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**Working paper submitted by the Friend of the Chair
on Definitions and Objective Criteria**

Human Pathogens

The following list of human pathogens and toxins was discussed by the Group and recognized to be relevant for developing a list or lists of bacteriological (biological) agents and toxins for specific measures [in particular for initiating or triggering declarations] to strengthen the Convention:

Viruses

1. Crimean-Congo haemorrhagic fever virus
- [2. Chikengunya virus]
3. Eastern encephalitis virus
4. Ebola virus
5. Hantavirus
- [6. Japanese encephalitis virus]
7. Junin virus
8. Lassa fever virus
9. Machupo virus
10. Marburg virus
11. Rift Valley Virus
12. Tick-borne encephalitis virus (Russian spring-summer encephalitis virus)
13. Variola virus (Smallpox virus)
14. Venezuelan encephalitis virus
15. Western encephalitis virus
16. Yellow fever virus
- [17. Kyasanur Forest Fever virus]

Bacteria

1. Bacillus anthracis

2. Brucella spp
3. Chlamydia psittaci
4. Clostridium botulinum
5. Francisella tularensis (tularemia)
6. Pseudomonas (Burkholderia) mallei
7. Pseudomonas (Burkholderia) pseudomallei
8. Yersinia pestis

Rickettsiae

1. Coxiella burnetti
2. Rickettsia prowazekii
3. Rickettsia rickettsii

Fungi

1. Histoplasma capsulatum (incl. var duboisii)

Toxins

1. Abrin (A. precatorius)
2. Botulinum toxins (Clostridium botulinum)
3. Clostridium perfringens (tox)
4. Corynebacterium diphtheriae (tox)
5. Cyanginosins (Microcystins) (Microcystis aeruginosa)
6. Enterotoxins (Staphylococcus aureus)
7. Neurotoxin (Shigella dysenteriae)
8. Ricin (Ricinus communis)
9. Saxitoxin (Gonyaulax catanella)
10. Shigatoxin
11. Tetanus toxin (Clostridium tetani)
12. Tetrodotoxin (Spherooides rufripes)
13. Trichothecene mycotoxins
14. Verrucologen (Myrothecium verrucaria)

Criteria for human pathogens and toxins

The following criteria, which are proposed to be used in combination, were discussed by the Group and recognized to be potentially useful for development of a list of human pathogens and toxins in support of specific measures:

1. Agents known to have been developed, produced, stockpiled or used as weapon;
2. Low infection dose or high toxicity;
3. [Short incubation and] high level of morbidity;
4. High level of contagiousness in population;
5. Infection or intoxication [by variety of route, especially] by respiratory route;
6. High level of incapacity or mortality;
7. No effective prophylaxis (i.e. immune sera, vaccines, antibiotics) and/or therapy commonly available and widely in use;
8. Stability in the environment;
9. Difficulty of detection or identification [at the early stage];
10. Ease of production [and transportation].

Definition of some terms:

morbidity:	ratio of sick to healthy persons;
contagiousness:	capability to be communicable;
incapacity:	lack of physical or intellectual power;
mortality:	ratio of dead to sick persons.

Animal pathogens

The following list of animal pathogens was discussed by the Group for further consideration with a view to developing a future list or lists of bacteriological (biological) agents and toxins, where relevant, for specific measures designed to strengthen the Convention:

1. African swine fever virus
2. Avian influenza virus (Fowl plague virus)
- [3. Bluetongue virus]
- [4. Camel pox virus]
5. Classic swine fever virus
- [6. Contagious bovine (pleuropneumonia)/Mycoplasma mycoides var. mycoides]
- [7. Contagious caprine (pleuropneumonia)/Mycoplasma mycoides var. capri]
8. Foot and mouth virus
- [9. Herpes B virus (monkey)]
- [10. Hog cholera virus]
11. Newcastle disease virus
- [12. Peste des petits ruminants virus]
- [13. Porcine enterovirus type 9]
- [14. Rabies virus]
15. Rinderpest virus (Cattle plague virus)
- [16. Sheep pox virus]
- [17. Teschen disease virus]
- [18. Vesicular stomatitis virus]

Plant pathogens

The following list of plant pathogens was discussed by the Group for further consideration with a view to developing a future list or lists of bacteriological (biological) agents and toxins, where relevant, for specific measures designed to strengthen the Convention:

- [1. Citrus greening disease bacteria]
 2. Colletotrichum coffeanum var. Virulans
 - [3. Chochliobolus miyabeanus]
 4. Dothistroma pini (Scirrhia pini)
 5. Erwinia amylovora
 - [6. Microcyclus ulei]
 - [7. Phytophthora infestans]
 8. Pseudomonas solanacearum
 - [9. Puccinia erianthi]
 - [10. Puccinia graminis]
 - [11. Puccinia striiformis (Puccinia glumarum)]
 12. Pyricularia oryzae
 - [13. Sugar cane Fiji disease virus]
 14. Tilletia indica
 15. Ustilago maydis
 16. Xanthomonas albilineans
 17. Xanthomonas campestris pv citri
 18. Xanthomonas campestris pv oryzae
 - [19. Sclerotinia sclerotiorum]
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