Nihon Medi-Physics Accelerates "Theranostics" Development

New research facility is completed for novel radiopharmaceuticals

The new research facility has been completed.

October 11, 2019, Tokyo, Japan. Nihon Medi-Physics (NMP), the leading radiopharmaceutical company in Japan, announced the completion of its new research facility on September 10, 2019. NMP invested JPY3.3Billion for the construction.

NMP is accelerating strategic plans and processes to establish Theranostics*[1], the fusion of therapeutics and diagnostics. NMP utilizes multiple techniques to arrive at a comprehensive image/therapy regime for cancer patients using a common molecule, such as an antibody or a peptide, to function as a Drug Delivery System (DDS) *[2]. In this concept, therapeutic and diagnostic agents can be concurrently developed by changing the radioisotopes labeled with the common molecule; for instance alpha emitters*[3] such as Actinium-225 (^{225}Ac) for therapeutic agent and gamma emitters such as Zirconium-89 (^{89}Zr) for diagnostic one.

The new site will play an indispensable role in the development of new drugs within the Theranostics concept based on exploratory research, through to investigational new drug manufacturing under a GMP compliant environment. In radiopharmaceutical research with alpha-emitters such as ^{225}Ac, NMP's new site is the first in Japan with this capacity.

NMP has been advancing this research theme which was funded by the second Cyclic Innovation for Clinical Empowerment (CiCLE *[4]) initiative organized and managed by the Japan Agency for Medical Research and Development (AMED). To accelerate Theranostics, NMP is actively pursuing invitation-based collaborations and alliances with academic and private organizations in and outside Japan. At the same time, NMP utilizes its distinguished skills to handle radionuclides cultivated through NMP's long-standing experience in the radiopharmaceutical business.

Sources

*[1]: Theranostics: A term to denote the fusion of therapeutics and diagnostics.

*[2]: Drug Delivery System: Engineering technologies and systems that deliver a drug in minimum quantity to the targeted organ or tissue, etc., with the right timing, by controlling the pharmacokinetics of the drug so that the maximum outcome can be obtained.

*[3]: Alpha emitters: In comparison to other types of radiation, alpha emitters are effective in destroying targeted cancer cells. At the same time, their short path length in human tissue minimizes irradiation of surrounding healthy tissues. Therefore, alpha emitters like ^{225}Ac are attracting a lot of attention globally as radionuclides in applications for cancer treatment.

*[4]: CiCLE: One of the grant programs promoted by the Japan Agency for Medical Research (AMED) for the establishment of infrastructure to respond to medical needs, the creation of an environment for open innovation, and venture development based on industry-academia government collaboration. See AMED website for more information: https://www.amed.go.jp/en/program/list/07/01/001.html

Nihon Medi-Physics Co., Ltd.
Nihon Medi-Physics Co., Ltd. (NMP) is a leading company for radiopharmaceuticals in Japan, engaged in R&D, manufacturing, and distribution. NMP's stable and reliable supply of quality products has contributed to society over the years. With continuous challenges to new business opportunities in the "Development of Theranostics", "Application of digital technology in healthcare" and "Expansion of radiopharmaceutical business in Asia", NMP anticipates to further contribute to the health and well-being of societies into the future.

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Personalized medicine
Precision medicine
Alpha nuclides
Cancer
Cancer Cure
Cancer Diagnostic Agents
Cancer Drug Delivery System
Companion diagnostic
Diagnostics
Gamma Emitters
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