A HERITAGE AND FUTURE OF Manufacturing Cures

1940s
Mass-producing penicillin during wartime

DEEP TANK FERMENTATION

Pfizer invested millions of dollars to convert a vacant ice plant in Brooklyn into an innovative production facility.

In just four months, Pfizer had perfected the deep-tank fermentation process and was producing FIVE TIMES more penicillin than expected.

Pfizer later received the Army-Navy "E" Award for this critical contribution to the war effort.

1990s
Making treatment safer for hemophilia patients

BIOENGINEERED BLOOD FACTORS

In the 1990s, using groundbreaking recombinant DNA technology, Pfizer became the first to manufacture a clotting factor protein (Factor IX).

Unlike replacement factors extracted and purified from human-donated plasma, the manufactured product cannot transmit any pre-existing donor infections.

PFIZER CONTINUES TO PRODUCE FACTOR IX TODAY

12,500-liter bioreactors grow cells
Chromatography and ultrafiltration purify protein

Individuals with hemophilia, a genetic disorder, cannot produce one of two clotting factor proteins necessary to stop bleeding.

Hemophilia A Factor VIII   |   Hemophilia B Factor IX

TODAY
Manufacturing medicines when and where they’re needed

PORTABLE PRODUCTION FACILITIES

PODs have a 60-70% smaller physical footprint than traditional medicine manufacturing facilities and can be easily transported to areas of need on a flatbed truck.

The miniaturized equipment can be used for all stages of production leading to great flexibility.

Innovation in manufacturing is at the core of Pfizer’s heritage, our present, and our future.

REFERENCES
1 www.pfizer.com/people/history
2 www.drugbank.ca/drugs/DB00100

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