

# IBA signs research collaboration agreement with the University of Kansas Medical Center on FLASH technology

**Louvain-La-Neuve, Belgium, December 5, 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, announced today a research collaboration agreement with the University of Kansas Medical Center (KUMC) to advance preclinical research into the use of ConformalFLASH<sup>®1</sup> technology using an IBA Proteus<sup>®</sup>ONE<sup>2</sup> machine. The preclinical evaluation will be focused on skin and muscular normal tissue sparing after proton FLASH irradiation.

The two organizations published a joint abstract, "Experimental demonstration of 360nA FLASH proton beam current via synchrocyclotron using IBA Proteus®ONE," during the Proton Therapy Co-Operative Group (PTCOG) Congress 2023, which took place in Madrid, Spain, in June. The collaboration announced today will facilitate a deepening of the research partnership between IBA and KUMC, as they look to develop ConformalFLASH<sup>®</sup> in a clinical Proteus<sup>®</sup>ONE treatment room.

**Olivier Legrain, Chief Executive Officer of IBA, commented:** "We are excited to partner with the University of Kansas Medical Center, comprising some of the brightest minds in the field of radiation oncology who have consistently pushed the boundaries of what is possible. This collaboration brings together a synergy of expertise and a shared passion for exploring the potential of FLASH radiotherapy and its translation to the clinic. We are eager to continue pushing the boundaries of knowledge on FLASH and sharing this expertise with our large community of IBA centers."

Ronald Chen, MD, Chair of the Department of Radiation Oncology at The University of Kansas Medical Center, added: "As an NCI-designated comprehensive cancer center, The University of Kansas Cancer Center at KUMC is committed to being a leader in cancer-related research. FLASH therapy has the potential to transform cancer care. Our team of physician scientists, physicists and radiobiologists is excited to collaborate with IBA to lead preclinical and clinical research in this area, so FLASH can be a clinical reality to help cancer patients in the not-so-distant future."

ConformalFLASH<sup>®</sup> is a ultra-high dose rate proton delivery using the Bragg peak, combining the biological tissue-sparing effects of FLASH with the physics properties of the proton Bragg peak. This technology distinguishes itself from electron FLASH machines, that are currently limited to deliver FLASH dose rates to superficial tumors, and protons transmission FLASH delivery, which has reduced conformality and higher integral doses compared to ConformalFLASH<sup>®</sup>.

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<sup>&</sup>lt;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



FLASH irradiation has the potential to dramatically change the landscape of radiotherapy and patient cancer care by enhancing the therapeutic window with less toxicity and possibility to escalate the dose with shorter treatment. FLASH, defined as radiation delivery at ultra-high dose rates (40-60Gy/s), has been shown in preclinical research to spare normal tissue toxicity while maintaining an equivalent anti-tumor efficacy<sup>3</sup>.

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### 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 2,000 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

### About the University of Kansas Medical Center

The University of Kansas Medical Center's mission is to educate exceptional health care professionals through a full range of undergraduate, graduate, professional, postdoctoral and continuing education programs in the schools of Medicine, Nursing and Health Professions. KU Medical Center also advances the health sciences through world-class research programs, provides compassionate and state-of-the-art patient care in an academic medical center environment and works with communities in every Kansas county to improve the health of Kansans. KU Medical Center is home to the research operations of The University of Kansas Cancer Center, a comprehensive cancer center designated by the National Cancer Institute. For more information visit <u>www.KUMC.edu</u>.

### About The University of Kansas Cancer Center

The University of Kansas Cancer Center is transforming cancer research and clinical care by linking an innovative approach to drug discovery, delivery and development to a nationally accredited patient care program. Our consortium center includes cancer research and health care professionals associated with the University of Kansas Medical Center and The University of Kansas Health

<sup>3</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

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System; the University of Kansas, Lawrence; The Stowers Institute for Medical Research; Children's Mercy; and in partnership with members of the Masonic Cancer Alliance.

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