# St George's University of London

# **Security of Pathogens and Toxins**

## **SHEP - 16**

Under Schedule 6 & Part 7 of the Anti-Terrorism Crime & Security Act 2001 (which relates to the Biological Weapons Act 1974) and The Schedule 5 to the Anti-terrorism, Crime and Security Act 2001 (Modification) Order 2012., St. George's University of London (SGUL) is required to keep certain pathogens, toxins and genetically modified organisms under secure storage when not in use and that the numbers of individuals who have access to them is restricted.

Principal Investigators must arrange for freezers or fridges to either be purchased with locks or have locks fitted as required. The Jenner Wing laboratory managers or the Safety Health and Environment office can give advice on the secure storage of biological agents and toxins.

Principal Investigators must complete the Biological Agents - Toxins - Blood use notification form on an annual basis and return it to the <u>Safety, Health and Environment (SHE) Office</u> (extension 5365 / 0637). They should also notify the SHE Office if they acquire any of the following organisms or toxins between the annual submissions of the form.

Definition of organisms or toxins that can affect humans

Under Schedule 5 Anti-terrorism, Crime and Security Act 2001 (Modification) Order 2012

Micro-organisms are defined as

- Intact micro-organisms;
- Micro-organisms which have been genetically modified by any means, but retain the ability to cause serious harm to human health;
- Any nucleic acid deriving from a micro-organism listed in this Schedule (synthetic or naturally derived, contiguous or fragmented, in host chromosomes or in expression vectors) that can encode infectious or replication competent forms of any of the listed micro-organisms;
- Any nucleic acid sequence derived from the micro-organism which when inserted into any other living organism alters or enhances that organism's ability to cause serious harm to human health.

#### Toxins are

- Intact toxins
- Any nucleic acid sequence coding for the toxin, and
- Any genetically modified micro-organism containing any such sequence.

# Organisms and toxins listed under Schedule 5

#### Viruses

- Chikungunya virus
- Congo-crimean haemorrhagic fever virus
- Dengue fever virus
- Eastern equine encephalitis virus

- Ebola virus
- Hantaan virus
- Japanese encephalitis virus
- Junin virus
- Lassa fever virus
- Lymphocytic choriomeningitis virus
- Machupo virus
- Marburg virus
- Monkey pox virus
- Rift Valley fever virus
- Tick-borne encephalitis virus (Russian Spring-Summer encephalitis virus)
- Variola virus
- Venezuelan equine encephalitis virus
- Western equine encephalitis virus
- Yellow fever virus

## Ricckettsiae

- Bartonella
- quintana (Rochalimea quintana, Rickettsia quintana)
- Coxiella burnetii
- Rickettsia prowazeki
- Rickettsia rickettsii

## Bacteria

- Bacillus anthracis
- Brucella abortus
- Brucella melitensis
- Brucella suis
- Burkholderia mallei (Pseudomonas mallei)
- Burkholderia pseudomallei (Pseudomonas pseudomallei)
- Chlamydophila psittaci
- Clostridium botulinum
- Francisella tularensis
- Salmonella typhi
- Shigella dysenteriae
- Vibrio cholerae
- Yersinia pestis

## **Toxins**

- Aflatoxins
- Botulinum toxins
- Clostridium perfringens toxins
- Conotoxin
- Microcystin (Cyanginosin)
- Ricin
- Saxitoxin
- Shiga toxin
- Staphylococcus aureus toxins
- Tetrodotoxin
- Verotoxin

Organisms or toxins that can affect animals as defined under SAPO

Intact pathogens;

- Pathogens which have been attenuated or genetically modified by any means; and
- Any nucleic acid derived from an animal pathogen listed in that Schedule that could produce that pathogen when introduced into a biological system in which the nucleic acid is capable of replicating.

The organisms that are listed under schedule one are as follows

- African horse sickness virus
- African swine fever virus
- Aujesky's disease virus
- Avian influenza viruses that are —
- (a)uncharacterised;

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 (b)Type A viruses which have an intravenous pathogenicity index in six-week-old chickens of greater than 1.2; or

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- (c)Type A viruses H5 or H7 subtype for which nucleotide sequencing has demonstrated multiple basic amino acids at the cleavage site of hæmagglutinin
- Babesia bovis
- Babesia bigemina
- Babesia caballi
- Bacillus anthracis
- Bluetongue virus
- Bovine leucosis virus
- Brucella abortus
- Brucella melitensis
- Brucella ovis
- Brucella suis
- Burkholderia mallei
- Classical swine fever virus
- Cochliomyia hominivorax
- Eastern and Western equine encephalomyelitis viruses
- Echinococcus multilocularis
- Echniococcus granulosus
- Ehrlichia ruminantium
- Equine infectious anemia virus
- Foot and mouth disease virus
- Hendra disease virus
- Histoplasma farciminosum
- Japanese encephalitis virus
- Lumpy skin disease virus
- Mycoplasma agalactiae
- Mycoplasma capricolum sub species capripneumoniae
- Mycoplasma mycoides sub species mycoides SC and mycoides LC variants
- Mycoplasma mycoides var capri

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- Newcastle disease (avian paramyxovirus type 1) viruses which are—
- (a) uncharacterised; or
- (b) have an intracerebral pathogenicity index in one-day-old chicks of 0.4 or more, when not less than 10 million 50% egg infectious doses (EID50) are administered to each bird in the test.

- Nipah disease virus
- Peste des petits ruminants virus
- Rabies virus and all viruses of the genus Lyssavirus
- Rift Valley Fever virus
- Rinderpest virus
- St. Louis equine encephalomyelitis virus
- Sheep and goat pox virus
- Swine vesicular disease virus
- Teschen disease virus
- Theileria annulata
- Theileria equi
- Theileria parva
- Trichinella spiralis
- Trypanosoma brucei
- Trypanosoma congolense
- Trypanosoma equiperdum
- Trypanosoma evansi
- Trypanosoma simiae
- Trypanosoma vivax
- Venezuelan equine encephalomyelitis virus
- Vesicular stomatitis virus
- West Nile virus
- The live virus causing viral hæmorrhagic disease of rabbits