

HISTORY

ONO's History Timeline

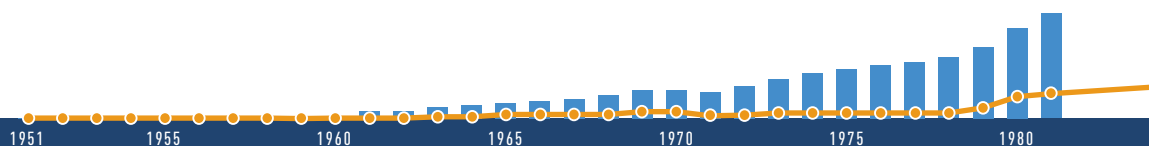
A 300-Plus-Year History of Full Commitment to the Pharmaceutical Business

Since our foundation in 1717, we have made progress for more than 300 years in our commitment to relieving pain of patients and focus on their health improvement.

"We believe there are new drugs that only we can develop."

We still continue to unite our efforts in meeting the challenge of discovering our own innovative drugs.

* Only for FY1989 (ended on March 31, 1990), the financial results are for four months from December 1, 1989 to March 31, 1990.



Foundation

1717

Ichibei Fushimiya I founded the apothecary "Fushimiya Ichibei Shoten" in Doshomachi, Osaka.



Illustration of the Fushimiya Ichibei shop
Source: Osaka guidebook "Naniwa Hitori Annai," 1867

1934

Ichibei Ono VIII changed the name of the business from Fushimiya Ichibei, which had been used since its foundation, to Ono Ichibei Shoten (Ono-Ichi) and reorganized operations to modernize management.



Ichibei Ono VIII

1947

Ono PHARMACEUTICAL CO., LTD. was established to grow into a pharmaceutical manufacturer dedicated to developing ethical pharmaceuticals.



(Original headquarters building and surrounding Doshomachi 2-chome area)

Shift in Marketing from OTC Drugs to Prescription Drugs

1960's

Transformed to a prescription drug manufacturer

1968

World's First

Became the world's first company to succeed in the total chemical synthesis of prostaglandins

Tackling an Impossible Challenge: The Road to Launching PG Drugs on the Market

After World War II, ONO made a full-fledged entry into the OTC drug market. With the economy fluctuating and a universal health insurance system introduced in 1961, however, the OTC drug market environment became increasingly severe. Under such circumstances, prostaglandins (PGs) came to ONO's knowledge through the special lecture of Professor Sune K. Bergström of Sweden's Lund University in 1965, when ONO was still a small company with 20 researchers. With little development experience of prescription drugs, ONO started research on the then unidentified compounds.

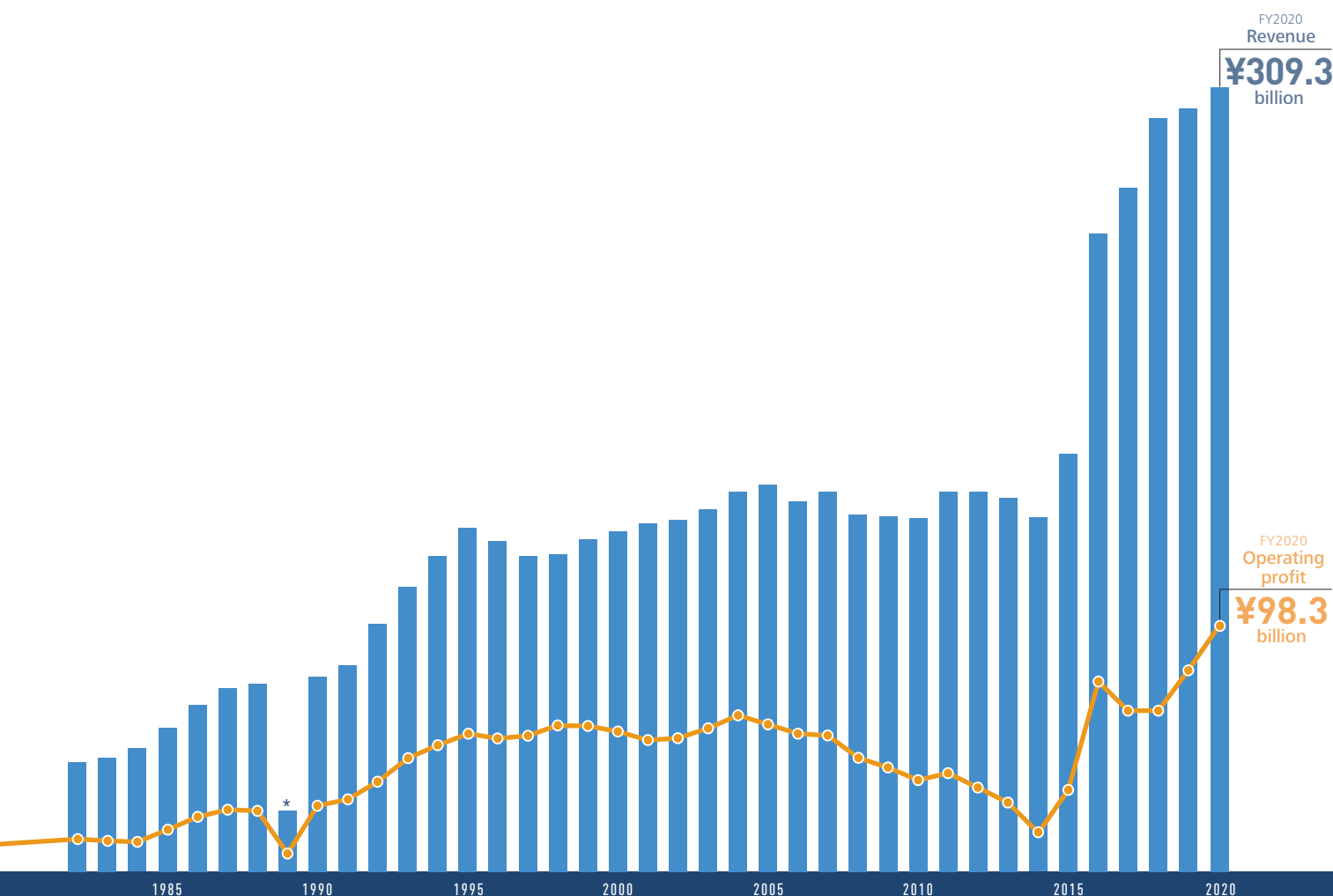
No method for the chemical synthesis of PGs had yet been established, and the only method available was biosynthesis, requiring a considerable amount of effort to produce even small quantities. Following the success by Professor Elias J. Corey of the US's Harvard University in total chemical synthesis of PGs, ONO immediately sent its researchers to the professor to have them learn about the method. Finally, in 1968, ONO succeeded in the total chemical synthesis of PGs on a commercial basis for the first time in the world.

"To put it exaggeratedly, I feel like Columbus sailing on the Santa Maria westward across the Atlantic Ocean in search of the New World."

Excerpted from Yuzo Ono's remarks at the first PG Study Meeting



Yuzo Ono standing in front of the stone monument on which ONO's corporate philosophy is engraved



Strengthening Licensing Activities

Entering Oncology Domain

1970's to 1980's

Successfully developed and launched new innovative drugs on the market



1990's

Strengthened licensing activities, promoting global open innovation

2010's

Made a full-fledged entry into the oncology domain

2014 World's First

Launched anti-PD-1 antibody OPDIVO for the first time in the world

A Game-Changing Cancer Immunotherapy Approach That Has Contributed to Drug Development Leading to receipt of the Nobel Prize in Physiology or Medicine



The 2018 Nobel Prize in Physiology or Medicine was awarded jointly to Distinguished Professor Tasuku Honjo of Kyoto University and Professor James P. Allison of the University of Texas for "discovery of an immunosuppression mechanism and development of cancer therapy based on the mechanism."

ONO was responsible for the development of cancer therapy.

In 1992, PD-1 was discovered at the Honjo laboratory of Kyoto University, but its functions had long been unknown. It was in 2002, 10 years after the identification of PD-1, that the researchers found it plays a role in the immune evasion mechanism of cancer.

However, because treating cancer by boosting the immune system was an unprecedented concept, ONO faced great difficulty in finding a co-developer with human antibody production technology and was turned down by a succession of companies. In 2005, ONO finally found and reached a collaborative research agreement with the American bioventure company Medarex (which was acquired by Bristol-Myers Squibb in 2009). As for clinical trials of OPDIVO, which started in Japan in 2008, ONO also saw reluctance among clinical healthcare professionals in accepting the therapy.

Overcoming many difficulties, ONO obtained marketing approval for OPDIVO for the first time in the world in July 2014, 22 years after the discovery of PD-1, and launched the drug on the market in September of the same year. Currently, OPDIVO is already approved for nine cancers and offers a new treatment option to clinical healthcare professionals.