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Japan's Shimadzu to develop integrated platform for lipid analysis

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To establish comprehensive, high-accuracy lipid related measurement techniques and create a highly reliable database



Shimadzu Corporation, Kyushu University, and Kazusa DNA Research Institute, have recently opened the Auto Biomolecular analysis Systematisation Laboratory (ABiS Lab) on the first floor of the Healthcare R&D Centre, a research and development building at the Shimadzu Head Office in Japan.

This lab will be a centre for collaborative research (Project name: Intelligent Biomolecular Screening Project for Advanced Healthcare), aimed at the development of an integrated platform for lipid analysis.

Shimadzu high-performance liquid chromatograph mass spectrometers (LC-MS) and supercritical fluid chromatograph mass spectrometers (SFC-MS) are installed in ABiS Lab. Using ABiS Lab., the three parties will develop the analytical conditions, pretreatment procedures, standard samples, and measurement data analysis systems necessary for setting integrated standards in lipid data acquisition and analysis, aiming to complete the platform to integrate them.

Triglycerides, cholesterol, and other lipids are now of interest because of their relationship to health promotion and various diseases, heightening the necessity for accurate measurement data. However, lipids have limited water solubility, and their extraction from living organisms and analysis are difficult, which tends to cause significant differences in measured data sets between institutions. As a result, the accumulation of lipid measurement data and its mutual use between institutions remain limited, and the lipid measurement data has yet to be fully utilized in industrial context, which is a problem. The next-generation integrated platform for lipid analysis being developed through this collaborative research is intended to provide an analytical environment to facilitate mutual use of data between institutions.