# **Establishment Plan for the Basic Virus Research Institute**

## I. Background and Progress

#### □ Background

O In order to strengthen the nation's basic virus research capabilities to respond to the emergence of new or variant viruses and the post-COVID-19 era, it is imperative to establish the (tentatively named) Basic Virus Research Institute (hereinafter referred to as "Institute").

#### □ **Progress**

 Oct. 2019: The need for a national research institute dedicated to the study of viruses was raised at a meeting with senior secretaries at the South Korean Presidential Blue House.

President Moon spoke about the need for a national research institute that carries out research on infectious diseases of livestock, developing vaccines, epidemiological studies, and other virus-related research at large.

- $\bigcirc$  Oct. 2019: The basic direction of the Institute was set.
- June 2020: The establishment of the Institute was presented as a major inter-agency task to respond to the COVID-19 pandemic in the following announcements:
  - 13 May 2020: Measures to strengthen infectious disease response capabilities announced by the Central Economic Emergency Countermeasure Headquarters
  - 3 June 2020: Measures to support development of treatments and vaccines for COVID-19 announced by the Pan-government Support Committee for the Development of COVID-19 Treatments and Vaccines
- July 2020: The government decided to establish the Institute as an organizational unit of IBS.
- Oct. 2020: The basic direction and operational plan of the Institute were developed.
- Dec. 2020: The proposed budget\* of the Institute for 2021 was finalized.
   \* Total of KRW 5.5 billion for a period of six months including research funds, cost for setting up physical space and personnel expenses.

# **II.** Operational Plan

#### 1. Organization and Operation

#### □ Type of Establishment

 The Institute will be established as an organizational unit of IBS to conduct excellenceoriented basic research in virology.





## □ Organizational Structure

O The Institute's organizational units, researchers, and administrative/technical staff will increase in stages to form two or three (tentatively named) Research Centers and administrative teams.

Note: Given the fact that the Institute will be in the early stage of its development, the 2021 budget will be allocated for one Research Center (KRW 5.5 billion).

## □ Operation

- O In order to attract world-class researchers, the Institute will provide researchers with long-term, stable operation and have the authority to organize and manage its personnel and budget allocation.
- The managing director will have the authority over personnel management depending on the size of basic research and ensure a stable research environment that enables

long-term research.

## 2. Major Functions

### **Carry Out Basic Research**

O Conduct world-class basic virus research, collaborate with universities and other government-funded research institutes, and contribute to strengthening the virus research capabilities of universities

Research category		Research areas
1	Virus–host interactions	①-1. Host immune response and defense mechanism against viral infection
		①-2. Mechanism of viral life cycle (proliferation) in a host
		①-3. Genetics and reverse genetics
		①-4. Viral evolution <i>in vitro</i> and <i>in vivo</i>
2	Characterization of new strains of viruses	2-1. Transmission mechanism of zoonotic viruses
		②-2. Molecular biological studies on new strains of viruses
		②-3. Pathogenesis of new strains of viruses
		②-4. Tropical viruses* or viruses which are rare in South Korea
3	Disease modeling or multidisciplinary	③-1. Mathematical modeling of viral infection and disease
		③-2. Viral infection modeling based on organoid and animal models
		3-3. Virus omics** using bioinformatics
		3-4. Virus morphology and protein structure

\* E.g., Zika, chikungunya, and dengue

\*\* E.g., genomics, transcriptomics, and proteomics

### □ Facilitate Collaboration Through Virus Research Consortium

- In order to be a focal point of the nation's collaborative efforts in basic virus research, the Institute will form a virus research consortium with members from universities, industry and research institutes.
  - Aims to broaden the basic research base in virology by encouraging the shared use of research equipment at a virus research resources center and facilitating access to research resources.

### **Establish Partnerships with Key Public Health Institutions and Agencies**

- In order to strengthen the nation's ability to respond to viruses, the Institute will establish a collaborative partnership with the National Research Institute of Infectious Diseases.
  - The Institute's basic R&D in virology will lead to applied and clinical R&D for vaccines and treatments by the National Research Institute of Infectious Diseases.
- O The Institute will work in close partnership with key national public health institutes and agencies, including the National Research Institute of Infectious Diseases, the Animal and Plant Quarantine Agency, and the National Institute of Wildlife Disease Control and Prevention.

## 3. Appointment of Managing Director

#### □ Roles/Responsibilities

 Oversee the Institute's overall operations while at the same time conducting basic virus research as head of a Research Center within the Institute

#### □ Selection Criteria

- Have demonstrated scientific excellence and potential and is capable of conducting large-scale, long-term, group research in basic virology
- Have a strong drive, self-motivation and leadership to contribute to strengthening the virus research capabilities of the nation through collaboration and cooperation with the domestic basic virus research community as well as the international community at large

#### □ Procedure and Timeline

- O Dec. 2020: Report the Managing Director Appointment Plan to the Board of Trustees
- O Dec. 2020: Open call for applications and organize a Search Committee
- Jan.–1 Feb. 2021: Candidate search
- O Mar.–Apr. 2021: In-depth evaluation
- May 2021: Comprehensive evaluation and consultation by the Scientific Advisory Board (SAB)
- End of May 2021: Appointment of managing director

# III. Future Schedule

○ From Dec. 2020: Establishment of detailed operational plan and institutional regulations

Note: The detailed operational plan of the Institute will be finalized in consultation with the Ministry of Science and ICT

- Mar.–June 2021: Setting up physical space and facilities
- O End of May 2021: Appointment of managing director of the Institute
- July 2021: Opening of the Institute

# □ 2021 Budget: KRW 5.5 billion

(Unit: KRW million)

Category	2021 budget	Description
Labor costs (salaries)	120	<ul> <li>Salaries of four administrative/technical staff</li> <li>The number of staff will increase in stages.</li> </ul>
General operating expenses	500	O Rent for research space, cost for utilities and other
Program	4,877	<ul> <li>Research funds: 2,977</li> <li>For a period of six months</li> <li>Equipment: 1,100</li> <li>Facilities: 800</li> </ul>
Total	5,497	