



Universität
Zürich^{UZH}

Vetsuisse Faculty

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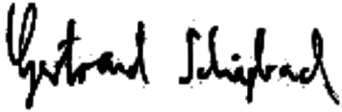
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UNIVERSITÄT
BERN

Biosafety and Biosecurity concept of the Vetsuisse Faculty, University of Bern and University of Zurich, Switzerland

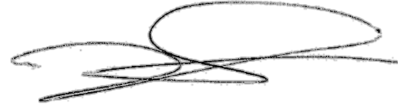


Developed by the Biosafety Working Group
of the Vetsuisse Faculty
Version 01; January 2026

Accepted by:



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List of abbreviations (in alphabetical order):

Abbreviation	Designation
ADR	Ordinance on the Transport of Dangerous Goods by Road
ADWO	The Ordinance on the Avoidance and Disposal of Waste
AR	Eradicable Animal Disease
ArG	Swiss Labour Act
ArGV 3	Ordinance 3 to the Labour Act
ASFV	African swine fever virus
BDV	Border Disease Virus
BSE	Bovine Spongiform Encephalopathy
BSL	Biosafety Level
BTV	Bluetongue virus
BVDV	Bovine viral diarrhoea virus
CAEV	Caprine arthritis encephalitis virus
ChemA	Chemicals Act
ContainO	Ordinance on Handling Organisms in Contained Systems
CS	Narcotics/Controlled Substances
EBL	Enzootic Bovine Leukosis
EHD	Epizootic Hemorrhagic Disease
EHEC	Enterohemorrhagic <i>Escherichia coli</i>
EHV	Equine Herpesvirus
EID	Emerging and Reemerging Infectious Diseases
ESCCAP	European Scientific Counsel Companion Animal Parasites
FAO	Food and Agriculture Organization of the United Nations
FCV	Feline calicivirus
FCVI	Federal Commission for Vaccination Issues
FFP	Filtering Facepiece
FMDV	Foot-and-mouth disease virus
FOEN	Federal Office for the Environment
FOPH	Federal Office of Public Health
FSVO	Federal Food Safety and Veterinary Office
GIS	Gastrointestinal Strongyles
HA	Highly Contagious Animal Disease
IBRV/IPRV	Infectious bovine rhinotracheitis virus / Infectious pustular vulvovaginitis virus
IPC	Infection Prevention and Control
ISO	International Organization for Standardization
JSRV	Jaagsiekte sheep retrovirus
LSDV	Lumpy skin disease virus
MDR	Multiple Drug Resistance
MVV	Visna/maedi virus
NarcA	Federal Act on Narcotics and Psychotropic Substances
ND	Newcastle Disease
PED	Porcine Epidemic Diarrhoea
PPE	Personal Protective Equipment
PRRS	Porcine Reproductive and Respiratory Syndrome

PRRV	Pest-des-petits-ruminants virus
RPV	Rinderpest virus
RV	Rabies virus
SAMV	Ordinance on the Protection of Workers from Risks Related to Microorganisms
SUVA	Swiss Accident Insurance Fund
SVMA	Swiss Veterinary Medical Association
SVPM	Swiss Association for Equine Medicine
TBE	Tick-borne Encephalitis
TSE	Transmissible Spongiform Encephalopathy
TSG	Animal Epidemics Act
TSV	Ordinance on Notifiable Animal Diseases
USG	Environmental Protection Act
VeVA	Ordinance on Waste Traffic
VMP	Veterinary Medicinal Products
VMPO	Veterinary Medicinal Products Ordinance
VSF	Vetsuisse Faculty
WHO	World Health Organization
WNV	West Nile virus
WOAH	World Organization for Animal Health
ZB	Controllable Animal Disease
ZU	Monitored Animal Disease

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1. Chapter 1 – General Biosafety instructions at the Vetsuisse Faculty

1.1 Swiss Labour Act

In Swiss labour law, the overall responsibility for occupational safety and the protection of employees' health lies with the employer or the executive management. This responsibility is not only a legal obligation but also a key element of effective risk management within any organization. Employers are required to ensure that the workplace is safe, healthy, and compliant with all relevant regulations.

The legal framework governing this responsibility is primarily provided by the Swiss Labour Act (ArG) and its associated regulations, particularly Ordinance 3 to the Labour Act (ArGV 3). Key provisions relevant to health and safety include Articles 6, 35, and 36a of the Labour Act, which define the duties of employers to assess risks, implement preventive measures, and ensure that employees are properly informed and trained regarding potential hazards. Ordinance 3 to the Labour Act further details the technical and organizational requirements for workplace safety, including measures for accident prevention, ergonomics, and exposure to hazardous substances.

1.2 Biosafety and Biosecurity

Historically, multiple definitions and understandings of the terms “biosafety” and “biosecurity” have developed and the two are sometimes used interchangeably. From a technical perspective, however, each term refers to a distinct framework of safety measures designed to manage the risk associated with biological materials in a different context, namely in the veterinary field or in laboratory settings:

Within the veterinary domain, biosecurity is defined by the World Organisation for Animal Health (WOAH) as the collection of management, physical, and procedural measures designed to reduce the risk of introduction, establishment, and spread of infectious diseases, pathogens, or pests within and between animal populations. Veterinary biosecurity aims to protect animal health, animal welfare, and public health. Its key components include bio-exclusion — measures that prevent the entry of infectious agents—and bio-containment — measures that limit their spread within affected populations. Beyond prevention, veterinary biosecurity also addresses disease control and, where feasible, eradication.

Veterinary biosecurity can be considered at multiple levels: the individual animal; groups of animals such as herds or flocks; production units or companies; and broader geographical regions including districts, states, countries, or continents. This scalable approach supports disease management strategies and facilitates compartmentalization in the context of national and international trade.

In laboratory contexts, the World Health Organization (WHO) further distinguishes between laboratory biosafety and laboratory biosecurity. Laboratory biosafety refers specifically to the containment principles, technologies, and practices applied to prevent unintentional exposure to biological agents or their accidental release within laboratory facilities. Laboratory biosecurity, by contrast, encompasses the administrative, regulatory, and physical security measures designed to ensure the protection, control, and accountability of

biological materials, as well as associated equipment, knowledge, and data. Its objective is to prevent unauthorized access, loss, theft, misuse, diversion, or intentional release.

Unless otherwise specified, in this document we use for simplicity the term biosafety to refer to a broader biorisk management framework with the overarching purpose of safeguarding personnel, animals and the environment from harmful biological agents or material regardless of the veterinary or laboratory context.

The procedures applied at the Vetsuisse Faculty aim to minimize the risk of all nosocomial and zoonotic diseases. Biosafety as well as infection prevention and control (IPC) measures implemented at the Vetsuisse Faculty are specifically designed to combat infectious diseases.

1.3 Objectives of the Vetsuisse Faculty Biosafety concept

1. Employees, students, and clients should be protected from exposure to zoonotic pathogens.
2. An environment should be created in which the risk of nosocomial infections is minimized, thereby optimizing patient care.
3. The spread of pathogens should be prevented through diagnostics and preventive measures.
4. Clients and the public should be informed and educated about the control and prevention of infectious diseases in animals and humans.
5. Education and training for students and staff regarding biosafety should be optimized and maintained.
6. Measures for infection prevention and control as well as disease surveillance shall be optimized and maintained.

1.4 Principles of infection prevention and control (IPC)

The following principles have guided the development of all procedures described in this document. These precautionary measures help to prevent the transmission of diseases.

From staff to patients; between patients; from patients to staff; and between staff members

1. Optimization of Hygiene:

Through standard precautions such as handwashing and hand disinfection, appropriate clothing and barrier protection measures, minimizing unnecessary contact with patients, proper disposal of infectious materials, and appropriate cleaning and disinfection.

2. Interruption of Transmission chains:

Through effective use of hygiene protocols, understanding the pathways of disease transmission, and implementing barriers against direct and indirect pathogen transmission.

3. Targeted Adaptation of IPC Measures:

Through monitoring, active surveillance and other investigative procedures.

4. Promotion of Education and Awareness:

Regarding nosocomial and zoonotic risks, by optimizing communication about the purpose of these guidelines and procedures.

1.5 Biosafety Committee of the Vetsuisse Faculty

In July 2025, the Vetsuisse Biosafety Committee was established by the Vetsuisse Council. The members of the Committee were elected in November by the Local Faculty Assemblies and in February 2026 the first meeting took place. The following members are represented at each location (Bern/Zurich):

- Two members from the group of professors at all levels and private lecturers
- Two members from the field of biosafety
- Three members from the Intermediate staff organization (Mittelbau)
- One member of the technical staff group
- One student representative

Additional representatives and guests will be invited to individual meetings on purpose. The frequency of meetings has been determined “twice per semester”.

1.5.1 Goals and responsibilities of the Biosafety Committee

The Biosafety Committee is an advisory and operational body responsible for developing a joint biosafety strategy for both locations and advises the Vetsuisse Executive Board on biosafety matters.

The Biosafety Committee:

- a) develops basic documents to harmonize and coordinate biosafety across locations.
- b) advises the Vetsuisse Executive Boards on the design and further development of cross-location biosecurity based on fact-based risk identification and assessment, taking into account legal requirements, technical/infrastructural possibilities, new scientific findings, resources and sustainability, and in accordance with EAEVE standards.
- c) is responsible for matters relating to biosafety assigned to it by the Vetsuisse Executive Board and the Vetsuisse Council, namely:
 1. Process development, comparison and standardization.
 2. Content-related discussion of biosafety issues of cross-location significance and recommendation of measures.
- d) proposes cross-location improvement measures identified from location-specific reporting systems to the Vetsuisse Executive Board.
- e) communicates recommendations regarding biosafety at both locations.

1.6 Definitions

Aerosol: Liquid or solid particles suspended in the air that are small enough to be inhaled into the lower respiratory tract.

Antibiotic: A substance that kills or inhibits the growth of another microorganism, e.g., penicillin.

Antiseptis: A measure that reduces or kills infectious microbes in living tissue, thereby preventing infection.

Antiseptic: A chemical substance that can be applied to epithelial surfaces and destroys or inhibits microorganisms by preventing their growth or reproduction, without harming the animal.

Asepsis: Hygienic condition in which no microorganisms are present that can multiply or cause disease (i.e., sterility).

Biofilm: A complex aggregation of bacteria that adhere to surfaces within an exopolysaccharide matrix, resulting in a thin residue remaining after cleaning. These bacteria are highly resistant to, for example, disinfectants.

Biological material: A microorganism, virus, biological toxin, particle, or other infectious material, which may occur naturally or be genetically modified, and has the potential to cause infection, allergies, toxicity, or other hazards to humans, animals, or plants.

Biosafety: Biosafety refers to policies, procedures, and containment measures designed to prevent the unintentional, accidental exposure to or release of hazardous biological agents. In laboratory and veterinary contexts: it protects personnel, animals, and the environment from infectious pathogens and dangerous toxins.

Biosafety Levels (BSL): Biosafety levels are sets of protective measures designed to safeguard laboratory personnel, the environment, and the community. They specify the specific controls a laboratory must implement to contain microbes and biological materials.

Cleaning: The mechanical removal of mostly visible dirt and other materials, particularly animal excretions, which may contain pathogens.

Containment: The combination of infrastructure and operational measures that protect personnel, the immediate work environment, and the community from exposure to biological materials. In this context, the term "biocontainment" is also used.

Decontamination: The reduction of viable biological agents or other hazardous substances on a surface or object to a defined level through chemical and/or physical means, in order to make infection less likely.

Disinfectant: A chemical agent that kills microorganisms or inhibits their growth on inanimate objects (e.g., surgical instruments, floors, tables, patient care equipment, surfaces inside and outside buildings).

Disinfection: A process or procedure (chemical or physical) that reduces the number of microorganisms on surfaces, making them safe for health.

Infection Prevention and Control (IPC): Encompasses all activities that reduce the risk of pathogen transmission. Proper hand hygiene is considered the most important measure for preventing the spread of microorganisms. Other measures, such as effective cleaning and disinfection, the use of protective clothing, and the correct implementation of quarantine procedures, also play a crucial role in lowering the risk of microorganism transmission.

Laboratory Biosafety: Describes the containment principles, technologies and practices that are implemented to prevent unintentional exposure to biological agents, or their inadvertent release within laboratories. [WHO Manual, 4 ed]

Laboratory Biosecurity: Describes the administrative, regulatory and physical security principles, technologies and practices within laboratories that are implemented for the protection, control and accountability of biological materials and/or the equipment, skills and data related to their handling. Biosecurity aims to prevent their unauthorized access, loss, theft, misuse, diversion or release. [WHO Manual, 4 ed]

Multiple Drug Resistance (MDR): Resistance to at least one agent in three or more chemical classes of antibiotics, excluding intrinsic resistances.

Nosocomial Infection: Nosocomial infections are infections that occur in temporal relation to a hospital stay or an inpatient medical procedure and may sometimes only become clinically apparent after the patient has

been discharged. Infections that are already present upon admission or are in the incubation period are excluded. Nosocomial infections can be caused by various microorganisms (bacteria, viruses, protozoa, etc.). In human hospitals, and likely also in veterinary hospitals, the most common nosocomial infections include postoperative wound infections, urinary tract infections in catheterized patients, respiratory infections, intestinal infections, and bacteremia associated with intravenous catheters.

One Health: One Health is an integrated, unifying approach that aims to achieve optimal and sustainable health for people, animals, and ecosystems. It recognizes that the health of humans, domestic and wild animals, plants, and the broader environment (including ecosystems) are closely interconnected and interdependent. The approach engages multiple sectors, disciplines, and communities at various levels of society to collectively address threats to health and ecosystems. At the same time, it ensures access to clean water, energy, and air, safe and nutritious food, implements measures against climate change, and contributes to sustainable development.

(Definition adopted from the One Health High Level Expert Panel (OHHLEP))
https://cdn.who.int/media/docs/default-source/one-health/ohhlep/one-health-definition-and-principles-translations.pdf?sfvrsn=d85839dd_5&download=true

Personal Protective Equipment (PPE): Barriers worn by a person to protect against infection with or transmission of microorganisms/diseases, or from contact with potentially harmful chemicals (e.g., disinfectants). Examples of personal protective equipment (PPE) include gloves, gowns, coveralls, safety goggles, masks, boots, shoe covers, caps, etc.

Sterilization: The removal of all microorganisms, including bacterial spores, from an inanimate object or surface.

Subclinical infection: The entry of microorganisms into the body without the observation of clinical signs. It may represent an early stage or a very mild form of infection in which clinical symptoms are not apparent or cannot be detected through clinical examination or laboratory tests.

Veterinary Biosecurity: Describes according to the WHOA a set of management, physical and procedural measures designed to reduce the risk of or prevent introduction, establishment and spread of infectious diseases, pathogens or pests within and between animal populations, protecting animal welfare and public health. Key components include bioexclusion (preventing entry) and biocontainment (preventing internal spread) measures. Biosecurity addresses strategies for disease prevention, control (limiting the consequence of infection) and elimination. Veterinary Biosecurity can be considered in terms of individual animals or in terms of animal populations (flocks or herds), economic entities (production facilities or companies), or geographical regions (counties, states, countries, or continents), thus facilitating compartmentalization for trade purposes.

Zoonoses: Diseases that can be transmitted between humans and animals. These include, among others, rabies, salmonellosis, campylobacteriosis, influenza, Streptococcus spp. infections, leptospirosis, as well as infections with ecto- and endoparasites.

Zoonotic pathogens: Infectious (transmissible) agents that are not limited to a single host but can cause infection (with or without clinical disease) in multiple hosts, including humans.

1.7 Classification of microorganisms

Microorganisms are classified into four groups based on their risk (hazard level). These are defined in Chapter 1, Article 3, Paragraph 2 of the Ordinance on the Protection of Workers from Risks Related to Microorganisms (SAMV; Systematic Collection of Federal Law 832.321).

Risk Group 1: Microorganisms that pose no or negligible risk; known to be non-pathogenic to humans, animals, and plants, harmless to the environment, or representing a negligible risk to humans and the environment at laboratory scale.

Risk Group 2: Microorganisms that pose a low risk; microorganisms that can cause disease in animals and exhibit one or more of the following characteristics to a limited extent: limited geographic relevance, little or no interspecies transmission, no vectors or carriers. Effective prophylaxis or treatment methods are generally available.

Risk Group 3: Microorganisms that pose a moderate risk; microorganisms that can cause serious disease or epidemics in animals. Interspecies transmission may play an important role. Some of these pathogens require the implementation of hygiene regulations for specific species as indexed by the authorities of the respective countries. Medical and/or hygienic prophylactic measures are available.

Risk Group 4: Microorganisms that pose a high risk; microorganisms that can cause extremely severe pandemics or epidemics in animals, with very high mortality rates or dramatic economic consequences in the affected agricultural regions. Either no medical prophylaxis is available, or only sanitary prophylaxis is possible or mandatory.

Moreover, ECOGEN is the official web portal of the Swiss Federal Office for the Environment (FOEN) through which notifications and applications for authorizations for activities involving genetically modified, pathogenic, or alien organisms are submitted. It is part of the Federal Contact Point for Biotechnology and serves to enforce the Ordinance on Handling Organisms in Contained Systems (Containment Ordinance; ContainO). The Swiss database for the classification of organisms can be found here: <https://www.ecogen.admin.ch/public#/organisms>.

Table 1: Examples of organisms (bacteria, fungi, parasites, viruses, prions) listed according to their risk group (not exhaustive).

Organisms	RG2	RG3	RG4
Bacteria			
<i>Bacillus cereus</i>	X		
<i>Clostridium perfringens</i>	X		
<i>Corynebacterium pseudotuberculosis</i>	X		
<i>Dichelobacter nodosus</i>	X		
<i>Erysipelothrix rhusiopathiae</i>	X		
<i>Leptospira interrogans</i>	X		
<i>Listeria monocytogenes</i>	X		

Organisms	RG2	RG3	RG4
Bacteria			
<i>Mycobacterium avium subsp. paratuberculosis</i>	X		
<i>Pseudomonas aeruginosa</i>	X		
<i>Salmonella enterica subsp. enterica</i>	X		
<i>Staphylococcus aureus</i>	X		
<i>Streptococcus suis</i>	X		
<i>Trueperella pyogenes</i>	X		
Fungi			
<i>Aspergillus fumigatus</i>	X		
<i>Candida albicans</i>	X		
<i>Trichophyton verrucosum var. verrucosum</i>	X		
Parasites			
<i>Cryptosporidium spp.</i>	X		
<i>Dicrocoelium spp.</i>	X		
<i>Echinococcus multilocularis</i>		X	
<i>Echinococcus granulosus</i>		X	
<i>Eimeria spp.</i>	X		
<i>Fasciola hepatica</i>	X		
<i>Strongyloides spp.</i>	X		
<i>Leishmania spp.</i>	X		
<i>Sarcoptes scabiei</i>	X		
Viruses			
African swine fever virus (ASFV)			X
Bluetongue virus (BTV)	X		
Border disease virus (BDV)	X		
Bovine viral diarrhea virus (BVDV)	X		
Caprine arthritis encephalitis virus (CAEV)	X		
Classical swine fever virus (CSFV)		X	
Equine herpesvirus (EHV)	X		
Feline calicivirus (FCV)	X		
Foot-and-mouth disease virus (FMDV)			X
Infectious bovine rhinotracheitis virus (IBRV)/ Infectious pustular vulvovaginitis virus (IPVV)	X		
Lumpy skin disease virus (LSDV)		X	
Jaagsiekte sheep retrovirus (JSRV)	X		
Pest des petits ruminants virus (PPRV)			X
Rabies virus (RV)		X	
Rinderpest virus (RPV)			X
Visna/maedi virus (MVV)	X		
West Nile virus (WNV)		X	
Prions			
Bovine spongiform encephalopathy (BSE) prions		X	
Scrapie prions	X		

1.8 Zoning concept at the Vetsuisse Faculty

A specific zoning system is implemented in the clinics and laboratories of the Vetsuisse Faculty.

To make access for clients, visitors, students, and staff more visible, floor markings in the colors green, yellow, orange, and red have been installed in specific areas of the Vetsuisse Faculty. Moreover, signs at the entry of buildings, corridors and laboratories have been installed as well. The colors of the markings also correspond to access authorization. In addition to the floor markings, attention must also be paid to official rescue, prohibition, warning, mandatory, and fire safety signs (see Chapter 6.1). The specific floor markings or signs at the door and zoning for each area are graphically illustrated in the hygiene manual of the respective clinic or laboratory.

Table 2: Definitions of color zones in the clinics and the laboratories of the Vetsuisse Faculty.

Zone	Clinics	Laboratories
No Signage	Public area in the building; free access for students, couriers and visitors	Public area in the building; free access for students, couriers and visitors
Green	<ul style="list-style-type: none"> • Zone with possible (direct or indirect) animal contact • Animals without suspected infectious diseases may be moved in this zone • No particular risk of infection and/or zoonosis potential • Contamination with excrement only in exceptional cases • Access only for authorized people • Staff and students with biosafety training • Animal owners/visitors accompanied • Wearing work clothes and work shoes (persons with animal contact) 	<ul style="list-style-type: none"> • Access only for authorized people • Employees, cleaning service and technical service staff with building-specific safety training • Visitors/customers/suppliers accompanied • Wearing private clothing • No special risk of infection • Offices, common rooms, corridors within the institute, boundary is badged entrance to the institute area
Yellow	<ul style="list-style-type: none"> • Zone with direct animal contact • Low risk of infection and/or zoonotic potential • Restrict movement of animals to the minimum necessary • Contamination of work clothing with excrement/infectious agents possible • Access only for authorized persons with biosafety training • Visitors/animal owners may be admitted if accompanied and wearing protective clothing • Wearing of protective clothing 	<ul style="list-style-type: none"> • Access only for authorized people • Employees, cleaning service and technical service staff with biosafety training • Accompanied visitors • Wearing protective clothing (lab coat) • Handling biological materials in RG1 • BSL1 laboratories without handling zoonotic microorganisms; freezer rooms
Orange	<ul style="list-style-type: none"> • Isolation for animals with moderate risk of infection • Zone with direct animal contact • Increased risk of infection (infectious diseases or zoonotic potential or suspicion thereof) • Animals with infection or suspected infection may only leave the zone in exceptional cases and with appropriate protective measures (e.g., imaging diagnostics) • Access only for authorized persons with biosafety training 	<ul style="list-style-type: none"> • Access only for authorized people • Employees and cleaning service staff with biosafety training • Visitors (including technical service employees) accompanied by staff • Wearing of protective clothing and additional PPE (lab coat, coveralls, gloves) • Handling of biological materials in RG2, including human pathogenic organisms and toxins • BSL2 laboratories, including handling of zoonotic microorganisms or toxins of RG2 • Autopsy room

	<ul style="list-style-type: none"> • Visitors may be admitted in exceptional cases if accompanied and wearing protective clothing • Wearing of protective clothing 	<ul style="list-style-type: none"> • Central inactivation unit DIP
Red	<ul style="list-style-type: none"> • Isolation unit; High risk of infection (highly contagious diseases, zoonoses, or suspected cases) • Animals must not be moved within the clinic or leave the zone as long as the infection or suspected infection persists • Access should be kept to a minimum and only granted after consultation with the person responsible • Access only for authorized personnel with additional training in dealing with such cases of disease • Special protective clothing and, if necessary, personal protective equipment; further measures in accordance with the potential risk 	<ul style="list-style-type: none"> • Access only for authorized people with special biosafety training, restrict access to a minimum • Employees of the technical service accompanied by wearing service and protective clothing and, if necessary, PPE (lab coat, coveralls, gloves, respirator if necessary) • Access only via airlock • (Potential) handling of biological materials in RG 3, including human pathogenic organisms and toxins • BSL3 laboratories, zoonosis autopsy room and autopsy hall under temporary barrier measures

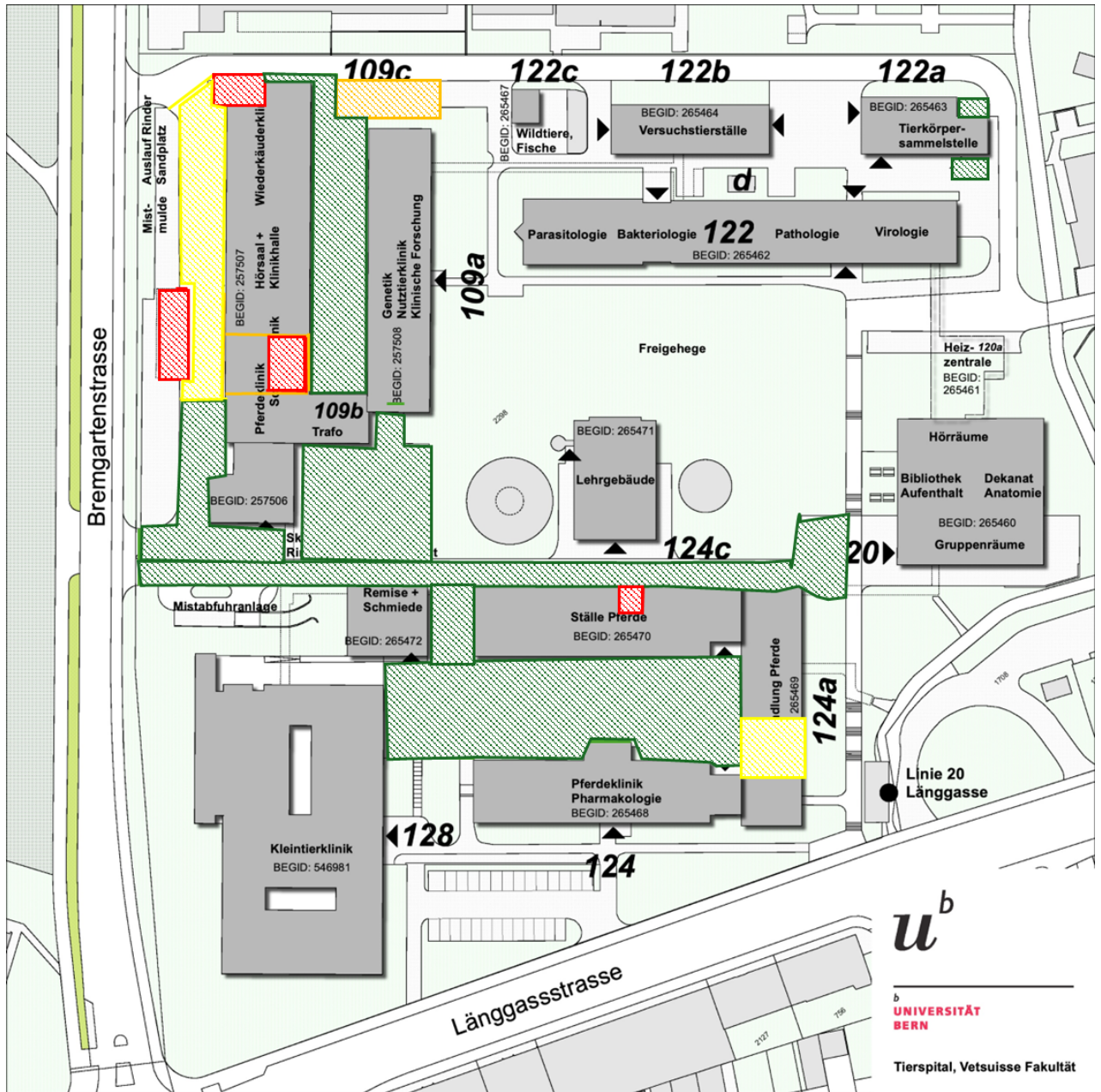


Figure 1: Zoning concept of the Vetsuisse Faculty Campus in Bern. Colors green, yellow, orange and red mark the corresponding areas listed in Table 2.

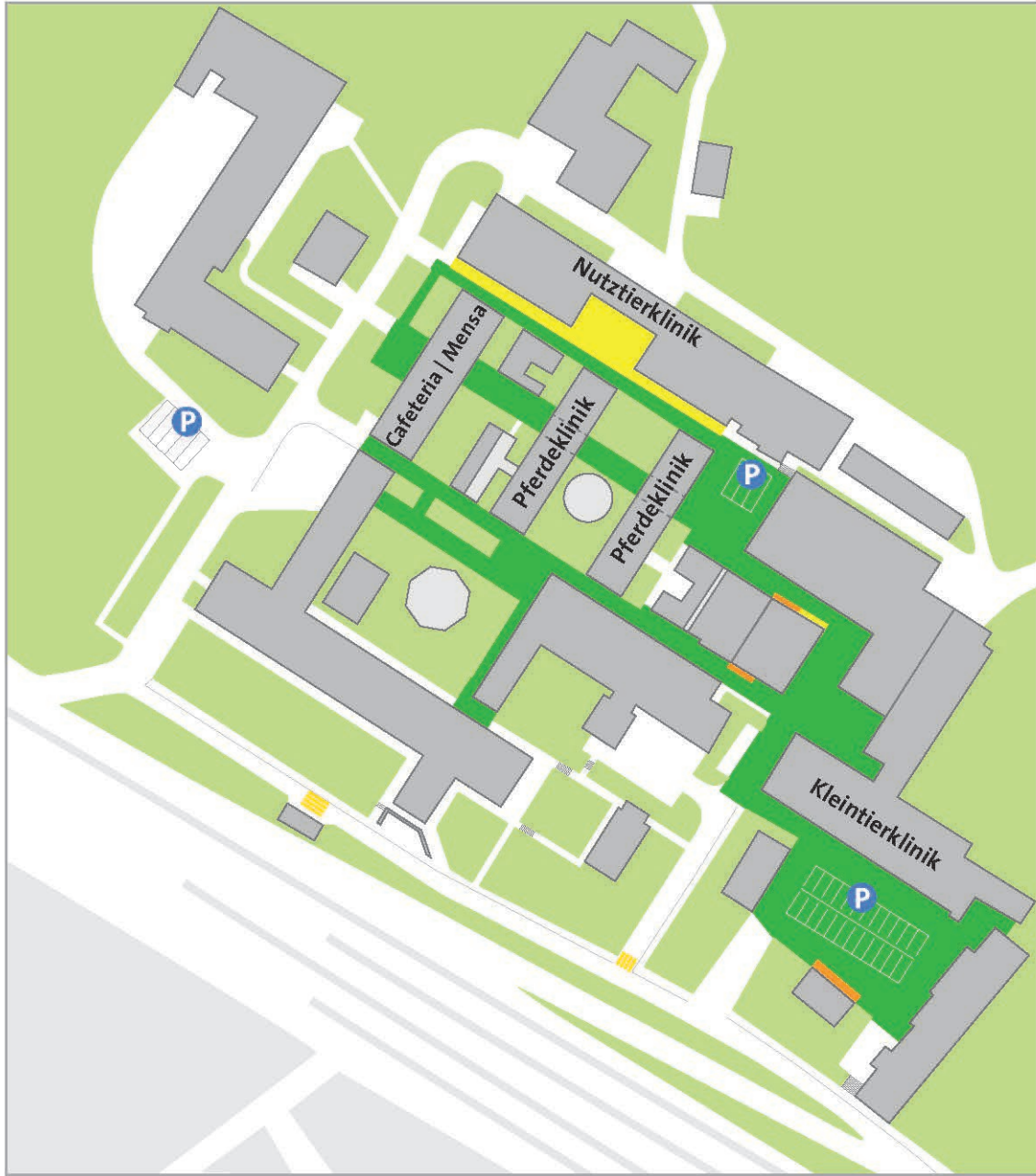


Figure 2: Zoning concept of the Vetsuisse Faculty Campus in Zurich. Colors green, yellow, orange and red mark the corresponding areas listed in Table 2.

1.9 Transmission routes of infectious diseases

Many pathogens can survive for extended periods in the air, on surfaces, and in organic matter. Pathogens can be transmitted through inhalation, oral ingestion, contact with nasal or ocular mucous membranes, and direct contact with contaminated objects or vectors, from animal to animal, animal to human, or human to animal.

Aerosol transmission: Droplets are transmitted through the air from one animal to another.

Direct contact: A susceptible animal is exposed when the pathogen comes into direct contact with open wounds, mucous membranes, or skin through blood, saliva, nasal contact, rubbing, or biting.

Indirect contact: Transmission of pathogens via an inanimate object, e.g., a feeding trough or water, to a susceptible animal.

Oral transmission: Ingestion of pathogens through contaminated food, water, or licking/chewing on contaminated objects in the environment.

Reproductive contact: A subtype of direct contact that includes disease transmission through mating or to the fetus during pregnancy.

Vector-borne transmission: An insect acquires a pathogen from one animal and transmits it to another.

Zoonosis: A disease transmitted from animals to humans or vice versa.

1.10 Reporting system for notifiable infectious diseases

The reporting obligation is the central component of animal disease surveillance in Switzerland. The reporting system for notifiable animal diseases allows the implementation of specific animal health measures and the continuous evaluation of actions for the prevention and control of animal diseases in Switzerland (<https://www.blv.admin.ch/blv/de/home/tiere/tierseuchen.html>). The “Animal Diseases” database of the Federal Food Safety and Veterinary Office (FSVO) contains information on all outbreaks of notifiable animal diseases in Switzerland since 1991: <https://www.dashboard.blv.admin.ch/animals/epizootics/infosm/2025/36>.

The publications of the Federal Food Safety and Veterinary Office (Bulletin) regularly report current disease notifications. The reporting obligation (Ordinance on Notifiable Animal Diseases (TSV), Art. 62, Systematic Collection of Federal Law 916.401; https://www.fedlex.admin.ch/eli/cc/1995/3716_3716_3716/en) requires all persons who keep, care for, or treat animals to report outbreaks of animal diseases (Animal Epidemics Act (TSG), Art. 1, Systematic Collection of Federal Law 916.40 https://www.fedlex.admin.ch/eli/cc/1966/1565_1621_1604/en) or any suspicious observations to a veterinarian. The reporting obligation also applies to bees, fish, and free-living wildlife. Reporting authorities include the bee inspector, the cantonal authority responsible for fisheries, or the cantonal veterinary office.

TSV Art. 62 - Initial Measures by Animal Keepers and Veterinarians:

¹ Anyone who detects an animal disease or suspects its presence must, until official veterinary clarification, take all measures to prevent the spread of the disease. Any movement of animals to or from the outbreak or suspected outbreak site must be stopped.

² The veterinarian is required to immediately report a confirmed or suspected outbreak to the official veterinarian or investigate it personally and communicate the findings.

1.11 Overview of animal diseases by the Federal Food Safety and Veterinary Office (FSVO)

Table 3: Overview of animal diseases by the Federal Food Safety and Veterinary Office (FSVO).

<https://www.blv.admin.ch/blv/de/home/tiere/tierseuchen/uebersicht-seuchen.html> ; Date September 4th, 2025

Animal Disease	Infection	Animal	Status FSVO*	Zoonosis
Actinobacillosis	Bacterial	Cattle; Sheep and Goats; Poultry; Horses, Donkeys	._#	No
Actinobacillosis in pigs	Bacterial	Pigs	ZB	No
Actinomycosis	Bacterial	Cattle	._#	No
African horse sickness	Viral	Horses, Donkeys	HA	No
African swine fever	Viral	Domestic pig and Wild boar	HA	No
American Foulbrood	Bacterial	Bees	ZB	No
Anthrax	Bacterial	Cattle; Sheep and Goats; Horses, Donkeys	AR	Yes
Ascariasis	Parasitic	Pigs	._#	No
Aujeszky's disease	Viral	Pigs	AR	No
Avian chlamydiosis	Bacterial	Poultry	ZB	Yes
Avian Influenza	Viral	Poultry	HA	Yes
Besnoitiosis	Parasitic	Cattle	AR	No
Bluetongue disease	Viral	Cattle; Sheep and Goats; Camelids	ZB	No
Border Disease	Viral	Ruminants (Sheep, Goats); Cattle; Wild ruminants	ZB	No
Botulism	Bacterial	Cattle; Sheep and Goats; Poultry; Horses, Donkeys	._#	No
Bovine Respiratory Disease	Bacterial	Cattle	HA	No
Bovine spongiform Encephalopathy (BSE), Scrapie and other transmissible spongiform encephalopathies (TSE)	Prions	All animal species, sheep, goats, cattle, wild ruminants, cats, zoo animals	AR	Yes
Bovine Viral Diarrhea	Viral	Cattle	AR	No
Brucellosis	Bacterial	Cattle; Sheep; Goats; Alpacas; Llamas; Pigs; Dogs; Horse, Donkeys	AR	Yes
Brucellosis	Bacterial	Odd-toe ungulates; Carnivores and Lagomorphs	ZU	

Brucellosis of rams	Bacterial	Sheep	ZB	Yes
Campylobacter fetus	Bacterial	Cattle	AR	No
Campylobacteriosis	Bacterial	Cattle; Pigs; Sheep and Goats; Poultry, wild birds; Dogs, Cats, Rodents	ZU	Yes
Caprine Arthritis and Encephalitis	Viral	Sheep and Goats	ZB	No
Caseous Lymphadenitis	Bacterial	Sheep and Goats; Horses, Donkeys, Cattle, Pigs, Dogs	ZU	Yes
Cattle Grubs	Parasitic larvae	Cattle, Goats, Deer, Horses, Donkeys	ZB	No
Chlamydial abortion in sheep and goats	Bacterial	Cattle; Sheep and Goats	ZU	Yes
Chronic Wasting Disease	Prions	Deer, Reindeer and Moose (Cervids)	NA	No
Circovirus Type 2 of pigs	Viral	Pigs	NA	No
Classical Swine Fever	Viral	Pigs	HA	No
Clostridioides difficile infection	Bacterial	Cattle; Pigs; Sheep and Goats	-.#	Yes
Contagious Equine Metritis	Bacterial	Horses, Donkeys, Mule, Zebras	ZB	No
Coxiellosis in animals and Q fever in humans	Bacterial	Cattle; Sheep and Goats; Dogs, Cats, Rabbits, Rodents, Wildlife	ZU	Yes
Crayfish Plague	Fungus	Crab	ZB	No
Cryptosporidiosis	Unicellular parasites	Cattle; Pigs; Sheep and Goats; Poultry; Horses, Donkeys, Cats, Dogs, Rodents	ZU	Yes
Cysticercosis	Cestode	Cattle; Pigs	-.#	Yes
Ebola virus disease	Viral	Monkeys	ZU	Yes
Echinococcosis	Cestodes	Dogs	ZU	Yes
Enterohaemorrhagic <i>Escherichia coli</i> (EHEC)	Bacterial	Fish, Poultry, Dogs, Rabbits, Cattle; Sheep and Goats; Pigs	-.#	Yes
Enzootic Bovine Leukosis (EBL)	Viral	Cattle; Sheep and Goats	AR	No
Enzootic Pneumonia of Swine	Bacterial	Pigs	ZB	No
Epizootic Hematopoietic Necrosis	Viral	Fish	HA	No
Epizootic Hemorrhagic Disease (EHD)	Viral	Wild and domestic ruminants	ZB	No
Equine Encephalomyelitis (Eastern and Western) and Japanese Encephalitis	Viral	Horses, Donkeys	ZU	Yes
Equine infectious Anemia	Viral	Horses, Donkeys	AR	No

Equine Viral Arteritis	Protozoan	Horses, Donkeys	AR	No
Equine Viral Arteritis	Viral	Horses, Donkeys, Mules	ZU	No
Erysipelas	Bacterial	Pigs; Sheep and Goats; Poultry	.#	Yes
European Foulbrood	Bacterial	Bees	ZB	No
Foot rot	Bacterial	Sheep and Goats	ZB	No
Foot-and-mouth disease (FMD)	Viral	Cattle, Pigs, Goats, Sheep	HA	No
Glanders (<i>Burkholderia mallei</i>)	Bacterial	Horses, Donkeys, Mules, Dogs and Felids	HA	Yes
Hendra virus	Viral	Horses	NA	Yes
Infection of salamanders with <i>Batrachochytrium salamandrivorans</i>	Fungus	Caudate amphibians	ZU	No
Infections of poultry with <i>Salmonella Pullorum</i> , <i>S. Gallinarum</i> or <i>S. arizonae</i>	Bacterial	Poultry	ZU	No
Infectious Agalactia of Sheep and Goats	Bacterial	Sheep and Goats	AR	No
Infectious Anemia of Salmonids	Viral	Fish	AR	No
Infectious Bovine Rhinotracheitis / Infectious Pustular Vulvovaginitis (IBR/IPV)	Viral	Cattle; Sheep and Goats, Pigs, wild even-toed ungulates	AR	No
Infectious Hematopoietic Necrosis	Viral	Fish	AR	No
Infectious Laryngotracheitis in Chickens	Viral	Poultry	ZB	No
Infectious Pancreatic Necrosis in Fish	Viral	Fish	NA	No
Koi Herpesvirus Infection	Viral	Fish (Koi)	ZU	No
Leptospirosis	Bacterial	Ruminants, Pigs, Horses, Donkeys, Dogs, Birds, cold-blooded horses	ZB	Yes
Listeriosis	Bacterial	Ruminants e.g. Cattle, Sheep, Goats; less commonly Horses, Donkeys, Pigs, Rabbits, Birds	ZU	Yes
Liver fluke infection : Dicrocoeliosis / Fasciolosis	Liver flukes	Cattle; Pigs; Sheep and Goats; Horses, Donkeys	.#	No
Louping-III	Viral	Cattle; Sheep and Goats	.#	Yes
Lumpy Skin Disease	Viral	Cattle, Buffaloes, Bisons	HA	No
Maedi-visna	Viral	Sheep and Goats	ZU	No
Mycoplasmosis (<i>Mycoplasma gallisepticum</i> , <i>M. meleagridis</i>)	Bacterial	Chickens and Turkeys	ZU	No

Myxomatosis	Viral	Rabbits	ZB	No
Neosporosis	Parasitic	Dog, Cattle, other ruminants such as Sheep, Goat, wild ruminants, Horses, Donkeys	ZU	No
Newcastle Disease (ND)	Viral	Poultry	HA	Yes
Nipah Virus Encephalitis	Viral	Pigs, Dogs, Cats, Bats	NA	Yes
Ovine Pulmonary Adenomatosis	Viral	Sheep and Goats	ZU	No
Paratuberculosis / Johne's Disease	Bacterial	Cattle; Sheep and Goats, Wild ruminants	ZB	Yes
Pest-des-petits-ruminants	Viral	Cattle; Sheep and Goats; Pigs, wild ruminants	HA	No
Pneumonia in Sheep and Goats	Bacterial	Sheep and Goats	HA	No
Porcine Epidemic Diarrhea (PED)	Viral	Pigs	NA	No
Porcine reproductive and respiratory syndrome (PRRS)	Viral	Pigs	AR	No
Proliferative Kidney Disease in Fish	Parasitic	Fish	ZU	No
Rabbit hemorrhagic Disease	Viral	Rabbits	ZU	No
Rabies	Viral	All mammals; Cattle, Pigs, Sheep and Goats, Horses, Donkeys, Dogs	AR	Yes
Rift Valley Fever	Virus	Cattle; Sheep and Goats, Buffaloes, Camels	HA	Yes
Salmonellosis and Salmonella infection	Bacterial	Cattle; Pigs; Sheep and Goats; Poultry; Horses, Donkeys	ZB	Yes
Sarcocystosis	Parasitic	Cattle; Pigs; Sheep and Goats	-.#	Yes
Schmallenberg virus	Viral	Cattle; Sheep and Goats	NA	No
Scrapie	Prions	Sheep and Goats	AR	No
Sheep and Goat Pox	Viral	Sheep and Goats	HA	No
Small Hive Beetle	Insect	Bees	ZB	No
Sporadic bovine Encephalitis	Not known	Cattle	-.#	No
Staphylococcal Infections	Bacterial	Poultry; Dogs	-.#	Yes
Surra (<i>Trypanosoma evansi</i>)	Parasitic	Equids, Camelids, Ruminants, Pigs, Dog, Wild animal species	ZU	No
Taura syndrome virus infection	Viral	Shrimp	HA	No
Tetanus	Bacterial	Cattle; Pigs; Sheep and Goats; Horses, Donkeys	-.#	No
Tick-borne encephalitis (TBE)	Viral	Cattle; Sheep and Goats; Dogs	-.#	Yes

Toxoplasmosis	Parasitic	Cats, Pigs, Sheep, Goats, Cattle, Horses, Donkeys, Dogs	ZU	Yes
Tracheal Mite Disease (<i>Acarapis woodi</i>)	Mites	Bees	ZU	No
Trichinosis	Parasitic	Fox, Bear, Nutria, Dog, Cat, Pig, Horses, Donkeys, Rat	ZU	Yes
<i>Tritrichomonas foetus</i>	Protozoa	Cattle; Pigs; Cats	AR	No
Tropilaelaps mite infestation	Mites	Bees	ZU	No
Tuberculosis	Bacterial	Cattle; Cats, Dogs, Pigs; Sheep and Goats; Horses, Donkeys	AR	Yes
Tuberculosis	Bacterial	Mammals, excluding animals of the cattle genus, Buffaloes, and Bisons	ZU	
Tularemia	Bacterial	Rodents, Hare, Rabbits, Sheep and Goats; Cattle, Horses, Donkeys, Dogs, Cats, Birds	ZU	Yes
Varroa mite infestation	Mites	Bees	ZU	No
Viral hemorrhagic septicemia	Viral	Fish	AR	No
West Nile Fever	Viral	Horses, Donkeys	ZU	Yes
White Spot Syndrome virus infection	Viral	Shrimp and Crustaceans	ZB	No
Yellowhead virus infection	Viral	Shrimp	HA	No

*AR: Eradicable animal diseases; HA: Highly contagious animal diseases; NA: newly (or re-) emerging diseases (not reportable!); ZB: Controllable animal diseases; ZU: monitored animal diseases; #-: no information provided (notifiable disease not applicable!)

1.12 Required samples and diagnostic tests

For appropriate sampling and diagnostic techniques regarding notifiable diseases, consult:
Animal Health Data – World Organization for Animal Health (WOAH) Technical Disease Cards:
<https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/>

Manual of Diagnostic Tests and Vaccines for Terrestrial Animals:
https://www.woah.org/fileadmin/Home/eng/Health_standards/tahm/A_summry.htm

1.13 Recommendations for disease control and the trade of animals

For recommendations on disease control and trade, see «WOAH-Terrestrial Animal Health Code»:
<https://www.woah.org/en/what-we-do/standards/codes-and-manuals/>

2. Chapter 2 – Personal Hygiene

2.1 General Requirements

Personal hygiene measures play an important role in hygiene-relevant areas.

2.1.1 Jewelry

Jewelry can harbor microorganisms and presents a risk of injury and safety hazards. Furthermore, it interferes with effective hand hygiene. Therefore, no jewelry should be worn on the hands or forearms. Jewelry includes wedding rings and wristwatches.

2.1.2 Hair

Long, loose hair can easily become contaminated or contaminated by the environment. Hair longer than shoulder length should always be tied back and must not come into contact with the patient or the patient's environment.

2.1.3 Fingernails/nail care

Fingernails must be clean, short (2 mm), and rounded, as bacteria can easily accumulate otherwise. Nail polish, gel polish, and/or artificial nails interfere with hand hygiene because they can significantly reduce the effectiveness of disinfection. Bacteria, fungi, or dirt can accumulate at the junctions of artificial nails and are not completely removed by normal handwashing, preventing complete disinfection. Small cracks may form on the surfaces of painted or artificial nails, providing additional grip for microbes. Therefore, nail polish, artificial nails, or gel polish are not allowed.

2.1.4 Mobile phones

The use (touching) of mobile phones in isolation units is strictly prohibited. In general, mobile phones used during work should be disinfected at the end of the shift with an appropriate disinfectant. If your smartphone is in a case, remove it. Carefully wipe the entire phone with a disinfectant wipe, avoiding the charging port, and allow the phone to air dry afterward.

2.1.5 Stethoscope

Stethoscopes must not be worn openly or around the neck in dining areas. They must be cleaned and disinfected according to the disinfection plan between each patient and at the end of the shift. Dedicated stethoscopes are provided for use in the isolation areas.

2.1.6 Food and beverages

Eating and drinking are only permitted in designated break rooms/common rooms and never in a room where animals are treated or kept (e.g., treatment rooms, stables, anesthesia preparation, inpatient area). Food and drinks must not be stored in the refrigerators in the treatment area. This rule serves both to protect your own health and to maintain hygiene in the work area. Food or drinks that are not consumed in designated break rooms can contaminate the work areas (e.g., crumbs, spilled liquids). There is also a risk that microorganisms or other foreign substances may be ingested unnoticed. As a general rule, hands should be washed correctly

before eating. The clear separation of the work area and break area ensures that meals are consumed in a clean and safe environment, while maintaining a high standard of hygiene in the workplace.

2.1.7 Thermometer

The thermometer must be clean and in good working order. During measurement, ensure that the thermometer is positioned correctly. The thermometer must be cleaned or disinfected after each use in accordance with the applicable hygiene regulations. There are separate thermometers in the isolation areas.

2.2 Working clothing

Working clothing must not be worn outside the clinic premises (e.g., shopping at the supermarket, walking outside the area during a break), except when directly or indirectly accompanying an animal from the clinic (e.g., walking within the immediate area of the respective clinic). Moreover, working clothing must not be covered by personal sweaters or similar garments.

In general, working clothing should be:

- changed daily and additionally as needed, especially if visibly soiled
- stored separately from personal clothing
- sent directly to the designated laundry collection containers

For further details, see the hygiene manual of the respective clinics.

2.3 Boots/Shoes

In the treatment rooms and stables of the clinic, shoes or boots that are not worn in private or public areas must be used. They should be closed to protect against contamination and foot injuries. Changing footwear should occur simultaneously with the change of work clothing.

For further details, see the hygiene manual of the respective clinics.

2.4 Personal Protective Equipment (PPE)

Personal protective equipment (PPE) is an important tool for routine infection prevention and control. The use of PPE for standard precautions is intended to reduce the risk of contamination of regular working clothing, skin, and mucous membranes, as well as the transmission of pathogens between patients by veterinary staff. It protects veterinary personnel and reduces the risk of pathogen transmission via clothing to patients, owners, staff, and the public.

Standard precautions should be applied as standard work practice in all clinical situations, including contact with animals and their environment:

- Always perform hand hygiene
- Cover any cuts or wounds
- Wear gloves when in contact with blood/body fluids, broken skin, mucous membranes (e.g. vulvar, preputial, thorough oral examination) or irritating substances such as disinfectants
- Protect clothing when there is a risk of contamination or splashes of blood or body fluids
- Protect mucous membranes when there is a risk of splashes on the eyes or face

2.4.1 Expiration date, storage and choosing the right PPE

Many PPE products have an expiration date because materials can age over time and lose their protective effect (e.g., elastic bands, filter media, coatings). Expired products should no longer be used, as their tested protective performance can no longer be guaranteed. Storage has a significant impact on effectiveness. PPE should be stored in a dry, clean place, protected from direct sunlight, heat, ozone, and chemical vapors, and in accordance with the manufacturer's instructions. Original packaging often offers the best protection against moisture and contamination. Choosing the right mask and gloves is crucial when using cytostatic drugs, chemicals, biological organisms, etc.

2.4.2 Protective clothing

Protective clothing may only be worn in the designated areas and must be changed (orange to red) or removed (yellow/orange to green) before entering other areas. Entering break rooms or offices in protective clothing is strictly prohibited. Protective clothing (except for washable gowns and coveralls) must be disposed immediately after each task. In general, protective clothing (smocks, lab coats, overalls) and work shoes may only be worn when treating animals (e.g., in examination rooms and animal housing areas).

For further details, see the hygiene manual of the respective clinics.

2.4.3 Safety goggles

Situations in which there is a risk to the eyes are clearly indicated by a sign or sticker displaying the safety goggles/eye protection pictogram. Goggles prevent harmful substances (e.g., blood or body fluids, as well as chemicals such as disinfectants, acids, basics and others) and particles from entering the eyes. In most research labs, eye protection is always required when working with chemicals or biohazards or when physical processes are ongoing. Performing procedures that can generate aerosols or splashes with biological material, even in biosafety cabinets (e.g. pipetting, centrifugation, tissue homogenization) require wearing safety goggles as well. Please note: Even if no pictogram is visible, wearing safety goggles may still be required.

2.4.4 Face mask

Wearing a face mask reduces the risk of inhaling infectious agents and the potential to transmit them to the patient. Sometimes a special Filtering Facepiece (FFP) has to be chosen depending on the infectious agent. Example: FFP3 is a respiratory mask that filters at least 99% of particles (liquid or solid) of around 0.6 microns (0.01 to 1 micron) in diameter or larger.

2.4.5 Protective gloves

Protective gloves are required whenever there is a potential risk to the hands (e.g. from heat/cold, sharp objects, chemical or biological exposure). Different types of gloves must be used depending on the specific hazard. It is important to note that gloves are never a substitute for proper hand hygiene.

2.4.6 Shoe covers

Shoe covers are disposable protective coverings for shoes and are required whenever it is necessary to prevent contamination of hygiene-sensitive areas. They also help prevent the introduction or spread of bacteria, viruses, or dust and reduce the risk of cross-contamination.

2.5 Hand hygiene

One of the most common routes for the transmission of infectious agents are our hands. Therefore, hand hygiene is an essential measure for the prevention and control of infections acquired in the clinic. Hand hygiene should be performed according to the WHO guidelines

<https://www.who.int/publications/m/item/five-moments-for-hand-hygiene>

2.5.1 Hand washing

Hand washing is a measure for cleaning the hands but is much less effective at reducing the microbial flora on the hands. Hand washing is not as effective as hand disinfection, but it is essential for the removal of parasites, bacteria, viruses, and/or visible dirt.

Hands should be washed:

- Before starting work and at the end of the workday
- Whenever hands are visibly soiled
- For the mechanical removal of suspected critical pathogens that are particularly resistant to disinfectants (e.g. echinococcus multilocularis, Giardia, etc.)
- Before eating or smoking and after breaks
- Before and after using the toilet



Figure 3: Proper hand-washing procedure.

2.5.2 Hand disinfection

Hand disinfection is one of the most important measures for the prevention and control of nosocomial infections, as it is more effective and faster than hand washing. Hand disinfection should be performed after the hands are completely dry. The procedure is identical to that of hand washing.

Hands should be disinfected:

- Before and after each patient contact
- Before clean, aseptic procedures
- After contact with potentially infectious material (e.g. secretions, excretions)
- After contact with the immediate patient environment
- Before putting on gloves and after removing gloves
- In general: whenever contact with pathogens cannot be excluded.

How:

- Approximately 3 ml undiluted hand disinfectant (about a cupped hand full)
- Entire surface of the hands and wrists must be covered
- Rub thoroughly over both hands, paying special attention to fingertips, thumbs, between fingers and nail folds
- Contact time at least 20 – 30 seconds, additional disinfectant may be necessary if hands are dry before that time

2.5.3 Skin care

Hand hygiene, specifically frequent washing and disinfection, is essential for infection control but can lead to skin damage, dryness and irritation. Thus, remoisturizing is a critical component of a comprehensive hand hygiene program. Alcohol-based hand sanitizers containing emollients are preferred over irritating soaps and detergents to reduce skin damage. A mild hand cream or lotion should regularly be applied after cleansing. Moreover, allergic reactions or intolerances to hand disinfectants and soap are almost always due to pre-existing skin damage. Proper care and protection of the hands ensure healthy skin and are therefore the foundation of good and effective hand hygiene. Skin care products can be used during breaks, at the end of the workday, and at home. Especially during the winter months, cold, low humidity, and dry indoor heating air can impair the protective function of the skin.

2.5.4 Disposal gloves

Wearing gloves does not replace hand disinfection! Gloves should only be worn for as long as necessary. Avoid wearing gloves for long periods of time and remember that gloves are not a substitute for hand disinfection. On the contrary, if used improperly, wearing gloves can promote the spread of germs.

- Hands must be disinfected before putting them on and after removing gloves, but hands must be dry before putting gloves on
- Gloves that have fallen on the floor must be discarded – they are considered contaminated and must not be put back in the box
- Transmission of microbes is just as possible with gloves as with bare hands. Therefore, gloves must be changed between each patient or, in the case of a single patient, when switching from “dirty” to “clean” tasks
- Do not disinfect gloves; disinfection of gloves is ineffective
- Gloves must be disposed of immediately after removal and must never be reused (disposable gloves)
- Empty glove boxes must be replaced in their entirety and must not be refilled

- Touching phones, computer keyboards, displays, etc., should only be done without gloves and with disinfected hands.

For special glove requirements, see the hygiene manual of the respective clinics or laboratory.

2.5.5 Surgical hand disinfection

Surgical hand disinfection must be performed before all invasive/surgical procedures. It serves to prevent perioperative contamination and postoperative infection. It reduces both the transient (contaminating) and resident (naturally occurring) skin flora on the hands of staff. No jewelry, watches, or rings may be worn on the hands, wrists, or forearms. Fingernails must be natural and kept short (no nail polish, artificial nails, or gel nails). The skin must be healthy and well-maintained, as damaged or unhealthy skin cannot be properly disinfected.

Washing and cleaning phase

- Clean forearms, including elbows and hands, with water and hand wash lotion
- Brushing your fingernails is only necessary if required (use a disposable brush if there is dirt residue)
- Rinse with water, keeping hands above elbow level
- Thoroughly dry forearms/hands with low-germ towels
- The washing and cleaning phase can be omitted in the case of series of short procedures (surgery including surgery breaks <60 minutes)

Disinfection phase

- Use rub-in preparations based on alcohol as the active ingredient
- Dispense hand sanitizer from the dispenser (using your elbow) into your dry, cupped hand, taking enough.
- Disinfect hands and forearms, including elbows (30 sec/1 min)
- Disinfection of hands and forearms (30 sec/1 min)
- Disinfection of hands, including wrists
- Use the rubbing technique for hygienic hand disinfection (30 sec/1 min)
- Always keep your hands above elbow level

CAVE: During the prescribed exposure time, hands/forearms must be completely covered with disinfectant, which must be completely dry before the next round is applied. Hand/forearms must not be dried afterwards. Only put on gloves when your hands are completely dry.

3. Chapter 3 – Laboratory biosafety

The Vetsuisse Faculty maintains research and diagnostic laboratories at the campus in Bern and Zurich. These laboratories work according to the following national regulations:

- Ordinance on Handling Organisms in Contained Systems (Containment Ordinance, ContainO)
- Ordinance on the Protection of Workers from Risks Associated with Microorganisms (SAMV)
- Federal Coordination Commission for Occupational Safety FCOS guideline 1871 "Laboratory"

Accordingly, each laboratory implements and maintains a safety concept, which covers the topics:

- Safety organization (incl. responsibility and liability; definition of the biosafety officer and chemical officer and their duties; register of employees)
- Emergency Organization: Planning and Incident Management (incl. emergency contacts; emergency management; incident notification; health records; safety documentation for incident services)
- Risk assessment (incl. notification of activities; list of activities and inventory of biological substances)
- Safety measures and rules of conduct (incl. access restrictions and signaling of the working areas; rules for laboratory safety; personnel training and continued education; laboratory cleaning; waste management; purchase and maintenance of equipment; transport of organisms and infectious biological agents; chemical safety)

The access to laboratories at the Vetsuisse Faculty is strictly limited to employees with specific biosafety training or to accompanied technical service staff and visitors (For details see Table 2).

In addition, diagnostic laboratories for infectious diseases are required to implement and maintain a quality management system according to ISO 17025 that is accredited by the Swiss Accreditation Service. This quality management system must cover not only aspects related to the quality of the diagnostic results, but also of relevance to biosafety and occupational safety.

4. Chapter 4 – Proper handling of veterinary medicinal products (VMP) and drugs

The legal regulations for the use of veterinary medicinal products (VMP) are set out in the Veterinary Medicinal Products Ordinance (VMPO; Systematic Collection of Federal Law 812.212.27; <https://www.fedlex.admin.ch/eli/cc/2004/592/de>). Only VMP used correctly and professionally can achieve the desired effect without causing adverse consequences for humans or animals.

For the careful handling of veterinary medicinal products, the Swiss Veterinary Medical Association (SVMA) provides its guidelines:

https://www.gstsvs.ch/fileadmin/user_upload/GST-SVS/Publikationen/Richtlinien_Umgang_TAM_d.pdf

4.1 Treatment guidelines for prudent use of antibiotics in veterinary medicine

The Federal Food Safety and Veterinary Office (FSVO) and the Swiss Association for Equine Medicine (SVPM) provide treatment guidelines and a corresponding online tool for the prudent use of antibiotics in veterinary medicine for the following animal species:

Online Tool

<https://www.vetpharm.uzh.ch/Cms/AntibioticScout/Index.html>

Dogs and cats

https://www.blv.admin.ch/blv/de/home/tiere/tierarzneimittel/antibiotika/sachgemaesser-antibiotikaeinsatz.html#9_1477385316848_content_blv_de_home_tiere_tierarzneimittel_antibiotika_sachgemaesser-antibiotikaeinsatz_jcr_content_par_tabs

Cattle, pigs, small ruminants and new world camelids

https://www.blv.admin.ch/blv/de/home/tiere/tierarzneimittel/antibiotika/sachgemaesser-antibiotikaeinsatz.html#9_1477385316848_content_blv_de_home_tiere_tierarzneimittel_antibiotika_sachgemaesser-antibiotikaeinsatz_jcr_content_par_tabs

Horses

https://www.svpm-asme.ch/fileadmin/user_upload/SVPM/TAM/abscoutLeitlinienPferd.pdf

4.2 Treatment guidelines on parasitic diseases in dogs, cats, small mammals, and horses

The European Scientific Counsel Companion Animal Parasites (ESCCAP) provides various guidelines on “Parasites in Dogs and Cats, Small Mammals, and Horses”: <https://www.esccap.ch/#guidelines>

Moreover, there is an online tool for the use of antiparasitic drugs in horses, small ruminants and new world camelids: <https://www.vetpharm.uzh.ch/Cms/AntiparasiticScout/index.html>

4.3 Storage and access to VMP and drugs

Each clinic has a dedicated medication storage area for veterinary medicinal products and drugs and maintains a medication register in accordance with legal requirements.

Medicines should be stored under optimal conditions (see label, e.g., appropriate temperature, away from light) in a clean environment and should not be exposed to extreme temperature fluctuations or humidity. They should be well organized (e.g., alphabetically) and opened medication bottles – labeled with the date of opening (DD/MM/YYYY) on the bottle - should be stored separately from stock (e.g., in a different room). The pharmacy/storage area should be inaccessible to unauthorized personnel and animals. Students may access it after proper introduction, as they sometimes prepare treatments.

In the event of accidental self-injection, spraying, contact with the eyes or mouth, or contact with mucous membranes with veterinary medicinal products, the instructions in the Summary of Product Characteristics (SPC) must be followed, and the supervisor must be informed. Moreover, a notification must be made in SAFELY or eCIRS. Medical attention may be required if necessary.

4.3.1 Controlled substances (CS)

Controlled substances (CS) must be stored in a secure room or safe, and only active clinicians should have access via code or key. Students are not allowed to remove controlled substances. In addition, a documentation requirement applies.

The documentation covers the receipt of goods, removal, use on animals, and disposal. Every movement of a CS must be recorded in a traceable manner in order to prevent theft, shortages, and misuse.

The CS may only be administered on the instructions of a veterinarian. The dosage, animal species, weight, and indication must be carefully checked. Residues and expired CS must be disposed in accordance with legal requirements (Federal Act on Narcotics and Psychotropic Substances (NarcA), Systematic Collection of Federal Law 812.121; https://www.fedlex.admin.ch/eli/cc/1952/241_241_245/en)

The aim of these measures is to ensure the safety of patients, staff, and operations, and to ensure compliance with legal requirements.

4.4 Preparation of treatments with VMPs and drugs

The preparation of treatments with VMPs and drugs should be carried out by technical staff or clinicians, or by students under direct supervision or after proper instruction. During preparation, contamination from other VMPs and drugs or dirt must be avoided. Therefore, hand disinfection should be performed before each preparation of VMPs and drugs. For parenteral drugs, the rubber stoppers of the vials should be wiped with alcohol before each puncture. New (sterile) syringes and needles should be used for treatment preparation. Needles and syringes used to administer VMPs, and drugs should never be reused, either for other patients or for the same patient.

The date of opening or breaking the sterility seal should be clearly marked on the respective immediate or primary containers (e.g. bottle, etc.). This also applies to any liquids. The format of the date must be DD/MM/YYYY (e.g. 01/DEC/2025 instead of 01.12.2025 or 2025-12-01, etc.).

General rules:

- Avoid recapping needles
- Use a new needle for injection after preparation
- Preparation of toxic or hazardous drugs should be performed under safe conditions, i.e., using appropriate PPE (depending on the medication: gloves, safety goggles, mask, if indicated under a fume hood or safety cabinet) and not in the presence of unprotected people
- Some medications (e.g., ampicillin) should not be prepared in advance due to their very short shelf life
- The name of the medication should be clearly labeled
- Certain VMPs and drugs are not to be prepared or administered by pregnant or breastfeeding women (e.g. cytostatic drugs)

4.5 Return of VMPs and drugs / expired VMPs and drugs

VMPs and drugs that are no longer needed or cannot be returned to the pharmacy must be disposed in designated waste containers as hazardous waste (see Chapter 5).

5. Chapter 5 – Hazardous waste (e.g. chemicals, sharps, old/expired or cytostatic drugs)

Hazardous waste must be stored exclusively in closed areas with access restricted to authorized people. Hazardous waste must also be separated according to waste categories (e.g. halogenated or non-halogenated waste; organic or inorganic; solid or liquid) and the separation according to human and veterinary medical origin is not always clear and should be carried out to the best of one's knowledge and belief.

Original and UN disposal containers (or canisters, white buckets, or blue containers (yellow/red lid)) may be used for storage, transfer, and transport. Containers have an expiration date and may be used for the transport of hazardous materials for a maximum of five years after the manufacturing date.

Containers must be tightly sealed and kept clean on the outside. Moreover, the correct labeling of containers is essential for compliant sorting and triage.

Minimal requirements for the correct labelling are:

- Substance/Chemical name
- Concentration
- Name and Address of the Supplier
- Laboratory number
- Date of disposal

Labelling containers with for example "various chemicals", "solid waste", "smelly" or "hazardous waste" cannot be disposed. Hazardous waste must be stored in containment trays and interim storage of hazardous waste shall be minimized, and disposal shall take place at the next available pickup date.

UN – Canister for liquid hazardous waste:

- UN – White Canister: e.g. acids, alkalis, waste oil, heavy metals, cytostatic drugs, antibiotics
- UN – Yellow Canister: Solvents, non-halogenated, chlorine-free (e.g. acetone, ethanol, methanol)
- UN – Blue Canister: solvents, halogenated (e.g. chloroform, dichloromethane)
-

UN – White buckets with lids:

These are suitable for hazardous waste, laboratory chemicals/contaminated materials in original containers and medications (filled with absorbent like vermiculite); contaminated materials must be separated according to the following criteria: organic/inorganic; solid/liquid.

UN 1H2/Y15-30/S – Blue disposal containers with lids (red; yellow):

- Only with declaration of contents
- Red lid: Radiochemistry (H3, C14) in original containers
- Yellow lid: ONLY clinical and laboratory waste, biological and infectious waste
-

All storage and handling, must comply with the relevant laws, regulations, and guidelines: Environmental Protection Act (USG), Ordinance on Waste Traffic (VeVA), The Ordinance on the Avoidance and Disposal of Waste (ADWO), Chemicals Act (ChemA), Ordinance on the Transport of Dangerous Goods by Road (ADR), Guidance on Healthcare Waste Disposal (2021), Safe Handling of Cytostatic (SUVA), Enforcement assistance for disposal of medical waste (FOEN).

Table 4: Examples of the categorization of hazardous waste.




Category	VeVA Code	UN Number	Example	Note
Waste posing a risk of injury "Sharps"	18 02 01 Sharps	UN 3291	Cannulas, Needles, Blades, Scalpels, Glass Tubes, Microscope slides	Hazardous waste disposal. Place in puncture-resistant, shatterproof, and liquid-tight containers.
Expired Veterinary Medicinal Products	18 02 08	Non-hazardous waste	Medications past their use-by date, contaminated containers	
Expired Human Medicinal Products	18 01 09	Non-hazardous waste	Medications past their use-by date, contaminated containers	
Cytostatic Drugs of Veterinary Medicine Origin	18 02 07	UN 3249	Bottles containing > 20 ml; material contaminated with high levels of cytostatic drugs	
Cytostatic Drugs of Human Medicine Origin	18 01 08	UN 3249	Bottles containing > 20 ml	
Cytostatic Drugs (Waste or packaging contaminated with very low levels of cytostatic drugs or with few residues)	15 02 02	Non-hazardous waste	Bottles containing < 20 ml; swabs, arm sleeves, gloves, respiratory masks, disposable gowns, plastic and paper materials, cleaning wipes	Soaked cleaning wipes can be disposed as 18 02 07 S or 18 01 08 S as well
Waste with danger of contamination "contagious"	18 02 98	UN 3291	With RG2 contaminated waste, material etc.	
Waste with danger of contamination "infectious waste"	18 02 02	UN 3549	With RG3 and RG4 contaminated waste, material etc.	

6. Chapter 6 – Personal protection

6.1 General rescue, prohibition, warning, mandatory, and fire signs

The International Organization for Standardization (ISO) 7010 defines the following types of safety signs: rescue / emergency signs (category E001–E076); prohibition signs (category P001–P081); warning signs (category W001–W089); mandatory signs (category M001–M072); fire safety signs (category F001–F019). The colors to be used for these signs are specified in ISO 3864.

Table 5: Exemplary safety signs used at the Vetsuisse Faculty Campus.

Rescue / Emergency sign	Prohibition sign	Warning sign	Mandatory sign	Fire safety sign
Emergency exit (left)	No access for unauthorized persons	Radioactive material or ionizing radiation	Wear a laboratory coat	Fire extinguisher
				
Automated external heart defibrillator (AED)	No access for people with active implanted cardiac devices	Biological hazard	Wear protective clothing	Fire hose reel
				
Evacuation assembly point	No eating or drinking	Flammable material	Wash your hands	Fire ladder
				

6.2 General emergency numbers in Switzerland

Table 6: General emergency numbers in Switzerland.

Area of responsibility / Emergency	Phone
General emergency number	112
Police	117
Fire brigade	118
Ambulance / Medical service	144
Poisoning / Chemical exposure (toxicological information centre)	145

For more details consult the corresponding emergency posters which are placed throughout the whole campus or check out the following links:

University of Bern:

https://www.unibe.ch/e809/e878/e880/e896/e34024/e1071413/e1071962/Notfallbroschure_A4_englisch_fin_al_ger.pdf

University of Zurich:

<https://www.su.uzh.ch/de/notfallapp-standorte/UZH-Allgemein.html>

6.3 Behavior in case of fire

When the Fire Alarm sounds, act immediately to ensure your safety. Never ignore the alarm and do not assume it is a false alarm or just a test. Everyone must evacuate the building by way of the safest and closest exit and/or stairway. Do not use an elevator during an alarm. Once you are outside the building, go as quickly as possible to the allotted evacuation assembly point. Do not re-enter the building until you are told by the fire department.

6.4 Working alone

A person is working alone if they cannot be helped immediately after an accident or in a critical situation. Before a person is allowed to work alone, they must provide evidence that they have been instructed in accordance with their task. Suitability of the person working alone:

1. Mental suitability: no anxiety, insecurity, etc.
2. Physical suitability: no diabetes, asthma attacks, addiction, etc.
3. Intellectual suitability: understanding instructions, making decisions, etc.

Moreover, the hazardous situation must be determined.

There are guidelines of the Swiss Accident Insurance Fund (SUVA) available in different languages.

6.5 Handling of «sharps» and objects with risk of injury

Injuries caused by injection needles are among the most common occupational accidents in veterinary medicine. The most frequent needle-stick injury is accidental self-injection. Needle-stick injuries occurring during procedures such as fine-needle aspirations are potential sources of zoonotic pathogens.

“Sharps” include, for example, trocars, capillaries, scalpels, injection needles, and glass pipettes. They must be collected separately in puncture-resistant, rigid, opaque, leak-proof plastic containers that can be securely closed (e.g. sharps containers or sharps disposal boxes) and cannot be reopened once sealed. Waste posing a risk of injury must be labelled as “sharps” and disposed of as hazardous (special) waste.

The basic principles of safety when handling sharps are:

- The person who generates sharp objects is responsible for their safe disposal
- Sharp and pointed objects must not be passed from hand to hand
- Replace sharps containers when they are full
- Store sharps containers out of the reach of children and animals
- Avoid recapping needles
- When injecting live vaccines or aspirating body substances or tissue, the used syringe with the needle attached should be placed directly into a sharps container to minimize aerosol formation
- Do not remove needle caps with your mouth
- Sharps should not be transferred from one container to another
- Do not store, send, or ship fluid-filled syringes with the needle attached; use a luer lock / syringe cap instead

6.6 All accidents, including bites, scratches, and being bumped into or kicked by an animal

In general, veterinarians and animal caretakers should be able to recognize animal behaviors and situations that are associated with an increased risk of biting. Professional judgment should be applied when preventing bites. The same applies to the prevention of horn injuries, kick injuries, and crushing injuries caused by cattle or equids. Precautionary measures may include physical restraint (appropriate fixation techniques or muzzles) or chemical restraint (sedation or anesthesia). Staff should always be alerted to changes in patient behavior that may precede a bite attempt. If a dog shows excessive aggressive behavior or if humans or animals have been seriously injured, this must be reported to the cantonal veterinary authority in accordance with Article 78 of the Animal Welfare Ordinance (TSV). Appropriate equipment such as muzzles in various sizes, bite-resistant gloves, halters, nose tongs, or a cattle crush should be readily available. This equipment should also be as easy to clean up as possible.

If you are bitten or scratched by an animal (e.g., dog or cat):

Wash the wound immediately and thoroughly with water and soap, then disinfect it. Seek medical attention, and an accident report must be filed without delay. If the bite wound becomes increasingly painful or swollen, if discharge develops, or if the person develops fever or swollen lymph nodes, medical attention should be sought as soon as possible. The physician will decide whether antimicrobial therapy, a tetanus vaccination, or additional treatment (e.g., irrigation, debridement, suturing) is required.

All incidents and “almost” accidents in clinics or laboratories must be reported to the biosafety officer (BSO) and to supervisors and filed on Safely (Safely – Incidents).

In Zurich, the eCIRS and BIRS reporting systems are available. In addition, the Division “Safety, Security and Environment” from the University of Zurich offers several occupational medicine SOP’s and information brochures as well as occupational medicine consultations:

<https://www.su.uzh.ch/de/unsere-aufgaben/arbeitssicherheit-gesundheitsschutz/arbeitsmedizin/doku.html>

<https://www.su.uzh.ch/de/unsere-aufgaben/arbeitssicherheit-gesundheitsschutz/arbeitsmedizin/appointment.html>

In Bern, the Safely reporting system must be used (https://unibe.safely.swiss/#/INIncidents_Login_with_Microsoft365) as well as forms that are available in the Department Administration Office (“Formular für Zwischenfälle”).

6.7 Vaccinations for employees

The Swiss Vaccination Schedule contains information on vaccinations recommended in Switzerland. It is issued by the Federal Commission for Vaccination Issues (FCVI) and the Federal Office of Public Health (FOPH):

https://assets.ctfassets.net/fclxf7o732gj/sjNV8hkXML89U96EdDtRS/5d259c1a112797ed4674680e26c03682/Impfplan_schweizerischer_impfplan_2025_DE.pdf

There are three different categories of recommended vaccinations:

1. **Basic vaccinations (General practitioner; employee`s own responsibility to ensure compliance)**
 - MMR (measles, mumps, rubella)
 - Tetanus, diphtheria, pertussis, polio
 - VZV (varicella / varicella-zoster virus; if not previously infected)
2. **Supplementary vaccinations (General practitioner; employee`s own responsibility to ensure compliance)**
 - TBE (tick-borne encephalitis; many employees may be at risk)
 - Hepatitis A or B (depending on individual risk)
 - Pneumococcal vaccination (depending on individual risk)
 - Human papillomavirus (HPV) (depending on individual risk)
3. **Work-related supplementary vaccinations / vaccinations for risk groups (Occupational physician)**
 - Rabies: increased exposure risk and therefore vaccination is recommended for:
 - Practicing veterinarians, veterinary students, veterinary practice assistants, and animal caretakers who have contact with imported mammals or animals of unknown origin
 - Bat researchers and other persons who regularly come into contact with bats in their professional or leisure activities
 - Personnel in laboratories performing rabies diagnostics (moderate risk: serology, histology, pathology), rabies research laboratories, and rabies vaccine production laboratories (high risk)

University of Zurich vaccination concept:

https://www.su.uzh.ch/dam/jcr:957677a1-b0ee-466c-b85d-843290919345/Impfkonzept%20UZH_2025.pdf

6.8 Immunocompromised persons

Immunocompromised individuals should, whenever possible, avoid contact with animals or samples suspected of carrying zoonotic infections. An individual risk assessment should be conducted on a case-by-case basis by a specialist.

6.9 Maternity protections

Certain chemicals (including certain VMPs, drugs and hormones), radioactive isotopes, and microorganisms can be hazardous to health and/or harmful to the fetus. Therefore, it must be ensured that pregnant and breastfeeding women are not exposed to these hazards. To safeguard the health of employees and their children during pregnancy and maternity, the employer must, in accordance with the Swiss Labor Act, assign pregnant and breastfeeding employees to tasks and design their workplaces in a way that protects their health and the health of their child. Women must also be informed of any potential workplace risks during pregnancy at the start of their employment. Moreover, pregnant employees should immediately inform their supervisor as soon as they are aware of their pregnancy. A risk assessment should be conducted for each affected employee and should include the potential hazards associated with their job. Subsequently determine the appropriate course of action regarding the management of the pregnant or nursing mother.

For further information and recommendations, see the Swiss Veterinary Medical Association (SVMA), and the documents on “SAFELY”, namely Guide/Documents/02_Health Protection/08 Maternity Protection.

6.10 Self-medication

Self-medication by employees, students, or other personnel with veterinary drugs is strictly prohibited and can have serious consequences for their own health, but also from a legal and employment perspective.

6.11 Health of staff and students

The health of employees and students is a top priority, both for their own safety and for the protection of others, including animals, on the premises. To prevent infections, the following principles apply: Employees and students who show symptoms of a contagious disease or feel unwell before starting work must stay away from the premises or wear a mask. If someone develops symptoms during their time on site that could indicate a contagious illness, they must immediately: Wear a mask, inform the attending supervising clinician/section chief and occupational safety officer (BSO), go home to reduce the risk of infecting others, and seek medical advice, if necessary, to reduce the risk of infecting others. People who become ill on site must inform their supervisor about the incident. In the case of a confirmed infection, contact tracing and additional protective measures may be required to prevent the spread of disease on the premises.

6.12 Special risks related to infectious diseases

Individuals with a weakened immune system are at higher risk of contracting zoonoses. Immunosuppression may result from disease or medications, but other physiological conditions—such as pregnancy—can also affect immune status. Many diseases and conditions can compromise or alter immune function, including HIV/AIDS, organ failure, diabetes, alcoholism, liver cirrhosis, malnutrition, and autoimmune disorders. All individuals, including students, are required to inform their supervisor before treating or caring for a patient if they have any health conditions (e.g., pregnancy, immunosuppression) that may influence their risk or the consequences of infection with zoonotic pathogens. All disclosures are confidential; however, communication among staff may be necessary to implement appropriate precautionary measures.

7. Chapter 7 - Further responsibilities

7.1 Pest control

Some important diseases, whether zoonotic or not, can be transmitted by vectors such as mice, rats, bats, fleas, ticks, mosquitoes, or flies, as these animals may be infected with the pathogen themselves or mechanically carry it. Therefore, pests in veterinary facilities should be prevented or efficiently controlled.

Examples of control measures are:

- Inspect all animals for ectoparasites upon entry and provide immediate treatment if infestation is detected
- Store open food and waste in sturdy containers with tight-fitting lids
- Promptly dispose of food scraps and other substances (e.g., feces) that may attract rodents or insects
- Eliminate potential rodent nesting sites and carry out active rodent control if necessary
- Seal potential entry points into buildings (e.g., with steel wool or wire mesh under doors or around pipes)
- Keep doors and windows open only when necessary
- Use insect screens on windows; employ insect repellents, traps, or sticky papers
- Avoid standing water around the building, as it can serve as breeding sites for mosquitoes

7.2 Smoking

Smoking is prohibited in all buildings of the university and is only allowed outside in designated areas with an ashtray.

7.3 Visitors/Clients at the Vetsuisse Faculty

Visitors/Clients are not allowed to enter isolation stables. An exception is only permitted in the case of severely deteriorating patients or in case of euthanasia and must follow all biosafety measures. Visitors/Clients must always follow the instructions of veterinary and animal care staff. In general, visits by animals are only allowed when accompanied by a staff member.

7.4 Private animals at the Vetsuisse Faculty

No private animals are allowed in buildings where animals are prohibited. Dogs are only permitted in offices and are not allowed in stables or examination rooms. For special requirements, see the hygiene manual of the respective clinics or laboratories.

7.5 Staff-Owned animals and off-campus animal contact

7.5.1 Scope and rationale

Staff members of the Veterinary Education Establishment (VEE) who keep animals at their private residence or have regular off-campus contact with animals (including livestock, equidae, companion animals, laboratory animals, or wildlife) may constitute a bidirectional biosecurity interface between the VEE and external holdings.

This section regulates preventive measures and mandatory procedures applicable:

- Under routine conditions, and
- During a confirmed or suspected outbreak on campus involving:
 - Multidrug-resistant (MDR) bacteria (e.g. MRSA, ESBL-/AmpC-producing Enterobacterales, carbapenemase producers), or
 - Notifiable infectious diseases under national or international legislation.

The objective is to prevent:

- Dissemination of pathogens from VEE clinics to private holdings, and
- Introduction of pathogens from private holdings into VEE facilities.

7.5.2 Declaration of animal ownership and risk exposure

1. All staff members (including academic staff, clinicians, technicians, animal caretakers, and students with clinical duties) must declare:
 - Ownership or co-ownership of animals kept at home,
 - Regular professional or non-professional contact with off-campus animal holdings (e.g. farms, equestrian facilities), and
 - Involvement in breeding, showing, trading, or animal transport activities.
2. Declarations shall be:
 - Submitted upon employment or assignment to clinical duties,
 - Updated annually, and
 - Immediately updated if the risk profile changes (e.g. acquisition of livestock).
3. Information will be handled confidentially and used solely for biosecurity risk assessment.

7.5.3 Routine preventive measures (non-outbreak situation)

Staff keeping animals at home must:

1. Maintain strict separation of clothing and equipment
 - No clinical clothing, footwear, stethoscopes, instruments, or electronic devices used in animal areas may be taken into private animal environments.
 - Dedicated work shoes and clothing must remain on campus or be laundered according to VEE-approved protocols.
2. Observe personal hygiene protocols
 - Showering and changing clothes before returning to private animal contact is strongly recommended for staff working in high-risk units (e.g. isolation wards, livestock clinics).
3. Avoid cross-use of vehicles and transport equipment
 - Vehicles used for private livestock transport must not be used for clinical patient transport unless cleaned and disinfected according to VEE SOPs.
4. Comply with vaccination and occupational health recommendations, where applicable (e.g. Q fever, rabies).

7.5.4 Measures during an on-campus outbreak

In the event of a confirmed or suspected outbreak involving MDR organisms or a notifiable disease within any VEE unit (small animal clinic, pig clinic, ruminant clinic, equine clinic, or other facility), the following procedures apply:

7.5.4.1 Risk classification

The Biosecurity Officer, in collaboration with the Infection Control Committee, will:

- Assess pathogen characteristics (transmission route, environmental persistence, zoonotic potential),
- Define risk groups of staff based on exposure level,
- Determine required restriction levels.

Risk-based measures may differ between contact personnel, indirect-contact personnel, and non-clinical staff.

7.5.4.2 Enhanced personal biosecurity

Affected staff must:

1. Change clothes and footwear before leaving campus.
2. Shower prior to contact with private animals when:
 - Direct contact with infected/suspect cases occurred, or
 - The pathogen is environmentally stable or highly transmissible.
3. Follow reinforced hand hygiene and disinfection protocols.

7.5.4.3 Temporary restrictions

Depending on the epidemiological risk, the VEE may impose:

- Temporary suspension of staff from clinical duties involving susceptible species if they keep such species at home.
- Temporary prohibition of contact with private livestock or equidae.
- Work reassignment to low-risk units.
- Enhanced screening (e.g. nasal or rectal swabs in MDR outbreaks).

In cases involving notifiable diseases, measures shall align with instructions from the competent veterinary authority.

7.5.4.4 Monitoring and screening

Where indicated (e.g. MDR organism outbreaks):

- Staff may be requested to undergo microbiological screening.
- Persistent carriers may be managed according to occupational health policies.
- Clearance criteria must be defined before resumption of unrestricted clinical work.

7.5.4.5 Reporting obligations

Staff must immediately report to the Biosecurity Officer if:

- Animals kept at home develop clinical signs consistent with the outbreak pathogen, or
- A notifiable disease is diagnosed in their private animals during an on-campus outbreak.

Failure to report constitutes a breach of institutional biosecurity policy.

7.5.4.6 Legal compliance in notifiable disease events

If the outbreak concerns a legally notifiable disease:

- All measures shall comply with national animal health legislation.
- The VEE will cooperate fully with the competent authority.
- Staff may be subject to official movement restrictions or surveillance measures.

7.5.4.7 Ethical and institutional responsibility

As a VEE, the institution has:

- a duty to protect teaching herds and clinical patients,
- a responsibility to prevent zoonotic transmission,
- an obligation to maintain public trust and regulatory compliance.

Staff share responsibility for upholding biosecurity beyond the physical boundaries of the campus.

7.6 Transportation of organisms or potentially infectious biological agents or samples containing such organisms/agents across the Vetsuisse Faculty Campus

The transportation of live organisms, cultures, clinical specimens, tissues, body fluids, excreta, or any material reasonably suspected of containing infectious or potentially infectious biological agents across the Vetsuisse Faculty campus is permitted only under controlled conditions designed to prevent exposure, spillage, environmental contamination, or unauthorized access.

1. Authorization and responsibility

Transport may only be performed by trained personnel. The sender is responsible for correct classification and labelling of the material (e.g. diagnostic specimen, culture, MDR organism, notifiable pathogen) and for ensuring compliance with this policy. High-consequence or notifiable agents require prior notification of the Biosafety Officer.

2. Containment requirements (triple packaging principle)

All materials must be transported using a sealed, leak-proof primary container, placed within a leak-proof secondary container containing absorbent material, and enclosed in a rigid outer container.

- Containers must be resistant to breakage and clearly labeled with:
 - Sender and recipient unit
 - Nature of content (e.g. “diagnostic specimen”)
 - Relevant biohazard symbol where applicable
 - UN 3373 label must also be attached to the outer packaging
- Open transport (e.g. uncovered trays, pockets, handbags) is strictly prohibited.

3. Dedicated routes and handling

Transport must follow predefined internal routes minimizing exposure to public areas, teaching spaces, and food preparation zones. Use of public elevators during peak hours should be avoided when feasible. Specimens must never be left unattended.

4. Time and storage control

Transport should occur without unnecessary delay. If temporary storage is unavoidable, it must occur in designated, access-controlled areas.

5. Incident management

Any spill, container damage, or suspected exposure must be reported immediately to the Biosecurity Officer and managed according to the institutional spill response SOP. The transporter remains responsible until confirmed handover to the receiving unit.

Failure to comply with these requirements constitutes a breach of institutional biosecurity policy and may result in disciplinary measures.

7.6.1 Submission of biological specimens to the Clinical Diagnostic Laboratory in Bern

- All biological specimens submitted to the laboratory by pneumatic tube or by hand at the door of the laboratory must be in a sealed clear plastic bag, accompanied by a written laboratory submission form that includes sufficient information to identify the patient from which the sample was taken, the type of sample submitted, the test or procedure requested, and the name and telephone number of the veterinarian responsible for the patient.
- Liquid biological specimens (blood, urine, ruminal contents, effusions) must be in correctly sealed leak-proof vials, which are placed in a leak-proof clear sealed plastic bag, accompanied by the filled laboratory request form.
- Glass slides (blood smears, cytology smears) must be clearly labelled in pencil on the frosted end with the animal's name, animal's ID or barcode number of the laboratory submission form. Glass slides must be submitted inside rigid slide holders in a sealed clear plastic bag, accompanied by the filled laboratory submission form.

7.7 Cadaver Storage as well as the Transport of Animal Cadavers across the Vetsuisse Faculty Campus

At both sites, the transport of animals to be submitted for necropsy or for cadavers disposal is organized by the respective clinics.

At the **VSF Bern**, animals are transported in a close and leak-safe container to the cooling hall where the disposal container (K1 label according to cantonal laws) is located.

The ITPA operates the public animal cadaver collection for the city of Bern and affiliated municipalities. The opening hours are published in the city of Bern's waste collection calendar.

Deliverers are not permitted to enter the cooling hall or the necropsy hall and must report to the necropsy technician using the calling system. Animal cadavers and domestic slaughtering waste weighing up to 200 kg are accepted. Animal cadavers intended for disposal must be placed by the deliverers in the designated wheelbarrows in the animal cadavers delivery area (green zone) without entering the orange zone. This is done either when the big door is opened or through the disposal flap at the rear of the cooling hall, which is operated by ITPA staff. The animal cadavers are then disposed of by the staff without direct contact with the customer.

Deliverers are not permitted to enter the cooling room. This is clearly indicated by a barrier chain and warning signs. Staff are not permitted to leave the necropsy and cooling area in protective clothing, except for cleaning the green delivery zone.

Large animals from the clinics are transported to the cooling room by clinic staff without entering the cooling room and are then disposed of by the necropsy staff or taken to the necropsy hall for examination. In case of delivery outside of regular opening hours, the clinic staff deposits the animals in the wheelbarrows or uses an appropriate vehicle to deposit the animals in the appropriate area without entering the cooling hall or the necropsy hall.

The designated delivery area outside of the cooling hall must be cleaned and disinfected regularly. If a potential zoonotic case or infectious animal epizootic is delivered, the delivery area outside is cleaned and disinfected with appropriate disinfecting solutions using the installed disinfection mixing device.

At the **VSF Zurich**, large animal cadavers are transported from the clinics to the post mortem room with the forklift truck; during transportation they are covered with a tarpaulin. Small animal cadavers for post mortem examination are transported within a closed cadaver bag, those for direct disposal in a round metal bucket with lid, placed in a cargo bicycle. Cadavers that arrive at the IVPZ originate from the Vetsuisse clinics, from external private clinics and practices, zoos, cantonal veterinary offices and the police (forensic cases) as well as private persons (owners). Deliverers are not permitted to enter the necropsy facilities, including the cold rooms and must report to the necropsy technicians in the facilities or to the office. After working hours and at night, small animal cadavers can be delivered to the small animal clinics (registration desk), where they are stored in a cold room until the following day when they will be delivered to the IVPZ (see above). Large animals can be delivered after calling the large animal clinics warden (telephone number on the board outside the post mortem room), who will accept the cadaver and place it in the cold room at the post mortem facility. These cadavers are stored for short periods, up to 3 days, at 4°C in the dedicated cold rooms in the necropsy facility. The necropsy facilities are cleaned and disinfected by the necropsy technicians on a regular basis and following an SOP defined in the accreditation documents of the IVPZ (STS 0255; ISO/IEC 17025:2017). All cadavers and animal organ remains from the VSF are categorized as "risk material" (K1 residues; labelled according to cantonal laws). The IVPZ serves as a public facility for animal cadaver collection for the city of Zurich. All material of animal origin for disposal collected at the IVPZ, cadavers as well as material collected in containers (fresh organs/tissues, fixed tissues) is disposed at the TMF Extraktionswerk AG Bazenheid, following transportation by the company in compliance with legal requirements of the Canton of Zurich. Containers are collected twice per week; cadavers are collected on a regular basis, upon request by the IVPZ. When owners choose to have their animal cremated at one of the animal crematoria in Switzerland, the cadavers and organ remains are collected in body bags provided by the crematorium and picked up and

transported by the respective crematorium staff according to their work schedule and in full compliance with legal requirements in Switzerland.

7.8 Unnecessary contact with hospitalized animals

Keep unnecessary contact with animals to a minimum. This rule applies in particular to very young animals (puppies and kittens, foals etc.), since they are not fully immunocompetent and not fully vaccinated yet and are therefore more susceptible for a nosocomial infection. On the other hand, any hospitalized patient could potentially carry/harbor a zoonotic infection.