

# COVID-19 Vaccine Production

Summit

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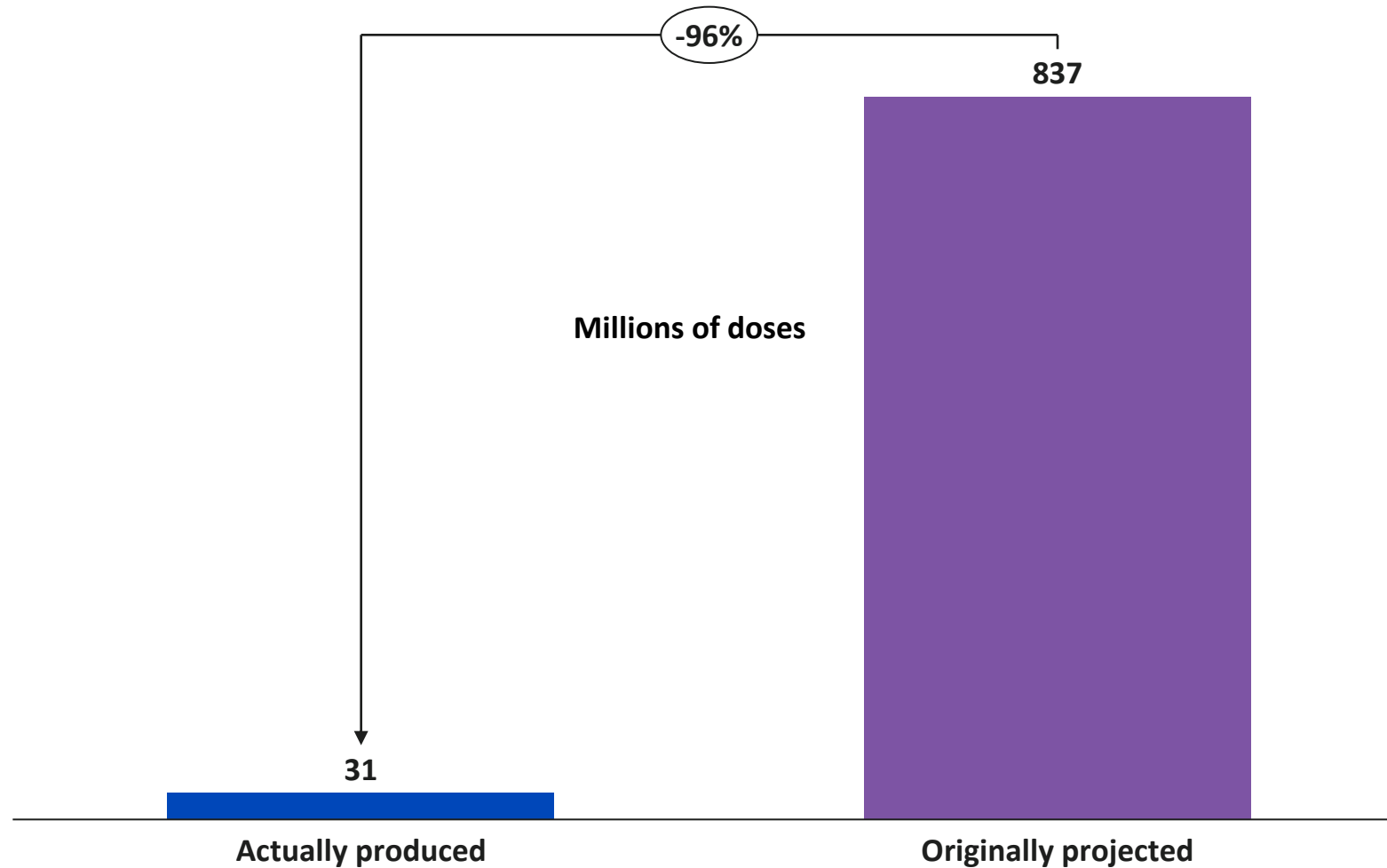
March 8<sup>th</sup> - Prepared for Vaccine Supply & Production Summit

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## Challenging start to the biggest vaccination drive in human history

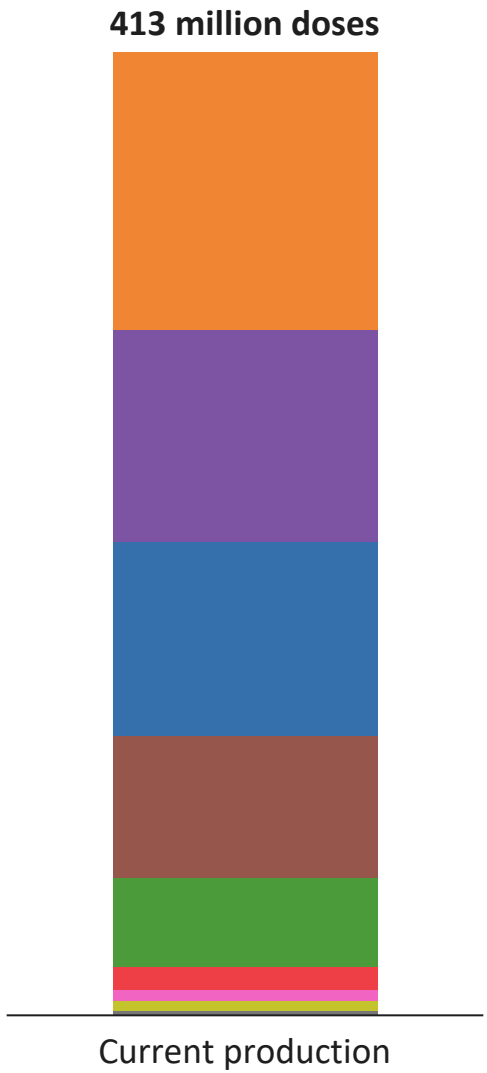
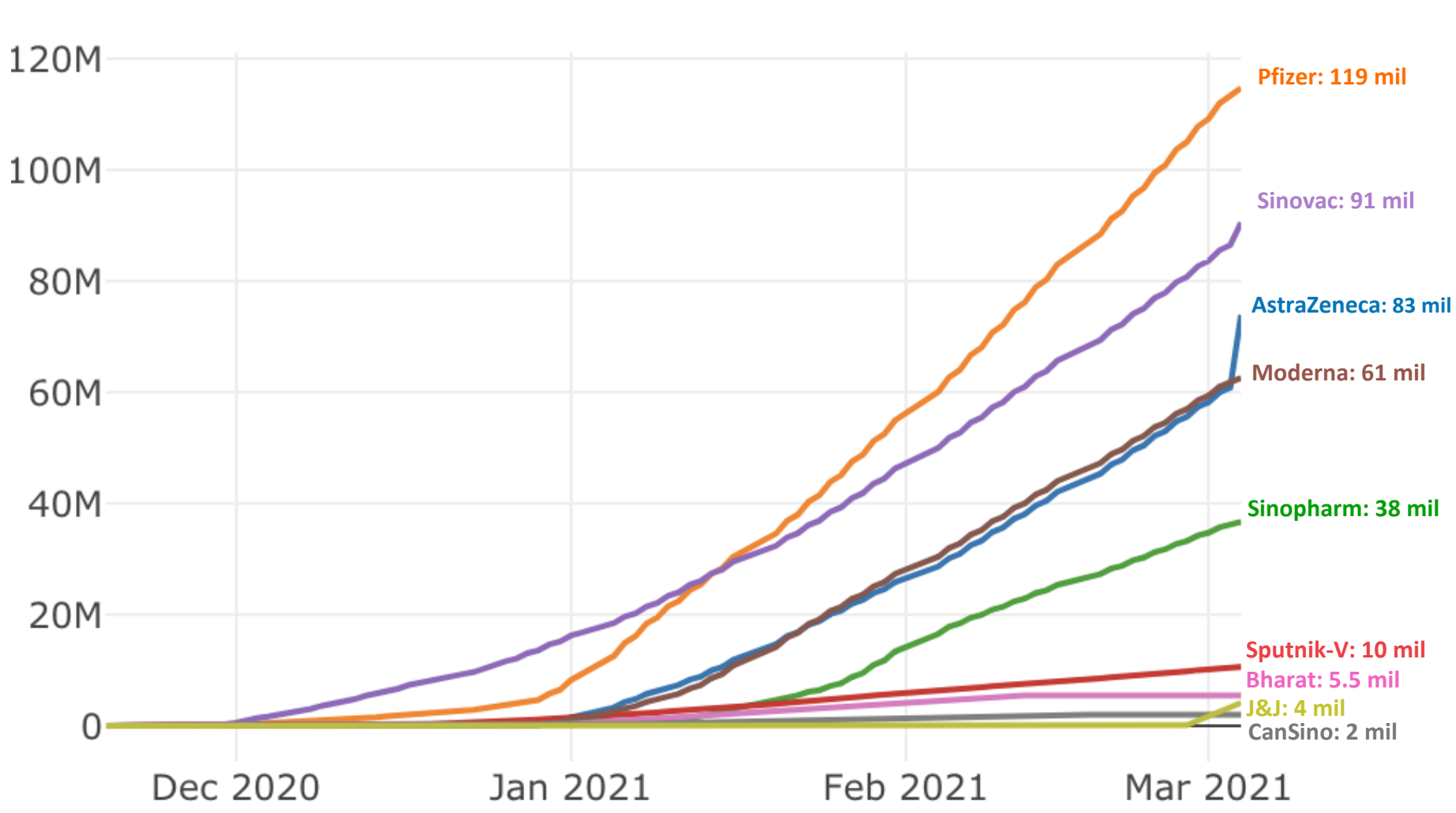
Vaccine productions in 2020 vs. what was originally projected

### Number of COVID vaccine doses produced vs projected in 2020



Production is beginning to scale up rapidly

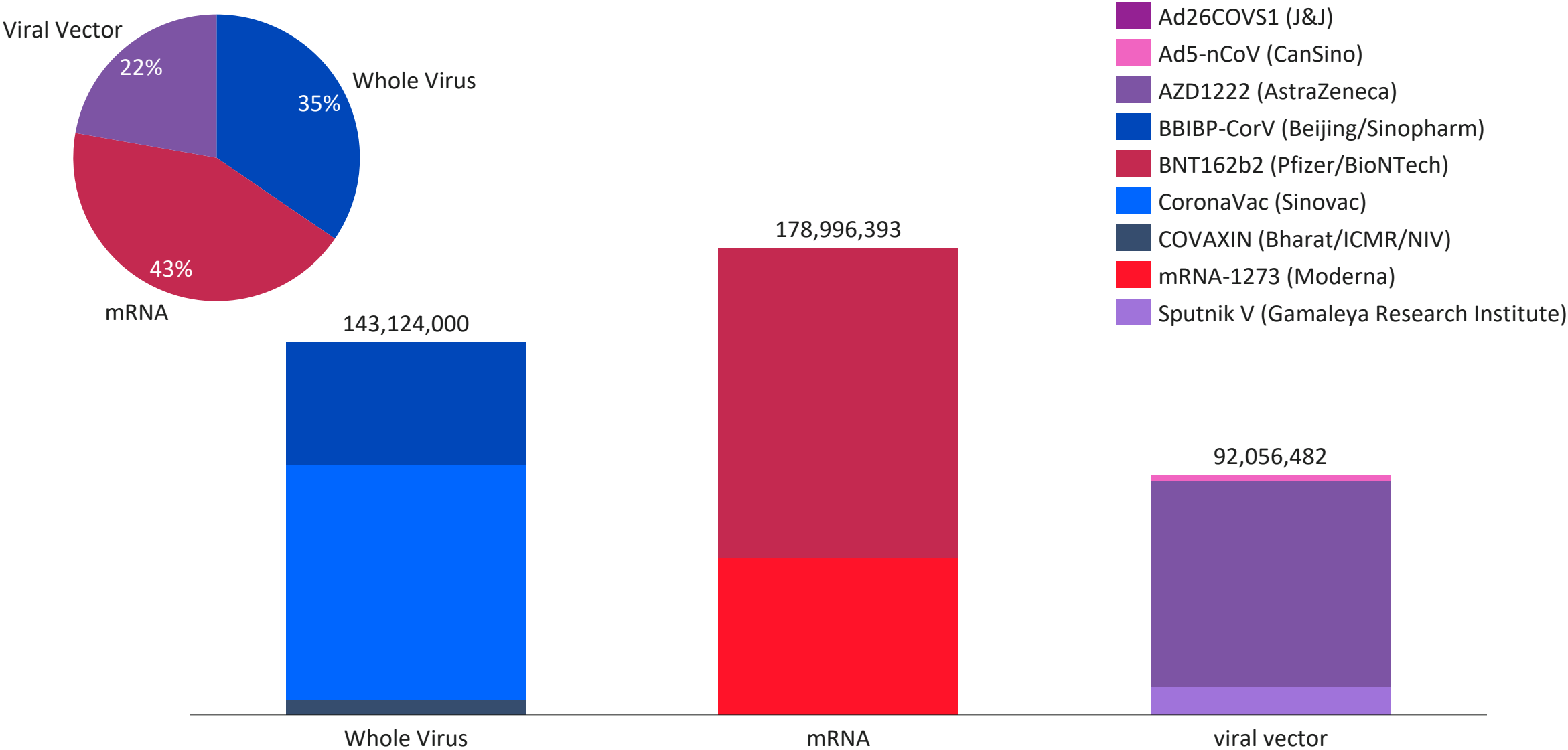
Timelines of each vaccine candidates' cumulative production



Lines are smoothed and may not completely representative of actual output at any given time  
Production to date as of 05/03/2021

mRNA vaccines are currently the most produced vaccines

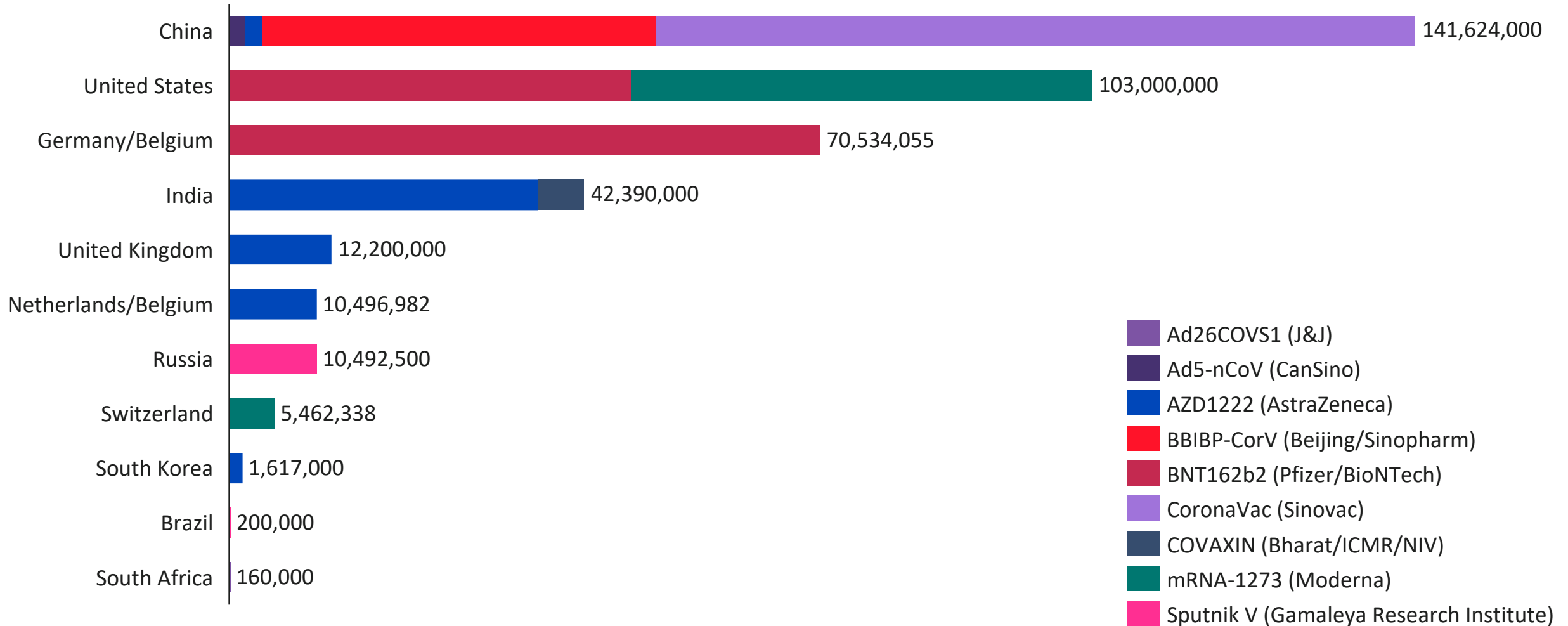
Total current vaccine production by vaccine type





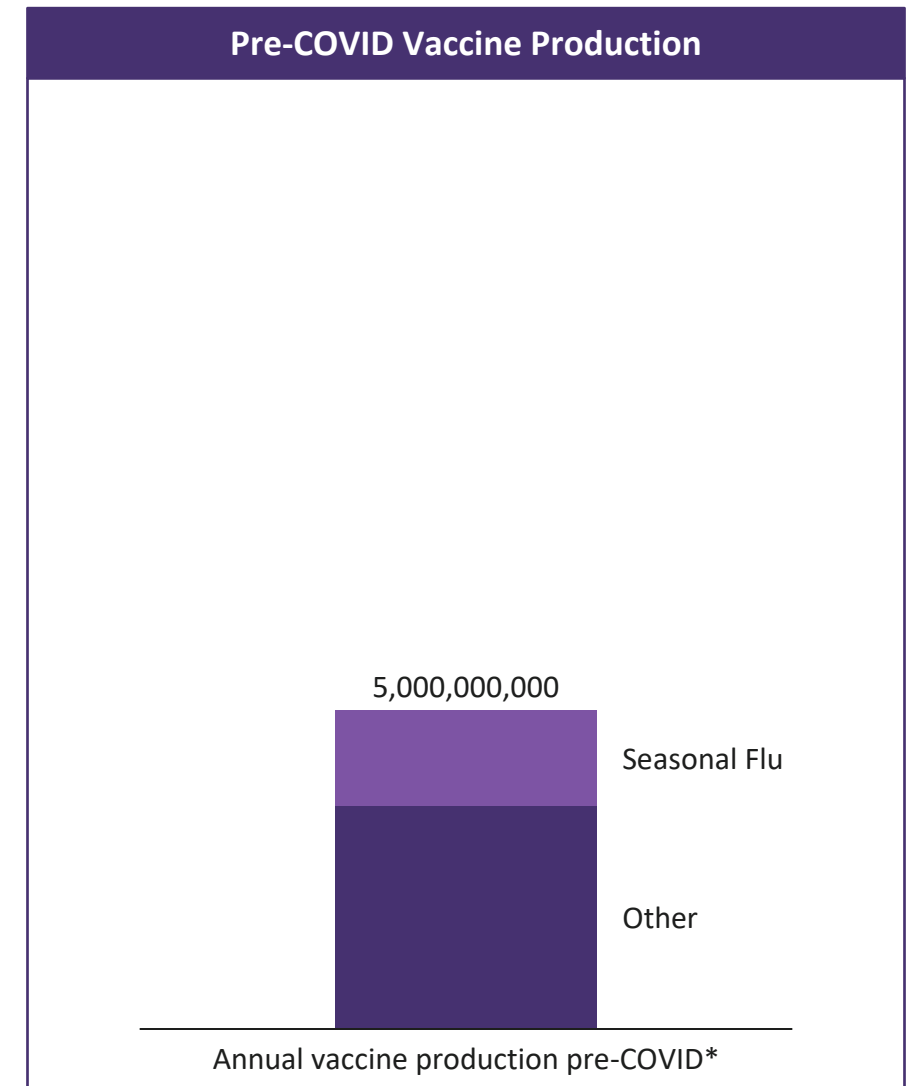
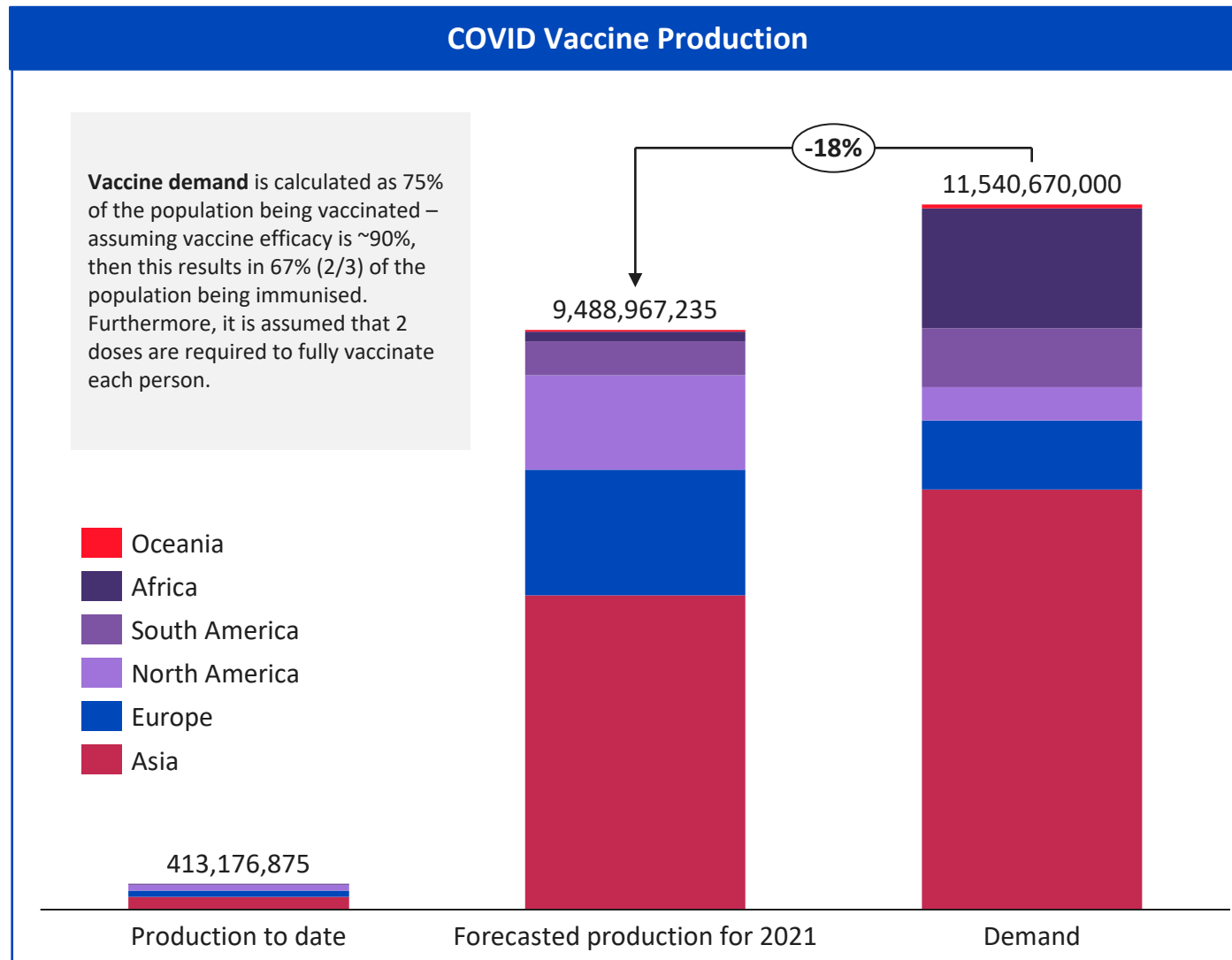
## China has quickly emerged as the largest producer but others are scaling faster

Current total production by country



## Forecasted production for 2021 is twice total non-COVID vaccines

Estimated vaccine production vs global demand (75% population)



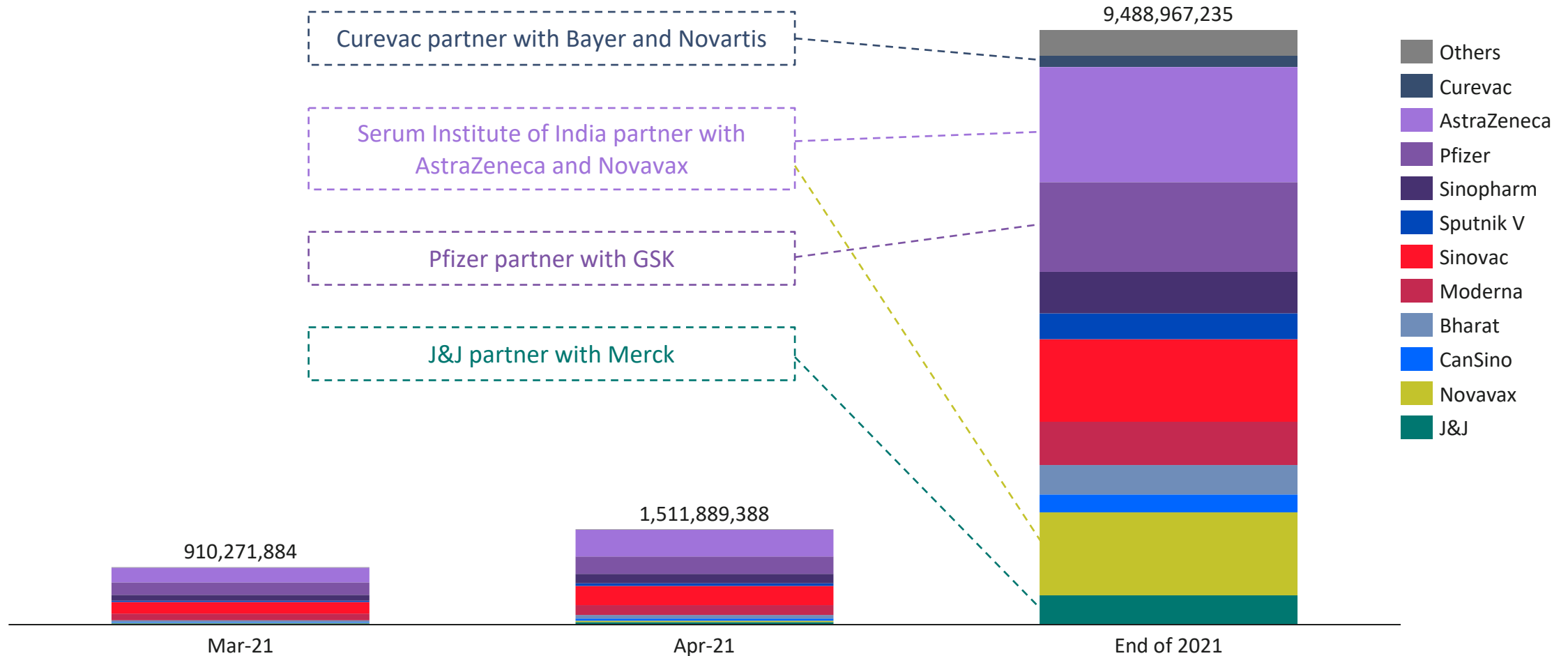
Production to date as of 05/03/2021

2021 production based on Airfinity forecasts accounting for scale up time and expected start date of production at each facility

\*Excluding OPV and travel & military markets – from 2018

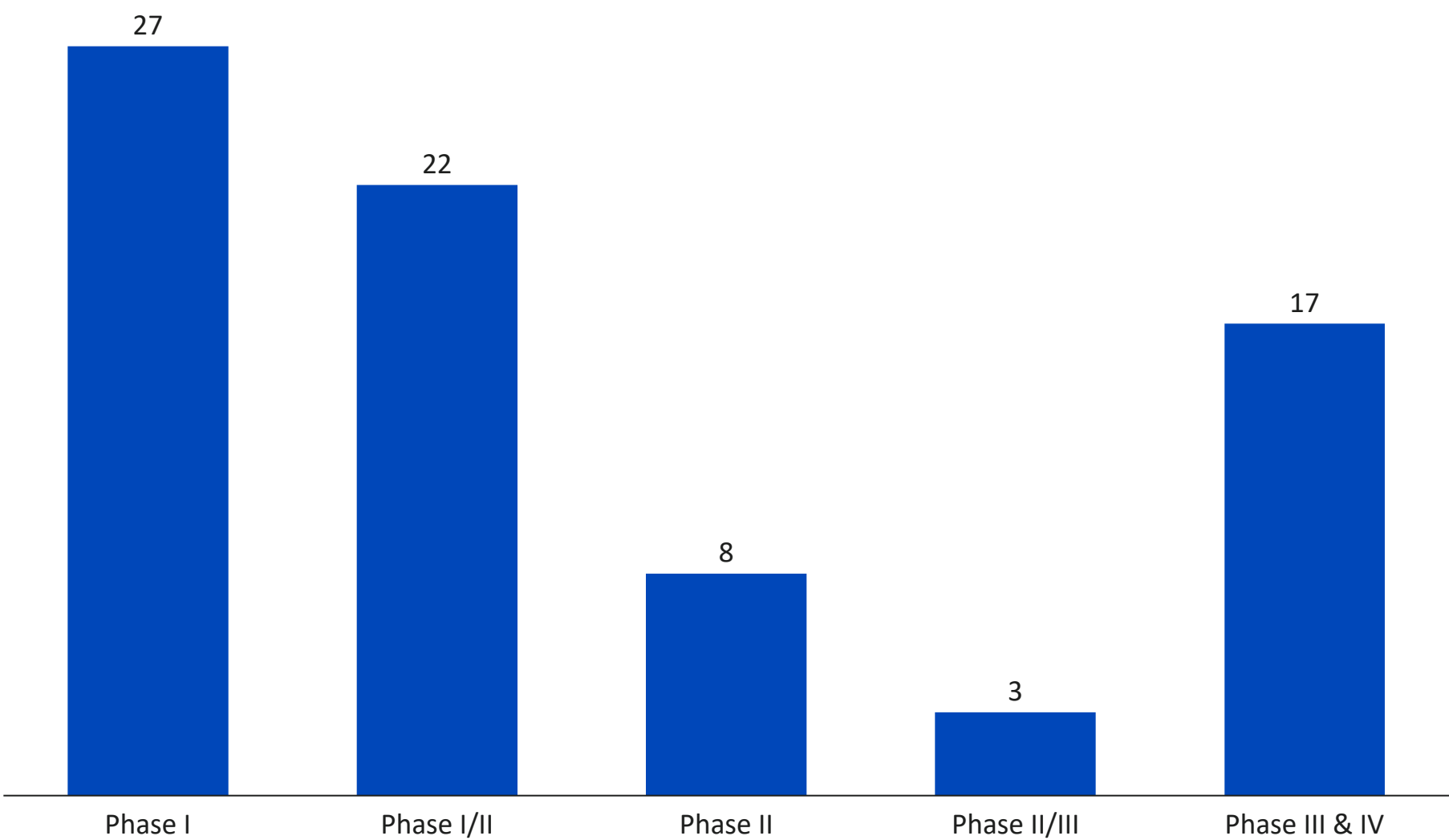
## Large scale up for the year, facilitated by vaccine partnerships

Forecasted vaccine production for 2021 with notable partnership deals



# 77 candidates in clinical trials – added pressure on production to be expected

Number of vaccine candidates in clinical trials



Currently rolling out
AstraZeneca
Bharat Biotech
CanSino
J&J
Moderna
Pfizer/BioNTech
Sinopharm
SinoVac
Sputnik-V

The repurposed BCG, VPM1002, RUTI, Polio and MMR vaccines have been excluded from this view.

## Variants of Concern could have a significant impact on current COVID vaccines

Summary of findings from studies investigating impact of variants on vaccine sera and efficacy

Vaccine	B.1.1.7 (UK)	B.1.351 (SA)	P.1 (BRA)	P.2 (BRA)	VOC202102/02 (UK-Bristol)
BNT162b2 (Pfizer/BioNTech)	Possible impact	Confirmed impact	Confirmed impact	Possible impact	Possible impact
mRNA-1273 (Moderna)	Possible impact	Confirmed impact	Possible impact	No/minimal impact	No/minimal impact
NVX-CoV2373 (Novavax)	Possible impact	No/minimal impact	No/minimal impact	No/minimal impact	No/minimal impact
Ad26.COV2.S (J&J)	No/minimal impact	No/minimal impact	No/minimal impact	No/minimal impact	No/minimal impact
AZD122 (AstraZeneca)	Possible impact	Confirmed impact	No/minimal impact	No/minimal impact	No/minimal impact
CoronaVac (SinoVac)	No/minimal impact	No/minimal impact	Possible impact	No/minimal impact	No/minimal impact

All vaccine efficacy is based on primary endpoint unless specified  
\*Utilised RBD mutations only  
Red or white underlined text indicates new findings this week

Possible impact  
No/insufficient data

No/minimal impact  
Confirmed impact

Impact is shown on either/both vaccine sera and/or efficacy



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## For more information

Rasmus Bech Hansen, CEO  
rasmus@airfinity.com  
+44 7703188600