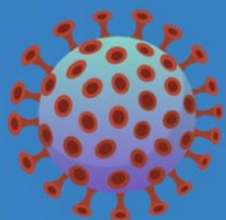
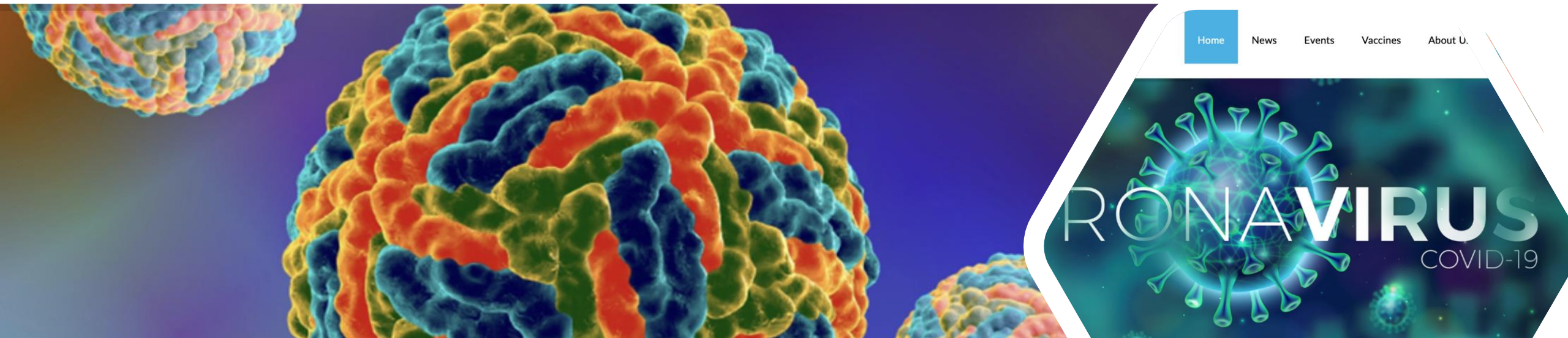




Chula VRC

Chula Vaccine Research Center
Faculty of Medicine, Chulalongkorn University

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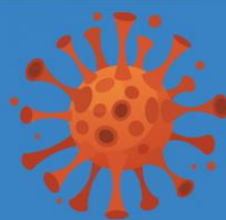
COVID-19

Development of COVID-19
vaccine



Dengue

Development of
nanoparticle-based dengue
DNA vaccine



HIV

We have been working on
HIV DNA vaccine



HDM Allergy

Development of vaccines
for prevention and
treatment of HDM allergy



Leptospirosis

Development of subunit
vaccines against
leptospirosis





Chula VRC

Chula Vaccine Research Center
Faculty of Medicine, Chulalongkorn University

Joining Global Effort for Vaccine Equity



Sustainable R&D: ChulaVRC

For “**Vaccine Inequity Issue**” and **Pandemic Preparedness**

Infectious Diseases

- **COVID-19**
- **Dengue**
- **HPV** for therapeutic
- Pandemic Flu: Avian
- TB
- Leptospirosis
- *P. vivax* (led by MU)

Non-Infectious diseases

- **Allergy vaccine**
- **Cancer vaccine**



ChulaCov19 Vaccine –the Thai Made Program

Thai Gov Funded Program: October 2021– August 2023

NVI Funded + Gov. Block Grant of **2.3 Billion THB**



Monovalent WT Vaccine ChulaCov19

R&D

Gen1 -Monovalent

Clinical Trials

Gen1 -Monovalent

- ✓ Testing in mice, NHP
- ✓ Toxicity study in rats
- ✓ Manufactured in Thailand
- ✓ Ethic approval
- ✓ TFDA Approval

- ✓ Phase 1 Thailand
- ✓ Phase 2 Australia
Part A N=80

Results:
Vaccine is well tolerated
with good immunogenicity



Bivalent WT/BA.4/.5 Vaccine Comvigen

R&D

Gen2 -Bivalent

Clinical Trials

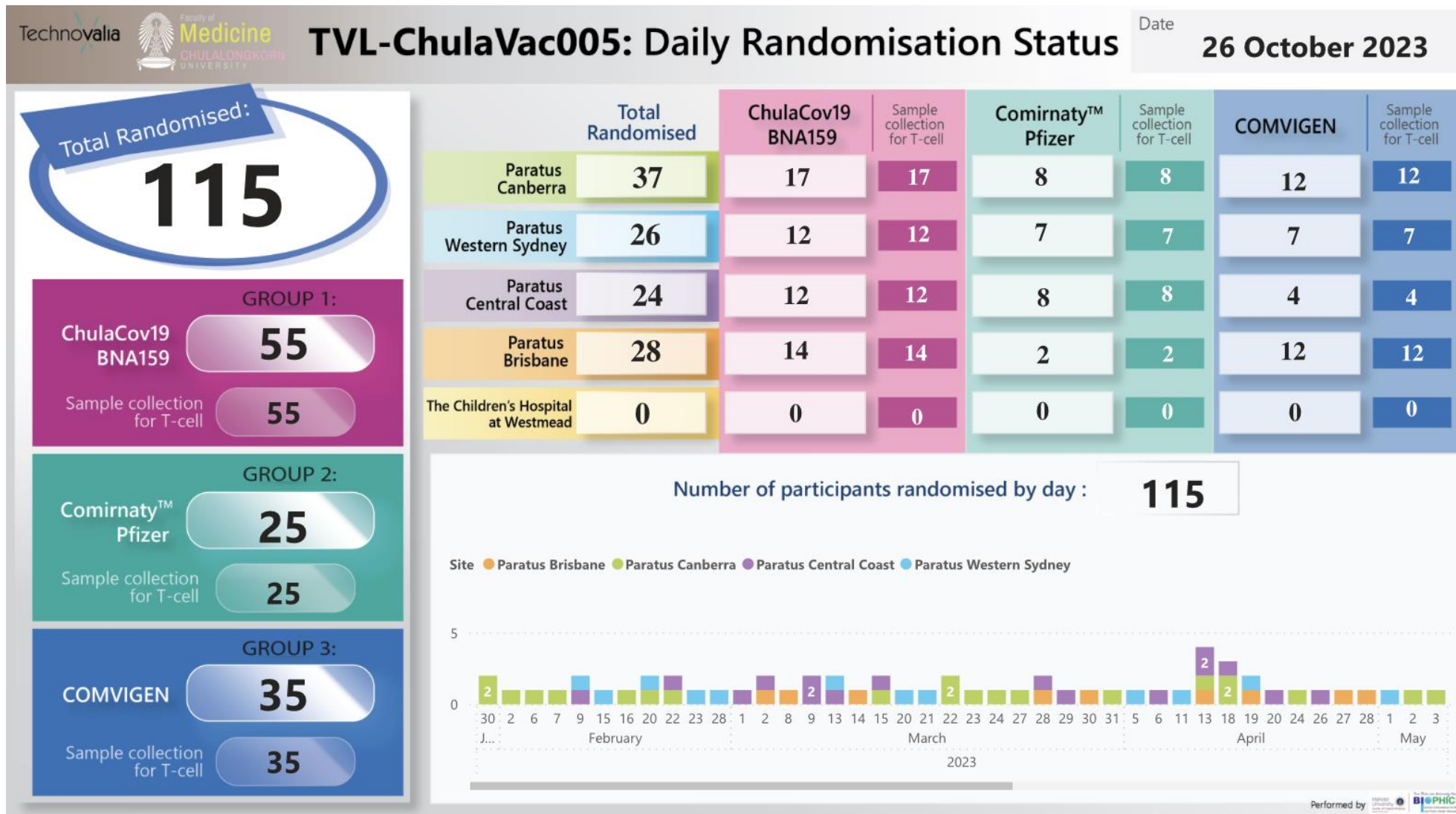
Gen2 -Bivalent

- ✓ Manufactured in Thailand
- ✓ Testing in mice, NHP
- ✓ Ethic approval
- ✓ TFDA Approval

Started Oct 2023

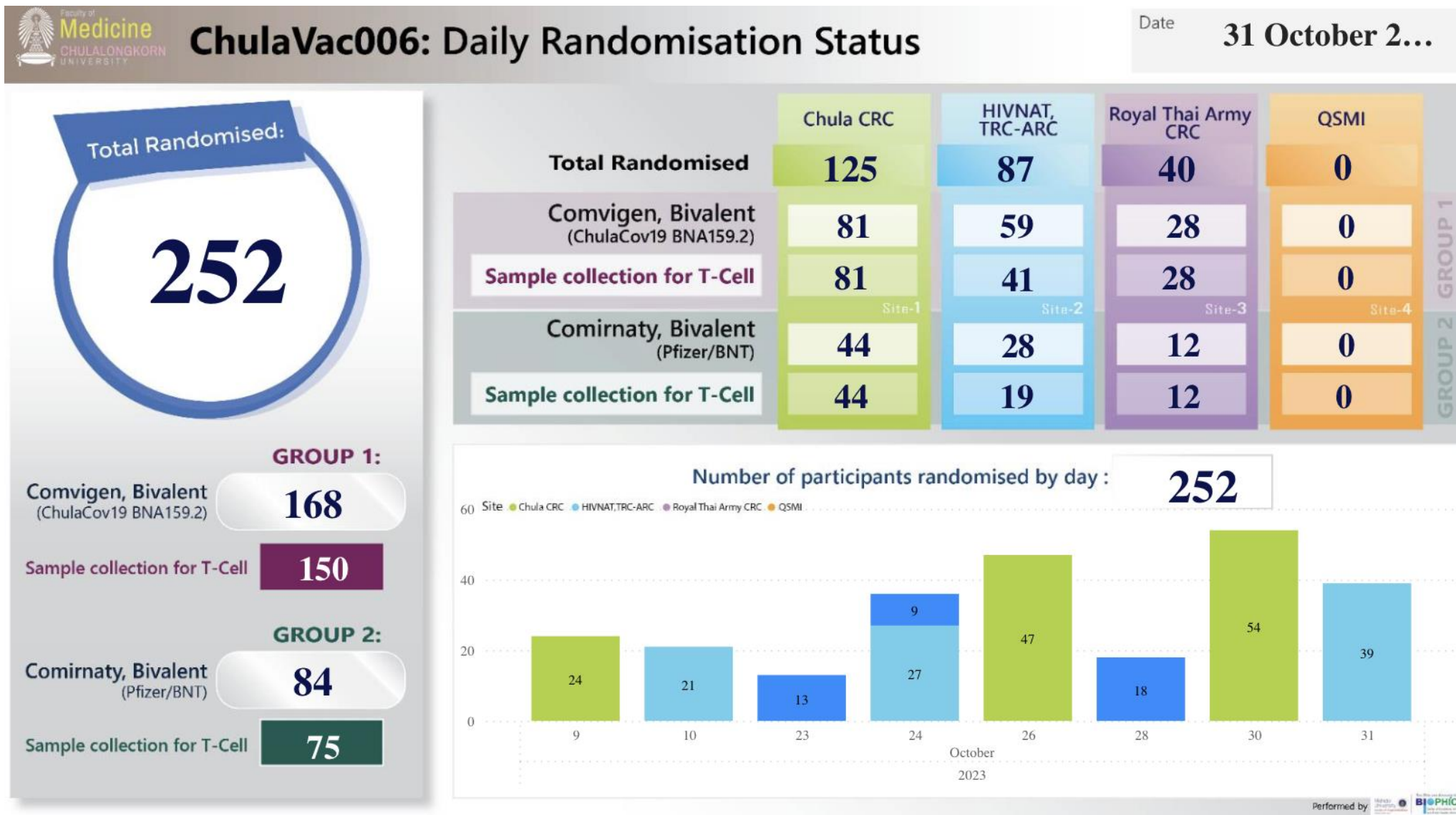
- * Phase 2 Thailand (N:450)
- * Phase 2 Australia (N:70)

TVL-ChulaVac005: Phase 2 in Australia: Part A-B, N=150



ChulaVac006:

“Comvigen” Bivalent Vaccine Phase Trial in Thailand, N=450





mRNA Vaccine R&D Capacity at Chula VRC

- Antigen design, but the DNA synthesis is outsourcing
- IVT and LNP encapsulation : We core team to run these key processes
- Immunogenicity testing in mice, NHP (at NPRCT-CU”)
- Ab assays, NAb assays, ADE assay (Dengue), T-cells assays (ELISpot, ICS)
- Viral challenge study will be conducted at AFRIMS, NPRCT-CU
- Clinical development : protocol development, acted as a sponsor in conducting clinical trial at Chula CRC and other clinical sites
- Various parallel R&D teams for different target vaccines

Current RnD Speed at Chula VRC = < 8 weeks

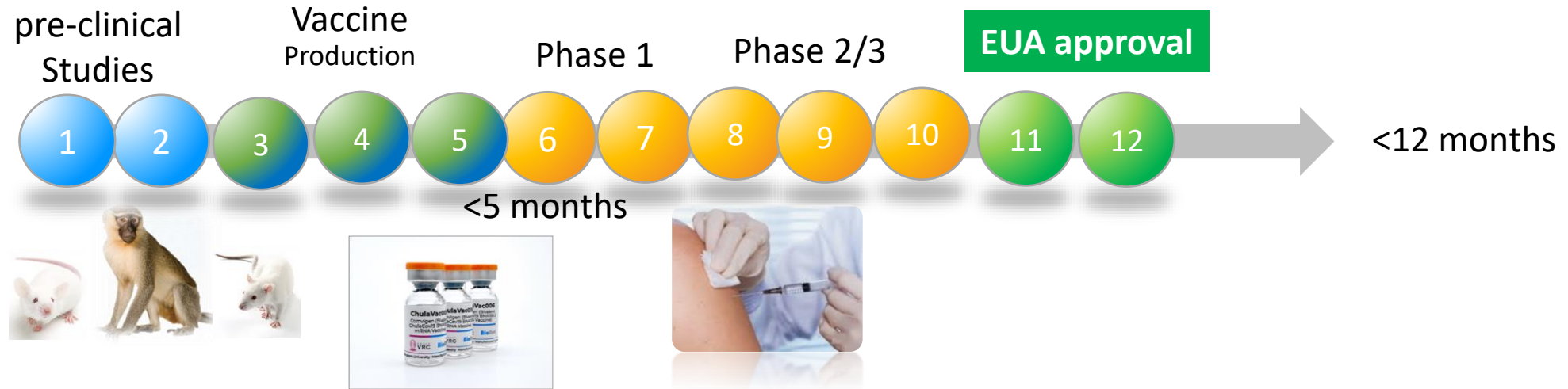
From Ag design to encasulated mRNA vaccine to animal testing



Next Pandemic: Can it be Speedier ?

The Next Pandemic Preparedness

Can we do faster & better for getting mRNA Vaccine available sooner ?



If we fill the gaps and address the key painpoints effectively



We look forward to regional
collaboration for a real impact on
“**Vaccine Equity**” and for the best
“**Pandemic Preparedness**”