

Pipeline

Self-sufficiency of NIP Vaccines

DTaP	Development of trivalent combination vaccines against diphtheria, tetanus, and pertussis (DTaP); Penta/hexa-valent vaccines against haemophilus influenza type B (Hib), polio (IPV), hepatitis B (HepB), etc. • Candidate verification → (TRL 4) → Non clinical trial → Phase 1 → Phase 2
Japanese Encephalitis	Ensuring advanced vaccine technologies by revamping the safety and the production process • Candidate verification → (TRL 4) → Non clinical trial → Phase 1 → Phase 2
Hepatitis A	Development of vaccines with improved efficacy and stability • Candidate verification → Non clinical trial → Phase 1 → Phase 2
Human Papilloma Virus	Development of vaccines against metastatic cancer-related diseases, including cervical cancer and head and neck cancer • Candidate verification → Non clinical trial → Phase 1 → Phase 2

Vaccines of Global Unmet Need

SFTS	Development of Severe Fever With Thrombocytopenia Syndrome (SFTS) vaccines • Candidate verification → Non-clinical trial → Phase 1 → Phase 2
Norovirus gastroenteritis	Development of multivalent VLP (virus-like particle) vaccines • Candidate verification → (TRL 4) → Non-clinical trial → Phase 1 → Phase 2
Next-generation Tuberculosis	Development of boosting vaccines to enhance the efficacy of the BCG vaccine • Candidate verification → Non-clinical trial → Phase 1 → Phase 2
Hand-Foot-and-Mouth Disease	Establishment of protective immune indicators for HFMD vaccines and the completion of clinical trials • Non-clinical trial → Phase 1 → Phase 2
Universal Influenza	Development of broad-spectrum influenza vaccines to combat both seasonal and pandemic influenza • Candidate verification → Non-clinical trial → Phase 1
Dengue Fever	Development of safe and effective vaccines • Candidate verification → Non-clinical trial
Respiratory Syncytial Virus	Development of RSV vaccines by rational design of recombinant antigens • Candidate verification → Non-clinical trial
Vaccine platform technologies for emerging viral diseases	Establishing technical platforms amenable to rapid response to future pandemics • Bacterial production of low-cost vaccine candidates
	Development of a communal platform technologies for both NIP and unmet needs vaccines • VLP(virus-like particle)/NP(nanoparticle) vaccines • Novel inactivated viral vaccine platform • Live attenuated vaccine platform for cross-protection

Vaccine Platform Technology

Novel vaccine adjuvants	Development of a vaccine adjuvant and POC with candidate vaccine antigens • Improved efficacy profile for high-risk groups (elderly or immunocompromised group) • Dose-sparing effects for healthy population
Vaccine delivery system	Development of novel delivery platforms and POC with candidate vaccine antigens • Vectored or nucleic acid-based delivery as rapid response to outbreak • Needle-free delivery of antigens for enhanced efficacy and safety profile

Contact Us <https://vitalkorea.kr/en> vitalkorea.yonsei@gmail.com

Vaccine Innovative Technology Alliance Korea



VITAL-Korea is dedicated to vaccine innovations and self-sufficiency.

VITAL-Korea
Vaccine Innovation Technology Alliance Korea

Project Overview

VACCINE
INNOVATIVE
TECHNOLOGY
ALLIANCE
KOREA

Ministry in charge



Project period

April 2020 - December 2029
(10 years in 3 phases, 3+4+3)

Director General

Prof. Baik-Lin Seong (Yonsei University)

Final goal

Completion of Phase 2 clinical trials of 7 vaccine candidates including 3 NIP vaccines

MISSION

Vaccine sovereignty

Securing vaccine self-sufficiency by establishing a stable infrastructure for vaccine production

VISION

Vaccine G-5

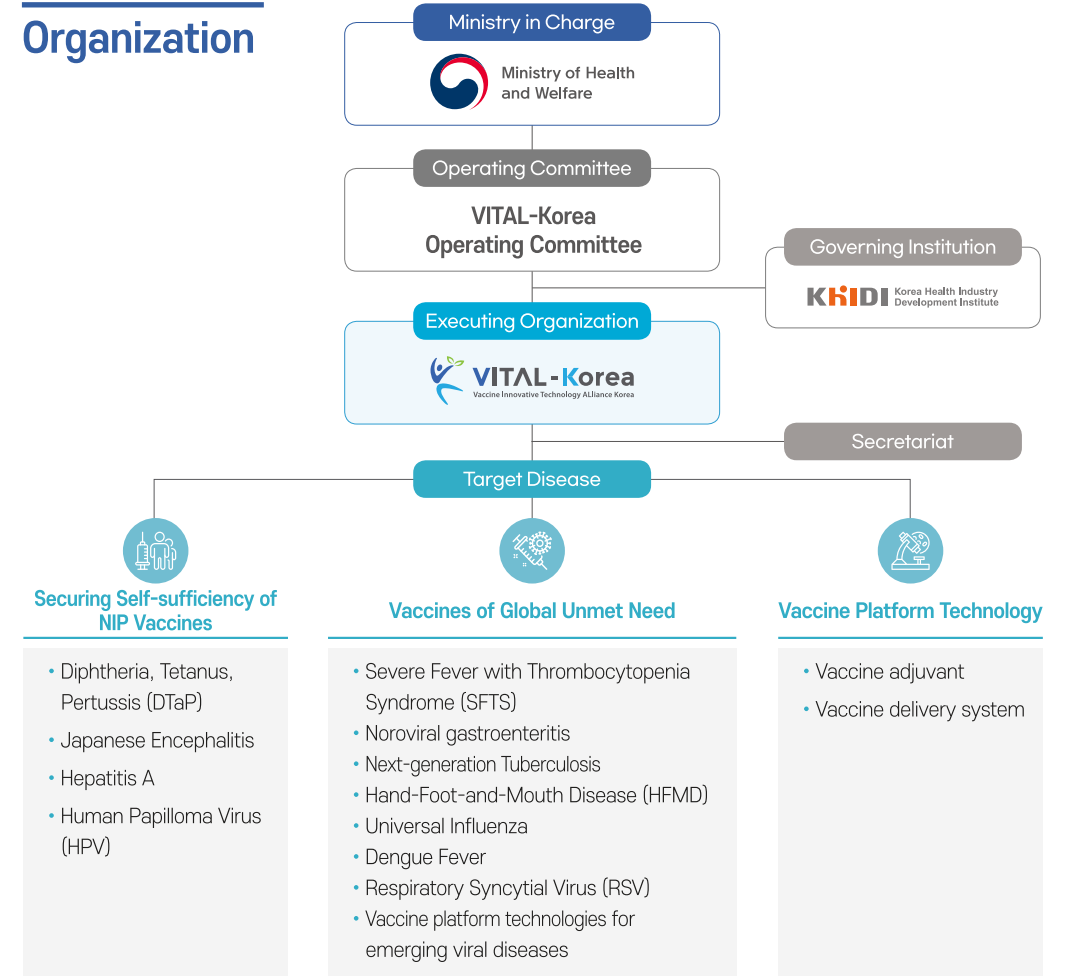
Building a global competitiveness by technical innovation to emerge the top 5 countries in the global vaccine market

GOALS

Securing vaccine pipelines and enabling technology

- Expedite domestic production and increase the self-sufficiency of NIP vaccines
- Develop vaccine candidates of global unmet need
- Improve pre-existing vaccines in efficacy, safety and affordability
- Secure innovative platform technologies for speedy deployment of endemic and pandemic vaccines

Organization



Research Objective

	Phase I (2020~2022)	Phase II (2023~2026)	Phase III (2027~2029)
Self-Sufficiency of NIP Vaccines	Proof of concept 4 Non-clinical 1 Surrogate marker 2	Non-clinical 4 Phase 1 3	Phase 2 3
Vaccines of Global Unmet Need	Candidate verification 3 Proof of concept 8 Non-clinical 1	Non-clinical 4 Phase 1 4	Phase 1 1 Phase 2 4
Vaccine Platform Technology	Candidate verification 2	Candidate verification 2 Proof of concept 1	Proof of concept 1

(number of vaccine targets)