

# SPOTLIGHT ON

## Seoul National University Veterinary Medicine

Advancing animal health and welfare through research

### Interprofessional translational research for future veterinary medicine

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The College of Veterinary Medicine (CVM) at Seoul National University (SNU) aims to nurture talented veterinarians, promote creative research, and provide top-quality animal care services. CVM continues their path of success as one of the world's leading veterinary education institutions. In recent years, CVM successfully received funding for 2 major research centers to facilitate our research program. With these efforts, CVM is preparing an innovative research environment and training system that would cultivate socially conscientious experts ready to exceed the standards of future student education.

#### BK21 FOUR Future Veterinary Medicine Leading Education and Research Center

SNU CVM was selected for the fourth-phase Brain Korea (BK) 21 project (Director: Ho Jae Han, BK21 FOUR Future Veterinary Medicine Leading Education and Research Center) in 2020. The objective of the project is to help graduate schools consolidate their research foundations and foster talented human resources based on which universities can enhance their research capability. This distinction authenticated that the quality of veterinary education and research productivity is far beyond the standards. In the fourth phase of the BK21 project, a total of 7 billion won will be granted to the CVM for 7 years from 2020 to 2027 to aid those who seek master's and doctorate degrees as well as for research assistant professors. This year, the research scholarship will be granted to 130 graduate students (in master's and doctorate courses) and non-tenure track professors. Along with more thorough performance evaluation, the CVM enhances the achievements in the fourth phase of the BK21 project. The BK21 project has contributed to both qualitative and quantitative improvements in the university's research potential.

#### Korea Mouse Phenotyping Center

The Korea Mouse Phenotyping Project was created to identify gene functions in human diseases by analyzing genetically engineered mouse (GEM) phenotypes, including physiology and pathology, as well as provide the phenotyping analyses and a la carte service of the mouse resource to researchers through Mouse One Portal (MOP), banking, rederivation, and monitoring. The Korea Mouse Phenotyping Center (KMPC) is currently funded by the Ministry of Science and ICT based on a 10-year financial aid agreement beginning in 2013 and ending



KMPC identifies the in vivo functions of human genes based on a wealth of information obtained by analyzing the phenotype and behavioral evaluation of genetically engineered mice.

next year in 2023 (10 years, 3 + 3 + 4 phases, \$170 million). The Center also aims to offer international researchers with GEM phenotype analysis technology by strengthening global collaboration with the International Mouse Phenotyping Consortium, which the KMPC joined as an institutional member since 2013.

#### Comparative Medicine Disease Research Center

The Comparative Medicine Disease Research Center (CDRC) at SNU CVM was established in June 2021 by the support of the Science Research Center grant from the Korean government Ministry of Science and ICT. The Center is conducting research in both basic biomedical research and translational medicine with the goal of identifying factors and mechanisms that cause common diseases in humans and companion animals through a comparative medicine approach. To study mammary gland cancer, for instance, the Center uses multiple omics analysis, 3-D organoid culture technique, genetic aging-related research, and comparative multi-omics as core technologies.

In addition, we are developing other centers to expand research areas of SNU CVM, such as the Center for Veterinary Integrative Medicine and the Center for Animal Welfare. These centers also contribute to the achievement of CVM's research and educational goals.

