

1 Lead cooperative research in the virus field



KVRI will serve as the central domestic hub of cooperative efforts in virus research, which consists of research organizations affiliated with government-funded research institutes, academic societies, universities, and hospitals.

2 Establish virus research facilities



KVRI plans to establish and operate secure research facilities by 2023 as part of the biomedical technology development project. These will include biosafety level 3 (BSL3) and animal biosafety level 3 (ABSL3) research facilities.

* Build core infrastructure for domestic industry, academia, and institutes to carry out virus research

* Will be jointly established by Institut Pasteur Korea and Scripps Korea Antibody Institute

3 Support the national quarantine system



KVRI will establish R&D governance in infectious diseases through basic science research in viruses. The Institute strives to translate the knowledge gained from research into clinical use so that it may serve as the foundation of the national quarantine system.



VISION

Contribute to national security against infectious diseases by securing platform technology to combat viruses

MISSION

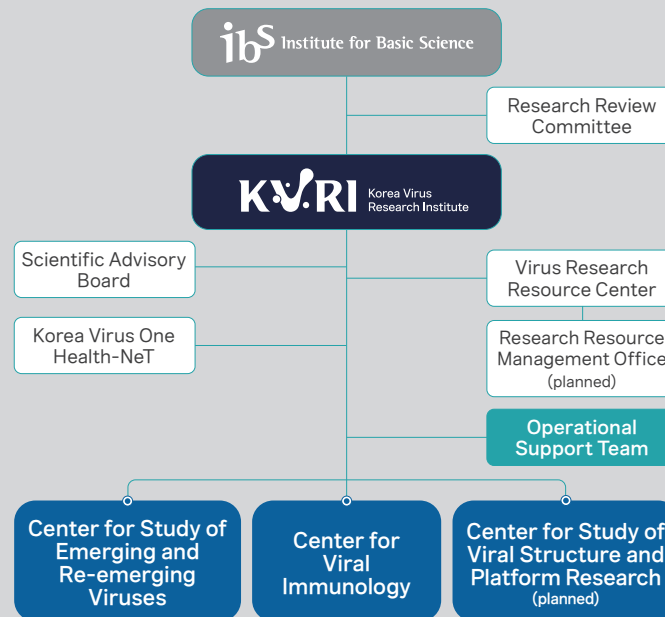
Contribute to humanity by increasing fundamental scientific knowledge of viruses

Understand viruses at the molecular level through basic research

Understand the mechanisms of infection by studying virus-host interactions

Understand host defense mechanisms by studying immune responses against viruses

Contribute to national quarantine by developing technology to prevent and respond to viral diseases



* Plan to gradually expand the Institute to 3 Research Centers and 130 personnel by 2025

KOREA VIRUS RESEARCH INSTITUTE

Greetings from
the Managing Director

KVRI Managing Director
CHOI Young Ki

The Korea Virus Research Institute (KVRI) was launched under the Institute for Basic Science (IBS) in July 2021. KVRI was established with the purpose of conducting basic science research to combat newly emerging viruses in the post-COVID era.

Additionally, virus research provides the scientific basis for curing intractable diseases such as atopy and cancer. Among worldwide competition to secure knowledge and technology related to viruses, KVRI aims to conduct world-class research on viruses and foster scientific cooperation in Korea and around the world.



Center for Study of Emerging and Re-emerging Viruses



Our goal is to explore and establish strategies for a swift response against infectious disease outbreaks. We study viral spread and transmission mechanisms through animal model systems and genetic analysis using multi-interdisciplinary cutting-edge technologies. The knowledge from our efforts will be fundamental for as-yet-unknown new pandemic candidates (Disease-X) that will succeed SARS-CoV-2.

Virus & One Health Research Team



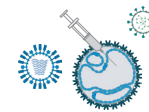
- Zoonotic viral diseases
- Environmental and animal-derived viruses

Disease-X & Neglected Virus Research Team



- Potential Disease-X viruses
- Neglected viral diseases

Viral Control & Technology Team



- Development of new therapeutic platforms
- Rapid & precise diagnostic tools



Korea Virus Research Institute Managing Director
Center for Study of Emerging and Re-emerging Viruses Director

CHOI Young Ki

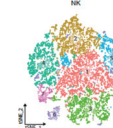
Ph.D. University of Minnesota, USA 2002
Professor, Chungbuk National University, Korea

Center for Viral Immunology



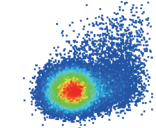
The Center aims to conduct research on viral immunology by studying immune responses and immunopathology that occur during viral infection. Major projects include obtaining and analyzing a large amount of single immune cell data, studying cross-immunity between heterologous viruses, and exploring the effects and mechanism of immune aging.

Immunity against COVID-19



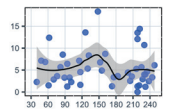
RNA sequencing of various immune cells in PBMCs, TCR sequencing, functional analysis of T cells and NK cells

Heterologous immunity



Single-cell transcriptome analyses for immune landscaping
TCR sequencing analyses for comprehensive analysis of T cell repertoire
IFN- γ ICS, AIM assays, and MHC-I multimer staining for functional analysis

Immune aging and cytokine



Perform comprehensive omics analysis
Analyze a variety of virus-specific T cells
Evaluate phenotypes and functions of individual immune cells



Center for Viral Immunology Director

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