Dr.rer.nat. Chrysoula Vraka

Personal Information

Date & Place of Birth	January 3rd 1987, Düsseldorf Germany
Research Facilities	Division of Nuclear Medicine, Department of Biomedical Imaging and Image-guided Therapy
Contact	chrysoula.vraka@meduniwien.ac.at
Marital Status	Single

Research and working field

Preclinical evaluations	*In vitro* metabolism (plasma, serum & enzyme assays), bioaffinity chromatography (plasma protein binding, permeability), logP measurements (HPLC & shake-flask), ultrafiltration plasma protein binding, binding studies, permeability/internalization and uptake assays), cell culture (co-culture model, real-time kinetics)
Small animal studies	FELASA certificate, *ex vivo* metabolism and biodistribution studies, µPET
Radiolabeling & Quality control	Carbon-11 methylations, lutetium-177 peptides, gallium-68 tracers, Nitrogen-13 ($[^{13}N]NH_3$)

Scientific and working experience

Current position	Section Head of Radiopharmacy and Experimental Nuclear Medicine (Biolabs)
March 2018	Teaching at the University of Vienna, Faculty of Life Sciences
Sept 2016-Dec 2017	Production manager of lutetium-177 therapies

Since March 2016	University Assistant, Medical University of Vienna, Division of Nuclear Medicine
June 2015 & June 2016	Assistant of the ESNM Practical Learning Course on Imaging in Infection & Inflammation
March 2013-March 2017	Teaching at the University of Vienna, Faculty of Life Sciences
April 2013- March 2016	Research Assistant, PhD Student, University of Vienna & Medical University of Vienna
October 2014- September 2015	"schrittweise"-Curriculum für Nachwuchswissenschaftlerinnen, Medical University of Vienna
December 2011- April 2013	Personal Assistant, Prof. S. Knasmueller, Institute of Cancer Research, Medical University of Vienna

Education

April 2013-Dec 2017	PhD Study at University of Vienna "Predictive in vitro methods in experimental nuclear medicine: Blood Brain Barrier Penetration"
October 2010- March 2013	Master Study at University of Vienna, Molecular Nutrition, Faculty of Life Sciences "Einfluss von Metaboliten und Lipophilie auf die Verfügbarkeit an der Zielregion" (engl. title: „The Impact of Metabolites and the Lipophilicity on the Availability of the Parent Compound at the Target Area ")
October 2006- June 2010	Bachelor Study at the University of Vienna, Nutritional Sciences "Ausgaben im Gesundheitssystem Österreichs- Ernährungsbezogene Erkrankungen" (engl. Title: Expenditure in the Austrian Health Care System- Diet-related Diseases")
June 17th, 2006	Higher Education Entrance Qualification, St. Ursula Gymnasium Düsseldorf, Germany

Languages

Mother tongues	German and Greek
Other languages	English (B2 to C1) Italian (A2)

Memberships

Since September 2013	AGRR (Arbeitergemeinschaft für Radiochemie & Radiopharmazie)
Since 2015	EANM (European Association of Nuclear Medicine)
Since 2016	DGN (Deutsche Gesellschaft für Nuklearmedizin)
Since 2017	OGN (Österreichische Gesellschaft für Nuklearmedizin)
Since September 2017	SRS (Society of Radiopharmaceutical Sciences)
October 2017	SRS-Think Tank (Selection of young scientist)
January 2018	ÖPPM-Österreichische Plattform für Personalisierte Medizin

Honors and awards

BSM-OGNMB-Award 2016

Hahn A, Gryglewski G, Nics L, Hienert M, Rischka L, **Vraka C**, Sigurdardottir H, Vanicek T, James GM, Seiger R, Kautzky A, Silberbauer L, Wadsak W, Mitterhauser M, Hacker M, Kasper S, Lanzenberger R. Quantification of task-specific glucose metabolism with constant infusion of 18F-FDG. J Nucl Med. 2016;57:1933-40.

ISRS 2017 Bursary Award

Vraka C, Papp L, Mijailovic S, Nics L, Wadsak W, Hacker M, Mitterhauser M. Prediction of Blood Brain Barrier Penetration of newly developed radiotracer using machine-learning software. 22nd International Symposium on Radiopharmaceutical Sciences, poster presentation (P216). J Label Compd Radiopharm 2017:60 (Suppl.1):S380

Peer Reviewed Articles

Nics L, Hahn A, Zeilinger M, **Vraka C**, Ungersboeck J, Haeusler D, Hartmann S, Wagner K-H, Lanzenberger R, Wadsak W, Mitterhauser M. Quantification of the radio-metabolites of the serotonin-1A receptor radioligand [carbonyl-11C]WAY-100635 in human plasma: An HPLC-assay which enables measurement of two patients in parallel. Applied Radiation and Isotopes 70 (2012) 2730–6.

Rami-Mark C, Bornatowicz B, Fink C, Otter P, Ungersboeck J, **Vraka C**, Haeusler D, Nics L, Spreitzer H, Hacker M, Mitterhauser M, Wadsak W. Synthesis, radiosynthesis and first in vitro evaluation of novel PET-tracers for the dopamine transporter: [(11)C]IPCIT and [(18)F]FE@IPCIT. Bioorg Med Chem. 2013 Dec 15;21(24):7562-9.

Neudorfer C, Shanab K, Jurik A, Schreiber V, Neudorfer C, **Vraka C**, Schirmer E, Holzer W, Ecker G, Mitterhauser M, Wadsak W, Spreitzer H. Development of potential selective and reversible pyrazoline based MAO-B inhibitors as MAO-B PET tracer precursors and reference substances for the early detection of Alzheimer's disease. Bioorg Med Chem Lett. 2014 Sep 15;24(18):4490-4495.

Rami-Mark C, Berroterán-Infante N, Philippe C, Foltin S, **Vraka C**, Hoepping A, Lanzenberger R, Hacker M, Mitterhauser M, Wadsak W. Radiosynthesis and first preclinical evaluation of the novel norepinephrine transporter pet-ligand [(11)C]ME@HAPTHI. EJNMMI Res. 2015 Dec;5(1):113.

Wenzel B, Mollitor J, Deuther-Conrad W, Dukic-Stefanovic S, Kranz M, **Vraka C**, Teodoro R, Günther R, Donat C, Ludwig F-A, Fischer S, Smits R, Wadsak W, Mitterhauser M, Steinbach J, Hoepping A, Brust P. On the development of a novel non-peptidic 18F-labeled radiotracer for in vivo imaging of oxytocin receptors with positron emission tomography. J Med Chem. 2016 Mar 10;59(5):1800-17.

Hahn A, Gryglewski G, Nics L, Hienert M, Rischka L, **Vraka C**, Sigurdardottir H, Vanicek T, James GM, Seiger R, Kautzky A, Silberbauer L, Wadsak W, Mitterhauser M, Hacker M, Kasper S, Lanzenberger R. Quantification of task-specific glucose metabolism with constant infusion of 18F-FDG. J Nucl Med. 2016;57:1933-40.

Vraka C, Nics L, Wagner KH., Hacker M, Wadsak W, Mitterhauser M. LogP, a yesterday's value? Nucl Med Biol. 2017, Mar 20; 50:1-10 (on the cover & ranked in the top-5 most read articles).

Vraka C and Mitterhauser M "Reconsider LogP!" Nucl Med Biol 2017;54:p42 (on the cover).

Hahn A, Gryglewski G, Nics L, Rischka L, Ganger S, Sigurdardottir H, **Vraka C**, Silberbauer L, Vanicek T, Kautzky A, Wadsak W, Mitterhauser M, Hartenbach M, Hacker M, Kasper S, Lanzenberger R. Task-relevant brain networks identified with simultaneous PET/MR imaging of metabolism and connectivity. Brain Struct and Funct 2017 Nov, 13. doi: 10.1007/s00429-017-1558-0. [Epub ahead of print].

Vraka C, Mijailovic S, Fröhlich V, Wadsak W, Wagner KH, Hacker M, Mitterhauser M. Expanding LogP: Present Possibilities. Journal of Nuclear Medicine and Biology, 2017 Nov 28;58:20-32 (Issue Highlights, March 2018 Volume 58).

Vraka C, Dumanic M, Racz T, Pichler F, Philippe C, Balber T, Klebermass EM, Wagner KH, Hacker M, Wadsak W, Mitterhauser M. A New Method Measuring the Interaction of Radiotracers with the human P-glycoprotein (P-gp) transporter. Journal of Nuclear Medicine and Biology, 2018;60: 29-36.

Balber T, Singer J, Berroterán-Infante N, Dumanic M, Fetty L, Fazekas-Singer J, **Vraka C**, Nics L, Bergmann M, Pallitsch K, Spreitzer H, Wadsak W, Hacker M, Jensen-Jarolim E, Viernstein H and Mitterhauser M. Preclinical in vitro and in vivo evaluation of [18F]FE@SUPPY for cancer PET-imaging: Limitations of a xenograft model for colorectal cancer. Contrast Media and Molecular Imaging. Volume 2018 (2018), Article ID 1269830), article in press.

Philippe C, Zeilinger M, Dumanic M, Pichler F, Fetty L, **Vraka C**, Balber T, Wadsak W , Pallitsch K, Spreitzer H, Lanzenberger R, Hacker M, Mitterhauser M. SNAPshots of the MCHR1: [18F]FE@SNAP vs. [11C]SNAP-7941. Mol Imaging Biol. 2018 Jun 13. doi: 10.1007/s11307-018-1212-0. [Epub ahead of print].

Pichler V, **Vraka C**, Berroteran-Infante N, Krcal A, Eidherr H, Traub-Weidinger T, Hacker M, Mitterhauser M, Wadsak W. Reliable set up for L-[S-methyl-11C]methionine production using GE Tracerlab FxC Pro. In submission: Amino Acids (AMAC-D-17-00479).

Spies M, Hienert M, **Vraka C**, James GM, Nics L, Philippe C, Baldinger P, Wadsak W, Mitterhauser M, Kasper S, Lanzenberger R, Winkler D. Brain Monoamine Oxidase A in Seasonal Affective Disorder and Treatment with Bright Light Therapy. Translational Psychiatry 2018 [2016, IF: 4.730]; in press (2017TP000651R)

Baldinger-Melich P, Gryglewski G, Philippe C, James G, **Vraka C**, Silberbauer L, Balber T, Vanicek T, Pichler V, Unterholzner J, Kranz G, Hahn A, Winkler D, Mitterhauser M, Wadsak W, Hacker M, Kasper S, Frey R, Lanzenberger R. The effect of electroconvulsive therapy on cerebral monoamine oxidase A expression in treatment-resistant depression investigated using positron emission tomography. Molecular Psychiatry 2018. Epub xxx [2016, IF: 13.204]; submitted 201806xx

James GM, Gryglewski G, Berroteran-Infante N, Vanicek T, Berroteran-Infante N, Philippe C, Kautzy A, Nics L, **Vraka C**, Godbersen G M, Unterholzner J, Sigurdardottir L H, Spies M, Kranz G, Hahn A, Mitterhauser M, Wadsak W, Bauer A, Hacker M, Kasper S1, Lanzenberger R. Parcellation of

the human cerebral cortex based on molecular targets in the serotonin system quantified by positron emission tomography in vivo. Submitted to NeuroImage (2018/June/14).

Pichler V, Ozenil M, Zenz T, Lanzenberger R, Pfaff S, Hacker M, Philippe C, **Vraka C**, Mitterhauser M, Traub-Weidinger T, Berroteran-Infante N, Langer O, Nics L, Willeit M, Wadsak W. Molar activity – the bugaboo in 11C-radiochemistry: an explorative study using the gas phase method. Submitted Journal of Nuclear Medicine and Biology (NUCMEDBIO_2018_148).