Scientific publications

"Peer reviewed" research papers

First author:

SNAPshots of the MCHR1: A comparison between the PET-tracers [^{18}F]FE@SNAP and [^{11}C]SNAP-7941
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
Molecular Imaging and Biology (2018) DOI: 10.1007/s11307-018-1212-0

Comparison of fully-automated radiosyntheses of [^{11}C]erlotinib for preclinical and clinical use starting from in target produced [^{11}C]CO_2 or [^{11}C]CH_4
Philippe C, Mairinger S, Pichler V, Stanek J, Nics L, Mitterhauser M, Hacker M, Wanek T, Langer O, Wadsak W.
EJNMMI Radiopharmacy & Chemistry (2018) 3:8.

[^{18}F]FE@SNAP – a specific PET-tracer for melanin-concentrating hormone receptor 1 imaging?
Philippe C, Haeusler D, Scherer T, Fürnsinn C, Zeilinger M, Wadsak W, Shanab K, Spreitzer H, Hacker M, Mitterhauser M.
EJNMMI Research (2016) 6:31.

Parameter evaluation and fully-automated radiosynthesis of [^{11}C]harmine for imaging of MAO-A for clinical trials
Philippe C, Zeilinger M, Mitterhauser M, Dumanic M, Lanzenberger R, Hacker M, Wadsak W.
Applied Radiation and Isotopes (2015) 97:182-187.

Comparative autoradiographic *in vitro* investigation of melanin concentrating hormone receptor 1 ligands in the central nervous system
Philippe C, Haeusler D, Fuchshuber F, Spreitzer H, Viernstein H, Hacker M, Wadsak W, Mitterhauser M.
European Journal of Pharmacology (2014) 735:177-183.

Preparation and first preclinical evaluation of [^{18}F]FE@SNAP:
a potential PET tracer for the melanin concentrating hormone receptor 1 (MCHR1)
Philippe C, Nics L, Zeilinger M, Schirmer E, Spreitzer H, Karanikas G, Lanzenberger R, Viernstein H, Wadsak W, Mitterhauser M.
Scientia Pharmaceutica (2013) 81:625-639.

Preclinical *in vitro* & *in vivo* evaluation of [^{11}C]SNAP-7941 - the first PET tracer for the melanin concentrating hormone receptor 1
Philippe C, Nics L, Zeilinger M, Kuntner C, Wanek T, Mairinger S, Shanab K, Spreitzer H, Viernstein H, Wadsak W, Mitterhauser M.
Nuclear Medicine and Biology (2013) 40:919-925.

[^{18}F]FE@SNAP - A new PET tracer for the melanin concentrating hormone receptor 1 (MCHR1): Microfluidic and vessel-based approaches
Philippe C, Ungersboeck J, Schirmer E, Zdravkovic M, Nics L, Zeilinger M, Shanab K, Lanzenberger R, Karanikas G, Spreitzer H, Viernstein H, Mitterhauser M, Wadsak W.
Bioorganic & Medicinal Chemistry (2012) 20:5936-5940.

Radiosynthesis of [^{11}C]SNAP-7941 – the first PET-tracer for the melanin concentrating hormone receptor 1 (MCHR1)
Philippe C, Schirmer E, Mitterhauser M, Shanab K, Lanzenberger R, Karanikas G, Spreitzer H, Viernstein H, Wadsak W.
Applied Radiation and Isotopes (2012) 70:2287-2294.

Optimization of the radiosynthesis of the Alzheimer tracer 2-(4-N [^{11}C]methylaminophenyl)-6-hydroxybenzothiazole ([^{11}C]PIB)
Philippe C, Haeusler D, Mitterhauser M, Ungersboeck J, Viernstein H, Dudczak R, Wadsak W.
Applied Radiation and Isotopes (2011) 69:1212-1217.

„Label and go"– A fast and easy radiolabelling method for pellets
Philippe C, Mien LK, Salar-Behzadi S, Knäusl B, Wadsak W, Dudczak R, Kletter K, Viernstein H, Mitterhauser M.
Applied Radiation and Isotopes (2010) 68:399-403.

Last author:

***In vivo* evaluation of radiotracers targeting the melanin concentrating hormone receptor 1: [^{11}C]SNAP-7941 and [^{18}F]FE@SNAP reveal specific uptake in the ventricular system**
Zeilinger M, Dumanic M, Pichler F, Budinsky L, Wadsak W, Pallitsch K, Spreitzer H, Lanzenberger R, Hacker M, Mitterhauser M, Philippe C.
Scientific Reports (2017) 7:8054

Corresponding author:

Speed matters to raise molar radioactivity: Fast HPLC shortens the quality control of C-11 PET-tracers
Nics L, Steiner B, Klebermass E-M, Philippe C, Mitterhauser M, Hacker M, Wadsak W.
Nuclear Medicine and Biology (2018) 57:28-33.

Co-author:

Brain monoamine oxidase A in seasonal affective disorder and treatment with bright light therapy.
Spies M, James GM, Vraka C, Philippe C, Hienert M, Gryglewski G, Komorowski A, Kautzky A, Silberbauer L, Pichler V, Kranz GS, Nics L, Balber T, Baldinger-Melich P, Vanicek T, Spurny B, Winkler-Pjrek E, Wadsak W, Mitterhauser M, Hacker M, Kasper S, Lanzenberger R, Winkler D.
Translational Psychiatry (2018) in press.

Microfluidic ^{68}Ga-labeling: A proof of principle study.

Paff S, Philippe C, Pichler V, Hacker M, Mitterhauser M, Wadsak W.
Dalton Transactions (2018) 47:5997-6004.

A new method measuring the interaction of radiotracers with the human P-glycoprotein (P-gp) transporter
Vraka C, Dumanic M, Racz T, Pichler F, Philippe C, Balber T, Klerbermass EM, Wagner KH, Hacker M, Wadsak W, Mitterhauser M.
Nuclear Medicine and Biology (2018) 60:29-36.

Influence of OATPs on hepatic disposition of erlotinib measured with positron emission tomography
Bauer M, Matsuda A, Wulkersdorfer B, Philippe C, Traxl A, Özvegy-Laczka C, Stanek J, Jäger W, Patik I, Bakos E, Szakács G, Wadsak W, Hacker M, Zeitlinger M, Langer O.
Clinical Pharmacology & Therapeutics (2017) 104:139-147.

The influence of the rs6295 gene polymorphism on serotonin-1A receptor distribution investigated with PET in patients with major depression applying machine learning
Kautzky A, James GM, Philippe C, Baldinger-Melich P, Kraus C, Kranz GS, Vanicek T, Gryglewski G, Wadsak W, Mitterhauser W, Rujescu D, Kasper S, Lanzenberger R.
Translational Psychiatry (2017) 7:e1150.

Effect of P-glycoprotein inhibition at the blood-brain barrier on brain distribution of (R)-[^{11}C]verapamil in elderly versus young subjects
Bauer M, Wulkersdorfer B, Karch R, Philippe C, Jäger W, Stanek J, Wadsak W, Hacker M, Zeitlinger M, Langer O.
British Journal of Clinical Pharmacology (2017) 83:1991-1999.

Effects of selective serotonin reuptake inhibitors on interregional relation of serotonin transporter availability in major depression
James GM, Baldinger-Melich P, Philippe C, Kranz GS, Vanicek T, Hahn A, Gryglewski G, Hienert M, Spies M, Traub-Weidinger T, Mitterhauser M, Wadsak W, Hacker M, Kasper S, Lanzenberger R.
Frontiers in Human Neuroscience (2017) 11:48.

Simple and rapid quantification of serotonin transporter binding using [^{11}C]DASB bolus plus constant infusion
Gryglewski G, Rischka L, Philippe C, Hahn A, James GM, Klebermass E, Hienert M, Silberbauer L, Vanicek T, Kautzky A, Berroterán-Infante N, Nics L, Traub-Weidinger T, Mitterhauser M, Wadsak W, Hacker M, Kasper S, Lanzenberger R.
NeuroImage (2017) 149:23-32.

Association of protein distribution and gene expression revealed by PET and post-mortem quantification in the serotonergic system of the human brain
Komorowski A, James GM, Philippe C, Gryglewski G, Bauer A, Hienert M, Spies M, Kautzky A, Vanicek T, Hahn A, Traub-Weidinger T, Winkler D, Wadsak W, Mitterhauser M, Hacker M, Kasper S, Lanzenberger R.
Cerebral Cortex (2016) 1-12.

Altered interregional molecular associations of the serotonin transporter in attention deficit/hyperactivity disorder assessed with PET
Vanicek T, Kutzelnigg A , Philippe C, Sigurdardottir HL, James GM, Hahn A, Kranz GS, Höflich A, Kautzky A, Traub-Weidinger T, Hacker M , Wadsak W, Mitterhauser M, , Kasper S, Lanzenberger R.
Human Brain Mapping (2017) 38:792-802.

Whole-body Distribution and Radiation Dosimetry of ^{11}C-Elacridar and ^{11}C-Tariquidar in Humans
Bauer M, Blaickner M, Philippe C, Wadsak W, Hacker M, Zeitlinger M, Langer O.
Journal of Nuclear Medicine (2016) 57:1265-1268.

A pilot PET study to assess the functional interplay between ABCB1 and ABCG2 at the human blood-brain barrier
Bauer M, Römermann K, Karch R, Wulkersdorfer B, Stanek J, Philippe C, , Maier-Salamon A, Haslacher H, Jungbauer C, Wadsak W, Jäger W, Löscher W, Hacker M, Zeitlinger M, Langer O.
Clinical Pharmacology & Therapeutics (2016) 100:131-141.

Radiosynthesis and first preclinical evaluation of the novel norepinephrine transporter pet-ligand [^{11}C]ME@HAPTHI
Rami-Mark C, Berroterán-Infante N, Philippe C, Foltin S, Vraka C, Hoepping A, Lanzenberger R, Hacker M, Mitterhauser M, Wadsak W.
EJNMMI Research (2015) 5:34.

Approaching complete inhibition of P-glycoprotein at the human blood-brain barrier: an *(R)*-[^{11}C]verapamil PET study.
Bauer M, Karch R, Zeitlinger M, Philippe C, Römermann K, Stanek J, Maier-Salamon A, Wadsak W, Jäger W, Hacker M, Müller M, Langer O.
Journal of Cerebral Blood Flow & Metabolism (2015), 1-4.

Regional differences in SERT occupancy after acute and prolonged SSRI intake investigated by brain PET
Baldinger P, Kranz GS, Haeusler D, Savli M, Spies M, Philippe C, Hahn A, Höflich A, Wadsak W, Mitterhauser M, Lanzenberger R, Kasper S.
NeuroImage (2014), 88:252-262.

Cerebral serotonin transporter asymmetry in females, males and male-to-female transsexuals measured by PET in vivo
Kranz GS, Hahn A, Baldinger P, Häusler D, Philippe C, Kaufmann U, Wadsak W, Savli M, Höflich A, Kraus C, Vanicek T, Mitterhauser M, Kasper S, Lanzenberger R.
Brain Structure and Function (2014) 219:171-183.

Syntheses of Precursors and Reference Compounds of the Melanin-Concentrating Hormone Receptor 1 (MCHR1) Tracers [^{11}C]SNAP-7941 and [^{18}F]FE@SNAP for Positron Emission Tomography
Schirmer E, Shanab K, Datterl B, Neudorfer C, Mitterhauser M, Wadsak W, Philippe C, Spreitzer H.
Molecules (2013) 18:12119-12143.

Reliable set-up for in-loop ^{11}C-carboxylations using Grignard reactions for the preparation of [*carbonyl*-^{11}C]WAY-100635 and [^{11}C]-(+)-PHNO
Rami-Mark C, Ungersboeck J, Haeusler D, Nics L, Philippe C, Mitterhauser M, Willeit M, Lanzenberger R, Karanikas G, Wadsak W.
Applied Radiation and Isotopes (2013) 82:75-80.

Interaction of ^{11}C-Tariquidar and ^{11}C-Elacridar with P-glycoprotein and breast cancer resistance protein at the human blood-brain barrier
Bauer M, Karch R, Zeitlinger M, Stanek J, Philippe C, Wadsak W, Mitterhauser M, Jäger W, Haslacher H, Müller M, Langer O.
Journal of Nuclear Medicine (2013) 54:1181-1187.

Optimization of [^{11}C]DASB-synthesis: Vessel-based and flow-through microreactor methods
Ungersboeck J, Philippe C, Haeusler D, Mitterhauser M, Lanzenberger R, Dudczak R, Wadsak W.
Applied Radiation and Isotopes (2012) 70:2615-2620.

Prediction of SSRI treatment response in major depression based on serotonin transporter interplay between median raphe nucleus and projection areas
Lanzenberger R, Kranz GS, Häusler D, Akimova E, Savli M, Hahn A, Wadsak W, Spindelegger C, Philippe C, Fink M, Mitterhauser M, Kasper S.
Neuroimage (2012) 63:874-881.

Differential modulation of self-referential processing in the default mode network via serotonin-1A receptors
Hahn A, Wadsak W, Windischberger C, Baldinger P, Höflich AS, Losak J, Nics L, Philippe C, Kranz GS, Kraus C, Mitterhauser M, Karanikas G, Kasper S, Lanzenberger R.
Proceedings of the National Academy of Sciences (2012) 109(7):2619-2624.

Microfluidic preparation of [^{18}F]FE@SUPPY and [^{18}F]FE@SUPPY:2 – comparison with conventional radiosyntheses
Ungersboeck J, Philippe C, Mien LK, Haeusler D, Shanab K, Lanzenberger R, Spreitzer H, Keppler B, Dudczak R, Kletter K, Mitterhauser M, Wadsak W.
Nuclear Medicine and Biology (2011) 38:427-437.

Simple and rapid preparation of [^{11}C]DASB with high quality and reliability for routine applications
Haeusler D, Mien LK, Nics L, Ungersboeck J, Philippe C, Lanzenberger R, Kletter K, Dudczak R, Mitterhauser M, Wadsak W.
Applied Radiation and Isotopes (2009) 67:1654-1660.

Book chapters

The Potential Role of the MCHR1 in Diagnostic Imaging: Facts and Trends

Philippe C, Mitterhauser M.
In: Melanin. Edited by Blumenberg M.
InTech, Rijeka (2017) 27-43.

Synthesis of 2-(4-N-[^{11}C]methylaminophenyl)-6-hydroxybenzothiazole ([^{11}C]6-OH-BTA-1; [^{11}C]PIB)
Philippe C, Mitterhauser M, Wadsak W.
In: Radiochemical Syntheses: Volume 1: Radiopharmaceuticals for Positron Emission Tomography. Wiley Series on Radiochemical Syntheses. Edited by Scott PJH and Hockley PG.
John Wiley & Sons, Inc., New Jersey (2012) 177-189.

Scientific abstracts

Oral presentations:

Time is Money and Radiation Burden - a carbon-11 'two-in-one-pot' production system
Vraka C, Philippe C, Zenz T, Mitterhauser M, Hacker M, Wadsak W, Pichler V.
EJNMMI Radiopharmacy and Chemistry (2018) 3(Suppl 1): 7. doi: 10.1186/s41181-018-0041-4
19th European Symposium on Radiopharmacy and Radiopharmaceuticals, April 5-8, 2018, Groningen, the Netherlands.

In vivo imaging of the MCHR1 in the ventricular system via [^{18}F]FE@SNAP
Philippe C, Zeilinger M, Scherer T, Fürnsinn C, Dumanic M, Wadsak W, Hacker M, Mitterhauser M.
EJNMMI Radiopharmacy and Chemistry (2016) 1(Suppl 1): 10. doi:10.1186/s41181-016-0012-6
18th European Symposium on Radiopharmacy and Radiopharmaceuticals, April 7-10, 2016, Salzburg, Austria.

In-vitro and in-vivo characterization of [^{18}F]FE@SNAP and derivatives for the visualization of the melanin concentrating hormone receptor 1
Zeilinger M, Philippe C, Dumanic M, Pichler F, Pilz J, Hacker M, Wadsak W, Mitterhauser M.
EJNMMI Research(2016) 6:A13.
Radioactive Isotopes in Clinical Medicine and Research – 32nd International Symposium, January 20-23, 2016, Zell am See, Austria.

Targeting the melanin-concentrating hormone receptor 1: first *in vivo* evaluation of [^{18}F]FE@SNAP
Philippe C, Haeusler D, Scherer T, Fuernsinn C, Kiefer F W, Wadsak W, Hacker M, Mitterhauser M.
Nuklearmedizin (2015) 54:A68-A69.
53. Jahrestagung der Deutschen Gesellschaft für Nuklearmedizin, April 22-25, 2015, Hannover, Germany.

Kampf der Methoden: Konventionelle vs Mikrofluid-Radiosynthese am Beispiel [^{18}F]Altanserin
Philippe C, Egger K, Mitterhauser M, Hacker M, Wadsak W.
Nuklearmedizin (2014)
OGN'15 - 11. Jahrestagung der Österreichischen Gesellschaft für Nuklearmedizin, January 21-23, 2015, Zell am See, Austria.

Status quo of [^{11}C]SNAP-7941 & [^{18}F]FE@SNAP: the first PET-tracer for the MCHR1
Philippe C, Nics L, Haeusler D, Zeilinger M, Kuntner C, Wanek T, Schirmer E, Spreitzer H, Hacker M, Wadsak W, Mitterhauser M.
Nuklearmedizin (2013) 52:A129.
Radioactive Isotopes in Clinical Medicine and Research – 31st International Symposium, January 22-25, 2014, Zell am See, Austria.

"En route" for [^{18}F]FE@SNAP: A potential PETtracer for obesity via the MCHR1
Philippe C, Ungersböck J, Schirmer E, Spreitzer H, Viernstein H, Wadsak W, Mitterhauser M.
Nuklearmedizin (2011) 50:A160.
Radioactive Isotopes in Clinical Medicine and Research - 30th International Symposium, January 11-14, 2012, Bad Hofgastein, Austria.

[^{11}C]SNAP-7941 & [^{18}F]FE@SNAP – die ersten potentiellen PET-Tracer für den MCHR1: erste Ergebnisse
Philippe C, Ungersböck J, Haeusler D, Nics L, Schirmer E, Spreitzer H, Dudczak R, Viernstein H, Wadsak W, Mitterhauser M.
19. Jahrestagung der Arbeitsgemeinschaft Radiochemie/Radiopharmazie; September 15-17, 2011, Ochsenfurt, Germany.

Radiosynthesis of [^{11}C]SNAP-7941: the first potential PET-ligand for the MCHR1
Philippe C, Nics N, Hartmann S, Schirmer E, Kletter K, Dudczak R, Viernstein H, Wadsak W, Mitterhauser M.
European Journal of Nuclear Medicine & Molecular Imaging (2010) 37:S206.
EANM'10 – 23th Annual Congress of the European Association of Nuclear Medicine, October 9-13, 2010, Vienna, Austria.

Poster presentations:

In vivo evaluation of the MCHR1-ligand [^{11}C]SNAP-7941: Proof of principle in MCHR1-KO mice
Philippe C, Dumanic M, Lakaye B, Wadsak W, Hacker M, Mitterhauser M.
Journal of Labelled Compounds and Radiopharmaceuticals (2017) 60:S407.
ISRS'17 - The 22nd International Symposium on Radiopharmaceutical Sciences, May 14-19, 2017, Dresden, Germany.

MCHR1: a potential indicator for BAT activity
Philippe C, Zeilinger M, Scherer T, Fürnsinn C, Dumanic M, Wadsak W, Hacker M, Mitterhauser M.
Nuklearmedizin (2016) 55:A78.

54. Jahrestagung der Deutschen Gesellschaft für Nuklearmedizin, April 20-23, 2016, Dresden, Germany.

Etablierung der [^{11}C]Harmin Radiosynthese für MAO-A Imaging in klinischen Studien
Philippe C, Zeilinger M, Mitterhauser M, Dumanic M, Lanzenberger R, Hacker M, Wadsak W.
Nuklearmedizin (2014)
OGN'15 - 11. Jahrestagung der Österreichischen Gesellschaft für Nuklearmedizin, January 21-23, 2015, Zell am See, Austria.

Microfluidic preparation of [^{18}F]altanserin for clinical trials
Philippe C, Ungersboeck J, Nics L, Karanikas G, Mitterhauser M, Wadsak W.
European Journal of Nuclear Medicine & Molecular Imaging (2013) 40:S421-S422.
EANM'13 – 26th Annual Congress of the European Association of Nuclear Medicine, October 19-23, 2013, Lyon, France.

[^{11}C]SNAP-7941, the first Tracer for the Melanin Concentrating Hormone Receptor 1: Biodistribution and small animal PET
Philippe C, Kuntner C, Wanek T, Mairinger S, Schirmer E, Spreitzer H, Viernstein H, Wadsak W, Mitterhauser M.
Journal of Labelled Compounds and Radiopharmaceuticals (2013) 56:S419.
ISRS'13 - The 20th International Symposium on Radiopharmaceutical Sciences, May 12-17, 2013, Jeju, South Korea.

Radiosynthesis & first preclinical evaluation of [^{18}F]FE@SNAP – a potential PET-tracer for the melanin concentrating hormone receptor 1
Philippe C, Nics L, Zeilinger M, Ungersböck J, Haeusler D, Hendl M, Heissenberger T, Schirmer E, Spreitzer H, Dudczak R, Viernstein H, Wadsak W, Mitterhauser M.
European Journal of Nuclear Medicine & Molecular Imaging (2012) 39:S534.
EANM'12 – 25th Annual Congress of the European Association of Nuclear Medicine, October 27-31, 2012, Milan, Italy.

[^{11}C]SNAP-7941, the first potential PET-Tracer for the MCHR1: Preparation and Automatisation
Philippe C, Schirmer E, Spreitzer H, Dudczak R, Viernstein H, Wadsak W, Mitterhauser M.
Journal of Labelled Compounds and Radiopharmaceuticals (2011) 54:S106.
ISRS'11 - The 19th International Symposium on Radiopharmaceutical Sciences, August 28-September 2, 2013, Amsterdam, Netherlands.

The "Dril & Fill" Method
Philippe C, Haeusler D, Mien LK, Kletter K, Dudczak R, Wadsak W, Viernstein H, Mitterhauser M.
Scientia Pharmaceutica (2010) 78:650.
CESPT'10 - 8th Central European Symposium on Pharmaceutical Technology, September 16-18, 2010, Graz, Austria.

Rapid radiosynthesis of [^{18}F]FE@SUPPY:2 using a microfluidic device
Philippe C, Ungersböck J, Mien L-K, Kletter K, Dudczak R, Viernstein H, Mitterhauser M, Wadsak W.

Nuklearmedizin (2009) 48:A159-160.
Radioactive Isotopes in Clinical Medicine and Research - 29th International Symposium, January 16-19, 2010, Bad Hofgastein, Austria.

Partikel-Markierung mit [^{18}F]Fluorid für PEPT
Philippe C, Salar-Behzadi S, Raith M, Mien LK, Wadsak W, Viernstein H, Dudczak R, Kletter K, Mitterhauser M.
Nuklearmedizin (2008) 47:A160.
OGN'09 - 7. Jahrestagung der Österreichischen Gesellschaft für Nuklearmedizin, January 22-24, 2009, Salzburg, Austria.