PRESS RELEASE
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ProtOnART – a new consortium for proton online adaptive radiation therapy

A new consortium for the advancement of Proton Online Adaptive Radiation Therapy, ProtOnART, uniquely brings together researchers, clinicians, and industry. The members of the ProtOnART consortium are OncoRay in Dresden, Germany, and PARTICLE in Leuven, Belgium, both combining academic expertise with clinical experience in proton therapy, as well as industrial partners Ion Beam Applications (IBA), proton therapy system manufacturer from Belgium, and RaySearch Laboratories, provider of oncology software solutions from Sweden.

ProtOnART builds upon the partners’ long-standing research efforts and shared ambition that an online adaptive workflow has the potential to significantly increase the quality of cancer treatments by making better use of the conformal nature of proton radiation. Thereby, the healthy tissue-sparing dose distribution of protons will be secured along the treatment course by continuously adapting the treatment to anatomical changes or inter- and even intra-fractional motion.

The first goal for the consortium is to develop an efficient daily online adaptive proton therapy workflow demonstrated in clinical practice by the clinical partners. The end goal of ProtOnART is to develop near-real-time adaptive proton therapy, where plan adaptation is performed during or between the delivery of the proton fields and make it a clinical reality as well.

Johan Löf, founder and CEO, RaySearch, says: “Adaptive radiation therapy (ART) has been a focus area for RaySearch for more than 20 years, and it is rewarding to see that daily online ART for photon treatments finally is getting into clinical use. However, online ART may be even more important for proton therapy, which hopefully will be the next step for the community. To achieve this goal, it is pivotal that academic institutions, clinics, and vendors of treatment planning systems, oncology information systems, and proton delivery systems work closely together. With the ProtOnART consortium we have managed to assemble exactly these competences.”

Charles Kumps, Chief Innovation and Development Officer of IBA, says: “Online adaptation is an important step towards personalized treatments in proton therapy. Defining the right tools enabling clinicians to account for morphology changes in an efficient and effective manner is only possible thanks to joint learning between the clinics and industry. We are delighted to leverage synergies between IBA and RaySearch solutions to support the ProtOnART consortium.”

Mechthild Krause, Director of OncoRay, underlines: “As the development of online-adaptive proton therapy is one of two main pillars of OncoRay’s strategy, we are delighted about the formation of the ProtOnART consortium, triggered also by our initiative. Our vision is to develop the technological and clinical best possible external radiation, by optimally using the physical benefits of protons also for changing anatomies. With ProtOnART, we want to bring near-real-time adaptive proton therapy into clinical reality - including a closed automated feedback loop of imaging, adaptation, treatment verification and quality assurance in real time, supported by artificial intelligence. Thereby, particularly patients with highly variable and moving tumors will benefit from the more targeted therapy.”

Edmond Sterpin, Research Professor, PARTICLE, says: “Online adaptive proton therapy has been a major research and development area of PARTICLE for several years. It potentially enables to update the treatment plan while the patient is on the treatment couch according to anatomical changes revealed by on-board imaging devices. By bringing together leading academic, clinical, and industrial players,
the ProtOnART consortium will ensure its effective deployment, which is an essential step for realizing the full potential of proton therapy to target tumors and spare healthy tissue with unparalleled precision. With the availability of online adaptive proton therapy, we hope to further improve the already excellent quality of the treatments delivered to our patients treated at the PARTICLE center.

About RaySearch
RaySearch Laboratories AB (publ) is a medical technology company that develops innovative software solutions for improved cancer treatment. RaySearch markets the RayStation® treatment planning system (TPS) and the oncology information system (OIS) RayCare®. The most recent additions to the RaySearch product line are RayIntelligence® and RayCommand®. RayIntelligence is an oncology analytics system (OAS) which enables cancer clinics to collect, structure and analyze data. RayCommand, a treatment control system (TCS), is designed to link the treatment machine and the treatment planning and oncology information systems.

RaySearch software is used by over 800 clinics in more than 40 countries. The company was founded in 2000 as a spin-off from the Karolinska Institute in Stockholm and the share has been listed on Nasdaq Stockholm since 2003. More information is available at raysearchlabs.com.

About OncoRay
The OncoRay - National Center for Radiation Research is founded and jointly operated by the University Hospital Carl Gustav Carus Dresden, the Faculty of Medicine at TU Dresden and the Helmholtz-Zentrum Dresden-Rossendorf. The research at OncoRay is strongly focused on the development of new approaches and technological innovations in radiation oncology and their translation into clinical application. The University Proton Therapy Dresden is located directly in the OncoRay building on the campus of the University hospital. More information is available at oncoray.de.

About PARTICLE
The Particle Therapy Interuniversity Center Leuven – or PARTICLE – is an interuniversity project of University Hospitals Leuven UZ / KU Leuven and Cliniques universitaires Saint-Luc - UCLouvain, supported by UZ Gent, CHU UCL Namur, UZ Brussel and UZA. The center is located on the Health Sciences campus Gasthuisberg of UZ Leuven in Leuven, Belgium and is the first center for proton therapy in Belgium. More information is available at particle.be.

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 1,600 people worldwide. IBA is a certified B Corporation (B Corp) meeting the highest standards of verified social and environmental performance.

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