Marie-Catherine Vozenin

OMB No. 0925-0001/0002 (Rev. 08/12 Approved Through 8/31/2015)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
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NAME: Marie-Catherine Vozenin

eRA COMMONS USER NAME (credential, e.g., agency login): MACATHVOZENIN

POSITION TITLE: Head of radiobiology

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Pierre&Marie Curie, PARIS VI University, Paris	B.Sc.	1990/1993	Biochemistry
PARIS V University, Paris	Master	1993/1994	Biomedical Sciences
South PARIS XI University, Paris	Ph.D.	1994/1999	Oncology/Radiobiology
South PARIS XI University, Paris	Habilitation	2005	Oncology/Radiobiology
CHUV-Management booster.com, Lausanne	Micro-MBA	2018	Management

A. Personal Statement

I along with my team have developed a novel modality of radiation therapy called FLASH-RT that minimizes normal tissue toxicity and eradicates tumors in various organs including the brain, lung and skin and in various species including mice, zebrafish, pigs and cats. The protection of normal tissue by FLASH-RT was termed the FLASH effect, resulting in a series of investigations to characterize the mechanisms involved. My work has been involved in many aspects of the FLASH effect. Monte Carlo simulations along with innovative and traceable dosimetric approaches have been undertaken to investigate the physico-chemical parameters involved in the interaction of FLASH-RT with biological matter. Further, we have established that the FLASH effect at the normal tissue level is mediated by the ultra-high intra-pulse dose-rate of ionizing radiation. Much of my recent work has

focused on testing the foregoing ideas, where FLASH-RT seems to elicits an entirely different biological response between normal tissue and tumors. I have developed an extensive array of pre-clinical and clinical brain tumor model systems able to recapitulate simultaneously, significant features of glioblastoma and the normal brain response to FLASH-RT. My work has also focused on the neuro-inflammatory response and immune infiltration activated at different time points after FLASH irradiation. Importantly, we have translated this technology to the first clinical trials with domestic cat patients suffering of Squamous cell carcinoma, my team has worked to secure the translation of FLASH-RT into clinical trials for human patients with cancer.

B. Positions and Honors

04/20- Present Associate Professor Radiation Oncology, Lausanne University Hospital and University of Lausanne- Switzerland.

2018 – Present Adjunct Professor at University California Irvine- Radiation Oncology, USA.

2013 – Present Head of the Radiobiology at Lausanne university hospital (CHUV/UNIL) Lausanne-Switzerland.

2009 – Present CR1- (INSERM researcher- Competitive recruitement at Inserm U1030, Institut Gustave Roussy, Villejuif, Fr

2008 Post-doctoral training at Peter McCallum, Melbourne, Australia.

2006 Post-doctoral training at UAMS, Little Rock, USA

2003 – 2009 Junior Group leader at Institut de Radioprotection et de Sureté Nucléaire, Fontenay aux Roses, Fr.

1999 – 2003 Permanent position as Staff scientist at Institut de Radioprotection et de Sureté Nucléaire, Fontenay aux Roses, Fr.

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