CURRICULUM VITAE

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Personal Information

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Professional Experience

Since 01/2020	Scientist at **Translational Radiopharmaceutical Sciences, Department of Nuclear Medicine and Molecular Imaging, CHUV**, Lausanne, Switzerland
10/2016 – 11/2019	Scientist at **Preclinical Molecular Imaging, AIT Austrian Institute of Technology GmbH**, Seibersdorf, Austria
07/2014 – 09/2016	Junior scientist at **Preclinical Molecular Imaging, AIT Austrian Institute of Technology GmbH,** Seibersdorf, Austria
01/2014 – 06/2014	Research associate at the **Department of Pharmacology**, **Medical University of Vienna**, Austria
12/2008 – 12/2013	Research associate at the **Department Health and Environment, AIT Austrian Institute of Technology GmbH,** Seibersdorf, Austria
11/2008 – 12/2011	Research associate at the **Department of Clinical Pharmacology, Medical University of Vienna**, Austria
03/2018 – 02/2020	Associate lecturer in "Practical Course in Instrumental Analytical and Physical Chemistry" and "Practical Course in Classical Analytical Chemistry" at the **Department for Analytical Chemistry, University of natural resources and life sciences** (BOKU), Vienna, Austria
09/2008 – 02/2014	Lecturer for the practical course "Drug Analysis" at the **Department of Medicinal Chemistry, Pharmacy, University of Vienna**, Austria
03/2009 – 06/2013	Lecturer for the practical course "Praktikum zur Allgemeinen, Anorganischen und Analytischen Chemie" at the FH Campus Wien, **University of Applied Sciences**, Vienna, Austria

Education

07/2019	Certified Project Management Associate IPMA Level D, Projekt Management Austria
07/2017	University course "Quality Assurance in the Chemical Laboratory", Montanuniversität Leoben
10/2016	Doctoral thesis, "Radiosynthesis and Bioevaluation of ABC Efflux Transporter Substrates and Inhibitors", University of Vienna
09/2016	FELASA B certificate "Laboratory Animal Science", University of Veterinary Medicine Vienna
2009	Basic Course Radiation Safety & Protection and advanced course unsealed sources, Seibersdorf Academy
06/2008	Diploma thesis, "Tariquidar Analogues as PET Precursors for Functional Imaging of P-glycoprotein", University of Vienna, Department of Medicinal Chemistry
09/2004- 06/2008	Diploma degree programme Biotechnology, at the FH Campus Wien, University of Applied Sciences, with focus on "Chemistry of Active Substances"

List of scientific publications Severin Mairinger (h-index 13) 24.04.2020

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Peer-reviewed articles:

41.) **Mairinger S**, Sake, JA, Hernández Lozano I, Filip T, Sauberer M, Stanek J, Wanek T, Ehrhardt C, Langer O. Assessing the Activity of Multidrug Resistance-Associated Protein 1 at the Lung Epithelial Barrier. J. Nucl. Med. 2020 [Epub ahead of print]

40.) Zoufal V, **Mairinger S**, Krohn M, Wanek T, Filip T, Sauberer M, Stanek J, Kuntner C, Pahnke J, Langer O. Measurement of cerebral ABCC1 transport activity in wild-type and APP/PS1-21 mice with positron emission tomography. J Cereb Blood Flow Metab. 2020; 40: 954-65.

39.) Zoufal V, Wanek T, Krohn M, **Mairinger S**, Filip T, Sauberer M, Stanek J, Pekar T, Bauer M, Pahnke J, Langer O. Age dependency of cerebral P-glycoprotein function in wild-type and APPPS1 mice measured with PET. J Cereb Blood Flow Metab. 2020; 40: 150-62.

38.) Wanek T, Schöllbauer L, Filip T, **Mairinger S**, Sauberer M, Blaickner M, Kuntner C. Impact of Attentuation Correction on Quantification Accuracy in Preclinical Whole-Body PET Images. Front. Phys. 2020 8:123

37.) **Mairinger S**, Filip T, Sauberer M, Flunkert S, Wanek T, Stanek J, Furtner S, Hutter-Paier B, Okamura N, Kuntner C. Plasma pharmacokinetic and metabolism of [18F]THK-5317 are dependent on sex. Nucl Med Biol 2020, 84-85: 28-32.

36.) Zoufal V, **Mairinger S**, Brackhan M, Krohn M, Filip T, Sauberer M, Stanek J, Wanek T, Tournier N, Bauer M, Pahnke J, Langer O. Imaging P-glycoprotein Induction at the Blood-Brain Barrier of a Beta-Amyloidosis Mouse Model with 11C-Metoclopramide PET. J. Nucl. Med. 2019, [Epub ahead of print]

35.) Hernández Lozano I, Bauer M, Wulkersdorfer B, Traxl A, Philippe C, Weber M, Häusler S, Stieger B, Jäger W, **Mairinger S**, Wanek T, Hacker M, Zeitlinger M, Langer O. Measurement of Hepatic ABCB1 and ABCG2 Transport Activity with [11C]Tariquidar and PET in Humans and Mice. Mol Pharm. 2020 Jan 6;17(1):316-326.

34.) Kannan P, Füredi A, Dizdarevic S, Wanek T, **Mairinger S**, Collins J, Falls T, van Dam RM, Maheshwari D, Lee JT, Szakács G, Langer O. In vivo characterization of [18F]AVT-011 as a radiotracer for PET imaging of multidrug resistance. Eur J Nucl Med Mol Imaging. 2019 Nov 15, [Epub ahead of print]

33.) Krohn M, Zoufal V, **Mairinger S**, Wanek T, Paarmann K, Brüning T, Eiriz I, Brackhan M, Langer O, Pahnke J. Generation and Characterization of an Abcc1 Humanized Mouse Model (hABCC1flx/flx) with Knockout Capability. Mol Pharmacol. 2019 Aug;96(2):138-147.

32.) Rosecker V, Denk C, Maurer M, Wilkovitsch M, **Mairinger S**, Wanek T, Mikula H. Cross-Isotopic Bioorthogonal Tools as Molecular Twins for Radiotheranostic Applications. Chembiochem. 2019 Jun 14;20(12):1530-1535.

31.) Zoufal V, **Mairinger S**, Krohn M, Wanek T, Filip T, Sauberer M, Stanek J, Traxl A, Schuetz JD, Kuntner C, Pahnke J, Langer O. Influence of Multidrug Resistance-Associated Proteins on the Excretion of the ABCC1 Imaging Probe 6-Bromo-7-[11C]Methylpurine in Mice. Mol Imaging Biol. 2019 Apr;21(2):306-316.

30.) Traxl A, **Mairinger S**, Filip T, Sauberer M, Stanek J, Poschner S, Jäger W, Zoufal V, Novarino G, Tournier N, Bauer M, Wanek T, Langer O. Inhibition of ABCB1 and ABCG2 at the Mouse Blood-Brain Barrier with Marketed Drugs To Improve Brain Delivery of the Model ABCB1/ABCG2 Substrate [11C]erlotinib. Mol Pharm. 2019 Mar 4;16(3):1282-1293.

29.) **Mairinger S**, Zoufal V, Wanek T, Traxl A, Filip T, Sauberer M, Stanek J, Kuntner C, Pahnke J, Müller M, Langer O. Influence of breast cancer resistance protein and P-glycoprotein on tissue distribution and excretion of Ko143 assessed with PET imaging in mice. Eur J Pharm Sci. 2018 Mar 30;115:212-222.

28.) Philippe C, **Mairinger S**, Pichler V, Stanek J, Nics L, Mitterhauser M, Hacker M, Wanek T, Langer O, Wadsak W. Comparison of fully-automated radiosyntheses of [11C]erlotinib for preclinical and clinical use starting from in target produced [11C]CO2 or [11C]CH4. EJNMMI Radiopharm Chem. 2018;3(1):8.

27.) Traxl A.; Komposch K.; Glitzner E.; Wanek T.; **Mairinger S**.; Langer O.; Sibilia M. Hepatocyte-Specific Deletion of EGFR in Mice Reduces Hepatic Abcg2 Transport Activity Measured by [11C]erlotinib and Positron Emission Tomography. Drug Metab Dispos. 2017 Oct;45(10):1093-1100.

26.) Traxl A, Beikbaghban T, Wanek T, Kryeziu K, Pirker C, **Mairinger S**, Stanek J, Filip T, Sauberer M, Kuntner C, Berger W, Langer O. [11C]Erlotinib PET cannot detect acquired erlotinib resistance in NSCLC tumor xenografts in mice. Nucl Med Biol. 2017 Sep;52:7-15

25.) Denk C, Wilkovitsch M, Skrinjar P, Svatunek D, **Mairinger S**, Kuntner C, Filip T, Fröhlich J, Wanek T, Mikula H. [18F]Fluoroalkyl azides for rapid radiolabeling and (Re)investigation of their potential towards in vivo click chemistry. Org Biomol Chem. 2017 Jul 19;15(28):5976-5982.

24.) Traxl A, Beikbaghban T, Wanek T, Kryeziu K, Pirker C, **Mairinger S**, Stanek J, Filip T, Sauberer M, Kuntner C, Berger W, Langer O. [11C]Erlotinib PET cannot detect acquired erlotinib resistance in NSCLC tumor xenografts in mice. Nucl Med Biol. 2017 Sep;52:7-15.

23.) Grunewald, C.; Sauberer, M.; Filip, T.; Wanek, T.; Stanek, J.; **Mairinger, S**.; Rollet, S.; Kudejova, P.; Langer, O.; Schütz, C.; Blaickner, M.; Kuntner, C. On the Applicability of [18F]FBPA to Predict L-BPA Concentration after Amino Acid Preloading in HuH-7 Liver Tumor Model and the Implication for Liver Boron Neutron Capture Therapy. Nucl. Med. Biol. 2017, 44, 83–89.

22.) Tournier, N.; Goutal, S.; Auvity, S.; Traxl, A.; **Mairinger, S**.; Wanek, T.; Helal, O.-B.; Buvat, I.; Soussan, M.; Caille, F.; Langer, O. Strategies to Inhibit ABCB1- and ABCG2-Mediated Efflux Transport of Erlotinib at the Blood-Brain Barrier: A PET Study in Non-Human Primates. J. Nucl. Med. 2017; 58: 117-22.

21.) Wingelhofer, B.; Kreis, K.; **Mairinger, S**.; Muchitsch, V.; Stanek, J.; Wanek, T.; Langer, O.; Kuntner, C. Preloading with L-BPA, L-Tyrosine and L-DOPA Enhances the Uptake of [18F]FBPA in Human and Mouse Tumour Cell Lines. Appl. Radiat. Isot. 2016, 118, 67–72.

20.) Wanek, T.; Kreis, K.; Križková, P.; Schweifer, A.; Denk, C.; Stanek, J.; **Mairinger, S**.; Filip, T.; Sauberer, M.; Edelhofer, P.; Traxl, A.; Muchitsch, V. E.; Mereiter, K.; Hammerschmidt, F.; Cass, C. E.; Damaraju, V. L.; Langer, O.; Kuntner, C. Synthesis and Preclinical Characterization of 1-(6′-Deoxy-6′-[18F]fluoro-β-D-Allofuranosyl)-2-Nitroimidazole (β-6′-[18F]FAZAL) as a Positron Emission Tomography Radiotracer to Assess Tumor Hypoxia. Bioorg. Med. Chem. 2016, 24 (21), 5326–5339.

19.) Denk, C.; Svatunek, D.; **Mairinger, S**.; Stanek, J.; Filip, T.; Matscheko, D.; Kuntner, C.; Wanek, T.; Mikula, H. Design, Synthesis, and Evaluation of a Low-Molecular-Weight 11 C-Labeled Tetrazine for Pretargeted PET Imaging Applying Bioorthogonal in Vivo Click Chemistry. Bioconjug. Chem. 2016, 27 (7), 1707–1712.

18.) Wanek, T.; Halilbasic, E.; Visentin, M.; **Mairinger, S**.; Römermann, K.; Stieger, B.; Kuntner, C.; Müller, M.; Langer, O.; Trauner, M. Influence of 24-Nor-Ursodeoxycholic Acid on Hepatic Disposition of [(18)F]Ciprofloxacin, a Positron Emission Tomography Study in Mice. J. Pharm. Sci. 2016, 105 (1), 106–112.

17.) **Mairinger, S**.; Stanek, J.; Wanek, T.; Langer, O.; Kuntner, C. Automated Electrophilic Radiosynthesis of [18F]FBPA Using a Modified Nucleophilic GE TRACERlab FXFDG. Appl. Radiat. Isot. 2015, 104, 124–127.

16.) Sander, K.; Galante, E.; Gendron, T.; Yiannaki, E.; Patel, N.; Kalber, T. L.; Badar, A.; Robson, M.; Johnson, S. P.; Bauer, F.; **Mairinger, S**.; Stanek, J.; Wanek, T.; Kuntner, C.; Kottke, T.; Weizel, L.; Dickens, D.; Erlandsson, K.; Hutton, B. F.; Lythgoe, M. F.; Stark, H.; Langer, O.; Koepp, M.; Årstad, E. Development of Fluorine-18 Labeled Metabolically Activated Tracers for Imaging of Drug Efflux Transporters with Positron Emission Tomography. J. Med. Chem. 2015, 58 (15), 6058–6080.

15.) Traxl, A.; Wanek, T.; **Mairinger, S**.; Stanek, J.; Filip, T.; Sauberer, M.; Müller, M.; Kuntner, C.; Langer, O. Breast Cancer Resistance Protein and P-Glycoprotein Influence In Vivo Disposition of 11C-Erlotinib. J. Nucl. Med. 2015, 56 (12), 1930–1936.

14.) Wanek, T.; Römermann, K.; **Mairinger, S**.; Stanek, J.; Sauberer, M.; Filip, T.; Traxl, A.; Kuntner, C.; Pahnke, J.; Bauer, F.; Erker, T.; Löscher, W.; Müller, M.; Langer, O. Factors Governing P-Glycoprotein-Mediated Drug-Drug Interactions at the Blood-Brain Barrier Measured with Positron Emission Tomography. Mol. Pharm. 2015, 12 (9), 3214–3225.

13.) Müllauer, J.; Karch, R.; Bankstahl, J. P.; Bankstahl, M.; Stanek, J.; Wanek, T.; **Mairinger, S**.; Müller, M.; Löscher, W.; Langer, O.; Kuntner, C. Assessment of Cerebral P-Glycoprotein Expression and Function with PET by Combined [11C]inhibitor and [11C]substrate Scans in Rats. Nucl. Med. Biol. 2013, 40 (6), 755–763.

12.) Philippe, C.; Nics, L.; Zeilinger, M.; Kuntner, C.; Wanek, T.; **Mairinger, S**.; Shanab, K.; Spreitzer, H.; Viernstein, H.; Wadsak, W.; Mitterhauser, M. Preclinical in Vitro & in Vivo Evaluation of [11C]SNAP-7941 - the First PET Tracer for the Melanin Concentrating Hormone Receptor 1. Nucl. Med. Biol. 2013, 40 (7), 919–925.

11.) Wanek, T.; **Mairinger, S**.; Langer, O. Radioligands Targeting P-Glycoprotein and Other Drug Efflux Proteins at the Blood-Brain Barrier. J. Label. Compd. Radiopharm. 2013, 56 (3-4), 68–77.

10.) **Mairinger, S**.; Bankstahl, J. P.; Kuntner, C.; Römermann, K.; Bankstahl, M.; Wanek, T.; Stanek, J.; Löscher, W.; Müller, M.; Erker, T.; Langer, O. The Antiepileptic Drug Mephobarbital Is Not Transported by P-Glycoprotein or Multidrug Resistance Protein 1 at the Blood-Brain Barrier: A Positron Emission Tomography Study. Epilepsy Res. 2012, 100 (1-2), 93–103.

9.) **Mairinger, S**.; Wanek, T.; Kuntner, C.; Doenmez, Y.; Strommer, S.; Stanek, J.; Capparelli, E.; Chiba, P.; Müller, M.; Colabufo, N. a.; Langer, O. Synthesis and Preclinical Evaluation of the Radiolabeled P-Glycoprotein Inhibitor [11C]MC113. Nucl. Med. Biol. 2012, 39 (8), 1219–1225.

8.) Wanek, T.; Kuntner, C.; Bankstahl, J. P.; Bankstahl, M.; Stanek, J.; Sauberer, M.; **Mairinger, S**.; Strommer, S.; Wacheck, V.; Löscher, W.; Erker, T.; Müller, M.; Langer, O. A Comparative Small-Animal PET Evaluation of [11C]tariquidar, [11C]elacridar and (R)-[11C]verapamil for Detection of P-Glycoprotein-Expressing Murine Breast Cancer. Eur. J. Nucl. Med. Mol. Imaging 2012, 39 (1), 149–159.

7.) Wanek, T.; Kuntner, C.; Bankstahl, J. P.; **Mairinger, S.**; Bankstahl, M.; Stanek, J.; Sauberer, M.; Filip, T.; Erker, T.; Müller, M.; Löscher, W.; Langer, O. A Novel PET Protocol for Visualization of Breast Cancer Resistance Protein Function at the Blood–brain Barrier. J. Cereb. Blood Flow Metab. 2012, 32: 2002–2011.

6.) Bauer F, Wanek T, **Mairinger S**, Stanek J, Sauberer M, Kuntner C, Parveen Z, Chiba P, Müller M, Langer O, Erker T.Interaction of HM30181 with P-glycoprotein at the murine blood-brain barrier assessed with positron emission tomography. Eur J Pharmacol. 2012 Dec 5;696(1-3):18-27

5.) Dörner, B.; Kuntner, C.; Bankstahl, J. P.; Wanek, T.; Bankstahl, M.; Stanek, J.; Müllauer, J.; Bauer, F.; **Mairinger, S**.; Löscher, W.; Miller, D. W.; Chiba, P.; Müller, M.; Erker, T.; Langer, O. Radiosynthesis and in Vivo Evaluation of 1-[18F]fluoroelacridar as a Positron Emission Tomography Tracer for P-Glycoprotein and Breast Cancer Resistance Protein. Bioorganic Med. Chem. 2011, 19 (7), 2190–2198.

4.) **Mairinger, S.**; Erker, T.; Muller, M.; Langer, O. PET and SPECT Radiotracers to Assess Function and Expression of ABC Transporters In Vivo. Curr. Drug Metab. 2011, 12 (8), 774–792.

3.) Bauer, F.; Kuntner, C.; Bankstahl, J. P.; Wanek, T.; Bankstahl, M.; Stanek, J.; **Mairinger, S**.; Dörner, B.; Löscher, W.; Müller, M.; Erker, T.; Langer, O. Synthesis and in Vivo Evaluation of [11C]tariquidar, a Positron Emission Tomography Radiotracer Based on a Third-Generation P-Glycoprotein Inhibitor. Bioorganic Med. Chem. 2010, 18 (15), 5489–5497.

2.) **Mairinger, S**.; Langer, O.; Kuntner, C.; Wanek, T.; Bankstahl, J. P.; Bankstahl, M.; Stanek, J.; Dörner, B.; Bauer, F.; Baumgartner, C.; Löscher, W.; Erker, T.; Müller, M. Synthesis and in Vivo Evaluation of the Putative Breast Cancer Resistance Protein Inhibitor [11C]methyl 4-((4-(2-(6,7-Dimethoxy-1,2,3,4-Tetrahydroisoquinolin-2-Yl)ethyl)phenyl)amino-Carbonyl)-2-(Quinoline-2-Carbonylamino)benzoate. Nucl. Med. Biol. 2010, 37 (5), 637–644.

1.) Dörner, B.; Kuntner, C.; Bankstahl, J. P.; Bankstahl, M.; Stanek, J.; Wanek, T.; Stundner, G.; **Mairinger, S**.; Löscher, W.; Müller, M.; Langer, O.; Erker, T. Synthesis and Small-Animal Positron Emission Tomography Evaluation of [11C]-Elacridar as a Radiotracer to Assess the Distribution of P-Glycoprotein at the Blood-Brain Barrier. J. Med. Chem. 2009, 52 (19), 6073–6082.