



## IBA and PARTICLE initiate FLASH proton therapy Research Partnership

*First FLASH research project to be conducted in a Proteus<sup>®</sup>ONE treatment room with a superconducting synchrotron*

**Louvain-La-Neuve, Belgium, June 15, 2023** – IBA (Ion Beam Applications S.A., EURONEXT), the world leader in particle accelerator technology and the world's leading provider of proton therapy solutions for the treatment of cancer, and PARTICLE (Particle Therapy Interuniversity Center Leuven), located on the health sciences campus of the University Hospitals Leuven (UZ Leuven), today announced they have initiated a Research Partnership for the development of ConformalFLASH<sup>®1</sup>.

As part of the collaboration, IBA will enable the FLASH configuration in the clinical proton therapy system of PARTICLE to facilitate preclinical research on FLASH therapy. Researchers from UZ Leuven, KU Leuven and UCLouvain will perform preclinical experiments to evaluate the FLASH effect on normal tissue toxicity using IBA's Proteus<sup>®</sup>ONE<sup>2</sup>. In the future, this could lead to new clinical functionality for patients.

This is the first FLASH research project to be carried out with a superconducting synchrotron, such as IBA's Proteus<sup>®</sup>ONE in a clinical setting. FLASH therapy aims to deliver treatment at an ultra-high dose rate (> 40 Gy/s) in one to five fractions. This is compared to conventional beam treatments that are delivered at much lower dose rate and typically spread out over an average of 25 to 30 sessions. This delivery at ultra-high dose rate might lead to a reduced toxicity and sparing effect on the normal tissues while offering similar tumor control to conventional treatment<sup>3</sup>.

FLASH therapy can potentially deliver a paradigm shift in radiation therapy and cancer treatment, as demonstrated by a growing body of preclinical evidence<sup>4-5</sup>. The collaboration between IBA and PARTICLE is another successful step in bringing FLASH therapy to patients in the clinic. It builds on the long-standing cooperation between the two partners, initiated in 2017.

**Olivier Legrain, Chief Executive Officer of IBA, commented:** *"ConformalFLASH<sup>®</sup> therapy has the potential to further improve radiotherapy for patients worldwide. IBA is committed to shaping the future of proton therapy together with its partners and user community. Building on its industry-leading efforts in FLASH research, we are excited to partner with PARTICLE, as our 1st*

<sup>1</sup> ConformalFLASH<sup>®</sup> is a registered brand of IBA's Proton FLASH irradiation solution currently under research and development phase.

<sup>2</sup> Proteus<sup>®</sup>ONE is the brand name of Proteus<sup>®</sup>235

<sup>3</sup> Velalopoulou et al, Cancer Res. 2021 Sep 15;81(18):4808-4821. doi: 10.1158/0008-5472.CAN-21-1500. Epub 2021 Jul 28.

<sup>4</sup> Diffenderfer, Koumenis, Metz et al. Design, Implementation, and in Vivo Validation of a Novel Proton FLASH Radiation Therapy System, Int J Radiation Oncol Biol Phys, 2020

<sup>5</sup> Kim et al. Comparison of FLASH Proton Entrance and the Spread-Out Bragg Peak Dose Regions in the Sparing of Mouse Intestinal Crypts and in a Pancreatic Tumor Model, Cancers, 2021



*Proteus® ONE research partner, to further increase our understanding of FLASH and move it closer toward clinical implementation.”*

*“At PARTICLE we invest in further improving the radiation treatment delivery to the benefit of our patients. Through this preclinical research, we hope to learn more about how FLASH therapy could provide faster, simpler and more effective cancer treatment”, said prof. Edmond Sterpin, Research professor KU Leuven & UCLouvain.*

\*\*\*ENDS\*\*\*

### About IBA

IBA (Ion Beam Applications S.A.) is the world leader in particle accelerator technology. The company is the leading supplier of equipment and services in the field of proton therapy, considered to be the most advanced form of radiation therapy available today. IBA is also a leading player in the fields of industrial sterilization, radiopharmaceuticals and dosimetry. The company, based in Louvain-la-Neuve, Belgium, employs approximately 1,800 people worldwide. IBA is a certified B Corporation (B Corp) meeting the highest standards of verified social and environmental performance.

IBA is listed on the pan-European stock exchange EURONEXT (IBA: Reuters IBAB.BR and Bloomberg IBAB.BB).

More information can be found at: [www.iba-worldwide.com](http://www.iba-worldwide.com)

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