CEPI

## COVAX Portfolio Briefing to the Gavi Board

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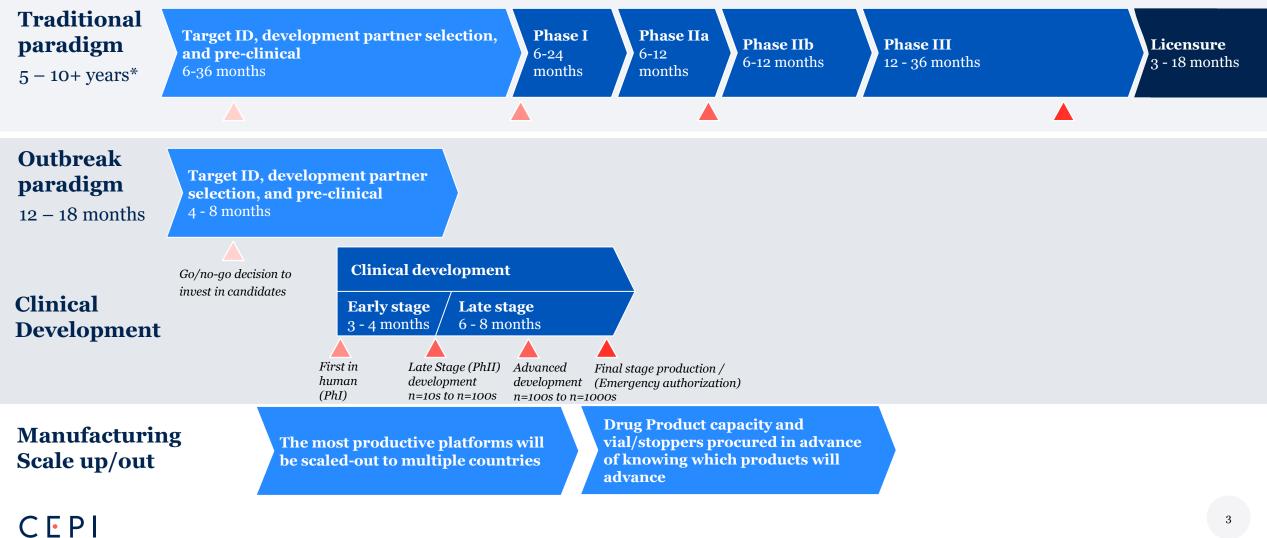




#### **Our mission**

**CEPI** accelerates development of vaccines against emerging infectious diseases and enables equitable access to these vaccines for affected populations during outbreaks

### Speed requires a paradigm shift



#### CEPI's vaccine development so far...

- CEPI has launched more than 20 programs in 3.5 years for 5 target pathogens, including 3 rapid response platforms.
- CEPI's COVID-19 portfolio includes 9 vaccines, with more to follow.
  - Rapid response vaccines were engaged in January 2020
  - First CEPI-supported vaccine initiated clinical trials March 16, 2020
  - Six projects now testing vaccine response in human subjects
  - Remaining programs will enter clinical trials later in coming months.

#### Current CEPI COVID-19 vaccine portfolio consists of 9 projects

	Inovio	University of Queensland / CSL	CureVac	Moderna	Clover BioPharma	Merck / Themis	Novavax	University of Hong Kong	AZ / Univ. Oxford	
Location	USA	Australia	Germany	USA	China	USA/Austria	USA	China	UK	Adjuvan
Platform	DNA	Protein	RNA	mRNA	Protein	Viral Vector	Protein	Viral Vector	Viral Vector	gsk
Antigen / Adjuvant	Full-length S protein	Full-length S protein / MF59 or AS03 or CPG1018	Full-length S protein	Full-length S protein	Full-length S protein / AS03 or CPG1018	Full-length S protein	Full-length S protein / saponin- based Matrix-M	Receptor Binding Domain / AS03	Full-length S protein	
Current phase	Phase 1	Preclinical	Preclinical	Phase I1a	Preclinical	Preclinical	Phase I	Preclinical	Phase I/II	



COVID-19





#### **Covid-19 vaccine clinical development pipeline**

Shading denotes CEPI-funded

Candidate	Vaccine characteristics	FIH / FPI Start date	Current stage (most advanced)	#Sites/Location	Lead Partner
ChAdOx1 nCoV- 19	ChAdOx1 vector that expresses S protein	TBU	Phase II/III (NCT04400838)	10260 sub. in 20 sites / UK	AstraZeneca / Oxford
Ad5-nCoV	Adenovirus type 5 vector that expresses S protein	01 Apr 20	Phase II ( <u>NCT04341389</u> )	500 sub. in ? sites / China	Cansino
mRNA-1273	LNP-encapsulated mRNA vaccine encoding S protein	01 Jun 20	Phase II (NCT04405076)	600 sub. in 10 sites / USA	Moderna Therapeutics
SARS-CoV-2 inactivated	Inactivated Novel Coronavirus Pneumonia vaccine (Vero cells)	11 Apr 20	Phase I/II ( <u>ChiCTR2000031809</u> )	1376 sub. in ? sites / China	Wuhan Institute of biological products
SARS-CoV-2 inactivated	Inactivated novel coronavirus (2019-CoV) vaccine (Vero cells)	29 Apr 20	Phase I/II ( <u>ChiCTR2000032459</u> )	2128 sub. in 1 site / China	Beijing Institute of Biotechnology
Inactivated Virus	SARS-CoV-2 inactivated vaccine	16 Apr 20	Phase I/II ( <u>NCT04352608</u> )	744 sub. in 1 site / China	Sinovac Biotech
Inactivated Virus	SARS-CoV-2 inactivated vaccine	15 May 20	Phase I/II <u>(NCT04412538)</u>	942 sub. in 1 sites / China	IMB, Chinese Academy of Medical Sciences
LV-SMENP-DC	DCs modified with LV vector expressing synthetic minigene based on domains of selected viral proteins; administered with antigen-specific CTLs	24 Mar 20	Phase I/II ( <u>NCT04276896</u> )	100 sub. in 3 sites / China	Shenzhen GIMI
mRNA-BNT162	mRNA NRM / SAM constructs with LNP	05 May 20	Phase I/II ( <u>NCT04368728</u> )	200 sub. in 1 site / Germany 7600 sub. in 5 sites / US	Pfizer; BioNTech
NVX-CoV2373	stable, prefusion protein, includes Matrix-M™ adjuvant	25 May 20	Phase I/II ( <u>NCT04368988</u> )	136 sub. in 2 sites / Australia	Novavax
saRNA	self-amplifying RNA	19 Jun 20	Phase I/II	UK	Imperial
Pathogen- specific aAPC	aAPCs modified with lentiviral vector expressing synthetic minigene based on domains of selected viral proteins	TBU	Phase I ( <u>NCT04299724</u> )	100 sub. in 1 site / China	Shenzhen GIMI
INO-4800	DNA plasmid encoding S protein delivered by electroporation	06 Apr 20	Phase I ( <u>NCT04336410</u> )	40 sub. in 2 sites / USA	Inovio Pharmaceuticals
SCB-2019	a Recombinant SARS-CoV-2 Trimeric S Protein Subunit Vaccine	19 Jun 20	Phase I <u>(NCT04405908)</u>	150 sub in ? Sites / Autralia	Clover Biopharmaceuticals
CVnCoV	mRNA encodes the spike protein of SARS-CoV-2 and is made up of lipid nanoparticles (LNP)	19 Jun 20	Phase I	Germany; Belgium	CureVac

#### Building Capacity at Risk – Multiple products

Partners produce early doses to support clinical studies

Processes scaled up to industrial scale before clinical trial begin

Each product is scaled-out in different countries to expand capacity

Bulk vaccine is stockpiled in anticipation of dose level definition

Some projects will fail during clinical development

Those facilities may be re-purposed for successful products

2-3 successful programs with productive processes should support 2-4BN doses by the end of 2021

#### CEPI

# Thank You