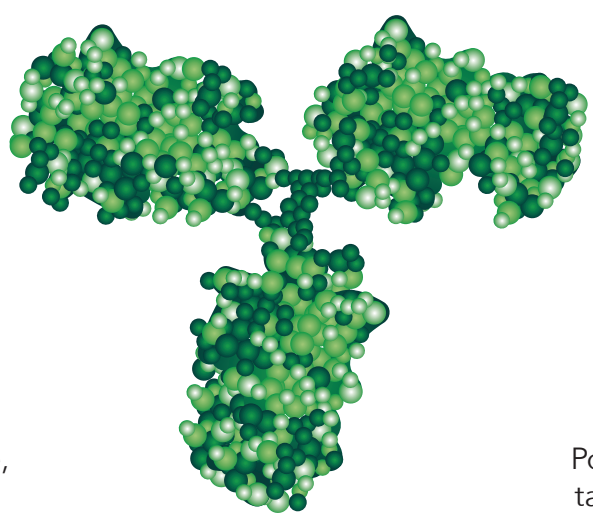
Biopharmaceuticals
Advancing more treatment options for patients

What are biopharmaceuticals?

Complex medicines made from living cells or organisms



Often produced using cutting-edge biotechnological methods

Usually injected into the body

Tend to be heat sensitive, easy to contaminate

Potential for precise, targeted treatments

Difficult and expensive to make, store and transport

How complex are they?

Two classes of biopharmaceuticals

Innovator biologics

An innovator biologic is the original version of a biopharmaceutical treatment. It is approved based on, among other things, a full complement of safety and effectiveness data.

Biosimilars

A biosimilar is a biopharmaceutical that is highly similar to a specific innovator biologic. It has no clinically-meaningful differences in terms of safety, purity and potency.

Biologics in numbers

1982
insulin becomes the first biologic cleared for human use

59%
of all biologic sales are in the US – the world's biggest market

26%
a quarter of US national prescription spending goes to biologics, but only 2% of patients use them

Biosimilars in numbers

2006
the first biosimilar is approved in Europe (a human growth hormone)

30%
average price difference between a biosimilar and a biologic

87%
of all biosimilars are sold in Europe

What are some of the different types of biopharmaceuticals?

- **Cytokines** (impacts the interactions and communications between cells)
- **Monoclonal antibodies** (fights disease like natural antibodies)
- **Enzymes** (speeds up biochemical reactions)
- **Immunomodulators** (affects immune response)

'I feel maternal towards them…'

Sandra Deponte, Senior Production Manager, Teva Biotech

Take a tour of our biopharmaceutical plant in Ulm, Germany, and meet some of the scientists growing the treatments.

Watch the video here