## Poland's Prime Minister Speaks Out

INTERNATIONAL

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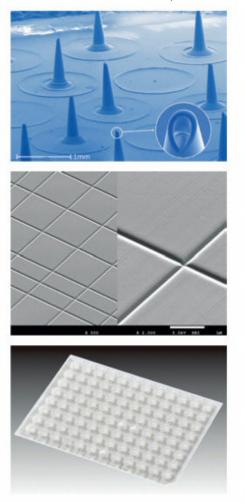
16-23.07.2021

## Channelling *monozukuri* for the development of cutting-edge life science research equipment

A renowned manufacturer of laboratory equipment, Fukae Kasei seeks international partners as it aims to apply its *monozukuri* technology in diverse new fields.

At the global level, *monozukuri*, the craftsmanship philosophy that underpins high-tech Japanese manufacturing, is often associated with Japan's corporate giants like Toyota. But *monozukuri* also forms the core of Japanese SMEs, which have excelled in niche areas of manufacturing thanks to their technological and R&D prowess, and an innate ability to listen and respond to customer needs.

Since its establishment, Fukae Kasei has specialized in the manufacturing of plastic laboratory equipment for life science research, which it supplies to labs worldwide through its globally renowned Watson brand. Embracing the spirit of *monozukuri* and *kaizen* (continu-



Fukae Kasei is continuously developing groundbreaking devices through successful collaboration. For more details, refer to the website (address bottom right).

ous improvement), this Kobe-based firm has dealt with many challenging requests from customers over its history. And while many of these requests seemed almost impossible to fulfil at first, Fukae Kasei has – through a process of trial and error and often in collaboration with leading universities – developed groundbreaking products that have cemented its reputation as a company ready to respond to any challenge.

"If the large companies try to do what the SMEs are doing in the niche field, then cost-wise it does not make any sense. There are many talented technicians and engineers in Japanese SMEs who are often requested by the large companies to make something happen," says Shoichi Kimura, president of Fukae Kasei. "I never want to turn down a single customer request and we try, as much as possible, to meet their needs."

Moving forward, by leveraging its long-cultivated monozukuri technologies and the experience gained from working with researchers and clients at the cutting-edge of life science research, Fukae Kasei aims to diversify into new fields such as micro-technology and the development of micro-scale products for the life science, medical and other industries. As such, the company is seeking to strengthen its collaboration with international partners that share a similar vision, including universities, research institutions and other companies.

In line with this endeavor, Fukae Kasei has already formed a successful collaboration with reputed Japanese universities – Ritsumeikan University and University of Hyogo - to develop technology to produce micro hollow needles, which, at 50µm, are thinner than a hair. "To produce these microlevel needles, injection moulding is needed with a pressure of one ton and normally the needle breaks as you do this. But we have a technology that prevents the needle from breaking. I think our company is the only one with that kind of technology," Mr. Kimura explains.

Aside from microscopic processing for plastic injection molding, other examples of Fukae Kasei's proprietary advanced technologies include Spheroid Catch, a contraption for catching spher-

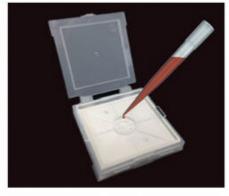


"We would like to produce higher functional products moving forward that will be related to pharmaceutical and biomedical research."

**Shoichi Kimura**, President, FUKAE KASEI CO., LTD.



oids used for investigation and research for regenerative medicine related to three-dimensional cell cultures, and Plasma Filter, which can separate plasma from whole blood quickly without the use of a centrifuge. This technique is related to "Liquid Biopsy", which



can perform early detection of illnesses such as cancer through the collection of blood samples.

While the company will continue to offer high-quality plastic lab equipment for vital research around the globe, Fukae Kasei also aims to channel its *monozukuri* spirit to take on new challenges, such as the production of higher functional solutions for pharmaceutical and biomedical research. "We would like to deal with other materials aside from plastic. There are preservation containers or tubes that have ICT chips in them, these are the kinds of products that we would like to have in the future," says Mr. Kimura, adding that the field of automatic research machines is another area in which the company sees potential opportunities for collaboration with overseas partners.

"There are many companies that produce automatic research machines. We do not have a lot of direct connections with these American manufacturers, there is only one US company that we are working with. We would like to expand our connections with US automatic research machine makers; and we are trying to achieve the same thing in the European market."

As it looks to expand its presence on the international market, Fukae Kasei aims to become a global ambassador of *monozukuri* and will continue to challenge itself to develop pioneering new technologies for the betterment of society.

