
Розділ 11. Короткі повідомлення

BIO-SAFETY AND BIO-SECURITY INVOLVED IN WORKING WITH *BRUCELLA* SPECIES AT THE VETERINARY LABORATORY AGENCY, GREAT BRITAIN

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Brucellosis, caused by infection with *Brucella* species, is an important zoonotic disease associated with reproductive disease in cattle, sheep, goats and pigs and febrile disease in humans.

In Great Britain (GB) there are legislations that contribute to maintaining the welfare of animals and health and safety of humans when working with pathogens that are classified as dangerous. Pathogens are classified by both the Advisory Committee on Dangerous Pathogens (ACDP) and the Department for Environment, Food and Rural Affairs (Defra). Classification is based on the inherent hazard of organisms.

The ACDP produces an approved list which classifies dangerous pathogens into four hazard groups. The ACDP hazard groupings are primarily concerned with hazards posed to human health under the Control of Substances Hazardous to Health (COSHH) Regulations. *B. suis*, *B. melitensis*, *B. abortus* and *B. canis* have all been reported to cause human infection by contact with infected material or consumption of unpasteurised infected dairy products. Due to the capability of these *Brucella* species causing severe disease and posing a serious risk to employees, they are listed as ACDP hazard group 3.

The Defra classification of pathogens is for the purpose of preventing the introduction and spread into Great Britain which, if introduced, could cause serious disease and economic loss to the British livestock and poultry industries. This is detailed under the auspices of the Specified Animal Pathogens Order, 2008 (SAPO). Great Britain has been officially Brucellosis free since 1985 therefore due to the risk of spread from the laboratory to the environment and subsequent introduction of infection to livestock *B. abortus*, *B. melitensis*, *B. suis* and *B. ovis* are listed Specified Animal Pathogens and as such require handling within Containment Level 3 laboratories.

Brucella suis has been weaponised in history. GB legislation Anti-Terrorism, Crime and Security Act 2001 (ATCSA) relates to the bio-security of dangerous pathogens and toxins (Schedule 5 pathogens). This schedule is divided into 3 groups (A, B, C) with *B. abortus*, *B. melitensis*, *B. suis* and *B. canis* all listed under group B.

Due to these GB legislative requirements, the hazards associated and to ensure that security is maintained whilst working with *Brucella* species there are a number of measures put into place at the VLA.

This presentation will detail all the bio-security and bio-safety measures in place at VLA for working with *Brucella* species to ensure safety of personnel and prevention of release of the organism into the environment.

БІОБЕЗПЕКА ТА БІОЗАХИСТ ПРИ РОБОТІ З ВИДАМИ *BRUCELLA* У ВЕТЕРИНАРНІЙ ЛАБОРАТОРНІЙ АГЕНЦІЇ, ВЕЛИКОБРИТАНІЯ

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*В статті детально розглядаються заходи щодо забезпечення біобезпеки та біозахисту при роботі з видами *Brucella* у Ветеринарній лабораторній агенції Великобританії. Ці заходи спрямовані на забезпечення безпеки персоналу та запобігання потрапляння небезпечних організмів у довкілля.*

BIOSECURITY & BIOSAFETY AT THE VETERINARY LABORATORIES AGENCY, UK

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Ensuring all work with dangerous pathogens is safely conducted is essential and consists of combination of factors, all aimed to provide a **biosafe and biosecure** working environment. Considerations must be made to ensure that the people working with them are capable, confident, trained and aware of legislation pertaining to working with such hazardous organisms.

Are we clear what we mean by these two terms?

Biosafety: Is the consistent application of safety measures to minimize or prevent exposure to the person handling a biological agent. These persons may be technicians in a laboratory or people in another room in the same building. ie keep dangerous pathogens away from people.

Biosecurity: Means maintaining a biological agent a secure way, usually by physical methods, to ensure it does not constitute a hazard to man or his environment ie keeping dangerous people away from pathogens.

Organisms are defined into categories according to four Hazard Groups (HG) and whether the agent is pathogenic for humans; whether the agent is a hazard to employees; whether the agent is transmissible to the community; and whether there is effective treatment or prophylaxis available.

For some organisms it is very easy to become infected, for example by introduction of an aerosol via the respiratory route, orally or splashes in the eyes.

Considerations need to be made regarding the spread and consequences if the organism is released, or accidents happen in the laboratory or animal accommodation.

Dangerous organisms must be contained by primary containment (the biosafety cabinet) and for small animals a flexible film isolator must be used. The secondary containment is the building itself.

Specialist facilities and experienced staff exist at the Veterinary Laboratories Agency for safe and secure working on dangerous organisms, supported by state – of – the – art equipment and backed up by a strict regime of quality and safety. These will be illustrated in the presentation.

БІОБЕЗПЕКА ТА БІОЗАХИСТ У ВЕТЕРИНАРНІЙ ЛАБОРАТОРНІЙ АГЕНЦІЇ, ВЕЛИКОБРИТАНІЯ

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В статті надано інформацію щодо забезпечення біобезпеки та біозахисту у Ветеринарній лабораторній агенції Великобританії. Основними факторами безпечності при роботі з небезпечними патогенами є надійність та досвідченість персоналу, безпечність зберігання та контроль доступу тощо.

Ветеринарна лабораторна агенція забезпечена спеціалізованими приміщеннями, сучасним обладнанням та досвідченим персоналом для безпечної роботи з небезпечними організмами.