# **[Department of Veterinary Science]**

Veterinary science is a comprehensive discipline focused on the understanding, prevention and treatment of animal diseases. Within this field, many issues are present that are highly relevant to the health and welfare of both humans and animals in society. These include: 1) The increasing sophistication of animal medical and surgical care, 2) The threat of zoonoses due to the growing international movement of animals, humans and livestock products, 3) The improvement of livestock production through biotechnology, 4) The development of novel medical and surgical approaches to disease and 5) The safety evaluation of pharmaceuticals and foods.

The Department of Veterinary Science aims to produce graduate veterinarians who are: 1) Specialists capable of applying veterinary perspectives, understanding and techniques in the domain of applied animal science, 2) Specialists in the diagnosis, treatment and public health aspects of animal diseases and 3) Capable of demonstrating innovative leadership in biomedical fields related to animal and human health.

(As of April 1, 2025)

#### Research Interests

#### < Division of Structural and Functional Biosciences >

#### **Integrated Structural Biosciences**

Status	Name	Research and Education Fields
Professor	KANEKO Takehito	Fertilization, gene modification and gamete preservation in animals
Professor	KUWAMURA Mitsuru	Pathological studies on spontaneous animal diseases and animal models for neurological disorders
Associate Professor	IZAWA Takeshi	Mechanism underlying progression of intractable liver diseases
Associate Professor	NAKAJIMA Takayuki	Brain ischemia, Ischemic tolerance, Neuronal cell death
Associate Professor	TANAKA Miyuu	Elucidation of pathomechanism of neurodegenerative diseases using animal models
Lecturer	TANIDA Takashi	Visualization of endocrine and metabolic regulatory factors and their pathophysiological analyses
Lecturer	KONDO Tomohiro	Genetic analysis, Mouse cataract model, Fetal growth restriction

#### **Integrated Functional Biosciences**

Status	Name	Research and Education Fields
Professor	AZUMA Yasu-Taka	The inhibitory mechanism of inflammatory diseases and research on their prevention, Prophylactic Pharmacology
Professor	MORIYAMA Mitsuaki	Veterinary physiology, Amino acid metabolism
Associate Professor	MATSUBARA Misako	Cellular and molecular mechanism of liver diseases
Associate Professor	NAKAJIMA Hidemitsu	Drug discovery for intractable neurological diseases and cancers
Associate Professor	NISHIYAMA Kazuhiro	Studies on intestinal homeostasis
Associate Professor	TAKANO Katsura	Regulation mechanism of glial function, Microglia and astrocytes, Neurodegenerative disorders

## < Division of Veterinary Environmental Sciences >

### **Bioenvironmental Sciences**

Status	Name	Research and Education Fields
Professor	MATSUBAYASHI Makoto	Veterinary parasitology, Genetical epidemiological analysis for parasites, Molecular pathogenesis of protozoan diseases
Professor	MIYAKE Masami	Veterinary public health, Molecular bacteriology, Bacterial pathogenesis, Host responses to bacterial pathogens
Associate Professor	NISHIMURA Kazuhiko	Toxicology, Cytotoxicology of metals
Associate Professor	YASUGI Mayo	Veterinary public health, Zoonosis, Molecular epidemiology, Development of prevention and treatment
Lecturer	NAKAGAWA Hiroshi	Toxicology, Roles of ER-localized trimeric G proteins in COP II vesicle transport, Role of Sar1 protein in COP II vesicle formation
Assistant Professor	HARAGUCHI Asako	Veterinary parasitology, Genetical epidemiological analysis for parasites, Molecular pathogenesis of protozoan diseases
Assistant Professor	IWASAKI Tadashi	Veterinary immunology, Animal infectious diseases

### Infection Diseases Control

Status	Name	Research and Education Fields
Professor	HORIE Masayuki	Evolution of viruses, Viral surveillance and discovery, Molecular diagnosis, Viral infectious diseases, Co-evolution between viruses and hosts
Professor	YAMASAKI Shinji	Food microbiology, Zoonosis, Molecular epidemiology, Molecular diagnosis Molecular pathogenesis, Antimicrobial resistance
Associate Professor	HATANAKA Noritoshi	Food microbiology, Zoonosis, Molecular epidemiology, Molecular diagnosis Molecular pathogenesis, Antimicrobial resistance
Associate Professor	HINENOYA Atsushi	Food microbiology, Zoonosis, Molecular epidemiology, Molecular diagnosis Molecular pathogenesis, Antimicrobial resistance
Associate Professor	HOSOMI Koji	Pathogenesis and control of bacterial infections/Functions and applications of symbiotic bacteria
Lecturer	KOHDA Tomoko	Veterinary hygiene, Molecular mechanism of bacterial toxins, Infectious control, Molecular detection of pathogenic factor
Assistant Professor	KISHIMOTO Mai	Virus discovery and characterization, Molecular mechanism of viral infection

## < Division of Veterinary Clinical Sciences >

## Advanced Pathobiology

Status	Name	Research and Education Fields
Professor	HATOYA Shingo	Regenerative veterinary medicine, veterinary hematology, veterinary endocrinology, veterinary gastroenterology
Professor	KAWATE Noritoshi	Theriogenology, reproductive endocrinology in farm animals and its clinical application
Associate Professor	KOYAMA Keisuke	Reproductive efficiency in farm animals and fertility of in vitro matured oocytes
Associate Professor	MATSUYAMA Satoshi	Molecular diagnosis of animal tumor-related genes, DNA damages and the genetic consequences, Base excision repair systems in mammalian cells
Associate Professor	TAKAHASHI Tomoko	Diagnosis and treatment in small animal veterinary oncology
Lecturer	TSUKAMOTO Masaya	Regenerative veterinary medicine, disease modeling using stem cells

### Advanced Clinical Medicine

Status	Name	Research and Education Fields
Professor	FURUYA Masaru	Advanced diagnosis and therapy of small animal dermatosis and tumor
Professor	HASEGAWA Takashi	Veterinary ophthalmology, Veterinary otology, Veterinary neurosurgery, Veterinary orthopedics, Veterinary surgery
Professor	SHIMADA Terumasa	Immunological diagnosis and therapy in cancer animals
Professor	YAMAGISHI Norio	Research on circulating biomarkers in diseased animals
Associate Professor	ISHIKAWA Shingo	Innate immunity and inflammation in farm animals
Associate Professor	SHIMAMURA Shunsuke	The diagnosis and treatment of cardiovascular diseases
Associate Professor	TANAKA Toshiyuki	Non-invasive diagnosis and radiogenomics using CT/MRI in small animals
Associate Professor	TANI Hiroyuki	Dermatology, Endocrinology, Blood-borne parasites infection, Zoonosis
Associate Professor	TOMIHARI Mizuki	Veterinary soft tissue surgery, Veterinary orthopedic surgery, Veterinary oncology
Lecturer	TSUCHIAKA Shinobu	Research on the gastrointestinal microbiome in farm animals
Assistant Professor	KIM SU EUN	Research on evaluation of respiratory disease and stress
Assistant Professor	WATANABE Shunichi	Establishment of Complement Diagnostics and Development of Complement- Targeted Tumor Therapy in Small Animal Medicine