

DAVID VIERTL, Ph.D.

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Professional Experiences

Since July 2014

microPET/SPECT/CT laboratory manager at the Department of Nuclear Medicine and Molecular Imaging (Prof. J. O. Prior, CHUV)

Development of new radiotracers and their translation into clinical applications.

¹²³I Radiolabeled 3BNC117 SPECT/CT to Image HIV Reservoir in Chronically Infected HIV Patients (ClinicalTrials.gov Identifier: NCT03468582).

Radiolabeling of clinical and preclinical compounds.

Design, management and analysis of preclinical imaging.

Radioprotection expert and animal welfare officer for the laboratory.

PostDoc at the Surgical Research Laboratory (Prof. L. Bühler, HUG)

Preclinical studies of new radioisotopes for the treatment of brain and pancreatic cancer using in vivo models and microPET/SPECT/CT imaging.

August 2010-June 2014

PostDoc at the Department of Radiation Oncology (Prof J. Buhris, CHUV)

Preclinical studies and validation of radio-sensitization effects of peptides and chemical compounds in *in vitro* and *in vivo* models in collaboration with Debiopharm Group.

Patent pending (WO_2005_000887_A1) and clinical trial (ClinicalTrials.gov Identifier: NCT01930292).

September 2006 to June 2010

Ph.D. student in life science (Prof. A. Bischof Delaloye, Dr PD F. Buchegger CHUV)

In vivo and *in vitro* study of enhanced cellular incorporation of [¹²⁵I]-IdUrd and [¹⁸F]-FLT radionucleotide and cell cycle alteration induced by FdUrd for cancer diagnosis and therapy purpose. Clinical trial (2010DR1151).

March 2005 to August 2005 to September 2006

Research assistant at the Laboratory of Molecular Neurobiology and Functional Neuroproteomics (Prof. H. Lashuel, EPFL)

Structural studies of α -Synuclein and Amyloid- β neuroproteins.

First EM images of α -synuclein in pore-like structure associated with lipid membranes at Harvard Medical School.

Research assistant in the laboratory of Physics of Living Matter (Prof. G. Dietler, EPFL)

Interactions study by AFM of Tomosyn-1 and TAU neuroproteins.

Education & Scientific Formation

2016 – 2018 CAS of Radiopharmaceutical Chemistry and Radiopharmacy.
 2006 – 2010 Ph.D. thesis at the Department of Nuclear Medicine, (CHUV).
 March 2005 Diploma (M.Sc.) in neuroscience and endocrinology (University of Lausanne).
 June 2004 License (B.Sc.) in pharmacology and toxicology (University of Lausanne).

Technical Skills

Excellent transversal biology and chemistry knowledge in nuclear medicine and radiopharmacy.

- Radiolabeling and radio-iodination of research peptide and antibody.
- Preparation of radiopharmaceutical (kit and unregistered preparation).
- Quality control of radiotracers.
- Animal imaging (microPET/SPECT/CT, MRI).
- Animal experimentation (small surgery, xenograft).
- Protein expression and purification (FPLC, HPLC, MS).
- Protein characterization (BiaCore, AFM, spectroscopy).
- Cell mechanism (IP, WB, flow cytometry, confocal and fluorescence microscopy).
- Cell survival assay (clonogenic assay, TUNEL, MTT).

Other Formations & Skills

Experienced at writing scientific publications, research proposals and authorization applications to regulatory authorities (SFN, Swissmedic, ethics committee, animal experiment authorization, IB).

European Drug Legislation, Quality Assurance and GMP (September 2017)

Radiopharmacology and Clinical Radiopharmacy (September 2016)

Radiopharmaceutical Chemistry (February 2016)

Expert in radioprotection Laboratory Type B and C (October 2015)

Project management (December 2011)

Animal care and experimentation Module II (September 2011)

Clinical research investigator. Co-investigator level 1 (July 2010)

Proficient on Windows, MacOS and Linux operating systems, skilled in Microsoft office suits, GraphPad Prism, PMOD and numerous instrument softwares.

Languages:	French,	native language
	English,	fluently written and spoken
	German	written and spoken

Publication List

1. Preclinical Evaluation and Dosimetry of [¹¹¹In]CHX-DTPA-scFv78-Fc Targeting Endosialin/Tumor Endothelial Marker 1 (TEM1).
Cicone F, Denoël T, Gnesin S, Riggi N, Irving M, Jakka G, Schaefer N, Viertl D, Coukos G, Prior JO.
Mol Imaging Biol. 2020 Jan 28. doi: 10.1007/s11307-020-01479-8. [Epub ahead of print] Erratum in: Mol Imaging Biol. 2020 Mar 20.
2. Internal radiation dosimetry of a ¹⁵²Tb-labeled antibody in tumor-bearing mice.
Cicone F, Gnesin S, Denoël T, Stora T, van der Meulen NP, Müller C, Vermeulen C, Benešová M, Köster U, Johnston K, Amato E, Auditore L, Coukos G, Stabin M, Schaefer N, Viertl D, Prior JO.
EJNMMI Res. 2019 Jun 11;9(1):53. doi: 10.1186/s13550-019-0524-7.
3. Low-Dose Imaging in a New Preclinical Total-Body PET/CT Scanner.
Molinos C, Sasser T, Salmon P, Gsell W, Viertl D, Massey JC, Mińczuk K, Li J, Kundu BK, Berr S, Correcher C, Bahadur A, Attarwala AA, Stark S, Junge S, Himmelreich U, Prior JO, Laperre K, Van Wyk S, Heidenreich M.
Front Med (Lausanne). 2019 May 3;6:88. doi: 10.3389/fmed.2019.00088. eCollection 2019.
4. First in-human radiation dosimetry of ⁶⁸Ga-NODAGA-RGDyK.
Gnesin S, Mitsakis P, Cicone F, Deshayes E, Dunet V, Gallino AF, Kosinski M, Baechler S, Buchegger F, Viertl D, Prior JO.
EJNMMI Res. 2017 Dec;7(1):43. doi: 10.1186/s13550-017-0288-x. Epub 2017 May 18.
5. Cardiac Radionuclide Imaging in Rodents: A Review of Methods, Results, and Factors at Play.
Cicone F, Viertl D, Quintela Pousa AM, Denoël T, Gnesin S, Scopinaro F, Vozenin MC, Prior JO.
Front Med (Lausanne). 2017 Mar 29;4:35. doi: 10.3389/fmed.2017.00035. eCollection 2017.
6. TAT-RasGAP317-326 Enhances Radiosensitivity of Human Carcinoma Cell Lines In Vitro and In Vivo through Promotion of Delayed Mitotic Cell Death.
Tsoutsou P, Annibaldi A, Viertl D, Ollivier J, Buchegger F, Vozenin MC, Bourhis J, Widmann C, Matzinger O.
Radiat Res. 2017 May;187(5):562-569. doi: 10.1667/RR14509.1. Epub 2017 Mar 21.
7. CERN-MEDICIS (Medical Isotopes Collected from ISOLDE): a new facility.
Viertl D, Buchegger F, Prior JO, Forni M, Morel P, Ratib O, Bühler Léo H, Stora T; CERN_MEDICIS collaboration.
Rev Med Suisse. 2015 Jun 17;11(479):1340-4. French.
8. The radiosensitizing activity of the SMAC-mimetic, Debio 1143, is TNF α -mediated in head and neck squamous cell carcinoma.
Matzinger O, Viertl D, Tsoutsou P, Kadi L, Rigotti S, Zanna C, Wiedemann N, Vozenin MC, Vuagniaux G, Bourhis J.
Radiother Oncol. 2015 Sep;116(3):495-503. doi: 10.1016/j.radonc.2015.05.017. Epub 2015 Jun 18.
9. Fragment N2, a caspase-3-generated RasGAP fragment, inhibits breast cancer metastatic progression.
Barras D, Lorusso G, Lhermitte B, Viertl D, Rüegg C, Widmann C.
Int J Cancer. 2014 Jul 1;135(1):242-7. doi: 10.1002/ijc.28674. Epub 2014 Mar 4.
10. 18F-FLT and 125I-IodUrd uptake increase in human tumour cell lines induced by the thymidylate synthase inhibitor FdUrd.
Viertl D, Perillo-Adamer F, André PA, Ametamey SM, Ross TL, Kosinski M, Dupertuis YM, Bischof Delaloye A, Buchegger F.
Nuklearmedizin. 2012 May 11;51(5). Epub ahead of print.
11. ⁶⁸Ga-NODAGA-RGDyK for $\alpha\beta$ 3 integrin PET imaging. Preclinical investigation and dosimetry.
Buchegger F, Viertl D, Baechler S, Dunet V, Kosinski M, Poitry-Yamate C, Rüegg C, Prior JO.
Nuklearmedizin. 2011;50(6):225-33. Epub 2011 Oct 11.
12. Antitumour effects of single or combined monoclonal antibodies directed against membrane antigens expressed by human B cells leukaemia.
Loisel S, André PA, Golay J, Buchegger F, Kadouche J, Cérutti M, Bologna L, Kosinski M, Viertl D, Delaloye AB, Berthou C, Mach JP, Boumsell L.
Mol Cancer. 2011 Apr 19;10:42.
13. Increase of [(18)F]FLT tumor uptake in vivo mediated by FdUrd: toward improving cell proliferation positron emission tomography.
Viertl D, Bischof Delaloye A, Lanz B, Poitry-Yamate C, Gruetter R, Mlynarik V, Ametamey SM, Ross TL, Lehr HA, André PA, Perillo-Adamer F, Kosinski M, Dupertuis YM, Buchegger F.
Mol Imaging Biol. 2011 Apr;13(2):321-31.
14. Charge dependent substrate activity of C3' and N3 functionalized, organometallic technetium and rhenium-labeled thymidine derivatives toward human thymidine kinase 1.
Struthers H, Viertl D, Kosinski M, Spingler B, Buchegger F, Schibli R.
Bioconjug Chem. 2010 Apr 21;21(4):622-34.

15. Amyloid-beta aggregates cause alterations of astrocytic metabolic phenotype: impact on neuronal viability.
Allaman I, Gavillet M, Bélanger M, Laroche T, Viertl D, Lashuel HA, Magistretti PJ.
J Neurosci. 2010 Mar 3;30(9):3326-38.
16. Fluorodeoxyuridine mediated cell cycle synchronization in S-phase increases the Auger radiation cell killing with 125I-iododeoxyuridine.
Perillo-Adamer F, Kosinski M, Dupertuis YM, Viertl D, Bischof Delaloye A, Buchegger F.
Nuklearmedizin. 2009;48(6):233-42. Epub 2009 Oct 1.
17. Branched KLVFF tetramers strongly potentiate inhibition of beta-amyloid aggregation.
Chafekar SM, Malda H, Merx M, Meijer EW, Viertl D, Lashuel HA, Baas F, Scheper W.
Chembiochem. 2007 Oct 15;8(15):1857-64.
18. Tomosyn-1 is involved in a post-docking event required for pancreatic beta-cell exocytosis.
Cheviet S, Bezzi P, Ivarsson R, Renström E, Viertl D, Kasas S, Catsicas S, Regazzi R.
J Cell Sci. 2006 Jul 15;119(Pt 14):2912-20. Epub 2006 Jun 20.