

Cécile Philippe

Key Researcher

Department of Biomedical Imaging and Image-guided Therapy
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SCIENTIFIC & ACADEMIC CAREER

Since 2023	Research group leader “Experimental Nuclear Medicine”, Medical University of Vienna, Austria
Since 2022	Associated professor, Medical University of Vienna, Austria
2020-2021	Visiting scientist, Werner Siemens Imaging Center, Department for Preclinical Imaging and Radiopharmacy, University of Tübingen, Germany
2014-2022	Postdoctoral researcher, Medical University of Vienna, Austria
2009-2013	Ph.D. thesis, University of Vienna, Austria
2002-2009	Studies of Pharmacy, University of Vienna, Austria

MAIN AREA OF RESEARCH

Preclinical development and assessment of radiopharmaceuticals, emphasizing on shifted energy metabolism during disease and immune-oncology. By exploring innovative strategies to image altered metabolic pathways, Cecile Philippe aims to contribute to the advancement of precision medicine. In collaboration with her colleagues, her main research findings were: 1. The discovery of the expression of the melanin-concentrating hormone receptor 1 in brown adipose tissue through positron emission tomography (PET). 2. The identification that STAT3/LKB1 controls metastatic prostate cancer by regulating mTORC1/CREB pathway.

In the course of the MetAGE project, Cecile Philippe aims to unravel metabolic alterations that accompany aging via non-invasive functional whole-body imaging (PET) in preclinical models, paving the way for interventions to promote healthy aging and combat age-related diseases.

ADDITIONAL RESEARCH ACTIVITIES (10 most important)

Since 2023	Head of the committee “Radiopharmaka”, Austrian Society of Nuclear Medicine and Theranostic (OGNT)
Since 2020	Steering Board Member of the Medical Imaging Cluster (MIC), Medical University of Vienna
2020-2023	WWTF Grant (Co-PI) for Multimodal Imaging: “Tracking Nutrient Metabolism and Cellular Partitioning by Multimodal Molecular Imaging”

Selected Presentations

09/2023	“RadioFACS reveals [¹⁸ F]FDG uptake in a KRAS induced lung cancer model is driven by immune cells but not tumor cell metabolism” (EANM Vienna)
03/2022	“[¹⁸ F]FAC-PET/MRI uncovers immune checkpoint inhibitor treatment induced immune cell activation in the tumor draining lymph node of mice with solid cancers” (EMIM Thessaloniki)
01/2022	“Crossing Boundaries: Science Diplomacy, Radioactive Isotopes & the Emerging Field of Nuclear Medicine in Cold War Europe” (Opening Lecture, OGNT International Austrian Winter Symposium Bad Ischl)

Honors & Awards

- 2022 Ilse-Zolle-Promotion-Award for Natural Sciences in Nuclear Medicine & Rudolf-Höfer-Award for the best publication related to the application of radioactive isotopes in clinic and science in Austria
Publication: "Discovery of melanin-concentrating hormone receptor 1 in brown adipose tissue" (Ann. N.Y. Acad. Sci. (2021) 1494:70-86)
- 2021 Bader-Award for the History of Natural Sciences from the Austrian Academy of Sciences (ÖAW).
Project: "Concepts, Cooperations and Demarcations: Nuclear Medicine Research in Austria during the Cold War".
- 2021 Erwin Schrödinger Fellowship (Austrian Science Fund)
Project: "Monitoring of cancer immunotherapy via simultaneous whole body PET/MRI immunoimaging"

10 MOST IMPORTANT PUBLICATIONS

1. Pencik J*, Philippe C*, Schlederer M, Atas E, Pecoraro M, Grund-Gröschke S, Li W, Tracz A, Heidegger I, Lagger S, Trachtová K, Oberhuber M, Heitzer E, Aksoy O, Neubauer HA, Wingelhofer B, Orlova A, Witzeneder N, Dillinger T, Redl E, Greiner G, D'Andrea D, Östman JR, Tangermann S, Hermanova I, Schäfer G, Sternberg F, Pohl EE, Sternberg C, Varady A, Horvath J, Stoiber D, Malcolm TI, Turner SD, Parkes EE, Hantusch B, Egger G, Rose-John S, Poli V, Jain S, Armstrong CWD, Hoermann G, Goffin V, Aberger F, Moriggl R, Carracedo A, McKinney C, Kennedy RD, Klocker H, Speicher MR, Tang DG, Moazzami AA, Heery DM, Hacker M, Kenner L (2023). STAT3/LKB1 controls metastatic prostate cancer by regulating mTORC1/CREB pathway. **Mol. Cancer** 22:133. doi: 10.1186/s12943-023-01825-8
2. Ustsinau U, Ehret V, Fürnsinn C, Scherer T, Helbich TH, Hacker M, Krššák M, Philippe C (2023). Novel approach using [¹⁸F]FTHA-PET and de novo synthesized VLDL for assessment of FFA metabolism in a rat model of diet induced NAFLD. **Clin. Nut.** 42:1839-1848. doi: 10.1016/j.clnu.2023.08.001
3. Vranka C, Murgaš M, Rischka L, Geist BK, Lanzenberger R, Gryglewski G, Zenz T, Wadsak W, Mitterhauser M, Hacker M, Philippe C, Pichler V (2022). Simultaneous radiomethylation of [¹¹C]harmine and [¹¹C]DASB and kinetic modeling approach for serotonergic brain imaging in the same individual. **Sci. Rep.** 12:3283. doi: 10.1038/s41598-022-06906-0
4. Philippe C*, Klebermass EM*, Balber T, Kulterer OC, Zeilinger M, Egger G, Dumanic M, Herz CT, Kiefer FW, Scheuba C, Scherer T, Fürnsinn C, Vranka C, Pallitsch K, Spreitzer H, Wadsak W, Viernstein H, Hacker M, Mitterhauser M (2021). Discovery of melanin-concentrating hormone receptor 1 in brown adipose tissue. **Ann. N.Y. Acad. Sci.** 1494:70-86. doi: 10.1111/nyas.14563
5. Philippe C, Zeilinger M, Dumanic M, Pichler F, Fetty L, Vranka C, Balber T, Wadsak W, Pallitsch K, Spreitzer H, Lanzenberger R, Hacker M, Mitterhauser M. (2019) SNAPshots of the MCHR1: A comparison between the PET-tracers [¹⁸F]FE@SNAP and [¹¹C]SNAP-7941. **Mol. Imaging Biol.** 21:257-268. doi: 10.1007/s11307-018-1212-0
6. Balber T, Bencurova K, Kiefer FW, Hedesan O, Klebermass E-M, Egger G, Tran L, Wagner KH, Viernstein H, Pallitsch K, Spreitzer H, Hacker M, Wadsak W, Mitterhauser M, Philippe C (2019) In vitro radiopharmaceutical evidence for MCHR1 binding sites in murine brown adipocytes. **Front.**

Endocrinol. 10:324. doi: 10.3389/fendo.2019.00324

7. Zeilinger M, Dumanic M, Pichler F, Budinsky L, Wadsak W, Pallitsch K, Spreitzer H, Lanzenberger R, Hacker M, Mitterhauser M, Philippe C (2017) In vivo evaluation of radiotracers targeting the melanin concentrating hormone receptor 1: [¹¹C]SNAP-7941 and [¹⁸F]FE@SNAP reveal specific uptake in the ventricular system. **Sci. Rep.** 7:8054. doi: 10.1038/s41598-017-08684-6
8. Philippe C, Haeusler D, Scherer T, Fürnsinn C, Zeilinger M, Wadsak W, Shanab K, Spreitzer H, Hacker M, Mitterhauser M (2016). [¹⁸F]FE@SNAP – a specific PET-tracer for melanin-concentrating hormone receptor 1 imaging? **EJNMMI Res.** 6:31. doi: 10.1186/s13550-016-0186-7
9. Philippe C*, Haeusler D*, Fuchshuber F, Spreitzer H, Viernstein H, Hacker M, Wadsak W, Mitterhauser M (2014). Comparative autoradiographic in vitro investigation of melanin concentrating hormone receptor 1 ligands in the central nervous system. **Eur. J. Pharmacol.** 15:177-183. doi: 10.1016/j.ejphar.2014.04.020
10. Philippe C, Nics L, Zeilinger M, Kuntner C, Wanek T, Mairinger S, Shanab K, Spreitzer H, Viernstein H, Wadsak W, Mitterhauser M (2013). Preclinical in vitro & in vivo evaluation of [¹¹C]SNAP-7941 - the first PET tracer for the melanin concentrating hormone receptor 1. **Nucl. Med. Biol.** 40:919-925. doi: 10.1016/j.nucmedbio.2013.05.010

*equally contributed