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Japan's Murata announces production of world's first metal cell fractionation filter

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CELLNETTA eliminates the need for specialised skills and bulky devices



Japan-based Murata Manufacturing Co. has successfully commercialised and mass produced "CELLNETTA," the world's first metal cell fractionation filter designed for the rapid and precise selection and recovery of target cells from cell suspensions used in regenerative medicine and cell pharmaceutical research and development.

Target applications include fractionation (selection and recovery), concentration, and filtration in research and development for regenerative medicine technologies or cellular pharmaceuticals, as well as biotechnology across agriculture, forestry, food, and energy industries. The product will be showcased at the 24th Annual Meeting of the Japanese Society for Regenerative Medicine happening March 20-22, 2025 at Pacifico Yokohama North.

In developing this product, the company focused on the process of selecting and recovering target cells from cell suspensions – a critical step in research related to regenerative medicine and cell therapy. The CELLNETTA solution features microscale pores arranged in a mesh structure on a thin metallic film, created using advanced thin-film microfabrication technology honed over years of electronic component manufacturing. By precisely controlling the pore sizes on the thin metal film, which minimises cell adhesion, this filter enables efficient selection and recovery of target cells without leaving residues.

Historically, selecting and recovering target cells required skilled personnel and equipment, such as centrifuges, or the use of membrane filters made from fibers or resins. CELLNETTA simplifies this process by eliminating the need for specialised skills and bulky devices, enabling quicker selection and recovery of target cells compared to fiber- or resin-based filters.