

# Joining forces to tackle the COVID-19 pandemic!

**01**

mRNA  
Production



The mRNA for the vaccine is produced in a machine called a bioreactor from a template DNA via a synthetic, cell-free process.

**02**

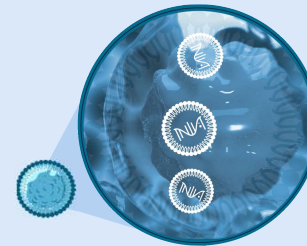
cGMP drug  
substance  
manufacturing



The mRNA is separated from process- and product-related impurities, and then concentrated, to create the cGMP drug substance.

**03**

Formulation



The drug substance is packed into lipid nanoparticles for targeted delivery and to prevent degradation within the human body.

**04**

Fill &  
Finish



The mRNA vaccine is filled into vials that are labelled and undergo a quality control check before they are packaged for global distribution.

To tackle the COVID-19 pandemic, it is critical to bring high-quality, safe and effective vaccines to the public quickly and on a large scale.

#UnitedAgainstCoronavirus