

# How Thailand get through COVID-19 situation: Balancing between health and economy concerns

Dr Phusit Prakongsai, MD. Ph.D.

Acting Senior Advisor on Health Promotion,

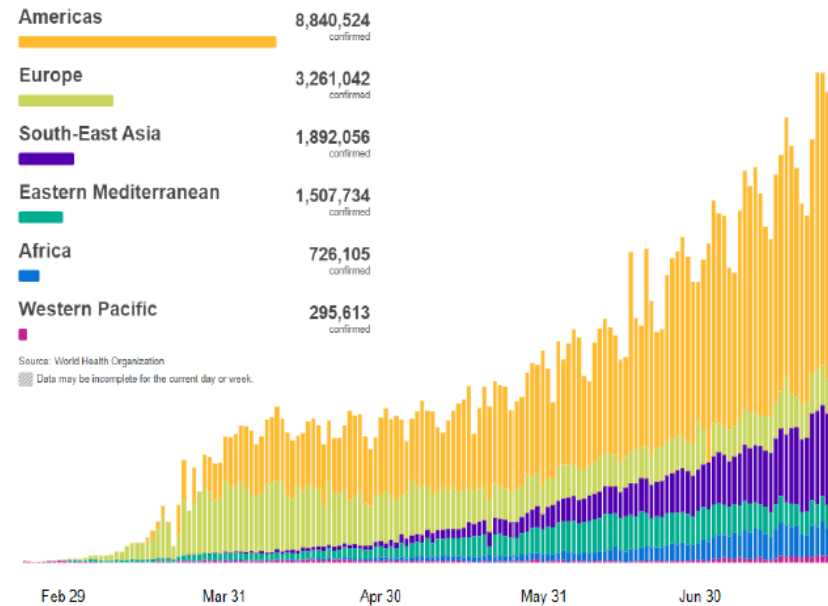
Office of Permanent Secretary, Ministry of Public Health of Thailand

# The Impacts of COVID-19 Pandemic

## Covid-19 Pandemic Trajectory

- **Increasing global number** of reported daily Covid-19 cases
- **Spread of Covid-19 will accelerate** as countries relax control measures
- Areas will have **multiple waves** of Covid-19, for example, from reimportations from travellers
- Despite millions of cases, billions of people **have not been exposed and are susceptible** to Covid-19
- Many of these people will still be unexposed and susceptible when a **vaccine becomes available**

Daily Covid-19 Cases Reported to World Health Organization  
As of 29 July 2020



**COVID-19 is the biggest threat to global health security in a century**

- **24.1 million COVID-19 cases globally,**
- **822K COVID-19 related deaths globally,**
- **216 affected countries globally,**
- **\$9Trillion – global economic cumulative losses in 2020 and 2021,**
- **160+ COVID-19 vaccines in development,**
- **25 COVID-19 vaccines in clinical trials**

# สถานการณ์การแพร่ระบาดของไวรัส COVID-19 ส่งผลให้เกิดการเร่งรัดการวิจัยเพื่อทดลองและผลิต COVID-19 vaccine ทั้งในระดับโลกและภูมิภาค



## COVID-19 Vaccine Pipeline

Candidate	Sponsor	Trial Phase	Institution	Funding
Inactivated vaccine	Wuhan Institute; Sinopharm	Phase 3	Henan Provincial CDC	Ministry of Science and Technology, China
CoronaVac	Sinovac	Phase 3	Sinovac Research and Development Co.	Sinovac Research and Development Co.
mRNA-1273	Moderna	Phase 3	Kaiser Permanente Washington Health Research Institute	Operation Warp Speed; NIAID, BARDA (\$483 million)
BCG live-attenuated vaccine	U Melbourne and Murdoch; Radboud University Med Ctr; Mass Gen Hosp	Phase 2/3	Same as Sponsor	Murdoch Children's Research Institute; UMC Utrecht
AZD1222	The University of Oxford; AstraZeneca; IQVIA	Phase 2/3	The Univ of Oxford, the Jenner Institute	Operation Warp Speed; UK Ministry of Health; The University of Oxford; BARDA
BNT162	Pfizer, BioNTech	Phase 2/3	Multiple study sites in Europe & N Amer	Pfizer; BioNTech
Ad5-nCoV	CanSino Biologics	Phase 2	Tongji Hospital; Wuhan, China	CanSino Biologics
Adjuvant recombinant vaccine	Anhui Zhifei, Institute of Microbiology of the Chinese Academy of Sciences	Phase 2		
BBIBP-CorV	Beijing Institute of Biological Products; Sinopharm	Phase 1/2	Henan Provincial Center for Disease Control and Prevention	Ministry of Science and Technology, China
GX-19	Genexine	Phase 1/2		GenexineGenexine
Gam-COVID-Vac	Gamaleya Research Institute, Acellena Contract Drug Research and Development	Phase 1/2	Various	Gamaleya Research Institute, Health Ministry of the Russian Federation
Self-amplifying RNA vaccine	Imperial College London	Phase 1/2	Imperial College London	UK Secretary of State for Health
LUNAR-COV19	Arcturus Therapeutics and Duke-NUS Medical School	Phase 1/2	Duke-NUS Medical School, Singapore	Arcturus
ZyCoV-D	Zydzus Cadila	Phase 1/2	Zydzus Cadila	

## Regional Vaccine Manufacturing

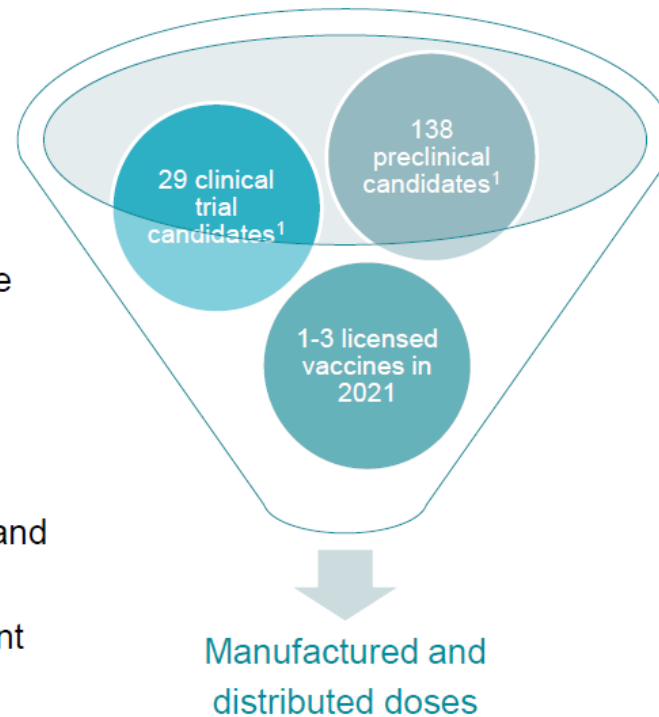
### COVID-19 Vaccine Pipeline in Asia

Candidate	Sponsor	Trial Phase	Country of Origin
Inactivated vaccine	Wuhan Institute of Biol Prod; China National Pharma Group (Sinopharm)	Phase 3	China
CoronaVac	Sinovac	Phase 3	China
Ad5-nCoV	CanSino Biologics	Phase 2	China
Adjuvant recombinant vaccine candidate	Anhui Zhifei Longcom Biopharma	Phase 2	China
BBIBP-CorV	Beijing Institute of Biological Products; Sinopharm	Phase 1/2	China
ZyCoV-D	Zydzus Cadila	Phase 1/2	India
Gam-COVID-Vac	Gamaleya Research Institute, Acellena Contract Drug Research and Development	Phase 1/2	Russia
GX-19	Genexine	Phase 1/2	South Korea
Covaxin	Bharat Biotech; National Institute of Virology	Phase 1	India
Molecular clamp vaccine	CSL; The University of Queensland	Phase 1	UK, Australia
SCB-2019	GlaxoSmithKline, Sanofi, Clover Biopharma, Dynavax and Xiamen Innovax	Phase 1	USA/EU/China/Australia
mRNA-based vaccine	Chulalongkorn University	Pre-clinical	Thailand

# Global development of COVID-19 Vaccines and current situation in Thailand

## Global Development of COVID-19 Vaccines

- Probability of technical and regulatory success<sup>2</sup>:
  - Preclinical 7%
  - Clinical Trials 17%
- Regulatory agencies agreed to accelerate development, shortening timelines from 7-20 years to 12-18 months
- Manufacturer scale-up and country registrations take time
- 215 countries<sup>3</sup> and >7 billion people demand vaccine globally
- Expect a 12- to 18-month supply constraint



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ZyCoV-D	Zyudus Cadila	Phase 1/2	Zyudus Cadila	

Source: WHO, <https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>, accessed 18 Aug 2020.

