor activity, and DNA interactions, *Journal of Inorganic Biochemistry*, 133 (2014) 33-39 doi: 10.1016/j.jinorgbio.2013.12.007

- [391] U. Jungwirth, J. Gojo, T. Tuder, G. Walko, M. Holcman, T. Schofl, K. Nowikovskiy, N. Wilfinger, S. Schoonhoven, C.R. Kowol, R. Lemmens-Gruber, P. Heffeter, B.K. Keppler, W. Berger, Calpain-mediated integrin deregulation as a novel mode of action for the anticancer gallium compound KP46, *Molecular Cancer Therapeutics*, 13 (2014) 2436-2449 doi: 10.1158/1535-7163.mct-14-0087
- [390] F. Jirsa, D. Pirker, R. Krachler, B.K. Keppler, Total mercury in sediments, macrophytes, and fish from a shallow steppe lake in eastern Austria, *Chemistry & Biodiversity*, 11 (2014) 1263-1275 doi: 10.1002/cbdv.201400172
- [389] R. Hudej, D. Miklavcic, M. Cemazar, V. Todorovic, G. Sersa, A. Bergamo, G. Sava, A. Martincic, J. Scancar, B.K. Keppler, I. Turel, Modulation of activity of known cytotoxic ruthenium(III) compound (KP418) with hampered transmembrane transport in electrochemotherapy in vitro and in vivo, *Journal of Membrane Biology*, 247 (2014) 1239-1251 doi: 10.1007/s00232-014-9696-2
- [388] P. Heffeter, A. Riabtseva, Y. Senkiv, C.R. Kowol, W. Korner, U. Jungwirth, N. Mitina, B.K. Keppler, T. Konstantinova, I. Yanchuk, R. Stoika, A. Zaichenko, W. Berger, Nanoformulation improves activity of the (pre)clinical anticancer ruthenium complex KP1019, *Journal of Biomedical Nanotechnology*, 10 (2014) 877-884 doi: 10.1166/jbn.2014.1763
- [387] M. Hanif, M.A.H. Nawaz, M.V. Babak, J. Iqbal, A. Roller, B.K. Keppler, C.G. Hartinger, Ruthenium(II)(η^6 -arene) complexes of thiourea derivatives: Synthesis, characterization and urease inhibition, *Molecules*, 19 (2014) 8080-8092 doi: 10.3390/molecules19068080
- [386] B. Fischer, P. Heffeter, K. Kryeziu, L. Gille, S.M. Meier, W. Berger, C.R. Kowol, B.K. Keppler, Poly(lactic acid) nanoparticles of the lead anticancer ruthenium compound KP1019 and its surfactant-mediated activation, *Dalton Transactions*, 43 (2014) 1096-1104 doi: 10.1039/c3dt52388h
- [385] A.E. Egger, S. Theiner, C. Kornauth, P. Heffeter, W. Berger, B.K. Keppler, C.G. Hartinger, Quantitative bioimaging by LA-ICP-MS: a methodological study on the distribution of Pt and Ru in viscera originating from cisplatin- and KP1339-treated mice, *Metallomics*, 6 (2014) 1616-1625 doi: 10.1039/c4mt00072b
- [384] O. Dömötör, S. Aicher, M. Schmidlehner, M.S. Novak, A. Roller, M.A. Jakupec, W. Kandioller, C.G. Hartinger, B.K. Keppler, E.A. Enyedy, Antitumor pentamethylcyclopentadienyl rhodium complexes of maltol and allomaltol: Synthesis, solution speciation and bioactivity, *Journal of Inorganic Biochemistry*, 134 (2014) 57-65 doi: 10.1016/j.jinorgbio.2014.01.020
- [383] J. Banfic, A.A. Legin, M.A. Jakupec, M. Galanski, B.K. Keppler, Platinum(IV) complexes featuring one or two axial ferrocene bearing ligands - synthesis, characterization, and cytotoxicity, *European Journal of Inorganic Chemistry*, 2014 (2014) 484-492 doi: 10.1002/ejic.201301282
- [382] H.P. Varbanov, M.A. Jakupec, A. Roller, F. Jensen, M. Galanski, B.K. Keppler, Theoretical investigations and density functional theory based quantitative structure-activity relationships model for novel cytotoxic platinum(IV) complexes, *Journal of Medicinal Chemistry*, 56 (2013) 330-344 doi: 10.1021/jm3016427
- [381] S.M. Valiahdi, A.E. Egger, W. Miklos, U. Jungwirth, K. Meelich, P. Nock, W. Berger, C.G. Hartinger, M. Galanski, M.A. Jakupec, B.K. Keppler, Influence of extracellular pH on the cytotoxicity, cellular accumulation, and DNA interaction of novel pH-sensitive 2-aminoalcoholatoplatinum(II) complexes, *Journal of Biological Inorganic Chemistry*, 18 (2013) 249-260 doi: 10.1007/s00775-012-0970-4
- [380] M.B. Schwarz, A. Kurzwernhart, A. Roller, W. Kandioller, B.K. Keppler, C.G. Hartinger, Rhodium(Cp*) compounds with flavone-derived ligand systems: Synthesis and characterization, *Zeitschrift für anorganische und allgemeine Chemie*, 639 (2013) 1648-1654 doi: 10.1002/zaac.201300145
- [379] V. Pichler, J. Mayr, P. Heffeter, O. Dömötör, E.A. Enyedy, G. Hermann, D. Groza, G. Kollensperger, M. Galanski, W. Berger, B.K. Keppler, C.R. Kowol, Maleimide-functionalised platinum(IV) complexes as a synthetic platform for targeted drug delivery, *Chemical Communications*, 49 (2013) 2249-2251 doi: 10.1039/c3cc39258a
- [378] V. Pichler, S. Göschl, S.M. Meier, A. Roller, M.A. Jakupec, M. Galanski, B.K. Keppler, Bulky N(N)-(di)alkylethane-1,2-diamineplatinum(II) compounds as precursors for generating unsymmetrically substituted platinum(IV) complexes, *Inorganic Chemistry*, 52 (2013) 8151-8162 doi: 10.1021/ic400816g

- [377] S.M. Meier, M. Novak, W. Kandioller, M.A. Jakupec, V.B. Arion, N. Metzler-Nolte, B.K. Keppler, C.G. Hartinger, Identification of the structural determinants for anticancer activity of a ruthenium arene peptide conjugate, *Chemistry - A European Journal*, 19 (2013) 9297-9307 doi: 10.1002/chem.201300889
- [376] S.M. Meier, M. Hanif, Z. Adhireksan, V. Pichler, M. Novak, E. Jirkovsky, M.A. Jakupec, V.B. Arion, C.A. Davey, B.K. Keppler, C.G. Hartinger, Novel metal(II) arene 2-pyridinecarbothioamides: aRationale to orally active organometallic anticancer agents, *Chemical Science*, 4 (2013) 1837-1846 doi: 10.1039/c3sc22294b
- [375] E. Madan, R. Gogna, B.K. Keppler, U. Pati, p53 increases intra-cellular calcium release by transcriptional regulation of calcium channel TRPC6 in GaQ3-treated cancer cells, *PLOS ONE*, 8 (2013) e71016 doi: 10.1371/journal.pone.0071016
- [374] A. Kurzwernhart, W. Kandioller, E.A. Enyedy, M. Novak, M.A. Jakupec, B.K. Keppler, C.G. Hartinger, 3-Hydroxyflavones vs. 3-hydroxyquinolinones: structure-activity relationships and stability studies on Ru(II)(arene) anticancer complexes with biologically active ligands, *Dalton Transactions*, 42 (2013) 6193-6202 doi: 10.1039/c2dt32206d
- [373] B. Kupcewicz, K. Sobiesiak, K. Malinowska, K. Koprowska, M. Czyz, B.K. Keppler, E. Budzisz, Copper(II) complexes with derivatives of pyrazole as potential antioxidant enzyme mimics, *Medicinal Chemistry Research*, 22 (2013) 2395-2402 doi: 10.1007/s00044-012-0233-5
- [372] W. Kandioller, E. Balsano, S.M. Meier, U. Jungwirth, S. Göschl, A. Roller, M.A. Jakupec, W. Berger, B.K. Keppler, C.G. Hartinger, Organometallic anticancer complexes of lapachol: Metal centre-dependent formation of reactive oxygen species and correlation with cytotoxicity, *Chemical Communications*, 49 (2013) 3348-3350 doi: 10.1039/c3cc40432c
- [371] F. Jirsa, E. Neubauer, R. Kittinger, T. Hofmann, R. Krachler, F. Von der Kammer, B.K. Keppler, Natural organic matter and iron export from the Tanner Moor, Austria, *Limnologia*, 43 (2013) 239-244 doi: 10.1016/j.limno.2012.09.006
- [370] I. Ivanovic, N. Gligorijevic, S. Arandelovic, S. Radulovic, A. Roller, B.K. Keppler, Z.L. Tesic, S. Grguric-Sipka, New ruthenium(II)-arene complexes bearing hydrazides and the corresponding (thio)semicarbazones of 3- and 4-acetylpyridine: Synthesis, characterization, crystal structure determination and antiproliferative activity, *Polyhedron*, 61 (2013) 112-118 doi: 10.1016/j.poly.2013.05.050
- [369] A.A. Hummer, P. Heffeter, W. Berger, M. Filipits, D. Batchelor, G.E. Buchel, M.A. Jakupec, B.K. Keppler, A. Rompel, X-ray absorption near edge structure spectroscopy to resolve the in vivo chemistry of the redox-active indazolium trans-[Tetrachlorobis(1H-indazole)ruthenate(III)] (KP1019), *Journal of Medicinal Chemistry*, 56 (2013) 1182-1196 doi: 10.1021/jm301648f
- [368] P. Heffeter, B. Atil, K. Kryeziu, D. Groza, G. Koellensperger, W. Korner, U. Jungwirth, T. Mohr, B.K. Keppler, W. Berger, The ruthenium compound KP1339 potentiates the anticancer activity of sorafenib in vitro and in vivo, *European Journal of Cancer*, 49 (2013) 3366-3375 doi: 10.1016/j.ejca.2013.05.018
- [367] M. Hanif, S.M. Meier, A.A. Nazarov, J. Risse, A. Legin, A. Casini, M.A. Jakupec, B.K. Keppler, C.G. Hartinger, Influence of the π -coordinated arene on the anticancer activity of ruthenium(II) carbohydrate organometallic complexes, *Frontiers in Chemistry*, 1 (2013) doi: 10.3389/fchem.2013.00027
- [366] G. Grabmann, B.K. Keppler, C.G. Hartinger, A systematic capillary electrophoresis study on the effect of the buffer composition on the reactivity of the anticancer drug cisplatin to the DNA model 2'-deoxyguanosine 5'-monophosphate (dGMP), *Analytical and Bioanalytical Chemistry*, 405 (2013) 6417-6424 doi: 10.1007/s00216-013-6937-7
- [365] L.K. Filak, S. Göschl, P. Heffeter, K.G. Samper, A.E. Egger, M.A. Jakupec, B.K. Keppler, W. Berger, V.B. Arion, Metal-arene complexes with indolo[3,2-c]-quinolines: Effects of ruthenium vs osmium and modifications of the lactam unit on intermolecular interactions, anticancer activity, cell cycle, and cellular accumulation, *Organometallics*, 32 (2013) 903-914 doi: 10.1021/om3012272

- [364] E.A. Enyedy, E. Sija, T. Jakusch, C.G. Hartinger, W. Kandioller, B.K. Keppler, T. Kiss, Solution equilibria of anticancer ruthenium(II)-(η⁶-p-cymene)-hydroxy(thio)pyr(id) one complexes: Impact of sulfur vs. oxygen donor systems on the speciation and bioactivity, *Journal of Inorganic Biochemistry*, 127 (2013) 161-168 doi: 10.1016/j.jinorgbio.2013.05.002
- [363] O. Dömötör, C.G. Hartinger, A.K. Bytzek, T. Kiss, B.K. Keppler, E.A. Enyedy, Characterization of the binding sites of the anticancer ruthenium(III) complexes KP1019 and KP1339 on human serum albumin via competition studies, *Journal of Biological Inorganic Chemistry*, 18 (2013) 9-17 doi: 10.1007/s00775-012-0944-6
- [362] J. Banfic, M.S. Adib-Razavi, M. Galanski, B.K. Keppler, Platinum(IV) complexes featuring axial (1,4-13C₂)succinato ligands - synthesis, characterization, and preliminary investigations in cancer cell lysates, *Zeitschrift für anorganische und allgemeine Chemie*, 639 (2013) 1613-1620 doi: 10.1002/zaac.201300058
- [361] M.V. Babak, S.M. Meier, A.A. Legin, M.S.A. Razavi, A. Roller, M.A. Jakupec, B.K. Keppler, C.G. Hartinger, Am(m)ines make the difference: Organoruthenium am(m)ine complexes and their chemistry in anticancer drug development, *Chemistry - A European Journal*, 19 (2013) 4308-4318 doi: 10.1002/chem.201202657
- [360] H.P. Varbanov, S.M. Valiahdi, C.R. Kowol, M.A. Jakupec, M. Galanski, B.K. Keppler, Novel tetracarboxylatoplatinum(IV) complexes as carboplatin prodrugs, *Dalton Transactions*, 41 (2012) 14404-14415 doi: 10.1039/c2dt31366a
- [359] A. Stojanovic, B.K. Keppler, Ionic liquids as extracting agents for heavy metals, *Separation Science and Technology*, 47 (2012) 189-203 doi: 10.1080/01496395.2011.620587
- [358] Y.Y. Scaffidi-Domianello, A.A. Legin, M.A. Jakupec, A. Roller, V.Y. Kukushkin, M. Galanski, B.K. Keppler, Novel oximate-bridged platinum(II) di- and trimer(s): Synthetic, structural, and in vitro anticancer activity studies, *Inorganic Chemistry*, 51 (2012) 7153-7163 doi: 10.1021/ic300148e
- [357] N. Rohr-Udilova, W. Sieghart, R. Eferl, D. Stoiber, L. Björkhem-Bergman, L.C. Eriksson, K. Stolze, H. Hayden, B. Keppler, S. Sagmeister, B. Grasl-Kraupp, R. Schulte-Hermann, M. Peck-Radosavljevic, Antagonistic effects of selenium and lipid peroxides on growth control in early hepatocellular carcinoma, *Hepatology*, 55 (2012) 1112-1121 doi: 10.1002/hep.24808
- [356] V. Pichler, P. Heffeter, S.M. Valiandi, C.R. Kowol, A. Egger, W. Berger, M.A. Jakupec, M. Galanski, B.K. Keppler, Unsymmetric mono- and dinuclear platinum(IV) complexes featuring an ethylene glycol moiety: Synthesis, characterization, and biological activity, *Journal of Medicinal Chemistry*, 55 (2012) 11052-11061 doi: 10.1021/jm301645g
- [355] G. Mühlgassner, C. Bartel, W.F. Schmid, M.A. Jakupec, V.B. Arion, B.K. Keppler, Biological activity of ruthenium and osmium arene complexes with modified paullones in human cancer cells, *Journal of Inorganic Biochemistry*, 116 (2012) 180-187 doi: 10.1016/j.jinorgbio.2012.06.003
- [354] M.N.M. Milunovic, E.A. Enyedy, N.V. Nagy, T. Kiss, R. Trondl, M.A. Jakupec, B.K. Keppler, R. Krachler, G. Novitchi, V.B. Arion, L- and D-proline thiosemicarbazone conjugates: Coordination behavior in solution and the effect of copper(II) coordination on their antiproliferative activity, *Inorganic Chemistry*, 51 (2012) 9309-9321 doi: 10.1021/ic300967j
- [353] S.M. Meier, Y.O. Tsybin, P.J. Dyson, B.K. Keppler, C.G. Hartinger, Fragmentation methods on the balance: Unambiguous top-down mass spectrometric characterization of oxaliplatin-ubiquitin binding sites, *Analytical and Bioanalytical Chemistry*, 402 (2012) 2655-2662 doi: 10.1007/s00216-011-5523-0
- [352] S.M. Meier, M. Hanif, W. Kandioller, B.K. Keppler, C.G. Hartinger, Biomolecule binding vs. anticancer activity: Reactions of Ru(arene)[(thio)pyr-(id) one] compounds with amino acids and proteins, *Journal of Inorganic Biochemistry*, 108 (2012) 91-95 doi: 10.1016/j.jinorgbio.2011.08.011
- [351] A. Kurzwernhart, W. Kandioller, C. Bartel, S. Bachler, R. Trondl, G. Mühlgassner, M.A. Jakupec, V.B. Arion, D. Marko, B.K. Keppler, C.G. Hartinger, Targeting the DNA-topoisomerase complex in a double-strike approach with a topoisomerase inhibiting moiety and covalent DNA binder, *Chemical Communications*, 48 (2012) 4839-4841 doi: 10.1039/c2cc31040f

- [350] A. Kurzwernhart, W. Kandioller, S. Bachler, C. Bartel, S. Martic, M. Buczkowska, G. Muhlgassner, M.A. Jakupec, H.B. Kraatz, P.J. Bednarski, V.B. Arion, D. Marko, B.K. Keppler, C.G. Hartinger, Structure-activity relationships of targeted Ru(II)(η^6 -p-cymene) anticancer complexes with flavonol-derived ligands, *Journal of Medicinal Chemistry*, 55 (2012) 10512-10522 doi: 10.1021/jm301376a
- [349] R. Krachler, F. von der Kammer, F. Jirsa, A. Suphandag, R.F. Krachler, C. Plessl, M. Vogt, B.K. Keppler, T. Hofmann, Nanoscale lignin particles as sources of dissolved iron to the ocean, *Global Biogeochemical Cycles*, 26 (2012) GB3024 doi: 10.1029/2012gb004294
- [348] C.R. Kowol, P. Heffeter, W. Miklos, L. Gille, R. Trondl, L. Cappellacci, W. Berger, B.K. Keppler, Mechanisms underlying reductant-induced reactive oxygen species formation by anticancer copper(II) compounds, *Journal of Biological Inorganic Chemistry*, 17 (2012) 409-423 doi: 10.1007/s00775-011-0864-x
- [347] U. Jungwirth, D.N. Xanthos, J. Gojo, A.K. Bytzek, W. Korner, P. Heffeter, S.A. Abramkin, M.A. Jakupec, C.G. Hartinger, U. Windberger, M. Galanski, B.K. Keppler, W. Berger, Anticancer activity of methyl-substituted oxaliplatin analogs, *Molecular Pharmacology*, 81 (2012) 719-728 doi: 10.1124/mol.111.077321
- [346] A.A. Hummer, C. Bartel, V.B. Arion, M.A. Jakupec, W. Meyer-Klaucke, T. Geraki, P.D. Quinn, A. Mijovilovich, B.K. Keppler, A. Rempel, X-ray absorption spectroscopy of an investigational anticancer gallium(III) drug: Interaction with serum proteins, elemental distribution pattern, and coordination of the compound in tissue, *Journal of Medicinal Chemistry*, 55 (2012) 5601-5613 doi: 10.1021/jm3005459
- [345] R. Hudej, J. Kljun, W. Kandioller, U. Repnik, B. Turk, C.G. Hartinger, B.K. Keppler, D. Miklavcic, I. Turel, Synthesis and biological evaluation of the thionated antibacterial agent nalidixic acid and its organoruthenium(II) complex, *Organometallics*, 31 (2012) 5867-5874 doi: 10.1021/om300424w
- [344] B.R. Hoffmeister, M.S. Adib-Razavi, M.A. Jakupec, M. Galanski, B.K. Keppler, Diamminetetakis(carboxylato)platinum(IV) complexes - synthesis, characterization, and cytotoxicity, *Chemistry & Biodiversity*, 9 (2012) 1840-1848 doi: 10.1002/cbdv.201200019
- [343] H. Henke, W. Kandioller, M. Hanif, B.K. Keppler, C.G. Hartinger, Organometallic ruthenium and osmium compounds of pyridin-2- and -4-ones as potential anticancer agents, *Chemistry & Biodiversity*, 9 (2012) 1718-1727 doi: 10.1002/cbdv.201200005
- [342] P. Heffeter, C. Pirker, C.R. Kowol, G. Herrman, R. Dornetshuber, W. Miklos, U. Jungwirth, G. Koellensperger, B.K. Keppler, W. Berger, Impact of terminal dimethylation on the resistance profile of α -N-heterocyclic thiosemicarbazones, *Biochemical Pharmacology*, 83 (2012) 1623-1633 doi: 10.1016/j.bcp.2012.03.004
- [341] M. Hanif, A.A. Nazarov, A. Legin, M. Groessl, V.B. Arion, M.A. Jakupec, Y.O. Tsybin, P.J. Dyson, B.K. Keppler, C.G. Hartinger, Maleimide-functionalised organoruthenium anticancer agents and their binding to thiol-containing biomolecules, *Chemical Communications*, 48 (2012) 1475-1477 doi: 10.1039/c1cc14713g
- [340] G. Grabmann, S.M. Meier, Y.Y. Scaffidi-Domianello, M. Galanski, B.K. Keppler, C.G. Hartinger, Capillary zone electrophoresis and capillary zone electrophoresis-electrospray ionization mass spectrometry studies on the behavior of anticancer cis- and trans-[dihalidobis(2-propanone oxime)platinum(II)] complexes in aqueous solutions, *Journal of Chromatography A*, 1267 (2012) 156-161 doi: 10.1016/j.chroma.2012.07.062
- [339] R. Gogna, E. Madan, B. Keppler, U. Pati, Gallium compound GaQ3 -induced Ca²⁺ signalling triggers p53-dependent and -independent apoptosis in cancer cells, *British Journal of Pharmacology*, 166 (2012) 617-636 doi: 10.1111/j.1476-5381.2011.01780.x
- [338] W. Ginzinger, G. Muhlgaessner, V.B. Arion, M.A. Jakupec, A. Roller, M. Galanski, M. Reithofer, W. Berger, B.K. Keppler, A SAR study of novel antiproliferative ruthenium and osmium complexes with quinoxalinone ligands in human cancer cell lines, *Journal of Medicinal Chemistry*, 55 (2012) 3398-3413 doi: 10.1021/jm3000906
- [337] W. Ginzinger, A. Egger, G. Muhlgassner, V.B. Arion, M.A. Jakupec, M. Galanski, W. Berger, B.K. Keppler, Water-soluble cationic derivatives of indirubin, the active anticancer component from *indigo naturalis*, *Chemistry & Biodiversity*, 9 (2012) 2175-2185 doi: 10.1002/cbdv.201200147

- [336] S.P. Gavrish, Y.D. Lampeka, P. Lightfoot, V.B. Arion, B.K. Keppler, K. Wozniak, Solid state structural variations in copper(II) complexes of open-chain and macrocyclic malonamide-derived ligands, *Crystal Growth & Design*, 12 (2012) 4388-4396 doi: 10.1021/cg300554r
- [335] M. Fuerhacker, T.M. Haile, D. Kogelnig, A. Stojanovic, B.K. Keppler, Application of ionic liquids for the removal of heavy metals from wastewater and activated sludge, *Water Science & Technology*, 65 (2012) 1765-1773 doi: 10.2166/wst.2012.907
- [334] E.A. Enyedy, E. Zsigo, N.V. Nagy, C.R. Kowol, A. Roller, B.K. Keppler, T. Kiss, Complex-formation ability of salicylaldehyde thiosemicarbazone towards ZnII, CuII, FeII, FeIII and GaIII Ions, *European Journal of Inorganic Chemistry*, (2012) 4036-4047 doi: 10.1002/ejic.201200360
- [333] E.A. Enyedy, O. Dömötör, E. Varga, L. Kiss, R. Trondl, C.G. Hartinger, B.K. Keppler, Comparative solution equilibrium studies of anticancer gallium(III) complexes of 8-hydroxyquinoline and hydroxy(thio)pyrone ligands, *Journal of Inorganic Biochemistry*, 117 (2012) 189-197 doi: 10.1016/j.jinorgbio.2012.08.005
- [332] I. Buss, G.V. Kalayda, A. Lindauer, M.R. Reithofer, M. Galanski, B.K. Keppler, U. Jaehde, Effect of reactivity on cellular accumulation and cytotoxicity of oxaliplatin analogues, *Journal of Biological Inorganic Chemistry*, 17 (2012) 699-708 doi: 10.1007/s00775-012-0889-9
- [331] G.E. Büchel, I.N. Stepanenko, M. Hejl, M.A. Jakupec, B.K. Keppler, P. Heffeter, W. Berger, V.B. Arion, Osmium(IV) complexes with 1H- and 2H-indazoles: Tautomer identity versus spectroscopic properties and antiproliferative activity, *Journal of Inorganic Biochemistry*, 113 (2012) 47-54 doi: 10.1016/j.jinorgbio.2012.04.001
- [330] O. Brandt, M. Mildner, A.E. Egger, M. Groessl, U. Rix, M. Posch, B.K. Keppler, C. Strupp, B. Mueller, G. Stingl, Nanoscale silver possesses broad-spectrum antimicrobial activities and exhibits fewer toxicological side effects than silver sulfadiazine, *Nanomedicine-Nanotechnology Biology and Medicine*, 8 (2012) 478-488 doi: 10.1016/j.nano.2011.07.005
- [329] C. Bartel, A.K. Bytzek, Y.Y. Scaffidi-Domianello, G. Grabmann, M.A. Jakupec, C.G. Hartinger, M. Galanski, B.K. Keppler, Cellular accumulation and DNA interaction studies of cytotoxic trans-platinum anticancer compounds, *Journal of Biological Inorganic Chemistry*, 17 (2012) 465-474 doi: 10.1007/s00775-011-0869-5
- [328] V.B. Arion, A. Dobrov, S. Göschl, M.A. Jakupec, B.K. Keppler, P. Rapta, Ruthenium- and osmium-arene-based paullones bearing a TEMPO free-radical unit as potential anticancer drugs, *Chemical Communications*, 48 (2012) 8559-8561 doi: 10.1039/c2cc33786j
- [327] S. Abramkin, S.M. Valiahdi, M.A. Jakupec, M. Galanski, N. Metzler-Nolte, B.K. Keppler, Solid-phase synthesis of oxaliplatin-TAT peptide bioconjugates, *Dalton Transactions*, 41 (2012) 3001-3005 doi: 10.1039/c2dt12024k
- [326] Y. Zhang, D. Kogelnig, C. Morgenbesser, A. Stojanovic, F. Jirsa, I. Lichtscheidl-Schultz, R. Krachler, Y.F. Li, B.K. Keppler, Preparation and characterization of immobilized [A336][MTBA] in PVA-alginate gel beads as novel solid-phase extractants for an efficient recovery of Hg (II) from aqueous solutions, *Journal of Hazardous Materials*, 196 (2011) 201-209 doi: 10.1016/j.jhazmat.2011.09.018
- [325] H. Varbanov, S.M. Valiahdi, A.A. Legin, M.A. Jakupec, A. Roller, M. Galanski, B.K. Keppler, Synthesis and characterization of novel bis(carboxylato)dichloridobis(ethylamine)platinum(IV) complexes with higher cytotoxicity than cisplatin, *European Journal of Medicinal Chemistry*, 46 (2011) 5456-5464 doi: 10.1016/j.ejmech.2011.09.006
- [324] J. Ungersboeck, C. Philippe, L.K. Mien, D. Haeusler, K. Shanab, R. Lanzenberger, H. Spreitzer, B.K. Keppler, R. Dudczak, K. Kletter, M. Mitterhauser, W. Wadsak, Microfluidic preparation of [18F]FE@SUPPY and [18F]FE@SUPPY:2 — comparison with conventional radiosyntheses, *Nuclear Medicine and Biology*, 38 (2011) 427-434 doi: 10.1016/j.nucmedbio.2010.09.009
- [323] I.N. Stepanenko, M.S. Novak, G. Muhlgassner, A. Roller, M. Hejl, V.B. Arion, M.A. Jakupec, B.K. Keppler, Organometallic 3-(1H-Benzimidazol-2-yl)-1H-pyrazolo-[3,4-b]pyridines as potential anticancer agents, *Inorganic Chemistry*, 50 (2011) 11715-11728 doi: 10.1021/ic201704u

- [322] I.N. Stepanenko, A. Casini, F. Edefe, M.S. Novak, V.B. Arion, P.J. Dyson, M.A. Jakupec, B.K. Keppler, Conjugation of organoruthenium(II) 3-(1H-benzimidazol-2-yl)pyrazolo[3,4-b]pyridines and indolo[3,2-d]benzazepines to recombinant human serum albumin: A strategy to enhance cytotoxicity in cancer cells, *Inorganic Chemistry*, 50 (2011) 12669-12679 doi: 10.1021/ic201801e
- [321] Y.Y. Scaffidi-Domianello, A.A. Legin, M.A. Jakupec, V.B. Arion, V.Y. Kukushkin, M. Galanski, B.K. Keppler, Synthesis, characterization, and cytotoxic activity of novel potentially pH-sensitive nonclassical platinum(II) complexes featuring 1,3-dihydroxyacetone oxime ligands, *Inorganic Chemistry*, 50 (2011) 10673-10681 doi: 10.1021/ic2010612
- [320] M.R. Reithofer, A.K. Bytzek, S.M. Valiahdi, C.R. Kowol, M. Groessler, C.G. Hartinger, M.A. Jakupec, M. Galanski, B.K. Keppler, Tuning of lipophilicity and cytotoxic potency by structural variation of anticancer platinum(IV) complexes, *Journal of Inorganic Biochemistry*, 105 (2011) 46-51 doi: 10.1016/j.jinorgbio.2010.09.006
- [319] V. Pichler, S.M. Valiahdi, M.A. Jakupec, V.B. Arion, M. Galanski, B.K. Keppler, Mono-carboxylated diaminedichloridoplatinum(IV) complexes - selective synthesis, characterization, and cytotoxicity, *Dalton Transactions*, 40 (2011) 8187-8192 doi: 10.1039/c1dt10301f
- [318] I. Pashkunova-Martic, C. Kremser, M. Galanski, V. Arion, P. Debbage, W. Jaschke, B. Keppler, Lectin-Gd-loaded chitosan hydrogel nanoparticles: a new biospecific contrast agent for MRI, *Molecular Imaging and Biology*, 13 (2011) 16-24 doi: 10.1007/s11307-010-0309-x
- [317] I. Pashkunova-Martic, M. Galanski, P. Schluga, V. Arion, B. Keppler, C. Kremser, W. Jaschke, P. Debbage, Lectin conjugates as biospecific contrast agents for MRI. Coupling of Lycopersicon esculentum agglutinin to linear water-soluble DTPA-loaded oligomers, *Molecular Imaging and Biology*, 13 (2011) 432-442 doi: 10.1007/s11307-010-0358-1
- [316] A. Kundu, H. Peterlik, M. Krssak, A.K. Bytzek, I. Pashkunova-Martic, V.B. Arion, T.H. Helbich, B.K. Keppler, Strategies for the covalent conjugation of a bifunctional chelating agent to albumin: Synthesis and characterization of potential MRI contrast agents, *Journal of Inorganic Biochemistry*, 105 (2011) 250-255 doi: 10.1016/j.jinorgbio.2010.10.015
- [315] D. Kogelnig, A. Regelsberger, A. Stojanovic, F. Jirsa, R. Krachler, B.K. Keppler, A polymer inclusion membrane based on the ionic liquid trihexyl(tetradecyl)phosphonium chloride and PVC for solid-liquid extraction of Zn(II) from hydrochloric acid solution, *Monatshefte für Chemie*, 142 (2011) 769-772 doi: 10.1007/s00706-011-0530-6
- [314] J. Kljun, A.K. Bytzek, W. Kandioller, C. Bartel, M.A. Jakupec, C.G. Hartinger, B.K. Keppler, I. Turel, Physicochemical studies and anticancer potency of ruthenium η^6 -p-cymene complexes containing antibacterial quinolones, *Organometallics*, 30 (2011) 2506-2512 doi: 10.1021/om101180c
- [313] W. Kandioller, A. Kurzwernhart, M. Hanif, S.M. Meier, H. Henke, B.K. Keppler, C.G. Hartinger, Pyrone derivatives and metals: From natural products to metal-based drugs, *Journal of Organometallic Chemistry*, 696 (2011) 999-1010 doi: 10.1016/j.jorganchem.2010.11.010
- [312] U. Jungwirth, C.R. Kowol, B.K. Keppler, C.G. Hartinger, W. Berger, P. Heffeter, Anticancer activity of metal complexes: Involvement of redox processes, *Antioxidants & Redox Signaling*, 15 (2011) 1085-1127 doi: 10.1089/ars.2010.3663
- [311] I. Ivanovic, S. Grguric-Sipka, N. Gligorijevic, S. Radulovic, A. Roller, Z.L. Tesic, B.K. Keppler, X-Ray structure and cytotoxic activity of a picolinate ruthenium(II)-arene complex, *Journal of the Serbian Chemical Society*, 76 (2011) 53-61 doi: 10.2298/jsc100517017i
- [310] M. Hanif, S.M. Meier, W. Kandioller, A. Bytzek, M. Hejl, C.G. Hartinger, A.A. Nazarov, V.B. Arion, M.A. Jakupec, P.J. Dyson, B.K. Keppler, From hydrolytically labile to hydrolytically stable Ru(II)-arene anticancer complexes with carbohydrate-derived co-ligands, *Journal of Inorganic Biochemistry*, 105 (2011) 224-231 doi: 10.1016/j.jinorgbio.2010.10.004
- [309] L.S. Foteeva, D.A. Trofimov, O.V. Kuznetsova, C.R. Kowol, V.B. Arion, B.K. Keppler, A.R. Timerbaev, A quantitative structure-activity approach for lipophilicity estimation of antitumor complexes of different metals using microemulsion electrokinetic chromatography, *Journal of Pharmaceutical and Biomedical Analysis*, 55 (2011) 409-413 doi: 10.1016/j.jpba.2011.02.011

- [308] L. Fischer, T. Falta, G. Koellensperger, A. Stojanovic, D. Kogelnig, M. Galanski, R. Krachler, B.K. Keppler, S. Hann, Ionic liquids for extraction of metals and metal containing compounds from communal and industrial waste water, *Water Research*, 45 (2011) 4601-4614 doi: 10.1016/j.watres.2011.06.011
- [307] L.K. Filak, G. Mühlgassner, F. Bacher, A. Roller, M. Galanski, M.A. Jakupec, B.K. Keppler, V.B. Arion, Ruthenium- and osmium-arene complexes of 2-substituted indolo [3,2-c] quinolines: Synthesis, structure, spectroscopic properties, and antiproliferative activity, *Organometallics*, 30 (2011) 273-283 doi: 10.1021/om101004z
- [306] E.A. Enyedy, M.F. Primik, C.R. Kowol, V.B. Arion, T. Kiss, B.K. Keppler, Interaction of triapine and related thiosemicarbazones with iron(III)/(II) and gallium(III): A comparative solution equilibrium study, *Dalton Transactions*, 40 (2011) 5895-5905 doi: 10.1039/c0dt01835j
- [305] E.A. Enyedy, L. Horvath, A. Hetenyi, T. Tuccinardi, C.G. Hartinger, B.K. Keppler, T. Kiss, Interactions of the carrier ligands of antidiabetic metal complexes with human serum albumin: A combined spectroscopic and separation approach with molecular modeling studies, *Bioorganic & Medicinal Chemistry*, 19 (2011) 4202-4210 doi: 10.1016/j.bmc.2011.05.063
- [304] A.K. Bytzek, K. Boeck, G. Hermann, S. Hann, B.K. Keppler, C.G. Hartinger, G. Koellensperger, LC- and CZE-ICP-MS approaches for the in vivo analysis of the anticancer drug candidate sodium trans-[tetrachloridobis(1H-indazole)ruthenate(III)] (KP1339) in mouse plasma, *Metallomics*, 3 (2011) 1049-1055 doi: 10.1039/c1mt00055a
- [303] I. Buss, D. Garmann, M. Galanski, G. Weber, G.V. Kalayda, B.K. Keppler, U. Jaehde, Enhancing lipophilicity as a strategy to overcome resistance against platinum complexes?, *Journal of Inorganic Biochemistry*, 105 (2011) 709-717 doi: 10.1016/j.jinorgbio.2011.02.005
- [302] G.E. Büchel, I.N. Stepanenko, M. Hejl, M.A. Jakupec, B.K. Keppler, V.B. Arion, En route to osmium analogues of KP1019: Synthesis, structure, spectroscopic properties and antiproliferative activity of trans-[OsIVCl₄(Hazole)₂], *Inorganic Chemistry*, 50 (2011) 7690-7697 doi: 10.1021/ic200728b
- [301] P. Bippus, M. Skocic, M.A. Jakupec, B.K. Keppler, F. Mohr, Synthesis, structures and in vitro cytotoxicity of some cationic cis-platinum(II) complexes containing chelating thiocarbamates, *Journal of Inorganic Biochemistry*, 105 (2011) 462-466 doi: 10.1016/j.jinorgbio.2010.08.010
- [300] C. Bartel, A.E. Egger, M.A. Jakupec, P. Heffeter, M. Galanski, W. Berger, B.K. Keppler, Influence of ascorbic acid on the activity of the investigational anticancer drug KP1019, *Journal of Biological Inorganic Chemistry*, 16 (2011) 1205-1215 doi: 10.1007/s00775-011-0809-4
- [299] U.P. Apfel, C.R. Kowol, F. Kloss, H. Gorls, B.K. Keppler, W. Weigand, Hydroxy and ether functionalized dithiolanes: Models for the active site of the [FeFe] hydrogenase, *Journal of Organometallic Chemistry*, 696 (2011) 1084-1088 doi: 10.1016/j.jorganchem.2010.09.048
- [298] G. Tamasi, M. Casolaro, A. Magnani, A. Sega, L. Chiasserini, L. Messori, C. Gabbiani, S.M. Valiahd, M.A. Jakupec, B.K. Keppler, M.B. Hursthouse, R. Cini, New platinum-oxicam complexes as anti-cancer drugs. Synthesis, characterization, release studies from smart hydrogels, evaluation of reactivity with selected proteins and cytotoxic activity in vitro, *Journal of Inorganic Biochemistry*, 104 (2010) 799-814 doi: 10.1016/j.jinorgbio.2010.03.010
- [297] M.M. Stollenwerk, I. Pashkunova-Martic, C. Kremser, H. Talasz, G.C. Thurner, A.A. Abdelmoez, E.A. Wallnoefer, A. Helbok, E. Neuhauser, N. Klammsteiner, L. Klimaschewski, E. Guggenberg, E. Froehlich, B. Keppler, W. Jaschke, P. Debbage, Albumin-based nanoparticles as magnetic resonance contrast agents. I: Concept, first syntheses and characterization, *Histochemistry and Cell Biology*, 133 (2010) 375-404 doi: 10.1007/s00418-010-0676-z
- [296] A. Stojanovic, C. Morgenbesser, M. Galanski, D. Kogelnig, A. Roller, R. Krachler, B.K. Keppler, Synthesis and crystal structure of N-phenyl-N'-(pyridin-2-ylmethyl)-S-methyl-thiouonium iodide, *Journal of Molecular Structure*, 965 (2010) 50-55 doi: 10.1016/j.molstruc.2009.11.037
- [295] A. Stojanovic, D. Kogelnig, L. Fischer, S. Hann, M. Galanski, M. Groessl, R. Krachler, B.K. Keppler, Phosphonium and ammonium ionic liquids with aromatic anions: Synthesis, properties, and platinum extraction, *Australian Journal of Chemistry*, 63 (2010) 511-524 doi: 10.1071/ch09340

- [294] Y.Y. Scaffidi-Domianello, K. Meelich, M.A. Jakupec, V.B. Arion, V.Y. Kukushkin, M. Galanski, B.K. Keppler, Novel cis- and trans-configured bis(oxime)platinum(II) complexes: Synthesis, characterization, and cytotoxic activity, *Inorganic Chemistry*, 49 (2010) 5669-5678 doi: 10.1021/ic100584b
- [293] M.F. Primik, G. Muehlgassner, M.A. Jakupec, O. Zava, P.J. Dyson, V.B. Arion, B.K. Keppler, Highly cytotoxic copper(II) complexes with modified paullone ligands, *Inorganic Chemistry*, 49 (2010) 302-311 doi: 10.1021/ic902042a
- [292] M.F. Primik, S. Göschl, M.A. Jakupec, A. Roller, B.K. Keppler, V.B. Arion, Structure-activity relationships of highly cytotoxic copper(II) complexes with modified indolo[3,2-c]quinoline ligands, *Inorganic Chemistry*, 49 (2010) 11084-11095 doi: 10.1021/ic101633z
- [291] R. Krachler, R.F. Krachler, F. von der Kammer, A. Suephandag, F. Jirsa, S. Ayromlou, T. Hofmann, B.K. Keppler, Relevance of peat-draining rivers for the riverine input of dissolved iron into the ocean, *Science of the Total Environment*, 408 (2010) 2402-2408 doi: 10.1016/j.scitotenv.2010.02.018
- [290] C.R. Kowol, R. Trondl, V.B. Arion, M.A. Jakupec, I. Lichtscheidl, B.K. Keppler, Fluorescence properties and cellular distribution of the investigational anticancer drug Triapine (3-aminopyridine-2-carboxaldehyde thiosemicarbazone) and its zinc(II) complex, *Dalton Transactions*, 39 (2010) 704-706 doi: 10.1039/b919119b
- [289] D. Kogelnig, A. Stojanovic, F. von der Kammer, P. Terzieff, M. Galanski, F. Jirsa, R. Krachler, T. Hofmann, B.K. Keppler, Tetrachloroferrate containing ionic liquids: Magnetic- and aggregation behavior, *Inorganic Chemistry Communications*, 13 (2010) 1485-1488 doi: 10.1016/j.inoche.2010.08.023
- [288] D. Kogelnig, A. Stojanovic, F. Jirsa, W. Korner, R. Krachler, B.K. Keppler, Transport and separation of iron(III) from nickel(II) with the ionic liquid trihexyl(tetradecyl)phosphonium chloride, *Separation and Purification Technology*, 72 (2010) 56-60 doi: 10.1016/j.seppur.2009.12.028
- [287] J.H. Kasser, W. Kandioller, C.G. Hartinger, A.A. Nazarov, V.B. Arion, P.J. Dyson, B.K. Keppler, Mannich products of kojic acid and N-heterocycles and their Ru(II)-arene complexes: Synthesis, characterization and stability, *Journal of Organometallic Chemistry*, 695 (2010) 875-881 doi: 10.1016/j.jorganchem.2010.01.007
- [286] R. Hudej, I. Turel, M. Kanduser, J. Scancar, S. Kranjc, G. Sersa, D. Miklavcic, M.A. Jakupec, B.K. Keppler, M. Cemazar, The influence of electroporation on cytotoxicity of anticancer ruthenium(III) complex KP1339 in vitro and in vivo, *Anticancer Research*, 30 (2010) 2055-2063 doi: ---
- [285] P. Heffeter, K. Bock, B. Atil, M.A.R. Hoda, W. Korner, C. Bartel, U. Jungwirth, B.K. Keppler, M. Micksche, W. Berger, G. Koellensperger, Intracellular protein binding patterns of the anticancer ruthenium drugs KP1019 and KP1339, *Journal of Biological Inorganic Chemistry*, 15 (2010) 737-748 doi: 10.1007/s00775-010-0642-1
- [284] M. Hanif, P. Schaaf, W. Kandioller, M. Hejl, M.A. Jakupec, A. Roller, B.K. Keppler, C.G. Hartinger, Influence of the arene ligand and the leaving group on the anticancer activity of (thio)maltol ruthenium(II)-(η⁶-arene) complexes, *Australian Journal of Chemistry*, 63 (2010) 1521-1528 doi: 10.1071/ch10232
- [283] M. Hanif, A.A. Nazarov, C.G. Hartinger, W. Kandioller, M.A. Jakupec, V.B. Arion, P.J. Dyson, B.K. Keppler, Osmium(II)-versus ruthenium(II)-arene carbohydrate-based anticancer compounds: Similarities and differences, *Dalton Transactions*, 39 (2010) 7345-7352 doi: 10.1039/c003085f
- [282] M. Hanif, H. Henke, S.M. Meier, S. Martic, M. Labib, W. Kandioller, M.A. Jakupec, V.B. Arion, H.B. Kraatz, B.K. Keppler, C.G. Hartinger, Is the reactivity of M(II)-arene complexes of 3-Hydroxy-2(1H)-pyridones to biomolecules the anticancer activity determining parameter?, *Inorganic Chemistry*, 49 (2010) 7953-7963 doi: 10.1021/ic1009785
- [281] M. Groessl, Y.O. Tsybin, C.G. Hartinger, B.K. Keppler, P.J. Dyson, Ruthenium versus platinum: interactions of anticancer metallodrugs with duplex oligonucleotides characterised by electrospray ionisation mass spectrometry, *Journal of Biological Inorganic Chemistry*, 15 (2010) 677-688 doi: 10.1007/s00775-010-0635-0
- [280] S. Grguric-Sipka, I. Ivanovic, G. Rakic, N. Todorovic, N. Gligorijevic, S. Radulovic, V.B. Arion, B.K. Keppler, Z.L. Tesic, Ruthenium(II)-arene complexes with functionalized pyridines: Synthesis, characterization and cytotoxic activity, *European Journal of Medicinal Chemistry*, 45 (2010) 1051-1058 doi: 10.1016/j.ejmech.2009.11.055

- [279] L.K. Filak, G. Muhlgassner, M.A. Jakupec, P. Heffeter, W. Berger, V.B. Arion, B.K. Keppler, Organometallic indolo[3,2-c]quinolines versus indolo[3,2-d]benzazepines: Synthesis, structural and spectroscopic characterization, and biological efficacy, *Journal of Biological Inorganic Chemistry*, 15 (2010) 903-918 doi: 10.1007/s00775-010-0653-y
- [278] E.A. Enyedy, N.V. Nagy, E. Zsigo, C.R. Kowol, V.B. Arion, B.K. Keppler, T. Kiss, Comparative solution equilibrium study of the interactions of copper(II), iron(II) and zinc(II) with triapine (3-aminopyridine-2-carbaldehyde thiosemicarbazone) and related ligands, *European Journal of Inorganic Chemistry*, (2010) 1717-1728 doi: 10.1002/ejic.200901174
- [277] V.M. Djinovic, M. Galanski, V.B. Arion, B.K. Keppler, Synthesis and structures of novel 1-methylcytosinato-bridged (ethylenediamine)platinum(II) and platinum(III) dinuclear complexes, *Dalton Transactions*, 39 (2010) 3633-3643 doi: 10.1039/b926133h
- [276] A.K. Bytzek, M.R. Reithofer, M. Galanski, M. Groessler, B.K. Keppler, C.G. Hartinger, The first example of MEEKC-ICP-MS coupling and its application for the analysis of anticancer platinum complexes, *Electrophoresis*, 31 (2010) 1144-1150 doi: 10.1002/elps.200900522
- [275] U.P. Apfel, C.R. Kowol, E. Morera, H. Gorus, G. Lucente, B.K. Keppler, W. Weigand, Synthetic and electrochemical studies of [2Fe2S] complexes containing a 4-Amino-1,2-dithiolane-4-carboxylic acid moiety, *European Journal of Inorganic Chemistry*, (2010) 5079-5086 doi: 10.1002/ejic.201000619
- [274] S.A. Abramkin, U. Jungwirth, S.M. Valiahd, C. Dworak, L. Habala, K. Meelich, W. Berger, M.A. Jakupec, C.G. Hartinger, A.A. Nazarov, M. Galanski, B.K. Keppler, {(1R,2R,4R)-4-methyl-1,2-cyclohexanediamine}oxalatoplatinum(II): A novel enantiomerically pure oxaliplatin derivative showing improved anticancer activity in vivo, *Journal of Medicinal Chemistry*, 53 (2010) 7356-7364 doi: 10.1021/jm100953c
- [273] S.M. Valiahd, P. Heffeter, M.A. Jakupec, R. Marculescu, W. Berger, K. Rappersberger, B.K. Keppler, The gallium complex KP46 exerts strong activity against primary explanted melanoma cells and induces apoptosis in melanoma cell lines, *Melanoma Research*, 19 (2009) 283-293 doi: 10.1097/CMR.0b013e32832b272d
- [272] M.A. Shaheen, C.G. Hartinger, M.N. Tahir, A.A. Shafiq, B.K. Keppler, 5-Hydroxy-2-methyl-4H-pyran-4-one, *Acta Crystallographica Section E-Structure Reports Online*, 65 (2009) O437-U3143 doi: 10.1107/s1600536809003158
- [271] E. Schuh, S.M. Valiahd, M.A. Jakupec, B.K. Keppler, P. Chiba, F. Mohr, Synthesis and biological studies of some gold(I) complexes containing functionalised alkynes, *Dalton Transactions*, (2009) 10841-10845 doi: 10.1039/b911234k
- [270] A.K. Renfrew, A.D. Phillips, A.E. Egger, C.G. Hartinger, S.S. Bosquain, A.A. Nazarov, B.K. Keppler, L. Gonsalvi, M. Peruzzini, P.J. Dyson, Influence of structural variation on the anticancer activity of RAPTA-type complexes: ptn versus pta, *Organometallics*, 28 (2009) 1165-1172 doi: 10.1021/om800899e
- [269] O. Novakova, A.A. Nazarov, C.G. Hartinger, B.K. Keppler, V. Brabec, DNA interactions of dinuclear RuII arene antitumor complexes in cell-free media, *Biochemical Pharmacology*, 77 (2009) 364-374 doi: 10.1016/j.bcp.2008.10.021
- [268] M.G. Mendoza-Ferri, C.G. Hartinger, A.A. Nazarov, R.E. Eichinger, M.A. Jakupec, K. Severin, B.K. Keppler, Influence of the arene ligand, the number and type of metal centers, and the leaving group on the in vitro antitumor activity of polynuclear organometallic compounds, *Organometallics*, 28 (2009) 6260-6265 doi: 10.1021/om900715j
- [267] M.G. Mendoza-Ferri, C.G. Hartinger, M.A. Mendoza, M. Groessler, A.E. Egger, R.E. Eichinger, J.B. Mangrum, N.P. Farrell, M. Maruszak, P.J. Bednarski, F. Klein, M.A. Jakupec, A.A. Nazarov, K. Severin, B.K. Keppler, Transferring the concept of multinuclearity to ruthenium complexes for improvement of anticancer activity, *Journal of Medicinal Chemistry*, 52 (2009) 916-925 doi: 10.1021/jm8013234
- [266] F. Lentz, A. Drescher, A. Lindauer, M. Henke, R.A. Hilger, C.G. Hartinger, M.E. Scheulen, C. Dittrich, B.K. Keppler, U. Jaehde, R. Cent European Soc Anticanc Drug, Pharmacokinetics of a novel anticancer ruthenium complex (KP1019, FFC14A) in a phase I dose-escalation study, *Anti-Cancer Drugs*, 20 (2009) 97-103 doi: 10.1097/CAD.0b013e328322fbc5

- [265] C.R. Kowol, R. Trondl, P. Heffeter, V.B. Arion, M.A. Jakupec, A. Roller, M. Galanski, W. Berger, B.K. Keppler, Impact of metal coordination on cytotoxicity of 3-aminopyridine-2-carboxaldehyde thiosemicarbazone (triapine) and novel insights into terminal dimethylation, *Journal of Medicinal Chemistry*, 52 (2009) 5032-5043 doi: 10.1021/jm900528d
- [264] J. Kasser, A.A. Nazarov, C.G. Hartinger, B. Wdziekonski, C. Dani, M.L. Kuznetsov, V.B. Arion, B.K. Keppler, A one step/one pot synthesis of N,N-bis(phosphonomethyl)amino acids and their effects on adipogenic and osteogenic differentiation of human mesenchymal stem cells, *Bioorganic & Medicinal Chemistry*, 17 (2009) 3388-3393 doi: 10.1016/j.bmc.2009.03.039
- [263] W. Kandioller, C.G. Hartinger, A.A. Nazarov, M.L. Kuznetsov, R.O. John, C. Bartel, M.A. Jakupec, V.B. Arion, B.K. Keppler, From pyrone to thiopyrone ligands – rendering maltol-derived ruthenium(II)-arene complexes that are anticancer active in vitro, *Organometallics*, 28 (2009) 4249-4251 doi: 10.1021/om900483t
- [262] W. Kandioller, C.G. Hartinger, A.A. Nazarov, J. Kasser, R. John, M.A. Jakupec, V.B. Arion, P.J. Dyson, B.K. Keppler, Tuning the anticancer activity of maltol-derived ruthenium complexes by derivatization of the 3-hydroxy-4-pyrone moiety, *Journal of Organometallic Chemistry*, 694 (2009) 922-929 doi: 10.1016/j.jorganchem.2008.10.016
- [261] W. Kandioller, C.G. Hartinger, A.A. Nazarov, C. Bartel, M. Skocic, M.A. Jakupec, V.B. Arion, B.K. Keppler, Maltol-derived ruthenium-cymene complexes with tumor inhibiting properties: The impact of ligand-metal bond stability on anticancer activity in vitro, *Chemistry - A European Journal*, 15 (2009) 12283-12291 doi: 10.1002/chem.200901939
- [260] P. Heffeter, A. Popovic-Bijelic, P. Saiko, R. Dornetshuber, U. Jungwirth, N. Voevodskaya, D. Biglino, M.A. Jakupec, L. Elbling, M. Micksche, T. Szekeres, B.K. Keppler, A. Gräslund, W. Berger, Ribonucleotide reductase as one important target of tris(1,10-phenanthroline)lanthanum(III) trithiocyanate (KP772), *Current Cancer Drug Targets*, 9 (2009) 595-607 doi: 10.2174/156800909789056962
- [259] S. Grguric-Sipka, I.N. Stepanenko, J.M. Lazic, C. Bartel, M.A. Jakupec, V.B. Arion, B.K. Keppler, Synthesis, X-ray diffraction structure, spectroscopic properties and antiproliferative activity of a novel ruthenium complex with constitutional similarity to cisplatin, *Dalton Transactions*, (2009) 3334-3339 doi: 10.1039/b822725j
- [258] A. Fleischer, A. Roller, V.B. Arion, B.K. Keppler, F. Mohr, Synthesis and structures of palladium(II) and platinum(II) complexes containing heterocyclic thiolate ligands formed by cycloaddition reactions of coordinated azides, *Canadian Journal of Chemistry-Revue Canadienne De Chimie*, 87 (2009) 146-150 doi: 10.1139/v08-115
- [257] A.E. Egger, C. Rappel, M.A. Jakupec, C.G. Hartinger, P. Heffeter, B.K. Keppler, Development of an experimental protocol for uptake studies of metal compounds in adherent tumor cells, *Journal of Analytical Atomic Spectrometry*, 24 (2009) 51-61 doi: 10.1039/b810481f
- [256] A.K. Bytzeck, E.A. Enyedy, T. Kiss, B.K. Keppler, C.G. Hartinger, Biodistribution of anti-diabetic Zn(II) complexes in human serum and in vitro protein-binding studies by means of CZE-ICP-MS, *Electrophoresis*, 30 (2009) 4075-4082 doi: 10.1002/elps.200900212
- [255] G.E. Büchel, I.N. Stepanenko, M. Hejl, M.A. Jakupec, V.B. Arion, B.K. Keppler, [OsIVCl5(Hazole)]– complexes: Synthesis, structure, spectroscopic properties, and antiproliferative activity, *Inorganic Chemistry*, 48 (2009) 10737-10747 doi: 10.1021/ic901671j
- [254] F. Biba, M. Groessler, A. Egger, A. Roller, C.G. Hartinger, B.K. Keppler, New Insights into the chemistry of the antineoplastic lanthanum complex tris(1,10-phenanthroline)tris(thiocyanato-κN)lanthanum(III) (KP772) and its interaction with biomolecules, *European Journal of Inorganic Chemistry*, (2009) 4282-4287 doi: 10.1002/ejic.200900038
- [253] F. Biba, M. Groessler, A. Egger, M.A. Jakupec, B.K. Keppler, A novel cytotoxic cerium complex: Aquatrichloridobis(1,10-phenanthroline)cerium(III) (KP776). Synthesis, characterization, behavior in H₂O, binding towards biomolecules, and antiproliferative activity, *Chemistry & Biodiversity*, 6 (2009) 2153-2165 doi: 10.1002/cbdv.200900011
- [252] U.P. Apfel, C.R. Kowol, Y. Halpin, F. Kloss, J. Kubel, H. Gorls, J.G. Vos, B.K. Keppler, E. Morera, G. Lucente, W. Weigand, Investigation of amino acid containing [FeFe] hydrogenase models concerning pendant base effects, *Journal of Inorganic Biochemistry*, 103 (2009) 1236-1244 doi: 10.1016/j.jinorgbio.2009.07.005

- [251] W. Wadsak, L.K. Mien, K. Shanab, K. Weber, B. Schmidt, K.M. Sindelar, D.E. Ettliger, D. Haeusler, H. Spreitzer, B.K. Keppler, H. Viernstein, R. Dudczak, K. Kletter, M. Mitterhauser, Radiosynthesis of the adenosine A3 receptor ligand 5-(2-[¹⁸F]fluoroethyl) 2,4-diethyl-3-(ethylsulfanylcarbonyl)6-phenylpyridine-5-carboxylate ([¹⁸F]FE@SUPPY), *Radiochimica Acta*, 96 (2008) 119-124 doi: 10.1524/ract.2008.1467
- [250] W. Wadsak, L.K. Mien, K. Shanab, D.E. Ettliger, D. Haeusler, K. Sindelar, R.R. Lanzenberger, H. Spreitzer, H. Viernstein, B.K. Keppler, R. Dudczak, K. Kletter, M. Mitterhauser, Preparation and first evaluation of [¹⁸F]FE@SUPPY: a new PET tracer for the adenosine A3 receptor, *Nuclear Medicine and Biology*, 35 (2008) 61-66 doi: 10.1016/j.nucmedbio.2007.09.004
- [249] A. Stojanovic, M. Lämmerhofer, D. Kogelnig, S. Schiesel, M. Sturm, M. Galanski, R. Krachler, B.K. Keppler, W. Lindner, Analysis of quaternary ammonium and phosphonium ionic liquids by reversed-phase high-performance liquid chromatography with charged aerosol detection and unified calibration, *Journal of Chromatography A*, 1209 (2008) 179-187 doi: 10.1016/j.chroma.2008.09.017
- [248] I.N. Stepanenko, A.A. Krokhin, R.O. John, A. Roller, V.B. Arion, M.A. Jakupec, B.K. Keppler, Synthesis, structure, spectroscopic properties, and antiproliferative activity in vitro of novel osmium(III) complexes withazole heterocycles, *Inorganic Chemistry*, 47 (2008) 7338-7347 doi: 10.1021/ic8006958
- [247] A.Y. Shmykov, V.N. Filippov, L.S. Foteeva, B.K. Keppler, A.R. Timerbaev, Toward high-throughput monitoring of metallodrug-protein interaction using capillary electrophoresis in chemically modified capillaries, *Analytical Biochemistry*, 379 (2008) 216-218 doi: 10.1016/j.ab.2008.04.043
- [246] C. Scolaro, C.G. Hartinger, C.S. Allardyce, B.K. Keppler, P.J. Dyson, Hydrolysis study of the bifunctional antitumor compound RAPTA-C, [Ru(η^6 -p-cymene)Cl₂(pta)], *Journal of Inorganic Biochemistry*, 102 (2008) 1743-1748 doi: 10.1016/j.jinorgbio.2008.05.004
- [245] R. Schuecker, R.O. John, M.A. Jakupec, V.B. Arion, B.K. Keppler, Water-soluble mixed-ligand ruthenium(II) and osmium(II) arene complexes with high antiproliferative activity, *Organometallics*, 27 (2008) 6587-6595 doi: 10.1021/om800774t
- [244] M.R. Reithofer, S.M. Valiahd, M. Galanski, M.A. Jakupec, V.B. Arion, B.K. Keppler, Novel endothall-containing platinum(IV) complexes: synthesis, characterization, and cytotoxic activity, *Chemistry & Biodiversity*, 5 (2008) 2160-2170 doi: 10.1002/cbdv.200890197
- [243] M.R. Reithofer, A. Schwarzinger, S.M. Valiahd, M. Galanski, M.A. Jakupec, B.K. Keppler, Novel bis(carboxylato)dichlorido(ethane-1,2-diamine)platinum(IV) complexes with exceptionally high cytotoxicity, *Journal of Inorganic Biochemistry*, 102 (2008) 2072-2077 doi: 10.1016/j.jinorgbio.2008.07.006
- [242] M.R. Reithofer, M. Galanski, V.B. Arion, B.K. Keppler, Unprecedented twofold intramolecular hydroamination in diam(m)ine-dicarboxylatodichloridoplatinum(IV) complexes - ethane-1,2-diamine vs. ammine ligands, *Chemical Communications*, (2008) 1091-1093 doi: 10.1039/b715680d
- [241] E. Reisner, V.B. Arion, B.K. Keppler, A.J.L. Pombeiro, Electron-transfer activated metal-based anticancer drugs, *Inorganica Chimica Acta*, 361 (2008) 1569-1583 doi: 10.1016/j.ica.2006.12.005
- [240] K. Polec-Pawlak, J.K. Abramski, J. Ferenc, L.S. Foteeva, A.R. Timerbaev, B.K. Keppler, M. Jarosz, Application of capillary electrophoresis-inductively coupled plasma mass spectrometry to comparative studying of the reactivity of antitumor ruthenium(III) complexes differing in the nature of counter-ion toward human serum proteins, *Journal of Chromatography A*, 1192 (2008) 323-326 doi: 10.1016/j.chroma.2008.04.009
- [239] M.G. Mendoza-Ferri, C.G. Hartinger, A.A. Nazarov, W. Kandioller, K. Severin, B.K. Keppler, Modifying the structure of dinuclear ruthenium complexes with antitumor activity, *Applied Organometallic Chemistry*, 22 (2008) 326-332 doi: 10.1002/aoc.1394
- [238] M.G. Mendoza-Ferri, C.G. Hartinger, R.E. Eichinger, N. Stolyarova, K. Severin, M.A. Jakupec, A.A. Nazarov, B.K. Keppler, Influence of the spacer length on the in vitro anticancer activity of dinuclear ruthenium-arene compounds, *Organometallics*, 27 (2008) 2405-2407 doi: 10.1021/om800207t

- [237] C.R. Kowol, E. Reisner, I. Chiorescu, V.B. Arion, M. Galanski, D.V. Deubel, B.K. Keppler, An electrochemical study of antineoplastic gallium, iron and ruthenium complexes with redox noninnocent α -N-heterocyclic chalcogensemicarbazones, *Inorganic Chemistry*, 47 (2008) 11032-11047 doi: 10.1021/ic8013249
- [236] D. Kogelnig, A. Stojanovic, M. Galanski, M. Groessler, F. Irlsa, R. Krachler, B.K. Keppler, Greener synthesis of new ammonium ionic liquids and their potential as extracting agents, *Tetrahedron Letters*, 49 (2008) 2782-2785 doi: 10.1016/j.tetlet.2008.02.138
- [235] G. Koellensperger, Z. Stefanka, K. Meelich, M. Galanski, B.K. Keppler, G. Stingeder, S. Hann, Species specific IDMS for accurate quantification of carboplatin in urine by LC-ESI-TOFMS and LC-ICP-QMS, *Journal of Analytical Atomic Spectrometry*, 23 (2008) 29-36 doi: 10.1039/b708541a
- [234] W. Jaschke, B.K. Keppler, P. Debbage, Diagnostic imaging in nanomedicine: particles to pharmaceutical nanomedicine, *Chimica Oggi*, 26 (2008) 72-74 doi: ---
- [233] M.A. Jakupec, M. Galanski, V.B. Arion, C.G. Hartinger, B.K. Keppler, Antitumour metal compounds: More than theme and variations, *Dalton Transactions*, (2008) 183-194 doi: 10.1039/b712656p
- [232] P. Heffeter, U. Jungwirth, M. Jakupec, C. Hartinger, M. Galanski, L. Elbling, M. Micksche, B.K. Keppler, W. Berger, Resistance against novel anticancer metal compounds: Differences and similarities, *Drug Resistance Updates*, 11 (2008) 1-16 doi: 10.1016/j.drug.2008.02.002
- [231] C.G. Hartinger, A.A. Nazarov, S.M. Ashraf, P.J. Dyson, B.K. Keppler, Carbohydrate-metal complexes and their potential as anticancer agents, *Current Medicinal Chemistry*, 15 (2008) 2574-2591 doi: 10.2174/092986708785908978
- [230] C.G. Hartinger, M.A. Jakupec, S. Zorbas-Seifried, M. Groessler, A. Egger, W. Berger, H. Zorbas, P.J. Dyson, B.K. Keppler, KP1019, a new redox-active anticancer agent - preclinical development and results of a clinical phase I study in tumor patients, *Chemistry & Biodiversity*, 5 (2008) 2140-2155 doi: 10.1002/cbdv.200890195
- [229] L. Habala, C. Dworak, A.A. Nazarov, C.G. Hartinger, S.A. Abramkin, V.B. Arion, W. Lindner, M. Galanski, B.K. Keppler, Methyl-substituted trans-1,2-cyclohexanediamines as new ligands for oxaliplatin-type complexes, *Tetrahedron*, 64 (2008) 137-146 doi: 10.1016/j.tet.2007.10.069
- [228] M. Groessler, C.G. Hartinger, K. Polec-Pawlak, M. Jarosz, B.K. Keppler, Capillary electrophoresis hyphenated to inductively coupled plasma-mass spectrometry: A novel approach for the analysis of anticancer metallodrugs in human serum and plasma, *Electrophoresis*, 29 (2008) 2224-2232 doi: 10.1002/elps.200700790
- [227] M. Groessler, C.G. Hartinger, K. Polec-Pawlak, M. Jarosz, P.J. Dyson, B.K. Keppler, Elucidation of the interactions of an anticancer ruthenium complex in clinical trials with biomolecules utilizing capillary electrophoresis hyphenated to inductively coupled plasma-mass spectrometry, *Chemistry & Biodiversity*, 5 (2008) 1609-1614 doi: 10.1002/cbdv.200890148
- [226] M. Groessler, C.G. Hartinger, P.J. Dyson, B.K. Keppler, CZE-ICP-MS as a tool for studying the hydrolysis of ruthenium anticancer drug candidates and their reactivity towards the DNA model compound dGMP, *Journal of Inorganic Biochemistry*, 102 (2008) 1060-1065 doi: 10.1016/j.jinorgbio.2007.11.018
- [225] W. Ginzinger, V.B. Arion, G. Giester, M. Galanski, B.K. Keppler, Synthesis and structural peculiarities of gallium complexes with novel paullone derivatives, *Central European Journal of Chemistry*, 6 (2008) 340-346 doi: 10.2478/s11532-008-0048-x
- [224] L.S. Foteeva, N.V. Stolyarova, A.R. Timerbaev, B.K. Keppler, Capillary electrophoretic assay for the stability of tris(8-quinolinolato)gallium(III) in tablet formulations, *Journal of Pharmaceutical and Biomedical Analysis*, 48 (2008) 218-222 doi: 10.1016/j.jpba.2008.05.017
- [223] A.E. Egger, C.G. Hartinger, H. Ben Hamidane, Y.O. Tsybin, B.K. Keppler, P.J. Dyson, High resolution mass spectrometry for studying the interactions of cisplatin with oligonucleotides, *Inorganic Chemistry*, 47 (2008) 10626-10633 doi: 10.1021/ic801371r

- [222] A. Egger, B. Cebrian-Losantos, I.N. Stepanenko, A.A. Krokhin, R. Eichinger, M.A. Jakupec, V.B. Arion, B.K. Keppler, Hydrolysis and cytotoxic properties of osmium(II)/(III)-DMSO-azole complexes, *Chemistry & Biodiversity*, 5 (2008) 1588-1593 doi: 10.1002/cbdv.200890146
- [221] A. Dorcier, C.G. Hartinger, R. Scopelliti, R.H. Fish, B.K. Keppler, P.J. Dyson, Studies on the reactivity of organometallic Ru-, Rh- and Os-pta complexes with DNA model compounds, *Journal of Inorganic Biochemistry*, 102 (2008) 1066-1076 doi: 10.1016/j.jinorgbio.2007.10.016
- [220] D. Dolfen, K. Schottler, S.M. Valiahdi, M.A. Jakupec, B.K. Keppler, E.R.T. Tiekink, F. Mohr, Synthesis, structures and in vitro cytotoxicity of some platinum(II) complexes containing thiocarbamate esters, *Journal of Inorganic Biochemistry*, 102 (2008) 2067-2071 doi: 10.1016/j.jinorgbio.2008.07.002
- [219] A. Dobrov, V.B. Arion, S. Shova, A. Roller, E. Rentschler, B.K. Keppler, Spontaneous resolution of a triple-stranded dinickel(II) helicate generated via intermolecular transamination reaction of S-methylisothiocarbohydrazide in the presence of Ni²⁺, *European Journal of Inorganic Chemistry*, (2008) 4140-4145 doi: 10.1002/ejic.200800605
- [218] I. Chiorescu, D.V. Deubel, V.B. Arion, B.K. Keppler, Computational electrochemistry of ruthenium anticancer agents. Unprecedented benchmarking of implicit solvation methods, *Journal of Chemical Theory and Computation*, 4 (2008) 499-506 doi: 10.1021/ct700247g
- [217] B. Cebrian-Losantos, E. Reisner, C.R. Kowol, A. Roller, S. Shova, V.B. Arion, B.K. Keppler, Synthesis and reactivity of the aquation product of the antitumor complex trans-[RuIIICl₄(indazole)₂]-, *Inorganic Chemistry*, 47 (2008) 6513-6523 doi: 10.1021/ic800506g
- [216] A. Casini, C. Hartinger, C. Gabbiani, E. Mini, P.J. Dyson, B.K. Keppler, L. Messori, Gold(III) compounds as anticancer agents: Relevance of gold-protein interactions for their mechanism of action, *Journal of Inorganic Biochemistry*, 102 (2008) 564-575 doi: 10.1016/j.jinorgbio.2007.11.003
- [215] I. Berger, M. Hanif, A.A. Nazarov, C.G. Hartinger, R.O. John, M.L. Kuznetsov, M. Groessl, F. Schmitt, O. Zava, F. Biba, V.B. Arion, M. Galanski, M.A. Jakupec, L. Juillerat-Jeanneret, P.J. Dyson, B.K. Keppler, In vitro anticancer activity and biologically relevant metabolism of organometallic ruthenium complexes with carbohydrate-based ligands, *Chemistry - A European Journal*, 14 (2008) 9046-9057 doi: 10.1002/chem.200801032
- [214] S.M. Ashraf, W. Kandioller, M.G. Mendoza-Ferri, A.A. Nazarov, C.G. Hartinger, B.K. Keppler, The Hydration of chloroacetonitriles catalyzed by mono- and dinuclear RuII- and OsII-arene complexes, *Chemistry & Biodiversity*, 5 (2008) 2060-2066 doi: 10.1002/cbdv.200890188
- [213] S.M. Ashraf, I. Berger, A.A. Nazarov, C.G. Hartinger, M.P. Koroteev, E.E. Nifant'ev, B.K. Keppler, Phosphite-derivatized ruthenium-carbohydrate complexes in the catalytic hydration of nitriles, *Chemistry & Biodiversity*, 5 (2008) 1640-1644 doi: 10.1002/cbdv.200890151
- [212] S. Zorbas-Seifried, M.A. Jakupec, N.V. Kukushkin, M. Groessl, C.G. Hartinger, O. Semenova, H. Zorbas, V.Y. Kukushkin, B.K. Keppler, Reversion of structure-activity relationships of antitumor platinum complexes by acetoxime but not hydroxylamine ligands, *Molecular Pharmacology*, 71 (2007) 357-365 doi: 10.1124/mol.106.030726
- [211] W. Wadsak, L.K. Mien, D.E. Ettlinger, H. Eideherr, D. Haeusler, K.M. Sindelar, B.K. Keppler, R. Dudczak, K. Kletter, M. Mitterhauser, ¹⁸F fluoroethylations: Different strategies for the rapid translation of ¹¹C-methylated radiotracers, *Nuclear Medicine and Biology*, 34 (2007) 1019-1028 doi: 10.1016/j.nucmedbio.2007.06.012
- [210] A.R. Timerbaev, O.O. Vasylenko, L.S. Foteeva, A.V. Rudnev, O. Semenova, B.K. Keppler, Application of micellar and microemulsion electrokinetic chromatography for characterization of gallium(III) complexes of pharmaceutical significance, *Journal of Separation Science*, 30 (2007) 399-406 doi: 10.1002/jssc.200600305
- [209] A.R. Timerbaev, B.K. Keppler, Capillary electrophoresis of metal-based drugs, *Analytical Biochemistry*, 369 (2007) 1-7 doi: 10.1016/j.ab.2007.05.009
- [208] A.R. Timerbaev, L.S. Foteeva, A.V. Rudnev, J.K. Abramski, K. Polec-Pawlak, C.G. Hartinger, M. Jarosz, B.K. Keppler, Probing the stability of serum protein-ruthenium (III) drug adducts in the presence of extracellular reductants using CE, *Electrophoresis*, 28 (2007) 2235-2240 doi: 10.1002/elps.200600707

- [207] I.N. Stepanenko, B. Cebrian-Losantos, V.B. Arion, A.A. Krokhin, A.A. Nazarov, B.K. Keppler, The complexes [OsCl₂(azole)₂(dmsO)₂] and [OsCl₂(azole)(dmsO)₃] : Synthesis, structure, spectroscopic properties and catalytic hydration of chloronitriles, *European Journal of Inorganic Chemistry*, (2007) 400-411 doi: 10.1002/ejic.200600859
- [206] C. Scolaro, A.B. Chaplin, C.G. Hartinger, A. Bergamo, M. Cocchietto, B.K. Keppler, G. Sava, P.J. Dyson, Tuning the hydrophobicity of ruthenium(II)-arene (RAPTA) drugs to modify uptake, biomolecular interactions and efficacy, *Dalton Transactions*, (2007) 5065-5072 doi: 10.1039/b705449a
- [205] W.F. Schmid, S. Zorbas-Seifried, R.O. John, V.B. Arion, M.A. Jakupec, A. Roller, M. Galanski, I. Chiorescu, H. Zorbas, B.K. Keppler, The first ruthenium-based paullones: Syntheses, X-ray diffraction structures, and spectroscopic and antiproliferative properties in vitro, *Inorganic Chemistry*, 46 (2007) 3645-3656 doi: 10.1021/ic070098j
- [204] W.F. Schmid, R.O. John, G. Muhlgassner, P. Heffeter, M.A. Jakupec, M. Galanski, W. Berger, V.B. Arion, B.K. Keppler, Metal-based paullones as putative CDK inhibitors for antitumor chemotherapy, *Journal of Medicinal Chemistry*, 50 (2007) 6343-6355 doi: 10.1021/jm701042w
- [203] W.F. Schmid, R.O. John, V.B. Arion, M.A. Jakupec, B.K. Keppler, Highly antiproliferative ruthenium(II) and osmium(II) arene complexes with paullone-derived ligands, *Organometallics*, 26 (2007) 6643-6652 doi: 10.1021/om700813c
- [202] Y.Y. Scaffidi-Domianello, A.A. Nazarov, M. Haukka, M. Galanski, B.K. Keppler, J. Schneider, P.W. Du, R. Eisenberg, V.Y. Kukushkin, First example of the solid-state thermal cyclometalation of ligated benzophenone imine giving novel luminescent platinum(II) species, *Inorganic Chemistry*, 46 (2007) 4469-4482 doi: 10.1021/ic062414k
- [201] M.R. Reithofer, S.M. Valiahdi, M.A. Jakupec, V.B. Arion, A. Egger, M. Galanski, B.K. Keppler, Novel di- and tetracarboxylatoplatinum(IV) complexes. Synthesis, characterization, cytotoxic activity, and DNA platination, *Journal of Medicinal Chemistry*, 50 (2007) 6692-6699 doi: 10.1021/jm070897b
- [200] C.R. Kowol, R. Elchinger, M.A. Jakupec, M. Galanski, V.B. Arion, B.K. Keppler, Effect of metal ion complexation and chalcogen donor identity on the antiproliferative activity of 2-acetylpyridine N,N-dimethyl(chalcogen)semicarbazones, *Journal of Inorganic Biochemistry*, 101 (2007) 1946-1957 doi: 10.1016/j.jinorgbio.2007.07.026
- [199] C.R. Kowol, R. Berger, R. Eichinger, A. Roller, M.A. Jakupec, P.P. Schmidt, V.B. Arion, B.K. Keppler, Gallium(III) and Iron(III) complexes of α -N-heterocyclic thiosemicarbazones: Synthesis, characterization, cytotoxicity, and interaction with ribonucleotide reductase, *Journal of Medicinal Chemistry*, 50 (2007) 1254-1265 doi: 10.1021/jm0612618
- [198] P. Heffeter, M.A. Jakupec, W. Korner, P. Chiba, C. Pirker, R. Dornetshuber, L. Elbling, H. Sutterluty, M. Micksche, B.K. Keppler, W. Berger, Multidrug-resistant cancer cells are preferential targets of the new antineoplastic lanthanum compound KP772 (FFC24), *Biochemical Pharmacology*, 73 (2007) 1873-1886 doi: 10.1016/j.bcp.2007.03.002
- [197] C.G. Hartinger, B.K. Keppler, CE in anticancer metallodrug research - an update, *Electrophoresis*, 28 (2007) 3436-3446 doi: 10.1002/elps.200700114
- [196] C.G. Hartinger, W.H. Ang, A. Casini, L. Messori, B.K. Keppler, P.J. Dyson, Mass spectrometric analysis of ubiquitin-platinum interactions of leading anticancer drugs: MALDI versus ESI, *Journal of Analytical Atomic Spectrometry*, 22 (2007) 960-967 doi: 10.1039/b703350h
- [195] M. Groessl, E. Reisner, C.G. Hartinger, R. Eichinger, O. Semenova, A.R. Timerbaev, M.A. Jakupec, V.B. Arion, B.K. Keppler, Structure-activity relationships for NAMI-A-type complexes (HL)[trans-RuCl₄L(S-dmsO)ruthenate(III)] (L = imidazole, indazole, 1,2,4-triazole, 4-amino-1,2,4-triazole, and 1-methyl-1,2,4-triazole): Aquation, redox properties, protein binding, and antiproliferative activity, *Journal of Medicinal Chemistry*, 50 (2007) 2185-2193 doi: 10.1021/jm061081y
- [194] S. Grguric-Sipka, C.R. Kowol, S.M. Valiahdi, R. Eichinger, M.A. Jakupec, A. Roller, S. Shova, V.B. Arion, B.K. Keppler, Ruthenium(II) complexes of thiosemicarbazones: The first water-soluble complex with pH-dependent antiproliferative activity, *European Journal of Inorganic Chemistry*, (2007) 2870-2878 doi: 10.1002/ejic.200601196

- [193] V.O. Gelmboldt, E.V. Ganin, M.S. Fonari, Y.A. Simonov, L.V. Koroeva, A.A. Ennan, S.S. Basok, S. Shova, H. Kahlig, V.B. Arion, B.K. Keppler, Two new "onium" fluorosilicates, the products of interaction of fluorosilicic acid with 12-membered macrocycles: structures and spectroscopic properties, *Dalton Transactions*, (2007) 2915-2924 doi: 10.1039/b703645k
- [192] M. Galanski, B.K. Keppler, Searching for the magic bullet: Anticancer platinum drugs which can be accumulated or activated in the tumor tissue, *Anti-Cancer Agents in Medicinal Chemistry*, 7 (2007) 55-73 doi: 10.2174/187152007779314017
- [191] B. Cebrian-Losantos, A.A. Krokhin, I.N. Stepanenko, R. Eichinger, M.A. Jakupec, V.B. Arion, B.K. Keppler, Osmium NAMI-A analogues: Synthesis, structural and spectroscopic characterization, and antiproliferative properties, *Inorganic Chemistry*, 46 (2007) 5023-5033 doi: 10.1021/ic700405y
- [190] E. Budzisz, M. Malecka, B.K. Keppler, V.B. Arion, G. Andrijewski, U. Krajewska, M. Rozalski, Synthesis, structure, protolytic properties, alkylating and cytotoxic activity of novel platinum(II) and palladium(II) complexes with pyrazole-derived Ligands, *European Journal of Inorganic Chemistry*, (2007) 3728-3735 doi: 10.1002/ejic.200700139
- [189] I. Berger, A.A. Nazarov, C.G. Hartinger, M. Groessl, S.M. Valiahdi, M.A. Jakupec, B.K. Keppler, A glucose derivative as natural alternative to the cyclohexane-1,2-diamine ligand in the anticancer drug oxaliplatin?, *ChemMedChem*, 2 (2007) 505-514 doi: 10.1002/cmdc.200600279
- [188] S.S. Aleksenko, C.G. Hartinger, O. Semenova, K. Meelich, A.R. Timerbaev, B.K. Keppler, Characterization of interactions between human serum albumin and tumor-inhibiting amino alcohol platinum(II) complexes using capillary electrophoresis, *Journal of Chromatography A*, 1155 (2007) 218-221 doi: 10.1016/j.chroma.2007.01.017
- [187] S. Zorbas-Seifried, C.G. Hartinger, K. Meelich, M. Galanski, B.K. Keppler, H. Zorbas, DNA interactions of pH-sensitive, antitumor bis(aminoalcohol) dichloroplatinum(II) complexes, *Biochemistry*, 45 (2006) 14817-14825 doi: 10.1021/bi061063i
- [186] W. Wadsak, B. Wirl-Sagadin, M. Mitterhauser, L.K. Mien, D.E. Ettliger, B.K. Keppler, R. Dudczak, K. Kletter, NCA nucleophilic radiofluorination on substituted benzaldehydes for the preparation of [¹⁸F]fluorinated aromatic amino acids, *Applied Radiation and Isotopes*, 64 (2006) 355-359 doi: 10.1016/j.apradiso.2005.09.001
- [185] A.R. Timerbaev, C.G. Hartinger, B.K. Keppler, Metallodrug research and analysis using capillary electrophoresis, *Trends in Analytical Chemistry*, 25 (2006) 868-875 doi: 10.1016/j.trac.2006.04.009
- [184] A.R. Timerbaev, C.G. Hartinger, S.S. Aleksenko, B.K. Keppler, Interactions of antitumor metallodrugs with serum proteins: Advances in characterization using modern analytical methodology, *Chemical Reviews*, 106 (2006) 2224-2248 doi: 10.1021/cr040704h
- [183] P. Schluga, C.G. Hartinger, A. Egger, E. Reisner, M. Galanski, M.A. Jakupec, B.K. Keppler, Redox behavior of tumor-inhibiting ruthenium(III) complexes and effects of physiological reductants on their binding to GMP, *Dalton Transactions*, (2006) 1796-1802 doi: 10.1039/b511792e
- [182] Y.Y. Scaffidi-Domianello, M. Haukka, P.F. Kelly, M. Galanski, B.K. Keppler, V.Y. Kukushkin, Crystal structure of trans-dichloro(dimethylsulfoxide)(diphenylsulfimide)-platinum(II)toluene hemisolvate, PtCl₂(C₂H₆SO)(C₁₂H₁₀NH) · 1/2C₇H₈, *Zeitschrift für Kristallographie-New Crystal Structures*, 221 (2006) 226-228 doi: 10.1524/ncrs.2006.0049
- [181] A.V. Rudnev, L.S. Foteeva, C. Kowol, R. Berger, M.A. Jakupec, V.B. Arion, A.R. Timerbaev, B.K. Keppler, Preclinical characterization of anticancer gallium(III) complexes: Solubility, stability, lipophilicity and binding to serum proteins, *Journal of Inorganic Biochemistry*, 100 (2006) 1819-1826 doi: 10.1016/j.jinorgbio.2006.07.003
- [180] C. Rothenburger, M. Galanski, V.B. Arion, H. Gorus, W. Weigand, B.K. Keppler, Synthesis and characterization of [(1R,2R)-trans-Diaminocyclohexane]-platinum(II) coordinated to sulfur and selenium amino acids, *European Journal of Inorganic Chemistry*, (2006) 3746-3752 doi: 10.1002/ejic.200600453
- [179] M. Reithofer, M. Galanski, A. Roller, B.K. Keppler, An entry to novel platinum complexes: Carboxylation of dihydroxoplatinum(IV) complexes with succinic anhydride and subsequent derivatization, *European Journal of Inorganic Chemistry*, (2006) 2612-2617 doi: 10.1002/ejic.200600108

- [178] K. Polec-Pawlak, J.K. Abramski, O. Semenova, C.G. Hartinger, A.R. Timerbaev, B.K. Keppler, M. Jarosz, Platinum group metallo-drug-protein binding studies by capillary electrophoresis - inductively coupled plasma-mass spectrometry: A further insight into the reactivity of a novel antitumor ruthenium(III) complex toward human serum proteins, *Electrophoresis*, 27 (2006) 1128-1135 doi: 10.1002/elps.200500694
- [177] K. Meelich, M. Galanski, V.B. Arion, B.K. Keppler, Bis(2-amino alcohol-κN)dicarboxylatoplatinum(II) complexes – Elegant synthesis via ring-opening of bis(2-amino alcoholato-κ2N,O)platinum(II) species with dicarboxylic acids, *European Journal of Inorganic Chemistry*, (2006) 2476-2483 doi: 10.1002/ejic.200600193
- [176] Z. Huang, A.R. Timerbaev, B.K. Keppler, T. Hirokawa, Determination of cisplatin and its hydrolytic metabolite in human serum by capillary electrophoresis techniques, *Journal of Chromatography A*, 1106 (2006) 75-79 doi: 10.1016/j.chroma.2005.09.042
- [175] P. Heffeter, M.A. Jakupec, W. Korner, S. Wild, N.G. von Keyserlingk, L. Elbling, H. Zorbass, A. Korynevskaya, S. Knasmüller, H. Sutterluty, M. Micksche, B.K. Keppler, W. Berger, Anticancer activity of the lanthanum compound tris(1,10-phenanthroline)lanthanum(III) trithiocyanate (KP772; FFC24), *Biochemical Pharmacology*, 71 (2006) 426-440 doi: 10.1016/j.bcp.2005.11.009
- [174] C.G. Hartinger, S. Zorbass-Seifried, M.A. Jakupec, B. Kynast, H. Zorbass, B.K. Keppler, From bench to bedside - preclinical and early clinical development of the anticancer agent indazolium trans-[tetrachlorobis(1H-indazole)ruthenate(III)] (KP1019 or FFC14A), *Journal of Inorganic Biochemistry*, 100 (2006) 891-904 doi: 10.1016/j.jinorgbio.2006.02.013
- [173] C.G. Hartinger, M.G. Ferri-Mendoza, A.A. Nazarov, B.K. Keppler, Electrospray ionization mass spectrometric study on the coordination behavior of dacarbazine towards transition metal ions, *Polyhedron*, 25 (2006) 1971-1978 doi: 10.1016/j.poly.2005.12.022
- [172] M. Galanski, B.K. Keppler, Tumorhemmende Metallverbindungen: Entwicklung, Bedeutung und Perspektiven, *Pharmazie in unserer Zeit*, 35 (2006) 118-123 doi: 10.1002/pauz.200500160
- [171] A. Dobrov, V.B. Arion, N. Kandler, W. Ginzinger, M.A. Jakupec, A. Rufinska, N.G. von Keyserlingk, M. Galanski, C. Kowol, B.K. Keppler, The first metal-based paullone derivative with high anti proliferative activity in vitro, *Inorganic Chemistry*, 45 (2006) 1945-1950 doi: 10.1021/ic0511120
- [170] H. Zorbass, B.K. Keppler, Cisplatin damage: Are DNA repair proteins saviors or traitors to the cell?, *ChemBioChem*, 6 (2005) 1157-1166 doi: 10.1002/cbic.200400427
- [169] A.R. Timerbaev, A.V. Rudnev, O. Semenova, C.G. Hartinger, B.K. Keppler, Comparative binding of antitumor indazolium [trans-tetrachlorobis(1H-indazole) ruthenate(III)] to serum transport proteins assayed by capillary zone electrophoresis, *Analytical Biochemistry*, 341 (2005) 326-333 doi: 10.1016/j.ab.2005.03.020
- [168] M. Sulyok, S. Hann, C.G. Hartinger, B.K. Keppler, G. Stinger, G. Koellensperger, Two dimensional separation schemes for investigation of the interaction of an anticancer ruthenium(III) compound with plasma proteins, *Journal of Analytical Atomic Spectrometry*, 20 (2005) 856-863 doi: 10.1039/b508060f
- [167] P. Schluga, C.G. Hartinger, M. Galanski, K. Meelich, A.R. Timerbaev, B.K. Keppler, Tumour-inhibiting platinum(II) complexes with aminoalcohol ligands: biologically important transformations studied by micellar electrokinetic chromatography, nuclear magnetic resonance spectroscopy and mass spectrometry, *Analyst*, 130 (2005) 1383-1389 doi: 10.1039/b506490b
- [166] A.V. Rudnev, S.S. Aleksenko, O. Semenova, C.G. Hartinger, A.R. Timerbaev, B.K. Keppler, Determination of binding constants and stoichiometries for platinum anticancer drugs and serum transport proteins by capillary electrophoresis using the Hummel-Dreyer method, *Journal of Separation Science*, 28 (2005) 121-127 doi: 10.1002/jssc.200401930
- [165] E. Reisner, V.B. Arion, A. Rufinska, I. Chiorescu, W.F. Schmid, B.K. Keppler, Isomeric [RuCl₂(dmsO)₂(indazole)₂] complexes: ruthenium(II)-mediated coupling reaction of acetonitrile with 1H-indazole, *Dalton Transactions*, (2005) 2355-2364 doi: 10.1039/b503650j

- [164] E. Reisner, V.B. Arion, A. Eichinger, N. Kandler, G. Giester, A.J.L. Pombeiro, B.K. Keppler, Tuning of redox properties for the design of ruthenium anticancer drugs: Part 2. Syntheses, crystal structures, and electrochemistry of potentially antitumor [Ru(III)/IrCl₆-n(Azole)_n]_z (n = 3, 4, 6) complexes, *Inorganic Chemistry*, 44 (2005) 6704-6716 doi: 10.1021/ic0503737
- [163] C. Rappel, M. Galanski, A. Yasemi, L. Habala, B.K. Keppler, Analysis of anticancer platinum(II)-complexes by microemulsion electrokinetic chromatography: Separation of diastereomers and estimation of octanol-water partition coefficients, *Electrophoresis*, 26 (2005) 878-884 doi: 10.1002/elps.200410053
- [162] I. Paschkunova-Martic, C. Kremser, K. Mistlberger, N. Shcherbakova, H. Dietrich, H. Talasz, Y. Zou, B. Hugel, M. Galanski, E. Soelder, K. Pfaller, I. Höllner, W. Buchberger, B.K. Keppler, P. Debbage, Design, synthesis, physical and chemical characterization, and biological interactions of lectin-targeted latex nanoparticles bearing Gd-DTPA chelates: an exploration of magnetic resonance molecular imaging (MRMI), *Histochemistry and Cell Biology*, 123 (2005) 283-301 doi: 10.1007/s00418-005-0780-7
- [161] A.A. Nazarov, M.P. Koroteev, C.G. Hartinger, B.K. Keppler, E.E. Nifant'ev, On the coordination properties of new bicycphosphite-carbohydrates, *Monatshefte für Chemie*, 136 (2005) 137-146 doi: 10.1007/s00706-004-0238-y
- [160] A.A. Nazarov, M.P. Koroteev, C.G. Hartinger, B.K. Keppler, E.E. Nifant'ev, Bis- and tris-bicycphosphites of D-glucofuranoside. Unexpected catalysis of P(III/V)-oxidation by triethylamine, *Tetrahedron*, 61 (2005) 10943-10950 doi: 10.1016/j.tet.2005.08.102
- [159] B.K. Keppler, Annual Meeting of the Working Group for Pharmacology in Oncology and Hematology (APOH) of the Central European Society for Anticancer Drug Research (CESAR) during the Symposium "Novel Approaches for the Discovery and the Development of Anticancer Agents, *International Journal of Clinical Pharmacology and Therapeutics*, 43 (2005) 566-608 doi:
- [158] S. Kapitza, M. Pongratz, M.A. Jakupec, P. Heffeter, W. Berger, L. Lackinger, B.K. Keppler, B. Marian, Heterocyclic complexes of ruthenium(III) induce apoptosis in colorectal carcinoma cells, *Journal of Cancer Research and Clinical Oncology*, 131 (2005) 101-110 doi: 10.1007/s00432-004-0617-0
- [157] S. Kapitza, M.A. Jakupec, M. Uhl, B.K. Keppler, B. Marian, The heterocyclic ruthenium(III) complex KP1019 (FFC14A) causes DNA damage and oxidative stress in colorectal tumor cells, *Cancer Letters*, 226 (2005) 115-121 doi: 10.1016/j.canlet.2005.01.002
- [156] M.A. Jakupec, P. Unfried, B.K. Keppler, Pharmacological properties of cerium compounds, *Reviews of Physiology Biochemistry and Pharmacology*, 153 (2005) 101-111 doi: 10.1007/s10254-004-0024-6
- [155] M.A. Jakupec, E. Reisner, A. Eichinger, M. Pongratz, V.B. Arion, M. Galanski, C.G. Hartinger, B.K. Keppler, Redox-active antineoplastic ruthenium complexes with indazole: Correlation of in vitro potency and reduction potential, *Journal of Medicinal Chemistry*, 48 (2005) 2831-2837 doi: 10.1021/jm0490742
- [154] M.A. Jakupec, V. Arion, S. Kapitza, E. Reisner, A. Eichinger, M. Pongratz, B. Marian, N. Graf von Keyserlingk, B.K. Keppler, KP1019 (FFC14A) from bench to bedside: Preclinical and early clinical development - An overview, *International Journal of Clinical Pharmacology and Therapeutics*, 43 (2005) 595-596 doi: 10.5414/cpp43595
- [153] R.D. Hofheinz, C. Dittrich, M.A. Jakupec, A. Drescher, U. Jaehde, M. Gneist, N. Graf von Keyserlingk, B.K. Keppler, A. Hochhaus, Early results from a phase I study on orally administered tris(8-quinolinolato)gallium(III) (FFC11, KP46) in patients with solid tumors - A CESAR study (Central European Society for Anticancer Drug Research - EWIV), *International Journal of Clinical Pharmacology and Therapeutics*, 43 (2005) 590-591 doi: 10.5414/cpp43590
- [152] P. Heffeter, M. Pongratz, E. Steiner, P. Chiba, M.A. Jakupec, L. Elbling, B. Marian, W. Korner, F. Sevelde, M. Micksche, B.K. Keppler, W. Berger, Intrinsic and acquired forms of resistance against the anticancer ruthenium compound KP1019 indazolium trans- tetrachlorobis(1H-indazole)ruthenate(III) (FFC14A), *Journal of Pharmacology and Experimental Therapeutics*, 312 (2005) 281-289 doi: 10.1124/jpet.104.073395
- [151] C.G. Hartinger, A.A. Nazarov, M. Galanski, M. Reithofer, B.K. Keppler, Glucose ferrocenyl-oxazolines: Coordination behavior toward [Pd(η^3 -allyl)Cl]₂ studied by ESI-MS, *Journal of Organometallic Chemistry*, 690 (2005) 3301-3308 doi: 10.1016/j.jorganchem.2005.03.062

- [150] C.G. Hartinger, A.A. Nazarov, V.B. Arion, G. Giester, M.L. Kuznetsov, M. Galanski, B.K. Keppler, 1,1'-bis(oxazolin-2-yl)ferrocenes: An investigation of their complexation behavior toward $[Pd(\eta^3\text{-allyl})Cl]_2$, *European Journal of Inorganic Chemistry*, (2005) 1589-1600 doi: 10.1002/ejic.200400737
- [149] C.G. Hartinger, S. Hann, G. Koellensperger, M. Sulyok, M. Groessl, A.R. Timerbaev, A.V. Rudnev, G. Stinger, B.K. Keppler, Interactions of a novel ruthenium-based anticancer drug (KP1019 or FFC14a) with serum proteins - significance for the patient, *International Journal of Clinical Pharmacology and Therapeutics*, 43 (2005) 583-585 doi: 10.5414/CP43583
- [148] L. Habala, M. Galanski, A. Yasemi, A.A. Nazarov, N.G. von Keyserlingk, B.K. Keppler, Synthesis and structure-activity relationships of mono- and dialkyl-substituted oxaliplatin derivatives, *European Journal of Medicinal Chemistry*, 40 (2005) 1149-1155 doi: 10.1016/j.ejmech.2005.06.003
- [147] M. Galanski, A. Yasemi, M.A. Jakupec, N.G. Von Keyserlingk, B.K. Keppler, Synthesis, cytotoxicity, and structure-activity relationships of new oxaliplatin derivatives, *Monatshefte für Chemie*, 136 (2005) 693-700 doi: 10.1007/s00706-004-0241-3
- [146] M. Galanski, S. Slaby, M.A. Jakupec, B.K. Keppler, Synthesis and in vitro antitumor potency of (cyclohexane-1,2-diamine)platinum(II) complexes with aminotris(methylenephosphonic acid) as bone-seeking ligand, *Bioinorganic Chemistry and Applications*, 3 (2005) 179-190 doi: 10.1155/bca.2005.179
- [145] M. Galanski, M.A. Jakupec, B.K. Keppler, Update of the preclinical situation of anticancer platinum complexes: Novel design strategies and innovative analytical approaches, *Current Medicinal Chemistry*, 12 (2005) 2075-2094 doi: 10.2174/0929867054637626
- [144] M. Galanski, L. Habala, A. Nazarov, M.A. Jakupec, A. Yasemi, S. Slaby, N. Keyserlingk, B.K. Keppler, Rational development of oxaliplatin analogues - Synthesis and preliminary structure-activity relationships, *International Journal of Clinical Pharmacology and Therapeutics*, 43 (2005) 575-576 doi: 10.5414/cpp43575
- [143] A. Egger, V.B. Arion, E. Reisner, B. Cebrian-Losantos, S. Shova, G. Trettenhahn, B.K. Keppler, Reactions of potent antitumor complex $trans\text{-}[RuCl_4(\text{indazole})_2]^-$ with a DNA-relevant nucleobase and thioethers: Insight into biological action, *Inorganic Chemistry*, 44 (2005) 122-132 doi: 10.1021/ic048967h
- [142] U. Warnke, C. Rappel, H. Meier, C. Kloft, M. Galanski, C.G. Hartinger, B.K. Keppler, U. Jaehde, Analysis of platinum adducts with DNA nucleotides and nucleosides by capillary electrophoresis coupled to ESI-MS: Indications of guanosine 5'-monophosphate O6-N7 chelation, *ChemBioChem*, 5 (2004) 1543-1549 doi: 10.1002/cbic.200400015
- [141] A.R. Timerbaev, K.S. Aleksenko, K. Polec-Pawlak, R. Ruzik, O. Semenova, C.G. Hartinger, S. Oszwaldowski, M. Galanski, M. Jarosz, B.K. Keppler, Platinum metallodrug-protein binding studies by capillary electrophoresis-inductively coupled plasma-mass spectrometry: Characterization of interactions between Pt(II) complexes and human serum albumin, *Electrophoresis*, 25 (2004) 1988-1995 doi: 10.1002/elps.200305984
- [140] E. Reisner, V.B. Arion, M. Fatima, C.G. da Silva, R. Lichtenecker, A. Eichinger, B.K. Keppler, V.Y. Kukushkin, A.J.L. Pombeiro, Tuning of redox potentials for the design of ruthenium anticancer drugs - An electrochemical study of $[trans\text{-}RuCl_4L(DMSO)]^-$ and $[trans\text{-}RuCl_4L_2]^-$ complexes, where L = imidazole, 1,2,4-triazole, indazole, *Inorganic Chemistry*, 43 (2004) 7083-7093 doi: 10.1021/ic049479c
- [139] E. Reisner, V. Arion, B. Keppler, A.J.L. Pombeiro, N.V. Kukushkin, First insights into structure-activity relationships of anticancer $[RuCl_4(\text{azole})_2]^-$ complexes, *Journal of the Russian Chemical Society (Zhurnal Ross. Khim.; Mendeleev Chemistry Journal)*, 48 (2004) 137-139 doi: ---
- [138] M. Pongratz, P. Schluga, M.A. Jakupec, V.B. Arion, C.G. Hartinger, G. Allmaier, B.K. Keppler, Transferrin binding and transferrin-mediated cellular uptake of the ruthenium coordination compound KP1019, studied by means of AAS, ESI-MS and CD spectroscopy, *Journal of Analytical Atomic Spectrometry*, 19 (2004) 46-51 doi: 10.1039/b309160k
- [137] F. Piccioli, S. Sabatini, L. Messori, P. Orioli, C.G. Hartinger, B.K. Keppler, A comparative study of adduct formation between the anticancer ruthenium(III) compound HInd $trans\text{-}[RuCl_4(\text{Ind})_2]$ and serum proteins, *Journal of Inorganic Biochemistry*, 98 (2004) 1135-1142 doi: 10.1016/j.jinorgbio.2004.04.002

- [136] M.A. Jakupec, B.K. Keppler, Gallium in cancer treatment, *Current Topics in Medicinal Chemistry*, 4 (2004) 1575-1583 doi: 10.2174/1568026043387449
- [135] M. Galanski, A. Yasemi, S. Slaby, M.A. Jakupec, V.B. Arion, M. Rausch, A.A. Nazarov, B.K. Keppler, Synthesis, crystal structure and cytotoxicity of new oxaliplatin analogues indicating that improvement of anticancer activity is still possible, *European Journal of Medicinal Chemistry*, 39 (2004) 707-714 doi: 10.1016/j.ejmech.2004.04.003
- [134] M. Galanski, C. Baumgartner, K. Meelich, V.B. Arion, M. Fremuth, M.A. Jakupec, P. Schluga, C.G. Hartinger, N.G. Von Keyserlingk, B.K. Keppler, Synthesis, crystal structure and pH dependent cytotoxicity of (SP-4-2)-bis(2-aminoethanolato-κ2 N, O)platinum(II) - a representative of novel pH sensitive anticancer platinum complexes, *Inorganica Chimica Acta*, 357 (2004) 3237-3244 doi: 10.1016/j.ica.2004.04.003
- [133] E. Budzisz, B.K. Keppler, G. Giester, M. Wozniczka, A. Kufelnicki, B. Nawrot, Synthesis, crystal structure and biological characterization of a novel palladium(II) complex with a coumarin-derived ligand, *European Journal of Inorganic Chemistry*, (2004) 4412-4419 doi: 10.1002/ejic.200400483
- [132] W. Wadsak, M. Mitterhauser, L.-K. Mien, S. Toegel, B.K. Keppler, R. Dudczak, K. Kletter, Radiosynthesis of 3-(2'-[18F]fluoro)-flumazenil ([18F]FFMZ), *Journal of Labelled Compounds and Radiopharmaceuticals* 46 (2003) 1229-1240 doi: 10.1002/jlcr.783
- [131] A.V. Makarycheva-Mikhailova, V.Y. Kukushkin, A.A. Nazarov, D.A. Garnovskii, A.J.L. Pombeiro, M. Haukka, B.K. Keppler, M. Galanski, Amidines derived from Pt(IV)-mediated nitrile-amino alcohol coupling and their Zn(II)-catalyzed conversion into oxazolines, *Inorganic Chemistry*, 42 (2003) 2805-2813 doi: 10.1021/ic034070t
- [130] M.A. Jakupec, M. Galanski, B.K. Keppler, Tumour-inhibiting platinum complexes-state of the art and future perspectives, *Reviews of Physiology, Biochemistry and Pharmacology*, 146 (2003) 1-53 doi: 10.1007/s10254-002-0001-x
- [129] C.G. Hartinger, A.R. Timerbaev, B.K. Keppler, Capillary electrophoresis in anti-cancer metallodrug research: Advances and future challenges, *Electrophoresis*, 24 (2003) 2023-2037 doi: 10.1002/elps.200305452
- [128] C.G. Hartinger, P. Schluga, M. Galanski, C. Baumgartner, A.R. Timerbaev, B.K. Keppler, Tumor-inhibiting platinum(II) complexes with aminoalcohol ligands: Comparison of the mode of action by capillary electrophoresis and electrospray ionization-mass spectrometry, *Electrophoresis*, 24 (2003) 2038-2044 doi: 10.1002/elps.200305463
- [127] C.G. Hartinger, A.A. Nazarov, V. Chevchenko, V.B. Arion, M. Galanski, B.K. Keppler, Synthesis, crystal structures, and electrospray ionisation mass spectrometry investigations of ether- and thioether-substituted ferrocenes, *Dalton Transactions*, (2003) 3098-3102 doi: 10.1039/b304115h
- [126] M. Galanski, S. Slaby, M.A. Jakupec, B.K. Keppler, Synthesis, characterization, and in vitro antitumor activity of osteotropic diam(m)ineplatinum(II) complexes bearing a N,N-bis(phosphonomethyl)glycine ligand, *Journal of Medicinal Chemistry*, 46 (2003) 4946-4951 doi: 10.1021/jm0308040
- [125] M. Galanski, C. Baumgartner, V.B. Arion, B.K. Keppler, Bis(2-aminobutanol)dichloroplatinum(II) complexes and their singly and doubly ring-closed butanolato species - Novel prodrugs for platinum-based antitumour chemotherapy?, *European Journal of Inorganic Chemistry*, (2003) 2619-2625 doi: 10.1002/ejic.200300050
- [124] M. Galanski, V.B. Arion, M.A. Jakupec, B.K. Keppler, Recent developments in the field of tumor-inhibiting metal complexes, *Current Pharmaceutical Design*, 9 (2003) 2078-2089 doi: 10.2174/1381612033454180
- [123] V.B. Arion, E. Reisner, M. Fremuth, M.A. Jakupec, B.K. Keppler, V.Y. Kukushkin, A.J.L. Pombeiro, Synthesis, X-ray diffraction structures, spectroscopic properties, and in vitro antitumor activity of isomeric (1H-1,2+triazole)Ru(III) complexes, *Inorganic Chemistry*, 42 (2003) 6024-6031 doi: 10.1021/ic034615i
- [122] V.B. Arion, A.A. Nazarov, C.G. Hartinger, G. Giester, B.K. Keppler, Crystal structure of 1-bromo-1'- (2S)-N-(1-hydroxy-3-methylbutane-2-yl) -ferroceneamide, *Applied Organometallic Chemistry*, 17 (2003) 723-724 doi: 10.1002/aoc.501
- [121] A.R. Timerbaev, A. Küng, B.K. Keppler, Capillary electrophoresis of platinum-group elements. Analytical, speciation and biochemical studies, *Journal of Chromatography A*, 945 (2002) 25-44 doi: 10.1016/s0021-9673(01)01489-3

- [120] D.B. Strickmann, A. Küng, B.K. Keppler, Application of capillary electrophoresis-mass spectrometry for the investigation of the binding behavior of oxaliplatin to 5'-GMP in the presence of the sulfur-containing amino acid L-methionine, *Electrophoresis*, 23 (2002) 74-80 doi: 10.1002/1522-2683(200201)23:1<74::aid-elps74>3.0.co;2-f
- [119] M.S. Robillard, M. Galanski, W. Zimmermann, B.K. Keppler, J. Reedijk, (Aminoethanol)dichloroplatinum(II) complexes: influence of the hydroxyethyl moiety on 5'-GMP and DNA binding, intramolecular stability, the partition coefficient and anticancer activity, *Journal of Inorganic Biochemistry*, 88 (2002) 254-259 doi: 10.1016/s0162-0134(01)00362-2
- [118] A.A. Nazarov, C.G. Hartinger, V.B. Arion, G. Giester, B.K. Keppler, Synthesis of ferrocenylglucose phosphonite and bisphosphinite: Pd(II) and Pt(II) complexes, Pd-catalyzed allylic alkylation, *Tetrahedron*, 58 (2002) 8489-8492 doi: 10.1016/s0040-4020(02)01027-x
- [117] A.V. Makarycheva-Mikhailova, M. Haukka, N.A. Bokach, D.A. Garnovskii, M. Galanski, B.K. Keppler, A.J.L. Pombeiro, V.Y. Kukushkin, Platinum(IV)-mediated coupling of dione monoximes and nitriles: a novel reactivity pattern of the classic oxime-based chelating ligands, *New Journal of Chemistry*, 26 (2002) 1085-1091 doi: 10.1039/b202947b
- [116] A. Küng, M. Galanski, C. Baumgartner, B.K. Keppler, Reaction of (SP-4-2)-dichlorobis(2-hydroxyethylamine)platinum(II) with 5'-GMP under simulated physiological conditions, a CZE-ESI-MS study, *Inorganica Chimica Acta*, 339 (2002) 9-13 doi: 10.1016/s0020-1693(02)00915-5
- [115] C.G. Hartinger, A.A. Nazarov, V.B. Arion, G. Giester, M. Jakupec, M. Galanski, B.K. Keppler, Novel glucose-ferrocenyl derivatives: synthesis and properties, *New Journal of Chemistry*, 26 (2002) 671-673 doi: 10.1039/b200701k
- [114] C. Hartinger, T.H. Brehmer, G. Giester, M. Galanski, A.A. Nazarov, S.M. Luther, B.K. Keppler, 1,1,3,3-tetramethyl-1,3-disila-2-oxa[3]ferrocenophane: improved synthesis and new crystal structure, *Inorganica Chimica Acta*, 328 (2002) 237-240 doi: 10.1016/s0020-1693(01)00668-5
- [113] M. Galanski, W. Zimmermann, M. Berger, C. Baumgartner, G. Giester, B.K. Keppler, Carboxylation of 2-hydroxyethyl-substituted tetrachloro(ethane-1,2-diamine)-platinum(IV) complexes - A new synthetic approach to anticancer platinum compounds, *European Journal of Inorganic Chemistry*, (2002) 417-421 doi: 10.1002/1099-0682(20022)2002:2<417::AID-EJIC417>3.0.CO;2-4
- [112] P. Collery, B.K. Keppler, C. Madoulet, B. Desoize, Gallium in cancer treatment, *Critical Reviews in Oncology/Hematology*, 42 (2002) 283-296 doi: [https://doi.org/10.1016/S1040-8428\(01\)00225-6](https://doi.org/10.1016/S1040-8428(01)00225-6)
- [111] V.B. Arion, M.A. Jakupec, M. Galanski, P. Unfried, B.K. Keppler, Synthesis, structure, spectroscopic and in vitro antitumour studies of a novel gallium(III) complex with 2-acetylpyridine 4N-dimethylthiosemicarbazone, *Journal of Inorganic Biochemistry*, 91 (2002) 298-305 doi: 10.1016/s0162-0134(02)00419-1
- [110] P. Zöllner, A. Zenker, M. Galanski, B.K. Keppler, W. Lindner, Reaction monitoring of platinum(II) complex-5'-guanosine monophosphate adduct formation by ion exchange liquid chromatography/electrospray ionization mass spectrometry, *Journal of Mass Spectrometry*, 36 (2001) 742-753 doi: 10.1002/jms.178
- [109] T. Pieper, M. Sommer, M. Galanski, B.K. Keppler, G. Giester, RuCl₃ind₃ and RuCl₂ind₄: Two new ruthenium complexes derived from the tumor-inhibiting Ru(III) compound HInd (OC-6-11)- RuCl₄ind₂ (ind = indazole), *Zeitschrift für anorganische und allgemeine Chemie*, 627 (2001) 261-265 doi:
- [108] T. Pieper, B.K. Keppler, Quinolone antibacterial agents linked to osteotropic bisphosphonate moieties, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 170 (2001) 5-14 doi: 10.1080/10426500108040581
- [107] A.A. Nazarov, C. Hartinger, T.H. Brehmer, G. Giester, M. Galanski, B.K. Keppler, New C₂-chiral 1,1'-bis(oxazoline-2-yl)-ferrocenes - synthesis and crystal structure, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 168 (2001) 465-468 doi: 10.1080/10426500108546610
- [106] J. Malina, O. Novakova, B.K. Keppler, E. Alessio, V. Brabec, Biophysical analysis of natural, double-helical DNA modified by anticancer heterocyclic complexes of ruthenium(III) in cell-free media, *Journal of Biological Inorganic Chemistry*, 6 (2001) 435-445 doi: 10.1007/s007750100223

- [105] A. Küng, A. Zenker, M. Galanski, B.K. Keppler, Capillary electrophoretic study of carboplatin and analogues with nucleoside monophosphates, di- and trinucleotides, *Journal of Inorganic Biochemistry*, 83 (2001) 181-186 doi: 10.1016/s0162-0134(00)00182-3
- [104] A. Küng, D.B. Strickmann, M. Galanski, B.K. Keppler, Comparison of the binding behavior of oxaliplatin, cisplatin and analogues to 5'-GMP in the presence of sulfur-containing molecules by means of capillary electrophoresis and electrospray mass spectrometry, *Journal of Inorganic Biochemistry*, 86 (2001) 691-698 doi: 10.1016/s0162-0134(01)00225-2
- [103] A. Küng, T. Pieper, R. Wissiack, E. Rosenberg, B.K. Keppler, Hydrolysis of the tumor-inhibiting ruthenium (III) complexes HIm trans-[RuCl₄(im)₂] and HInd trans-[RuCl₄(ind)₂] investigated by means of HPCE and HPLC-MS, *Journal of Biological Inorganic Chemistry*, 6 (2001) 292-299 doi: 10.1007/s007750000203
- [102] A. Küng, T. Pieper, B.K. Keppler, Investigations into the interaction between tumor-inhibiting ruthenium(III) complexes and nucleotides by capillary electrophoresis, *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences*, 759 (2001) 81-89 doi: 10.1016/s0378-4347(01)00205-5
- [101] C. Hartinger, A.A. Nazarov, T.H. Brehmer, G. Giester, M. Galanski, B.K. Keppler, Synthesis and new crystal structure of 1,1,3,3-tetramethyl-1,3-disila-2-oxa 3 ferrocenophane, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 169 (2001) 289-292 doi: 10.1080/10426500108546645
- [100] S. Hann, A. Zenker, M. Galanski, T.L. Bereuter, G. Stingeder, B.K. Keppler, HPIC-UV-ICP-SFMS study of the interaction of cisplatin with guanosine monophosphate, *Fresenius Journal of Analytical Chemistry*, 370 (2001) 581-586 doi: 10.1007/s002160100740
- [99] M. Galanski, W. Zimmermann, C. Baumgartner, B.K. Keppler, The intramolecular ligand-exchange reaction of (SP-4-2)-dichlorobis-(2-hydroxyethylamine)platinum(II) and (OC-6-22)-tetrachlorobis-(2-hydroxyethylamine)platinum(IV), a 1H and 15N, 1H-HMQC NMR study, *European Journal of Inorganic Chemistry*, (2001) 1145-1149 doi: 10.1002/1099-0682(200105)2001:5<1145::AID-EJIC1145>3.0.CO;2-E
- [98] A. Zenker, M. Galanski, T.L. Bereuter, B.K. Keppler, W. Lindner, Time-dependent interactions of platinum(II) complexes with 5'-GMP under simulated physiological conditions studied by capillary electrophoresis, *Journal of Biological Inorganic Chemistry*, 5 (2000) 498-504 doi: 10.1007/s007750050010
- [97] A. Zenker, M. Galanski, T.L. Bereuter, B.K. Keppler, W. Lindner, Kinetics of binding properties of 5'-GMP with cisplatin under simulated physiological conditions by capillary electrophoresis, *Journal of Chromatography B*, 745 (2000) 211-219 doi: 10.1016/s0378-4347(00)00096-7
- [96] L. Trynda-Lemiesz, A. Karaczyn, B.K. Keppler, H. Kozłowski, Studies on the interactions between human serum albumin and trans-indazolium (bisindazole) tetrachlororuthenate(III), *Journal of Inorganic Biochemistry*, 78 (2000) 341-346 doi: 10.1016/s0162-0134(00)00062-3
- [95] T. Pieper, W. Peti, B.K. Keppler, Solvolysis of the tumor-inhibiting ru(III)-complex trans-tetrachlorobis(indazole)ruthenate(III), *Metal-Based Drugs*, 7 (2000) 225-232 doi: 10.1155/mbd.2000.225
- [94] T. Pieper, B.K. Keppler, Preparation of tetraethyl-4-hydroxyphenylmethylene-1,1-bisphosphonate by hydroxy-de-diazonation of the corresponding diazonium salt of tetraethyl-4-aminophenylmethylene 1,1-bisphosphonate, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 165 (2000) 77-82 doi: 10.1080/10426500008076326
- [93] L. Messori, F. Gonzales Vilchez, R. Vilaplana, F. Piccioli, E. Alessio, B. Keppler, Binding of antitumor ruthenium(III) complexes to plasma proteins, *Metal-Based Drugs*, 7 (2000) 335-342 doi: 10.1155/mbd.2000.335
- [92] V.Y. Kukushkin, T.B. Pakhomova, N.A. Bokach, G. Wagner, M.L. Kuznetsov, M. Galanski, A.J.L. Pombeiro, Iminoacylation. 3. formation of platinum(IV)-based metallaligands due to facile one-end addition of vic-dioximes to coordinated organonitriles 1-3, *Inorganic Chemistry*, 39 (2000) 216-225 doi: 10.1021/ic990552m
- [91] M. Galanski, B.K. Keppler, Is reduction required for antitumour activity of platinum(IV) compounds? Characterisation of a platinum(IV)-nucleotide adduct enPt(OCOCH₃)₃(5'-GMP) by NMR spectroscopy and ESI-MS, *Inorganica Chimica Acta*, 300-302 (2000) 783-789 doi: 10.1016/s0020-1693(99)00613-1

- [90] M. Galanski, M. Berger, B.K. Keppler, Synthesis of (N,N'-bis(2-hydroxyethyl)ethane-1,2-diamine)malonatoplatinum(II) and x-ray crystal structure of the cis-r,s-isomer, *Metal-Based Drugs*, 7 (2000) 349-355 doi: 10.1155/mbd.2000.349
- [89] C. Dittrich, B.K. Keppler, Central European Society for Anticancer Drug Research (CESAR), *Oncology Research and Treatment*, 23 (2000) 492-493 doi: 10.1159/000027220
- [88] P. Collery, F. Lechenault, A. Cazabat, E. Juvin, L. Khassanova, A. Evangelou, B.K. Keppler, Inhibitory effects of gallium chloride and tris(8-quinolinolato)gallium(III) on A549 human malignant cell line, *Anticancer Research*, 20 (2000) 955-958 doi: ---
- [87] W. Zimmermann, M. Galanski, B.K. Keppler, G. Giester, Synthesis and structures of (SP-4-2)-diiodobis(2-hydroxyethylamine)platinum(II), (SP-4-2)-dichlorobis(2-hydroxyethylamine)platinum(II) and (OC-6-22)-bis(2-hydroxyethylamine)tetrachloroplatinum(IV) in the crystal, *Inorganica Chimica Acta*, 292 (1999) 127-130 doi: 10.1016/s0020-1693(99)00175-9
- [86] A. Zenker, M. Galanski, T.L. Bereuter, B.K. Keppler, W. Lindner, Capillary electrophoretic study of cisplatin interaction with nucleoside monophosphates, di- and trinucleotides, *Journal of Chromatography A*, 852 (1999) 337-346 doi: 10.1016/s0021-9673(99)00467-7
- [85] L. Trynda-Lemiesz, H. Kozlowski, B.K. Keppler, Effect of cis-, trans-diamminedichloroplatinum(II) and DBP on human serum albumin, *Journal of Inorganic Biochemistry*, 77 (1999) 141-146 doi: 10.1016/s0162-0134(99)00183-x
- [84] L. Trynda-Lemiesz, B.K. Keppler, H. Kozlowski, Studies on the interactions between human serum albumin and imidazolium trans-tetrachlorobis(imidazol) ruthenate(III), *Journal of Inorganic Biochemistry*, 73 (1999) 123-128 doi: 10.1016/s0162-0134(99)00004-5
- [83] J. Szpunar, A. Makarov, T. Pieper, B.K. Keppler, R. Lobinski, Investigation of metallodrug-protein interactions by size-exclusion chromatography coupled with inductively coupled plasma mass spectrometry (ICP-MS), *Analytica Chimica Acta*, 387 (1999) 135-144 doi: 10.1016/s0003-2670(99)00074-4
- [82] W. Peti, T. Pieper, M. Sommer, B.K. Keppler, G. Giester, Synthesis of tumor-inhibiting complex salts containing the anion trans-tetrachlorobis(indazole)ruthenate(III) and crystal structure of the tetraphenylphosphonium salt, *European Journal of Inorganic Chemistry*, (1999) 1551-1555 doi: 10.1002/(SICI)1099-0682(199909)1999:9<1551::AID-EJIC1551>3.0.CO;2-7
- [81] M.J. Bloemink, J.J.H. Diederik, J.P. Dorenbos, R.J. Heetebrij, B.K. Keppler, J. Reedijk, Calcium ions do accelerate the DNA binding of new antitumor-active platinum aminophosphonate complexes, *European Journal of Inorganic Chemistry*, (1999) 1655-1657 doi: 10.1002/(SICI)1099-0682(199910)1999:10<1655::AID-EJIC1655>3.0.CO;2-5
- [80] T. Pieper, B.K. Keppler, Tumor-inhibiting ruthenium complexes - formulation and analytical characterization, *Analisis*, 26 (1998) M84-M87 doi: 10.1051/analisis:199826060084
- [79] E.D. Kreuser, H.H. Fiebig, M.E. Scheulen, E. Max, A.R. Hanauske, B.K. Keppler, K. Mross, A. Schalhorn, G. Eisenbrand, L. Edler, K. Höffken, W.E. Berdel, Standard Operating Procedures and Organization; 3. New Drug Development Group (AWO), *Oncology Research and Treatment*, 21 (1998) 63-64 doi: ---
- [78] L. Kersten, H. Bräunlich, B.K. Keppler, C. Gliesing, M. Wendelin, J. Westphal, Comparative nephrotoxicity of some antitumor-active platinum and ruthenium complexes in rats, *Journal of Applied Toxicology*, 18 (1998) 93-101 doi: 10.1002/(sici)1099-1263(199803/04)18:2<93::aid-jat472>3.0.co;2-w
- [77] M. Hartmann, K.G. Lipponer, B.K. Keppler, Imidazole release from the antitumor-active ruthenium complex imidazolium trans-tetrachlorobis(imidazole) ruthenate(III) by biologically occurring nucleophiles, *Inorganica Chimica Acta*, 267 (1998) 137-141 doi: 10.1016/s0020-1693(97)05556-4
- [76] T.J. Einhäuser, T.G. Pieper, B.K. Keppler, Titanium determination in human blood plasma by ICP-OES, longitudinally, and transversally heated Zeeman ETAAS, *Journal of Analytical Atomic Spectrometry*, 13 (1998) 1173-1176 doi: 10.1039/a802874e
- [75] M.B.L. Marx, H. Pritzkow, B.K. Keppler, Darstellung und Struktur von Hexa(4-methoxyphenyl)cyclohexaarsan, *Zeitschrift für anorganische und allgemeine Chemie*, 623 (1997) 75-78 doi: 10.1002/zaac.19976230113

- [74] M. Hartmann, A. Robert, V. Duarte, B.K. Keppler, B. Meunier, Synthesis of water-soluble ruthenium porphyrins as DNA cleavers and potential cytotoxic agents, *Journal of Biological Inorganic Chemistry*, 2 (1997) 427-432 doi: 10.1007/s007750050153
- [73] M. Galanski, B.K. Keppler, Carboxylation of dihydroxoplatinum(IV) complexes with acyl chlorides. Crystal structures of the trans-R,R- and trans-S,S-isomer of (OC-6-33)-bis(1-adamantanecarboxylato)-(cyclohexane-1,2-diamine)dichloro platinum(IV), *Inorganica Chimica Acta*, 265 (1997) 271-274 doi: 10.1016/s0020-1693(97)05639-9
- [72] T.J. Einhäuser, M. Galanski, E. Vogel, B.K. Keppler, The influence of calcium ions on the DNA binding behaviour of a new platinum(II) compound linked to an amino phosphonic acid, *Inorganica Chimica Acta*, 257 (1997) 265-268 doi: 10.1016/s0020-1693(96)05477-1
- [71] U. Dittes, E. Vogel, B.K. Keppler, Overview on bismuth(III) and bismuth(V) complexes with activity against *Helicobacter pylori*, *Coordination Chemistry Reviews*, 163 (1997) 345-364 doi: 10.1016/s0010-8545(97)00042-8
- [70] H. Depenbrock, S. Schmelcher, R. Peter, B.K. Keppler, G. Weirich, T. Block, J. Rastetter, A.R. Hanauske, Preclinical activity of trans-indazolium tetrachlorobisindazoleruthenate(III) (NSC 666158; IndCR; KP 1019) against tumour colony-forming units and haematopoietic progenitor cells, *European Journal of Cancer*, 33 (1997) 2404-2410 doi: 10.1016/s0959-8049(97)00277-3
- [69] W. Winckler, T. Pieper, B.K. Keppler, Preparation of octaethyl-3-amino-pentane-1,1,5,5-tetrakisphosphonate by catalytic hydrogenation of the corresponding 3-nitro-compound, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 112 (1996) 137-141 doi: 10.1080/10426509608046357
- [68] C.A. Smith, A.J. Sutherland-Smith, B.K. Keppler, F. Kratz, E.N. Baker, Binding of ruthenium(III) anti-tumor drugs to human lactoferrin probed by high resolution X-ray crystallographic structure analyses, *Journal of Biological Inorganic Chemistry*, 1 (1996) 424-431 doi: 10.1007/s007750050074
- [67] T. Schilling, K.B. Keppler, M.E. Heim, G. Niebch, H. Dietzfelbinger, J. Rastetter, A.R. Hanauske, Clinical phase I and pharmacokinetic trial of the new titanium complex budotitane, *Investigational New Drugs*, 13 (1996) 327-332 doi: 10.1007/BF00873139
- [65] M.B.L. Marx, B. Nuber, B.K. Keppler, Structure of 4-hydroxyphenylarsonic acid and 4-methoxy-3-nitrophenylarsonic acid, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 118 (1996) 31-38 doi: 10.1080/10426509608038797
- [66] M.B.L. Marx, H. Pritzkow, B.K. Keppler, Struktur von S-9,10-Dimethyl-1,3,5,7-tetraarsa-2,4,5,8-tetraoxadamantan und 9,10-Diethyl-1,3,5,7-tetraarsa-2,4,6,8-tetraoxadamantan, *Zeitschrift für anorganische und allgemeine Chemie*, 622 (1996) 1097-1100 doi: 10.1002/zaac.19966220627
- [64] K.G. Lipponer, E. Vogel, B.K. Keppler, Synthesis, characterization and solution chemistry of trans-indazoliumtetrachlorobis(indazole)ruthenate(III), a new anticancer ruthenium complex. IR, UV, NMR, HPLC investigations and antitumor activity. Crystal structures of trans-1-methyl-indazoliumtetrachlorobis-(1-methylindazole)ruthenate(III) and its hydrolysis product trans-monoaquatrachlorobis-(1-methylindazole)-ruthenate(III), *Metal-Based Drugs*, 3 (1996) 243-260 doi: 10.1155/mbd.1996.243
- [63] F. Kratz, B.K. Keppler, M. Hartmann, L. Messori, M.R. Berger, Comparison of the antiproliferative activity of two antitumour ruthenium(III) complexes with their apotransferrin and transferrin-bound forms in a human colon cancer cell line, *Metal-Based Drugs*, 3 (1996) 15-23 doi: 10.1155/mbd.1996.15
- [62] M. Hartmann, T.J. Einhäuser, B.K. Keppler, Two antitumour ruthenium(III) complexes showing selectivity in their binding towards poly(dG)·poly(dC) and poly(dA)·poly(dT), *Chemical Communications*, (1996) 1741-1742 doi: 10.1039/cc9960001741
- [61] M. Galanski, B.K. Keppler, Carboxylation of dihydroxoplatinum(IV) complexes via a new synthetic pathway, *Inorganic Chemistry*, 35 (1996) 1709-1711 doi: 10.1021/ic9509490
- [60] T.J. Einhäuser, M. Galanski, B.K. Keppler, Determination of platinum in protein-bound COOP and DBP by inductively coupled plasma optical emission spectrometry and electrothermal atomic absorption spectrometry, *Journal of Analytical Atomic Spectrometry*, 11 (1996) 747-750 doi: 10.1039/ja9961100747

- [59] U. Dittes, B.K. Keppler, B. Nuber, Synthese und Struktur siebenfach koordinierter Bismut(v)-Komplexe mit benzoiden und nichtbenzoiden Arenliganden: Tri(aryl)tropolonato-bismut(V)-Komplexe, *Angewandte Chemie*, 108 (1996) 90-92 doi: doi:10.1002/ange.19961080117
- [58] U. Dittes, B.K. Keppler, B. Nuber, Synthesis and structure of seven-coordinate bismuth(v) complexes with benzenoid and non-benzenoid arene ligands: Tri(aryl)tropolonato-bismuth(v) complexes, *Angewandte Chemie International Edition*, 35 (1996) 67-68 doi: 10.1002/anie.199600671
- [57] P. Collery, J.L. Domingo, B.K. Keppler, Preclinical toxicology and tissue gallium distribution of a novel antitumour gallium compound: Tris(8-quinolinolato)gallium(III), *Anticancer Research*, 16 (1996) 687-691 doi: ---
- [56] A. Leperre, H. Millart, A. Prevost, T. Trenque, J.P. Kantelip, B.K. Keppler, Compared effects of ruthenium red and cis[Ru(NH₃)₄Cl₂]Cl on the isolated ischaemic-reperfused rat heart, *Fundamental & Clinical Pharmacology*, 9 (1995) 545-553 doi: 10.1111/j.1472-8206.1995.tb00532.x
- [55] M. Hartmann, B.K. Keppler, Inorganic anticancer agents: Their chemistry and antitumor properties, *Comments on Inorganic Chemistry*, 16 (1995) 339-372 doi: 10.1080/02603599508035776
- [54] A. Gund, B.K. Keppler, B. Nuber, Five-coordinate platinum olefin complexes: Synthesis, ¹H NMR investigations, and crystal structure of a platinum η²-ethylene crown ether complex, *Inorganic Chemistry*, 34 (1995) 2788-2790 doi: 10.1021/ic00114a043
- [53] M. Galanski, B.K. Keppler, B. Nuber, Erstmalige Isolierung des Enols einer Carbonsäure durch Komplexierung an eine (Ethan-1,2-diamin)platin(II)-Einheit, *Angewandte Chemie*, 107 (1995) 1220-1221 doi: doi:10.1002/ange.19951071021
- [52] M. Galanski, B.K. Keppler, B. Nuber, First Isolation of an Enol of a Carboxylic Acid by Complexation to an (Ethane-1,2-diamine)-platinum(II) Fragment, *Angewandte Chemie-International Edition in English*, 34 (1995) 1103-1104 doi: 10.1002/anie.199511031
- [51] M. Galanski, B.K. Keppler, Synthesis and characterization of new ethylenediamine platinum(IV) complexes containing lipophilic carboxylate ligands, *Metal-Based Drugs*, 2 (1995) 57-63 doi: 10.1155/MBD.1995.57
- [50] R. Diemer, B.K. Keppler, U. Dittes, B. Nuber, V. Seifried, W. Opferkuch, Preparation and characterization of biologically active bismuth(III) tropolonato complexes, *Chemische Berichte*, 128 (1995) 335-342 doi: 10.1002/cber.19951280404
- [49] R. Diemer, U. Dittes, B. Nuber, V. Seifried, W. Opferkuch, B.K. Keppler, Synthesis, characterization and molecular structures of some bismuth(III) complexes with thiosemicarbazones and dithiocarbazonic acid methylester derivatives with activity against helicobacter pylori, *Metal-Based Drugs*, 2 (1995) 271-292 doi: 10.1155/MBD.1995.271
- [48] J. Chatlas, R. van Eldik, B.K. Keppler, Spontaneous aquation reactions of a promising tumor inhibitor trans-imidazolium-tetrachlorobis(imidazole)ruthenium(III), trans-H₂Im[RuCl₄(Im)₂], *Inorganica Chimica Acta*, 233 (1995) 59-63 doi: 10.1016/0020-1693(94)04447-4
- [47] F. Kratz, B.K. Keppler, L. Messori, C. Smith, E.N. Baker, Protein-binding properties of two antitumour Ru(III) complexes to human apotransferrin and apolactoferrin, *Metal-Based Drugs*, 1 (1994) 169-173 doi: 10.1155/MBD.1994.169
- [46] F. Kratz, M. Hartmann, B.K. Keppler, L. Messori, The binding properties of two antitumor ruthenium(III) complexes to apotransferrin, *Journal of Biological Chemistry*, 269 (1994) 2581-2588 doi: ---
- [45] B.K. Keppler, C. Silvestru, I. Haiduc, Antitumor organometallics. III. In vivo activity of diphenylantimony(III) and diorganotin(IV) dithiophosphorus derivatives against P388 leukemia, *Metal-Based Drugs*, 1 (1994) 73-77 doi: 10.1155/MBD.1994.73
- [44] B.K. Keppler, M. Hartmann, New tumor-inhibiting metal complexes. Chemistry and antitumor properties., *Metal-Based Drugs*, 1 (1994) 145-149 doi: 10.1155/MBD.1994.145
- [43] A. Gund, B.K. Keppler, Struktur eines tumorhemmenden Bipyridyl-Kronenether-Platinkomplexes, *Angewandte Chemie*, 106 (1994) 198-200 doi: doi:10.1002/ange.19941060211

- [42] A. Gund, B.K. Keppler, Structure of an Antineoplastic Platinum Complex with a Bipyridyl- Crown Ether, *Angewandte Chemie-International Edition*, 33 (1994) 186-188 doi: 10.1002/anie.199401861
- [41] O.M.N. Dhuhghail, W.R. Hagen, B.K. Keppler, K.G. Lipponer, P.J. Sadler, Aquation of the anticancer complex trans-[RuCl₄(Him)₂]- (Him = imidazole) *Dalton Transactions*, (1994) 3305-3310 doi: ---
- [40] P. Comba, H. Jakob, B. Nuber, B.K. Keppler, Solution Structures and Isomer Distributions of Bis(β -diketonato) Complexes of Titanium(IV) and Cobalt(III), *Inorganic Chemistry*, 33 (1994) 3396-3400 doi: 10.1021/ic00093a031
- [39] M.J. Bloemink, J.P. Dorenbos, R.J. Heetebrij, B.K. Keppler, J. Reedijk, H. Zahn, New antitumor platinum compounds linked to amino phosphonic acids which lose the phosphonate and tertiary amine ligand upon binding to nucleic acids, *Inorganic Chemistry*, 33 (1994) 1127-1132 doi: 10.1021/ic00084a026
- [38] R. Lopez-Garzon, M.D. Gutierrez-Valero, M.L. Godino-Salido, B.K. Keppler, B. Nuber, Spectroscopic studies of metal-pyrimidine complexes. Crystal structures of 4,6-dimethyl-2-thiopyrimidine complexes with Zn(II) and Cd(II), *Journal of Coordination Chemistry*, 30 (1993) 111-123 doi: 10.1080/00958979308024663
- [37] M.H. Seelig, M.R. Berger, B.K. Keppler, Antineoplastic activity of three ruthenium derivatives against chemically induced colorectal carcinoma in rats, *Journal of Cancer Research and Clinical Oncology*, 118 (1992) 195-200 doi: 10.1007/bf01410134
- [36] E.D. Kreuser, B.K. Keppler, W.E. Berdel, A. Piest, E. Thiel, Synergistic antitumor interactions between newly synthesized ruthenium complexes and cytokines in human colon carcinoma cell lines, *Seminars in Oncology*, 19 (1992) 73-81 doi: ---
- [35] F. Kratz, B. Nuber, J. Weiss, B.K. Keppler, Synthesis and characterization of potential antitumor and antiviral gallium(III) complexes of n-heterocycles, *Polyhedron*, 11 (1992) 487-498 doi: 10.1016/s0277-5387(00)83206-4
- [34] A. Galeano, M.R. Berger, B.K. Keppler, Activity of two platinum-linked phosphonic acids against autochthonous rat colorectal cancer as well as in two human colon-cancer cell lines, *Cancer Chemotherapy and Pharmacology*, 30 (1992) 131-138 doi: 10.1007/bf00686405
- [33] A. Galeano, M.R. Berger, B.K. Keppler, Antitumor activity of some ruthenium derivatives in human colon cancer cell lines in vitro, *Arzneimittel-Forschung/Drug Research*, 42 (I) (1992) 821-824 doi: ---
- [32] W.J. Zeller, S. Frühauf, G. Chen, B.K. Keppler, E. Frei, M. Kaufmann, Chemoresistance in rat ovarian tumours, *European Journal of Cancer*, 27 (1991) 62-67 doi: 10.1016/0277-5379(91)90063-j
- [31] F. Kratz, B. Nuber, J. Weiss, B.K. Keppler, Synthesis and characterization of potential antitumor and antiviral gallium(III) complexes of α -(N)-heterocyclic thiosemicarbazones, *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry*, 21 (1991) 1601-1615 doi: 10.1080/15533179108020631
- [30] E. Holler, W. Schaller, B.K. Keppler, Inhibition of escherichia coli DNA polymerase I catalysed DNA polymerization by trans-imidazolium-bisimidazoletetrachlororuthenate(III), *Arzneimittel-Forschung/Drug Research*, 41 (1991) 1065-1068 doi: ---
- [29] T. Klenner, F. Wingen, B.K. Keppler, B. Krempien, D. Schmähl, Anticancer-agent-linked phosphonates with antiosteolytic and antineoplastic properties: a promising perspective in the treatment of bone-related malignancies?, *Journal of Cancer Research and Clinical Oncology*, 116 (1990) 341-350 doi: 10.1007/bf01612916
- [28] T. Klenner, F. Wingen, B. Keppler, P. Valenzuela-Paz, F. Amelung, D. Schmähl, Therapeutic efficacy of two different cytostatic-linked phosphonates in combination with razoxane in the transplantable osteosarcoma of the rat, *Clinical & Experimental Metastasis*, 8 (1990) 345-359 doi: 10.1007/BF01810680
- [27] T. Klenner, P. Valenzuela-Paz, B.K. Keppler, H.R. Scherf, Sensitivity of rodent osteosarcoma clones to platinum-containing phosphonic acid complexes in vitro, *Journal of Cancer Research and Clinical Oncology*, 116 (1990) 453-458 doi: 10.1007/bf01612993
- [26] T. Klenner, P. Valenzuela-Paz, B.K. Keppler, G. Angres, H.R. Scherf, F. Wingen, F. Amelung, D. Schmähl, Cisplatin-linked phosphonates in the treatment of the transplantable osteosarcoma in vitro and in vivo, *Cancer Treatment Reviews*, 17 (1990) 253-259 doi: 10.1016/0305-7372(90)90056-L

- [25] B.K. Keppler, M.R. Berger, M.E. Heim, New tumor-inhibiting metal complexes, *Cancer Treatment Reviews*, 17 (1990) 261-277 doi: 10.1016/0305-7372(90)90057-m
- [24] B.K. Keppler, Metal complexes as anticancer agents. The future role of inorganic chemistry in cancer therapy, *New Journal of Chemistry*, 14 (1990) 389-403 doi: ---
- [23] M.R. Berger, A. Galeano, M. Seelig, B.K. Keppler, HInd(RuInd₂Cl₄), *Drugs of the Future*, 15 (1990) 992-994 doi: ---
- [22] E. Petru, D. Schmähl, M.R. Berger, W.J. Zeller, B.K. Keppler, Selected Recent Aspects in Cancer-Chemotherapy Tumordiagnostik & Therapie, 10 (1989) 181-184 doi: ---
- [21] B.K. Keppler, M.E. Heim, H. Flechtner, F. Wingen, B.L. Pool, Assessment of the preclinical activity of budotitane in three different transplantable tumor systems, its lack of mutagenicity, and first results of clinical phase I studies, *Arzneimittel-Forschung/Drug Research*, 39 (1989) 706-709 doi: ---
- [20] M.R. Berger, F.T. Garzon, B.K. Keppler, D. Schmähl, Efficacy of new ruthenium complexes against chemically induced autochthonous colorectal carcinoma in rats, *Anticancer Research*, 9 (1989) 761-766 doi: ---
- [19] B.K. Keppler, H. Bischoff, M.R. Berger, M.E. Heim, G. Reznik, D. Schmähl, Preclinical development and first clinical studies of budotitane, in: M. Nicolini (Ed.) *Platinum and Other Metal Coordination Compounds in Cancer Chemotherapy: Proceedings of the Fifth International Symposium on Platinum and Other Metal Coordination Compounds in Cancer Chemotherapy* Abano, Padua, ITALY - June 29-July 2, 1987, Springer US, Boston, MA, 1988, pp. 684-694. 10.1007/978-1-4613-1717-3_77
- [18] B. Keppler, M.E. Heim, Antitumor-active bis- β -diketonato metal complexes: Budotitane - a new anticancer agent *Drugs of the Future*, 13 (1988) 637-652 doi: ---
- [17] B.K. Keppler, D. Wehe, H. Endres, W. Rupp, Synthesis, antitumor activity, and x-ray structure of bis(imidazolium)(imidazole)pentachlororuthenate(III), (ImH)₂(RuImCl₅), *Inorganic Chemistry*, 26 (1987) 844-846 doi: 10.1021/ic00253a014
- [16] B.K. Keppler, W. Rupp, U.M. Juhl, H. Endres, R. Niebl, W. Balzer, Synthesis, molecular structure, and tumor-inhibiting properties of imidazolium trans-bis(imidazole)tetrachlororuthenate(III) and its methyl-substituted derivatives, *Inorganic Chemistry*, 26 (1987) 4366-4370 doi: 10.1021/ic00273a018
- [15] B.K. Keppler, W. Balzer, V. Seifried, Synthesis and antitumor-activity of triazolium-bis(triazole)-tetrachlororuthenate (III) and bistriazolium-triazolepentachlororuthenate (III) 2 representatives of a new class of inorganic antitumor agents, *Arzneimittel-Forschung/Drug Research*, 37-2 (1987) 770-771 doi: ---
- [14] F.T. Garzon, M.R. Berger, B.K. Keppler, D. Schmähl, Comparative antitumor activity of ruthenium derivatives with 5'-deoxy-5-fluorouridine in chemically induced colorectal tumors in SD rats, *Cancer Chemotherapy and Pharmacology*, 19 (1987) 347-349 doi: 10.1007/BF00261487
- [13] F.T. Garzon, M.R. Berger, B.K. Keppler, D. Schmähl, Paradoxical effect of dichlorobis(1-phenylbutane-1,3-dionato)molybdenum (IV), (Mo(bzac)₂Cl₂ on the growth of autochthonous chemically induced colorectal tumors in SD rats, *Cancer Letters*, 34 (1987) 325-330 doi: 10.1016/0304-3835(87)90183-2
- [12] H. Bischoff, M.R. Berger, B.K. Keppler, D. Schmähl, Efficacy of β -diketonato complexes of titanium, zirconium, and hafnium against chemically induced autochthonous colonic tumors in rats, *Journal of Cancer Research and Clinical Oncology*, 113 (1987) 446-450 doi: 10.1007/bf00390038
- [11] B.K. Keppler, D. Schmähl, Preclinical evaluation of dichlorobis(1-phenylbutane-1,3-dionato)titanium (IV) and budotitane. Two representatives of the new class of antitumor-active bis- β -diketonato metal complexes, *Arzneimittel-Forschung/Drug Research*, 36-2 (1986) 1822-1828 doi: ---
- [10] B.K. Keppler, W. Rupp, Antitumor activity of imidazolium-bisimidazole-tetrachlororuthenate (III). A representative of a new class of inorganic antitumor agents, *Journal of Cancer Research and Clinical Oncology*, 111 (1986) 166-168 doi: 10.1007/bf00400758
- [9] B.K. Keppler, K. Michels, Antitumor activity of 1.3-diketonato zirconium (IV) and hafnium (IV) complexes, *Arzneimittel-Forschung/Drug Research*, 35 (1985) 1837-1839 doi: ---

- [8] B.K. Keppler, A. Diez, V. Seifried, Antitumor activity of phenyl substituted dihalogenobis(1-phenyl-1,3-butanedionato)titanium (IV) compounds, *Arzneimittel-Forschung/Drug Research*, 35-2 (1985) 1832-1836 doi: ---
- [7] J. Mattern, B. Keppler, M. Volm, Preclinical evaluation of diethoxy(1-phenyl-1,3-butanedionato)titanium(IV) in human tumor xenografts, *Arzneimittel-Forschung/Drug Research*, 34 (1984) 1289-1290 doi: ---
- [6] H.J. Keller, B. Keppler, D. Schmähl, Antitumor activity of cis-dihalogenobis(1-phenyl-1,3-butanedionato)titanium (IV) compounds. A new class of antineoplastic agents, *Journal of Cancer Research and Clinical Oncology*, 105 (1983) 109-110 doi: 10.1007/BF00391842
- [5] H.J. Keller, B. Keppler, D. Schmähl, Antitumor activity of cis-dihalogenobis(1-phenyl-1,3-butanedionato)titanium(IV) compounds against Walker 256 carcinosarcoma. A new class of antineoplastic agents., *Arzneimittel-Forschung/Drug Research*, 32 (1982) 806-807 doi: ---
- [4] H.J. Keller, B. Keppler, H. Pritzkow, Structure of bis(ethylenediamine)diiodoplatinum(IV) di- μ -iodo-bis[diiodoargentate(I)], *Acta Crystallogr., Sect. B*, B38 (1982) 1603-1065 doi: 10.1107/S0567740882006542
- [3] H.J. Keller, B. Keppler, G. Ledezma-Sanchez, W. Steiger, Redetermination of the structure of trans-diamminedibromoplatinum(II)-trans-diamminetetrabromoplatinum(IV), trans- $\{PtBr_2(NH_3)_2\}\{PtBr_4(NH_3)_2\}$, *Acta Crystallogr., Sect. B*, B37 (1981) 674-675 doi: 10.1107/S0567740881003889
- [2] H. Endres, H.J. Keller, B. Keppler, R. Martin, W. Steiger, U. Traeger, Redetermination of the structure of anhydrous tetrakis(ethylamine)platinum(II)dibromotetrakis(ethylamine)platinum(IV) tetrabromide, $[Pt(ea)_2][PtBr_2(ea)_2]Br_4$: a red analog of Reihlen's Green, *Acta Crystallogr., Sect. B*, B36 (1980) 760-761 doi: 10.1107/S056774088000444X
- [1] R.J.H. Clark, M. Kurmoo, H.J. Keller, B. Keppler, U. Traeger, Electronic and resonance-Raman spectra of the linear-chain mixed-valence platinum complexes $\{[Pt(en)_2][Pt(en)_2X_2]\}_3[CuX_4]_4[X = Cl (1) \text{ or } Br (2)]$ and $[Pt(pn)_2][Pt(pn)Br_2][Cu_3Br_5]_2(3)$ (en = ethane-1,2-diamine and pn = propane-1,2-diamine), *Journal of the Chemical Society, Dalton Transactions*, (1980) 2498-2502 doi: 10.1039/DT9800002498

1. Book chapters

- [53] I. Pötsch, D. Baier, B.K. Keppler, W. Berger, Challenges and chances in the preclinical to clinical translation of anticancer metallodrugs, in: A. Casini, A. Vessières, S.M. Meier-Menches (Eds.) *Metal-Based Anticancer Agents*, The Royal Society of Chemistry, 2019, pp. 308-347.
- [52] M.A. Jakupec, W. Kandioller, B. Schoenhacker-Alte, R. Trondl, W. Berger, B.K. Keppler, Trends and perspectives of ruthenium anticancer compounds (Non-PDT), in: *Ruthenium Complexes*, Wiley-VCH Verlag GmbH & Co. KGaA, 2017, pp. 271-291.
- [51] J. Sonet, A.-L. Bulteau, L. Chavatte, T. Garcia-Barrera, J.L. Gomez-Ariza, B. Callejon-Leblic, V. Nischwitz, S. Theiner, L. Galvez, G. Koellensperger, B.K. Keppler, M. Roman, C. Barbante, K. Neth, J. Bornhorst, B. Michalke, Biomedical and pharmaceutical applications, in: B. Michalke (Ed.) *Metallomics: Analytical Techniques and Speciation Methods*, Wiley-VCH Verlag GmbH & Co. KGaA, 2016, pp. 359-462.
- [50] M. Galanski, B.K. Keppler, Tumor-targeting strategies with anticancer platinum complexes, in: *Drug Delivery in Oncology: From Basic Research to Cancer Therapy*, 3 Volume Set, Kratz, F. Senter, P. Steinhagen, H., 2012, pp. 1605-1629.
- [49] A. Stojanovic, C. Morgenbesser, D. Kogelnig, R. Krachler, B.K. Keppler, Quaternary ammonium and phosphonium ionic liquids in chemical and environmental engineering, in: A. Kokorin (Ed.) *Ionic Liquids: Theory, Properties, New Approaches*, IntechOpen, 2011, pp. 657-680.
- [48] I. Bratsos, T. Gianferrara, E. Alessio, C. Hartinger, M. Jakupec, B.K. Keppler, Ruthenium and other non-platinum anticancer compounds, in: E. Alessio (Ed.) *Bioinorganic Medicinal Chemistry*, Wiley-VCH, 2011, pp. 151-174.
- [47] S.M. Valiahdi, M.R. Reithofer, A. Egger, M.A. Jakupec, M. Galanski, B.K. Keppler, Structure-activity relationships and DNA platination of new di- and tetracarboxylatoplatinum(IV) complexes, in: P. Collery, I. Maynard, T. Theophanides, L. Khassanova, T. Collery (Eds.) *Metal Ions in Biology and Medicine*, Vol 10, 2008, pp. 75-81.

- [46] M.A. Jakupec, P. Collery, B.K. Keppler, Synergistic antiproliferative effects of tris(8-quinolinolato)gallium(III) (KP46) in combination with platinum drugs in ovarian and colon carcinoma cells, in: P. Collery, I. Maynard, T. Theophanides, L. Khassanova, T. Collery (Eds.) *Metal Ions in Biology and Medicine*, Vol 10, 2008, pp. 110-115.
- [45] S.M. Valiahdi, M.A. Jakupec, R. Marculescu, B.K. Keppler, Tris(8-quinolinolato)gallium(III) exerts strong antiproliferative effects in melanoma cells, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 282-286.
- [44] K. Meelich, W. Galanski, V.B. Arion, M.A. Jakupec, P. Schluga, C.G. Hartinger, K.N. von Graf, B.K. Keppler, Activation of anticancer platinum complexes by tumoral acidity, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 52-58.
- [43] R.O. John, V.B. Arion, M.A. Jakupec, B.K. Keppler, Ruthenium(II)-arene complex with heterocyclic ligands as prospective antitumor agent, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 40-45.
- [42] P. Heffeter, M.A. Jakupec, R. Dornetshuber, L. Elbling, H. Sutterluty, M. Micksche, B.K. Keppler, W. Berger, Anticancer activity of the lanthanum drug KP772 (FFC24): impact of the cellular P53 status, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 260-266.
- [41] M. Groessl, C.G. Hartinger, A. Egger, B.K. Keppler, The binding of ruthenium(III) anticancer complexes to serum proteins: An ESI-MS Study, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 111-116.
- [40] R. Eichinger, C.R. Kowol, V.B. Arion, M.A. Jakupec, B.K. Keppler, Divergent effects of complexation with gallium(III) or iron(III) on the antitumor potency of 2-acetylpyridine-4 N-dimethylthiosemi-carbazone, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 30-34.
- [39] A. Egger, P. Schluga, C.G. Hartinger, V.B. Arion, B.K. Keppler, Impact of biological reductants on GMP binding of trans-[RuIIICl₄(Hind)₂]- and preparation of a model nucleobase adduct, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 24-29.
- [38] P. Collery, M.A. Jakupec, B. Kynast, B.K. Keppler, Preclinical and early clinical development of the antitumor gallium complex KP46 (FFC11), in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 521-524.
- [37] I. Berger, A. Nazarov, C. Hartinger, S.M. Valiahdi, M.A. Jakupec, M. Galanski, B.K. Keppler, Synthesis and in vitro antitumor activity of 2,3-diaminoglucose-based platinum(II) coordination compounds, in: M.C. Alpoim, P.V. Morais (Eds.) *Metal Ions in Biology and Medicine*, Vol 9, 2006, pp. 9-12.
- [36] E. Reisner, V.B. Arion, C.G. Hartinger, M.A. Jakupec, A.J.L. Pombeiro, B.K. Keppler, From synthesis to antitumor activity – NAMI-A and KP1019, two ruthenium complexes in clinical trials, in: A. Trzeciak (Ed.) *Perspectives of Coordination Chemistry*, Pozán - Wrocław, 2005, pp. 215-229.
- [35] M. Galanski, M.A. Jakupec, B.K. Keppler, Oxaliplatin and derivatives as anticancer drugs—novel design strategies, in: J.M. Pérez Martín, M.A. Fuertes Villadangos, C. Alonso Bedate (Eds.) *Metal compounds in cancer chemotherapy*, Research Signpost, Trivandrum, 2005, pp. 155-185.
- [34] M.A. Jakupec, B.K. Keppler, Gallium and other main group metal compounds as antitumor agents, in: A. Sigel, H. Sigel (Eds.) *Metal Complexes in Tumor Diagnosis and as Anticancer Agents*, 2004, pp. 425-462.
- [33] M.A. Jakupec, M. Galanski, B.K. Keppler, The effect of cytoprotective agents in platinum anticancer therapy, in: A. Sigel, H. Sigel (Eds.) *Metal Complexes in Tumor Diagnosis and as Anticancer Agents*, 2004, pp. 179-208.
- [32] W. Zimmermann, M. Galanski, B.K. Keppler, Synthesis and characterization of aminoalcohol platinum complexes and methods for linking these complexes to carrier molecules, in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 447-450.
- [31] E. Thiel, T. Schilling, D.C. Gey, R. Ziegler, P. Collery, B.K. Keppler, Tris(8-quinolinolato)gallium(III), a novel orally applied antitumor gallium compound, in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 439-443.

- [30] S. Slaby, M. Galanski, S.W. Metzger, B.K. Keppler, Design of platinum complexes with high affinity for osteosarcoma and bone metastases — structure-activity relationship, in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 201-205.
- [29] T. Pieper, W. Peti, M. Sommer, B.K. Keppler, Development of the tumor-inhibiting complex salt sodium trans-tetrachlorobis(indazole)ruthenate(III), in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 451-452.
- [28] T. Pieper, K. Borsky, B.K. Keppler, Non-platinum antitumor compounds, in: M.J. Clarke, P.J. Sadler (Eds.) *Metallopharmaceuticals I: DNA Interactions*, Springer Berlin Heidelberg, Berlin, Heidelberg, 1999, pp. 171-199.
- [27] S.W. Metzger, B.K. Keppler, Potential in inhibition of telomerase activity and cytotoxicity of different platinum compounds, in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 445-446.
- [26] B.K. Keppler, G. Eisenbrand, M.A. Jakupec, New anticancer agents developed by the new drug development group (AWO), in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 361-367.
- [25] M. Galanski, S. Slaby, B.K. Keppler, The mode of action of antitumor platinum compounds linked to amino phosphonic acids with particular activity against bone malignancies and the influence of calcium ions onto the DNA binding behavior, in: H.H. Fiebig, A.M. Burger (Eds.) *Relevance of Tumor Models for Anticancer Drug Development*, Karger, Basel, 1999, pp. 435-438.
- [24] B.K. Keppler, T. Pieper, Studies into the mode of action of trans-HInd[RuCl₄(ind)₂] and trans-HIm[RuCl₄(im)₂], in: A. Trautwein (Ed.) *Bioinorganic chemistry: Transition metals in biology and their coordination chemistry*, Deutsche Forschungsgemeinschaft, Wiley-VCH, Bonn, Weinheim 1997, pp. 123-128.
- [23] B.K. Keppler, E.A. Vogel, Overview of tumor-inhibiting non-platinum compounds, in: H.M. Pinedo, J.H. Schornagel (Eds.) *Platinum and Other Metal Coordination Compounds in Cancer Chemotherapy 2*, 1996, pp. 253-268.
- [22] B.K. Keppler, E. Vogel, Antitumor properties of metal complexes, in: G. Berthon (Ed.) *Handbook of Metal-Ligand Interactions in Biological Fluids*, Marcel Dekker, Inc., New York, 1995, pp. 1200-1229.
- [21] T. Klenner, P. Valenzuela-Paz, F. Amelung, H. Münch, H. Zahn, B.K. Keppler, H. Blum, Platinum phosphonate complexes with particular activity against bone malignancies. An evaluation of an experimental model highly predictive for the clinical situation., in: B.K. Keppler (Ed.) *Metal Complexes in Cancer Chemotherapy*, VCH, Weinheim, New York, 1993, pp. 85-127.
- [20] B.K. Keppler, K.G. Lipponer, B. Stenzel, F. Kratz, New tumor-inhibiting ruthenium complexes, in: B.K. Keppler (Ed.) *Metal Complexes in Cancer Chemotherapy*, VCH, Weinheim, New York, 1993, pp. 189-220.
- [19] B.K. Keppler, C. Friesen, H. Vongerichten, E. Vogel, Budotitane, a new tumor-inhibiting titanium compound: preclinical and clinical development, in: B.K. Keppler (Ed.) *Metal Complexes in Cancer Chemotherapy*, VCH, Weinheim, New York, 1993, pp. 297-323.
- [18] B.K. Keppler, Metal complexes in cancer chemotherapy. General remarks, in: B.K. Keppler (Ed.) *Metal Complexes in Cancer Chemotherapy*, VCH, Weinheim, New York, 1993, pp. 1-8.
- [17] F. Kratz, N. Mulinacci, L. Messori, I. Bertini, B.K. Keppler, Kinetic, spectroscopic and LPLC studies of the interactions of antitumor ruthenium (III) complexes with serum proteins, in: J. Anastassopoulou, P. Collery, J.C. Etienne, T. Theophanides (Eds.) *Metal Ions in Biology and Medicine*, 1992, pp. 69-74.
- [16] B.K. Keppler, B. Stenzel, K.-G. Lipponer, R. Niebl, H. Vongerichten, E. Vogel, Ruthenium complexes as anticancer agents, in: R.R. Brooks (Ed.) *Noble Metals and Biological Systems: Their Role in Medicine, Mineral Exploration, and the Environment*, CRC Press, 1992, pp. 323-358.
- [14] P. Collery, H. Millart, C. Pechery, F. Kratz, B.K. Keppler, New gallium complexes for a cisplatin combination therapy, in: J. Anastassopoulou, P. Collery, J.C. Etienne, T. Theophanides (Eds.) *Metal Ions in Biology and Medicine*, John Libbey Eurotext, 1992, pp. 173-175.

- [13] T. Klenner, P. Valenzuela-Paz, B.K. Keppler, H. Münch, G. Angres, H.R. Scherf, D. Schmähl, Cisplatin-gekoppelte Phosphonate in der Therapie des transplantablen Osteosarkoms der Ratte in vivo und in vitro, in: W.J. Zeller, K. Hellmann, B.T. Hill, M.R. Berger, D. Schmähl (Eds.) Erhöhung des therapeutischen Index durch Reduktion der Toxizität. Fortschritte in der medikamentösen Krebsbehandlung, Zuckschwerdt, München, 1991, pp. 259-269.
- [12] B.K. Keppler, C. Friesen, H.G. Moritz, H. Vongerichten, E. Vogel, Tumor-inhibiting bis(β -diketonato) metal complexes. Budotitane, cis-diethoxybis(1-phenylbutane-1,3-dionato)titanium(IV). The first transition metal complex after platinum complexes to have qualified for clinical trial, in: Bioinorganic Chemistry, 1991, pp. 97-127.
- [11] B.K. Keppler, M.R. Berger, M.E. Heim, Neue tumorhemmende Metallkomplexe, in: W.J. Zeller, K. Hellmann, B.T. Hill, M.R. Berger, D. Schmähl (Eds.) Erhöhung des therapeutischen Index durch Reduktion der Toxizität. Fortschritte in der medikamentösen Krebsbehandlung, Zuckschwerdt, München, 1991, pp. 237-258.
- [10] M.H. Seelig, M.R. Berger, B.K. Keppler, D. Schmähl, Efficacy of two ruthenium complexes against chemically induced autochthonous colorectal carcinoma in rats, in: P. Collery, L.A. Poirier, M. Manfait, J.C. Etienne (Eds.) Metal Ions in Biology and Medicine, John Libbey Eurotext, 1990, pp. 476-478.
- [9] T. Klenner, B.K. Keppler, H. Münch, P. Valenzuela-Paz, Treatment of rat osteosarcoma with phosphonic acid linked platinum complexes in vivo and in vitro, in: P. Collery, L.A. Poirier, M. Manfait, J.C. Etienne (Eds.) Metal Ions in Biology and Medicine, John Libbey Eurotext, 1990, pp. 369-371.
- [8] B.K. Keppler, T. Klenner, D. Schmähl, M.R. Berger, Chancen und Stand der Entwicklung neuer antineoplastischer Substanzen I, in: H.J. Dengler, C.G. Schmidt (Eds.) Klinische Pharmakologie und Onkologie, Gustav Fischer Verlag, Stuttgart, 1990, pp. 193-213.
- [7] B.K. Keppler, M.R. Berger, T.H. Klenner, M.E. Heim, Metal complexes as antitumour agents, in: B. Testa (Ed.) Advances in Drug Research, Academic Press, 1990, pp. 243-310.
- [6] B.K. Keppler, The role of non-platinum complexes in cancer therapy, in: M. Gielen (Ed.) Tin-Based Antitumour Drugs, Springer Berlin Heidelberg, Berlin, Heidelberg, 1990, pp. 1-68.
- [5] M.E. Heim, H. Bischoff, B.K. Keppler, Clinical studies with budotitane - a new non-platinum complex for cancer therapy, in: P. Collery, L.A. Poirier, M. Manfait, J.C. Etienne (Eds.) Metal Ions in Biology and Medicine, John Libbey Eurotext, 1990, pp. 508-510.
- [4] D. Schmähl, M.R. Berger, B.K. Keppler, T. Klenner, New antineoplastic agents, in: P. Bannasch (Ed.) Cancer Therapy: New Trends, Springer Berlin Heidelberg, Berlin, Heidelberg, 1989, pp. 95-110.
- [3] B.K. Keppler, M. Henn, U.M. Juhl, M.R. Berger, R. Niebl, F.E. Wagner, New ruthenium complexes for the treatment of cancer, in: Ruthenium and Other Non-Platinum Metal Complexes in Cancer Chemotherapy, 1989, pp. 41-69.
- [2] M.E. Heim, H. Flechtner, B.K. Keppler, Clinical studies with budotitane — a new non-platinum metal complex for cancer therapy, in: Ruthenium and Other Non-Platinum Metal Complexes in Cancer Chemotherapy, Springer Berlin Heidelberg, Berlin, Heidelberg, 1989, pp. 217-223.
- [1] M.E. Heim, H. Flechtner, B.K. Keppler, W. Queißer, Clinical studies with budotitane, a new non-platinum metal complex for cancer therapy, in: W. Queißer, H.H. Fiebig (Eds.) New Drugs in Oncology. Symposium der Phase II Studiengruppe der Arbeitsgemeinschaft für internistische Onkologie (AIO) der Deutschen Krebsgesellschaft, Frankfurt/Main, November 1988, Karger, 1988, pp. 168-175.
- [15] B.K. Keppler, C. Friesen, E. Vogel, M.E. Heim, Budotitane - preclinical and clinical development of a new tumor-inhibiting titanium complex, in: J. Anastassopoulou, P. Collery, J.C. Etienne, T. Theophanides (Eds.) Metal Ions in Biology and Medicine, 1992, pp. 163-166.