

Bringing biopharmaceuticals to the world



By reducing the cost of expensive biopharmaceuticals through its unique advanced chromatography technology, YMC foresees making biopharmaceuticals available to more people globally.

In the world of chromatography – a technology for the separation of molecules critical to the pharmaceutical industry – few companies can offer a one-stop-shop; from lab-scale analytical columns to high-volume purification packing materials, from consumables to large-scale chromatography equipment. Fewer still can offer optimized methodologies that enable customers to understand how to employ their products more efficiently.

YMC Co., Ltd. specializes in this one-stop-shop business model for the world's pharmaceutical organizations, having expanded its presence globally to geographies where many of the world's top firms operate.



YMC

www.ymc.co.jp/en

"Whereas most manufacturers can only offer a single chromatography product, such as separation media 'packing materials', specialized loading devices for the packing materials 'columns', 'HPLC systems' or other instruments that run and document the processes, the greatest strength of YMC's business model is that we are uniquely positioned to offer our customers a platform that allows them to determine which packing materials, which devices/systems/instruments, and which methods can be applied to achieve maximum production efficiency," says Ryuji Yamamura, President of YMC.

The company's diverse set of services for the pharmaceutical industry in the niche field of chromatography – and a gradual international expansion that has allowed it to get a foothold in the competitive global market – has proved a highly successful strategy. With offices and production facilities across Japan, USA, Germany, India, China, Korea, Taiwan, Singapore and Switzerland, overseas activity today accounts for over 70% of the Group's chromatography sales.

"We have been able to achieve this growth by working closely with our customers to refine the use of our purification technology specific to their unique processes and then provide them with the high-performance products they need. This customer-intimate approach is the very essence of Japanese manufacturing," explains Mr. Yamamura.

In order to further expand such activities in the future, YMC is actively investing in research facilities and recruitment at its main overseas bases. One such initiative is the construction of a laboratory at YMC America (Massachusetts) which is slated to carry out joint

research with its USA-based customers. The new R&D facility is targeted to be operational from the second quarter of 2021.

One particular area of research focus in which YMC has invested heavily is improving the efficiency of biopharmaceutical production. Biopharmaceuticals are medical drugs based upon large molecules such as antibodies, peptides and nucleic acids, and are considered to have a very high direct effect on the treatment of disease, unlike traditional low-molecular-weight drugs.

"For this reason, the market for biopharmaceuticals has grown significantly in recent years," says Mr. Yamamura. "On the other hand, the cost of production is very high and so it is important to improve the efficiency of the chromatographic purification process."

By reducing the cost of expensive biopharmaceuticals through its unique advanced chromatography technology, YMC hopes to make biopharmaceuticals available to more people around the world. To achieve this goal, YMC plans to invest 10 billion yen globally over the next five years to improve its research facilities and to recruit new technicians. In doing so, YMC looks to continue its culture for co-creation, expansion, and joint development, including increased collaboration internationally with new partners.

"YMC has been very active in forming alliances with other companies," says the YMC president. "For example, we have worked with Bristol-Myers Squibb at their Boston site to develop a continuous purification platform. Similarly, in Japan, we started working with PeptiDream and PeptiStar to develop a platform to dramatically improve the productivity of specialty peptide drug manufacturing.



"We forecast that our purification platform, based on our continuous chromatography technology, to soon be recognized as the global standard technology for the most cost-effective production of biopharmaceuticals"

Ryuji Yamamura,
President of YMC

As YMC is still a growing company, we intend to actively leverage our partnerships with leading global pharmaceutical companies, in order to promote our revolutionary continuous chromatography technology globally and rapidly."

Within five years, Mr. Yamamura states that the Group's ambition is to double its current consolidated turnover to 20 billion yen and more than double its global workforce to around 1,000 people. An initial public offering (IPO) is also being planned within three years, he confirms.

"We want our purification platform centered around our continuous chromatography technology, to soon be recognized as the global standard technology for the production of biopharmaceuticals, with traditional, outdated purification equipment replaced by our latest technology. And when this happens, our next five-year plan may well be to achieve sales of over 100 billion yen."

Nemoto: perfecting image technology for better medical diagnosis

The leading developer of high-precision contrast injectors for CT, MRI and Angiography, Nemoto works with medical professionals and leading organizations to develop, improve and find new uses for its products.



"Our long-term goal is to continuously drive towards creating the perfect image"

Shigeru Nemoto, President, Nemoto Kyorindo Co., Ltd.

Monozukuri – the Japanese manufacturing philosophy centered around craftsmanship, innovation and pursuit of the highest quality – lends itself greatly to the creation of high-precision equipment for the medical device industry.

For this reason, many medical professionals depend on the expertise and technological know-how of Japanese medical device manufacturers like Nemoto, whose high-precision contrast injectors for CT, MRI and Angiography are used in medical facilities in Japan, the US, Europe and throughout the world.

Having introduced the first cerebral angiography contrast injector in Japan, Nemoto continues to pursue pioneering innovation, working

in collaboration with both physicians and leading global medical organizations to develop, improve and find new uses for its products.

"As the birthplace of *monozukuri*, Japan is the ideal place to produce medical devices. With each medical device, we like to try to understand how far *monozukuri* can work in the production of that device," says company president, Shigeru Nemoto. "*Monozukuri* is a philosophy that guides us to where we and our products are headed."

Nemoto's success has been firmly rooted in its willingness to work closely with radiologists and physicians to acutely understand their needs in order to develop the most appropriate equipment to meet those needs. Such research and development – based on a high-degree of first-hand knowledge of the situations in which its products are used – is what sets Nemoto apart from many of its competitors, and why many medical professionals choose Nemoto's contrast injector solutions over others available on the market.

"Medical facilities are the true battlefield for our products, so collaborating with those on the ground gives us the most authentic feedback," says Mr. Nemoto. Even though we are small compared to our competition, we have observed larger companies failing at a task in which we have succeeded, because we have kept to our strategy of speaking with physicians first. This gives us a huge advantage."

Nemoto's latest innovations

As the company looks to expand its presence on the international market, it will continue its strategy of "speaking with physicians first" to ensure its goal of developing products that are exactly aligned with the needs of medical professionals. One of the key issues for Nemoto focuses on how to make injectors lighter and easier to use while maximizing efficacy, which led to the development of its latest angiographic injectors, like the PRESS DUO elite. "For this new product, it's the first and only technology of its kind in the USA, and we are now expanding it into Europe. This new product encompasses our strategies, making it aligned with the users," adds Mr. Nemoto.

Thanks to its successful collaboration with medical professionals and leading organizations, Nemoto continues to pioneer medical device innovations and is currently working on an injector for heart catheterization, which marks a major milestone for the company.

Meanwhile, its R&D department, in collaboration with leading Japanese universities, has also put focus on developing new uses for its injector technology, such as in the delivery of anti-cancer drugs, while

Nemoto's long-term goal remains "to continuously drive towards creating the perfect image".

"We continuously work with key leaders, such as Dr. Jean-Louis Sablyrolles and Dr. Laurent Macron at Centre Cardiologique du Nord – who are using the latest CT technology from GE Healthcare – and with leading partners like Siemens Healthineers, to understand how we can improve our products to maximize all the technological elements of the imaging process to achieve as near perfect an image as possible," explains Mr. Nemoto.

"We are planning to be the pioneer once again with our newest angiography injector through our partnership with Siemens Healthineers in the USA."



www.nemoto-do.com

Kawamoto Corporation: the healthcare materials leader at the forefront of the COVID-19 battle

Established in 1914 to supply bandages during World War One, Kawamoto today finds itself at the forefront of the war against COVID-19, where it is supplying high-quality infection control materials and protective equipment.



"We believe that it is necessary to positively consider working with overseas partners if there are any promising companies with excellent technologies or services"

Makoto Fukui, President, Kawamoto Corporation

Kawamoto's proud history

In 1914, the same year that World War One began, Shinnosuke Kawamoto founded a family store manufacturing and selling bandage materials. Due to the war, demand for bandages was high and Kawamoto's factory was constructed in Osaka in 1916 shortly after the store was founded. As the Great Kanto earthquake occurred that year, the demand for bandages rapidly increased. "For a period of two months, there was only enough time to sleep for three hours a day," explains Kawamoto's current president, Makoto Fukui. "To meet the rising demand, the Osaka plant was relocated and rebuilt. It is still in operation today and marks its 98th year of history this year."

As of 2021, 107 years have passed since the founding of Kawamoto, which has and continues to lead the healthcare materials industry in Japan. Kawamoto's corporate philosophy includes the phrase "improvement of society's health and hygiene." This philosophy is based on the company's desire since its founding – to resolve the issue of adequate healthcare materials not reaching the people during wartime or in the event of earthquakes.

"Recently, there have not been any shortages of gauze or bandages, but there have been shortages of items such as face masks, disinfectant and protective gowns due to the spread of COVID-19 last year, making it a year that made us think about our philosophy of 'improvement of society's health and hygiene' again," explains Mr. Fukui.

Products in focus

At present, Kawamoto handles not only bandage materials, but also products in a wide range of categories including infection control, surgery, oral care, nursing, and health and safety protective gear. Of these, the most focus is being placed on infection control products and oral care products.

Products in focus

"Focus has been placed back on infection control products due to the spread of COVID-19," says Mr. Fukui. "We have many products including

age." As one ages, the mouth tends to become dry, chewing becomes more difficult and it also becomes harder to swallow. To address these symptoms, Kawamoto aims to provide sponges and gels to be used to clean, moisturize and massage the oral cavity to keep it clean and ensure people are able to eat properly.

"It is said that longevity is increasing, but we believe it is important to have a long healthy lifespan," adds Mr. Fukui. "It is our belief that being able to eat with one's own mouth even in old age leads to a healthy lifespan."

History of overseas expansion

Kawamoto has a very long history overseas, starting with the establishment of the Republic of China Qingdao Office in 1940. In 1946, the Export Division was established

own brand, KBM. "The KBM brand has penetrated the Middle East market through sales activities of our products over many years, and sales to the region have now become a major pillar supporting our overseas business," Mr. Fukui explains.



Hi-Medi Plast ENDORACTOR

Future overseas expansion

Most of Kawamoto's products are disposables, and due to the nature of its products, it is necessary to comply with different medical device regulations in each country. As such, Kawamoto has grown by utilizing local distributors with abundant knowledge of the local healthcare industry and market in each country. In particular, growth has been pronounced in Southeast Asian countries, where there is demand for high-quality products worth their price. In order to cater to this demand, Kawamoto has decided to assign sales personnel overseas.

"Moving forward, we will further expand the area covered by our distributor business and believe that it is necessary to positively consider working with overseas partners if there are any promising companies with excellent technologies or services," says Mr. Fukui.

"We also see M&A and joint ventures as necessary options for gaining overall strength and providing the capability to respond to change. If there are any partners enabling both sides to enjoy synergies, we will powerfully push to work together with a sense of speed."



Ster Gel

face masks, gloves and eye shields, in addition to hand sanitizer and environmental disinfectant wipes. In particular, the sales volume of hand sanitizer has increased significantly during the COVID-19 pandemic."

"Kawamoto's hand sanitizer is characterized by its fragrance and moisturizing effect. The fragrance has been created by adding natural aromatic oils in order to make hand sanitizing more enjoyable for medical professionals. Repeated use tends to cause chapped hands, but the inclusion of a moisturizing ingredient makes the product less likely to cause chapping."

Kawamoto's oral care products have been developed with the desire to "make people smile by continuing to experience the joy of eating even in old

at head office, which led the company to begin sales of gauze materials to government organizations in locations such as Sweden, Thailand and Indonesia through Japanese trading companies.

Backed by oil money, Kawamoto then expanded into the Middle East region around 1975, which was during a period of transition from indirect trade centered on materials through trading companies to direct trade of materials processed into finished products under the company's



MOUTH PURE series

えがおを、ずっと。 えがおに、ずっと。





Sato Pharmaceutical: Marketing and *monozukuri* the differentiators in drug development overseas

Under the principles of *monozukuri*, Sato Pharmaceutical prioritizes the customer journey through formulation to packaging to successfully cater for different global markets.

The essence and influence of *monozukuri* across Japan's economic spectrum knows no bounds. In the pharmaceutical sector, where research and development (R&D), manufacturing and – perhaps traditionally to a less obvious extent – branding function together to meet market demands, the application of *monozukuri* is especially prominent.

Take Sato Pharmaceutical, which since its founding in 1915 has accurately captured these market needs to provide the highly original over-the-counter (OTC) and ethical products that contribute to healthy lives. Owing to their R&D ability developed over the years, Sato's OTC drugs such as Yunker, Access and Nazal have held a top share in their respective markets in Japan. The Sato brand is distinguishable globally through its marketing mascots, Sato-chan and Satoko-chan, a pair of Indian elephant siblings first introduced in 1959.

"With OTC drugs, we find the packaging made by the non-Japanese companies rather simple and cost-efficient," explains Seiichi Sato, President and CEO of Sato Pharmaceutical. "In Japan, under the principles of *monozukuri*, we strive to elaborate on the entire usage experience of the customer through details such as the formulation, dosage type, package, and so on, to enable each customer to choose their most convenient product. We're proud

to provide our differentiated OTC drugs which are developed based on our marketing insights and our R&D capabilities established over the past century."

As a global company with operations all over Asia, North America and Europe, including Hong Kong, Singapore, the US, Canada and Germany, Mr. Sato says that meeting these high standards everywhere it goes has been a challenge, especially as each of these regional and international marketplaces has different demands. However, the company has helped maintain its core Japanese philosophy throughout its global locations through training in the key principles of *monozukuri*.

"We have a local factory in Taiwan, for instance, where the local employees are being taught by our Japanese employees. The aim is to replicate the same quality of the product as that of Japan under the local laws and regulations," says Mr. Sato. "With our international subsidiaries, we also carry out fine-tuned marketing and sales activities and make use of our know-how and networking to further popularize Sato brands to respond to the various lifestyles and needs of different countries."



"Sato Pharmaceutical is aggressively expanding our business to continue being a global leader and export our *monozukuri* overseas"

Seiichi Sato,
President and CEO,
Sato Pharmaceutical Co., Ltd.

for OTC drugs will grow accordingly."

Though there remain huge opportunities in the

domestic market, due to Japan's shrinking population, the CEO says that Sato Pharmaceutical will continue its strategy of international expansion – for which it is actively seeking international partners – "in order to continue being a global leader and export our *monozukuri* overseas."

Back in Japan, where Mr. Sato is also chairman of the Japan Self-Medication Industry (JSMI) – the national association of OTC drug manufacturers – the company has long been contributing to the country's public health by enhancing the role and function of OTC medicines as well as promoting responsible self-care.

"Whilst OTC drugs account for 20% of total drugs in most marketplaces, in Japan there is a very big contrast because OTC drugs account for less than 10%," says Mr. Sato. "This means that there is a huge sea of opportunities for us. And due to the spread of COVID-19, the importance of self-care and self-medication has once again been emphasised. This will lead to better health literacy as well as change in the way people act, and so we think that the needs

