

Press Release: TheraPanacea, Gustave Roussy, AP-HP, ICANS | Institut de cancérologie Strasbourg Europe and GE Healthcare target to improve brain tumor survival through AI-based personalized radiation treatment

Paris / Strasbourg, France – 7/12/2020. TheraPanacea, Gustave Roussy, AP-HP, ICANS | Institut de cancérologie Strasbourg Europe and GE Healthcare announce a promising collaboration to provide an AI-powered solution to optimize the response to radiation treatment of patients with brain tumors (glioblastoma).

Glioblastoma (GBM) is one of the most complex, deadly, treatment-resistant cancers with an estimated survival of only 12 to 18 months. Despite its long history (first scientific identification in the 1920's), only a few treatment drugs and devices are used in the management of GBM patients today. A failure to account for the overly complex (heterogenous) structure of GBM, and a tendency to treat tumors uniformly, result in lack of success to significantly extend patient lives beyond a few extra months. To reduce the socio-economic burden related to unsuccessful, suboptimal treatment of glioblastoma, TheraPanacea along with AP-HP, Gustave Roussy, ICANS and GE Healthcare have secured a competitive funding from Bpifrance to bring effective, personalized treatment to patients as soon as possible.

Leveraging on its expertise in developing cutting-edge, AI-powered software to optimize cancer diagnostics, prognostics, and therapies, TheraPanacea will develop AI algorithms to elucidate the complex structure of GBM and unlock underlying local characteristics which are invisible to human eyes. *"This unique collaboration with outstanding clinical partners shifts radiation oncology towards a personalized, smart treatment delivery with better outcomes, lower treatment toxicity and substantial side-effects reduction for GBM patients,"* explains Professor Nikos Paragios, founder, and CEO of TheraPanacea.

To enable treatment doses to be delivered locally, the consortium will combine these powerful AI solutions with domain knowledge coming from the renowned clinical institutions. *"The goal is to provide a robust, reliable, and easy to use solution for the individualization of GBM treatment that can also improve the radiotherapy workflow across all tumor locations"* comments Professor Eric Deutsch, Chair of Radiotherapy at Gustave Roussy and director of the Inserm Unit 1030 - Molecular Radiotherapy and Novel Therapeutics. Professor Georges Noël, head of the department 4R (radiobiology | radioisotope | radiology radiationphysics | radiotherapy) at the Institut de cancérologie Strasbourg Europe, highlights *"This unique effort, will introduce novel radiotherapeutic options that will shift the paradigm of dose homogeneity towards improved local disease control, ultimately leading to better outcomes and quality of life for the patients"*.

Timing and strategical alignment play an important role in ultimate success and outlook of a cutting-edge project. *"We are delighted to be part of such a promising project. Not only because it will dramatically better the prognosis of glioblastoma patients, but also due to its timely alignment with the current national efforts towards improving the poor prognostic of malignant diseases,"* declares Professor Philippe Maingon, Medical Director of the Department of Oncology and Hematology at the AP-HP Sorbonne Université hospital-university group.

To make these solutions reach as many patients as possible, the idea is to develop it as a kind of plug-in, that will be made available through a global platform developed by GE Healthcare. *"AI DReAM refers to a unique open, interoperable, on prem deployed platform that will accelerate the development of Artificial Intelligence solutions for diagnosis, treatment and follow-up. We are thrilled to contribute towards improving treatment and life expectancy of glioma tumors,"* concludes Baptiste Perrin Digital Research & Development Director, GE Healthcare.



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About TheraPanacea: A medical technology company created in 2017, TheraPanacea develops top-notch software for smarter cancer diagnosis, prognosis, and treatment. TheraPanacea's first software for radiotherapy, ART-Plan™, has been available on the European market since 2019. Since its creation, TheraPanacea has won prestigious distinctions and prizes including the European Research Council (ERC) Proof of Concept Grant (2016), the Digital Innovation Competition (Bpifrance), the Grands Prix d'Innovation de la Ville de Paris in Health category (2017), the 1st AI Challenge prize for the Paris region (2018) and the H2020 - SME Instrument Phase 2 prize (2019) rewarding the most disruptive European companies in their market. <http://www.therapanacea.eu>

For media inquiries, please contact Ms. Catherine Huynh | +33 6 47 93 51 65 | c.huynh@therapanacea.eu

About AP-HP: Assistance Publique - Hôpitaux de Paris / Greater Paris University Hospitals: The leading hospital and university centre (CHU) in Europe, Greater Paris University Hospitals and its 39 hospitals are organised into six hospital-university groups (AP-HP. Centre - Université de Paris ; AP-HP. Sorbonne Université ; AP-HP. Nord - Université de Paris ; AP-HP. Université Paris Saclay ; AP-HP. Hôpitaux Universitaires Henri Mondor et AP-HP. Hôpitaux Universitaires Paris Seine-Saint-Denis) and are centred around five universities in the Île-de-France region. Closely linked to large research bodies, Greater Paris University Hospitals include three international hospital-university institutes (ICM, ICAN, IMAGINE) and the largest French health data repository (EDS). As a major stakeholder in applied research and health innovation, Greater Paris University Hospitals hold a portfolio of 650 active patents, and each year its clinicians sign off nearly 9,000 scientific publications and over 4,000 research projects are under development, all promoters combined. In 2020, Greater Paris University Hospitals were awarded the Institut Carnot label, which is recognition of the quality of partner research: Carnot@AP-HP offers industrial stakeholders applied and clinical research solutions in the health sector. In 2015, Greater Paris University Hospitals also founded the Greater Paris University Hospitals Research Foundation to support the biomedical and health research performed in all its hospitals. <http://www.aphp.fr>

Press contact: service de presse de l'AP-HP : | +33 1 40 27 37 22 | service.presse@aphp.fr

About Gustave Roussy: Gustave Roussy, ranked as the leading cancer center in Europe, is a global center of expertise in the fight against cancer, entirely dedicated to patients, whatever their age or pathology. It brings together on two sites (Villejuif and Chevilly Larue) 3,100 professionals whose missions are care, research and teaching. <https://www.gustaveroussy.fr/en> for more information.

Press contact: Claire Parisel | +33 1 42 11 50 59 | claire.parisel@gustaveroussy.fr

About ICANS | Strasbourg Europe Cancer Institute: Opened in November 2019, ICANS | Strasbourg Europe Cancer Institute combines the Paul Strauss Center, one of the Comprehensive Cancer Centers in France, and the University Hospital of Strasbourg oncology teams. This institute is entirely dedicated to patients and works in three different areas: cares teaching and research.

ICANS has been at the forefront of new technologies and it gathers human assets, state-of-the-art equipment and expertise on a single site, which focuses on preventing high-risk groups from developing cancer, providing personalized treatments and follow-up during and after the disease. A modern facility alongside cutting-edge equipment and experienced personnel provide patients with optimal overall cares.

Follow us on Facebook, LinkedIn and Instagram, or visit our website for more information.

For media inquiries, please contact Marie BRAULT, ICANS Head of communication +33 3 88 25 24 66 | m.brault@icans.eu

About GE Healthcare: GE Healthcare is the \$16.7 billion healthcare business of GE (NYSE: GE). As a leading global medical technology and digital solutions innovator, GE Healthcare enables clinicians to make faster, more informed decisions



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through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping to drive productivity and improve outcomes for patients, providers, health systems and researchers around the world. Follow us on [Facebook](#), [LinkedIn](#), [Twitter](#) and [Insights](#), or visit our website www.gehealthcare.com for more information.

For media inquiries, please contact Caroline Nouveau ,GE Healthcare | +33 6 20 49 49 25 | caroline.nouveau@ge.com or Aude Vayre ,Agence Grayling | +33 6 14 64 15 65 | aude.vayre@grayling.com

