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ASIA EDITION

Japanese firm Sumitomo invests in radiopharmaceutical startup Alpha Fusion

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Alpha Fusion is a developer of Astatine based radiopharmaceuticals for Targeted Alpha Therapy



Japan-based Sumitomo Heavy Industries (SHI) has announced the decision to invest in Alpha Fusion Inc. (AF), a developer of Astatine based radiopharmaceuticals for Targeted Alpha Therapy (TAT).

AF will aim at establishing their pipeline. Development of their radiopharmaceuticals is expected to be progressed by this funding and will lead more needs of Astatine-211.

SHI is joining a new project led by Osaka University for mass production of Astatine-211 and will contribute for the development of the TAT, which is expected to be a future advanced medicine, with technology of particle accelerators and a synthesis of radio-isotope (RI) labeled compounds.

TAT is a treatment that destroys cancer cells in the human body by injecting alpha emitting RI labeled candidate which selectively targets to cancer cells. Astatine-211 (211At, Atomic number 85, Half life time 7.2H) is an element belonging to halogens and has the property of emitting alpha particle. Due to no stable isotopes in nature, their properties have not been fully elucidated so far. However, it's getting attention in accordance with recent development of a nuclear medicine treatment and/or a theranostics (a new term combinated of therapy and diagnostic).

Clinical studies had been already conducted in US and Sweden etc. because of the advantages which is different from other approved RIs (177Lu, 223Ra, or 131I).

In Japan, investigator-initiated clinical trials targeting differentiated thyroid cancer (jRCT2051210144) at Osaka University and pheochromocytoma paraganglioma (jRCT2021220012) at Fukushima Medical University have started and further progress is highly expected.