

# VETBIONET

Veterinary Biocontained facility Network for excellence in animal infectiology research and experimentation

**Deliverable D3.5**  
**Training material for specific critical positions in animal high containment facilities**

**Due date of deliverable: September 2018**

**Actual submission date: June 2021 (M52)**

**Start date of the project: March 1<sup>st</sup>, 2017**

**Duration: 60 months**

**Organisation name of lead contractor: IRTA**

**Revision: V1**

<b>Dissemination level</b>	
<b>Public</b>	
<b>Confidential, only for members of the consortium (including Commission Services)</b>	√
<b>Classified, as referred to in Commission Decision 2001/844/EC</b>	

## Table of contents:

1. Summary .....	3
2. Introduction .....	3
3. Results.....	5
4. Conclusions.....	5
5. ANNEX.....	6
<b>ANNEX 1: Training material put on the VetBioNet website.....</b>	<b>6</b>

## 1. Summary

**Objectives:** Work package 3 (WP3, “Best practices for biosafety, biosecurity and quality management in high containment farmed animal facilities”) centres on the elements and principles of the CWA 15793 workshop agreement drafted by the CEN (European Committee for Standardization) in September 2011 (CWA 15793:2011). The CWA 15793:2011 relates to “Laboratory biorisk management”, and WP3 aims to inspect and highlight the specific requirements for the management of high containment farmed animal facilities (HCFAFs).

The objective of Deliverable D3.5 is to produce training materials for specific critical positions for operating HCFAFs.

Using the information gathered by Deliverables D3.4 (“Guidelines of minimum requirements and criteria for training provision and competency assessment”) and D3.10 (“Report on best practice for facility management, including emergency response and planning”) draft PowerPoint presentations were produced and circulated for feedback by project partners involved in WP3 and concerned members of the GOHLD (“Group of High containment Laboratory Directors”).

## 2. Introduction

VetBioNet’s overall objective is to enhance the preparedness of the European Research Area to respond to and to control highly pathogenic (re-)emerging epizootic and zoonotic diseases through the rapid development of diagnostic tests, the generation of experimental data feeding European regulations, and the conception of preventive solutions. One key aspect for this preparedness is to connect a network of veterinary infectious disease research infrastructures being able to undertake experiments with farm or wildlife animals in high containment facilities. For this to be effective, there is a clear need for competent and well-trained staff to run and maintain such facilities.

As part of the VetBioNet Networking Activities, and to help with the (advanced) training of highly qualified staff, this task seeks to produce training material for specific critical positions in HCFAFs.

The only standard available for the management of high containment facilities is the CEN CWA 15793:2011 agreement relating to “Laboratory biorisk management”. Filling the gaps of the CWA 15793:2011, VetBioNet/WP3 strives to advise the project partners and other HCFAFs operators on how to meet the CWA 15793: 2011 standard.

The CWA 15793:2011 standard states that *“The organization shall ensure that personnel that have responsibilities and /or perform tasks that may impact biorisk management in the workplace are competent to do so. Competence levels shall be judged on appropriate education, training and experience. The organization shall define required competency levels and shall maintain records verifying that staff members have attained and demonstrated those levels of competency”* (item 4.4.2.).

This statement implies that all personnel working in a high or maximum containment facility must be properly trained, from animal caretakers to biosafety officers or technical personnel, as all of them “have responsibilities and/or perform tasks that may impact in biorisk management”.

WP3 Task 3.5 (“Competence, training and health monitoring of staff”) set out drafting a questionnaire in an Excel format that was sent to all participating partners (see D3.4 “Guidelines of minimum requirements and criteria for training provision and competency assessment”). This questionnaire queried the staff roles indicated in the CWA 15793:2011 and the specific training and competence requirements that were deemed critical by the VetBioNet partners for running HCFAFs. Based on the requirements identified by this approach, training materials were developed for specific critical positions in animal high containment facilities and transferred to the WP5 lead (“Dissemination, training, data management and technology transfer”) for public sharing on the VetBioNet website.

### 3. Results

Using the partners' feedback to the questionnaire and additional information gathered in D3.4 and D3.10, 9 PowerPoint presentations were produced addressing all scientific, technical and regulatory aspects that cover the specific training requirements identified for various staff categories in HCFAFs. The presentations can be compiled in 6 different training modules covering these role-specific training requirements as is given below:

- Biosafety Officer: Training Module 1 (presentations 1-9)
- Head of Biocontainment Unit: Training Module 1 (presentations 1-9)
- Lab Technician: Training Module 2 (presentations 1-3, 5-7 and 9)
- Animal Care Taker: Training Module 3 (presentations 1-3, 5, 7 and 9)
- Scientists (Principal Investigator, Postdoc, PhD student): Training Module 4 (presentations 1-3, 5, 6, and 9)
- Maintenance staff: Training Module 5 (presentations 1, 2, 5, 7 and 8)
- Security Management staff: Training Module 6 (presentations 6 and 9)

The 9 PowerPoint presentations are listed in ANNEX 1 and can be accessed as PDFs on the VetBioNet website (<https://www.vetbionet.eu/best-practice-guidelines/>).

### 4. Conclusions

The modular training material produced in WP3 Task 3.5 matches the requirements of the CWA 15793:2011 standard on laboratory biorisk management and specifically addresses the training requirements for staff working in terrestrial HCFAFs. Main differences between HCFAFs and high containment laboratories pertain to the animal room being the primary containment, the waste streams being substantially larger and the need to integrate the requirements of the European Directive 2010/63/EU which covers the welfare of animals used for scientific purposes.

The presentations should be considered as a matrix to be modified and updated by each network partner providing details for their facilities and the respective national legislation.

Additional presentations shall be produced on:

- a) Life-long education in biosafety: The knowledge requirements for effective biosafety have developed dramatically over the last 10 to 15 years, with the development of a deeper understanding of the pathogens handled, containment technologies (computing power and mechanical/physical advances) and risk management techniques. Future advances in these fields will require continuous education and refresher training on various biosafety aspects.
- b) Handling of farm animals in biocontainment: The handling and sampling of large animals in the relatively small spaces of high containment units whilst wearing personal protective equipment (often including a ventilated helmet hampering communication) is challenging and bears a high risk unless operators are well trained and competent.
- c) Handling of infected arthropods in biocontainment: This is a highly specialized area and requires additional technical skills as well as an enhanced facility design.

## 5. ANNEX

### **ANNEX 1: Training material put on the VetBioNet website**

1. Hazard criteria and categorization
2. Biocontainment Levels
3. Risk Assessment
4. Commissioning and decommissioning
5. Protective Personnel Equipment
6. Shipping biological materials
7. Waste management
8. Theory and practice of fumigation
9. Biosafety and biosecurity