

# Project Lightspeed

BioNTech's circa 10-month path to develop an effective and well-tolerated vaccine following highly scientific and ethical standards

## SARS-CoV-2 Genetic Sequence

Made Public  
January 12, 2020



## COVID-19 mRNA Vaccine Program Initiation

January 27, 2020



## Collaborations

Fosun Pharma: March 16, 2020  
Pfizer: March 17, 2020



## Phase 1 / 2 Trial

Germany started April 23, 2020  
U.S. started May 4, 2020  
4 vaccine candidates enter clinical testing



## FDA Fast Track Designation

July 13, 2020



## Initiated Pivotal Phase 2 / 3 Trial

July 27, 2020  
Lead mRNA vaccine candidate (BNT162b2) chosen  
Up to 44,000 subjects



## Initiated Rolling Submissions

EMA: October 6, 2020  
Canada: October 7, 2020  
UK: October 9, 2020  
Singapore  
New Zealand  
...and other countries



## Phase 3 Trial met all primary efficacy endpoints; vaccine efficacy rate of 95%

November 18, 2020



## Submission of EUA in the US

November 18, 2020



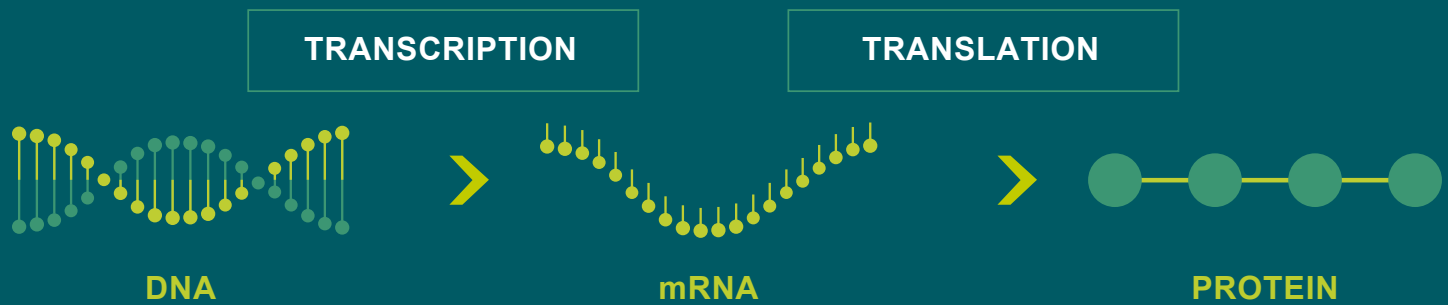
## First temporary authorization for emergency supply in the UK

December 2, 2020



Vaccination programs now active across the globe

# What is messenger RNA?



- The first molecule of life, involved in almost all aspects of cell biology
- Can be synthesized and engineered to resemble mRNA molecules as they occur naturally in the cytoplasm of human cells and transiently deliver proteins of interest
- mRNA has a transient messenger function and is rapidly degraded in the body

mRNA is a natural solution for vaccines, especially in a pandemic

Natural molecule studied for > 50 years with well-characterized bio-safety properties

Does not require addition of adjuvants or use of a viral vector for administration

High purity and animal material free

Highly scalable production

Precision vaccine

Virus-free

Non-integrating into DNA

Non-infectious

mRNA vaccines train the immune system for a real infection: Both parts of the immune system activated against virus

