

## Revised forms for the submission of the Confidence-Building Measures

### Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare	Year of last declaration if nothing new to declare
A, part 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (i)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (ii)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (iii)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Please mark the appropriate box(es) for each measure with a tick, and fill in the year of last declaration in the last column where applicable.)

Date: 10.4.2012

State Party to the Convention: Finland

Date of ratification/accession to the Convention: 4.2.1974

National point of contact: Aleksi Vakkuri / MFA

## Confidence-Building Measure "A"

### Form A, part 1 (i)

No maximum containment laboratory exists in Finland.

### Form A, part 1 (ii)

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>1</sup> on a State Party's territory:

Biosafety level 3 <sup>2</sup>	<input type="checkbox"/> / no
Biosafety level 2 <sup>3</sup> (if applicable)	yes / no

Any additional relevant information as appropriate:

Additional information specific to each laboratory working with biological agents at BSL2/BSL3 level follows from these organisations: Centre for Biothreat Preparedness, National Institute of Health and Welfare (THL), University of Helsinki Yersinia Research Laboratory and Department of Virology, Finnish Food Safety Authority (Evira), and Finnish Defence Forces Technical Research Centre (PVTT).

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<sup>1</sup> Microorganisms pathogenic to humans and/or animals

<sup>2</sup> In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.

<sup>3</sup> In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.

## Exchange of Data on Research Centres and Laboratories #1

- 1. Name(s) of the Facility**  
Centre for Biothreat Preparedness
- 2. Responsible public or private organization or company**  
Centre for Military Medicine, Finnish Defence Forces under the Ministry of Defence and the National Institute for Health and Welfare (THL) under Ministry of Social Affairs and Health.
- 3. Location and postal address**  
Tukholmankatu 8 A, FI-00290 Helsinki and Mannerheimintie 166, FI-00300 Helsinki.
- 4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**  
The Centre is financed jointly by the Finnish Defence Forces and National Institute for Health and Welfare (THL).
- 5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m<sup>2</sup>)**  
There are no BSL-4 units at the Centre.
- 6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**  
The Centre for Biothreat Preparedness started its activities in 2005. During 2011, the Centre developed rapid PCR detection assays for selected microbial agents.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>4</sup> on a State Party's territory:**

Biosafety level 3	yes
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<sup>4</sup> Microorganisms pathogenic to humans and/or animals

## Exchange of Data on Research Centres and Laboratories #2

**1. Name(s) of the Facility**

National Institute for Health and Welfare (THL), bacteriological and virological laboratories.

**2. Responsible public or private organization or company**

National Institute for Health and Welfare (THL) under Ministry of Social Affairs and Health.

**3. Location and postal address**

Mannerheimintie 166  
FI-00300 Helsinki

**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Funding from the Ministry of Social Affairs and Health and large variety of external research funding.

**5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m<sup>2</sup>)**

There are no BSL-4 laboratories or other units at this containment level.

**6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

Clinical and environmental microbiological research and reference laboratory facilities exist in Helsinki, Turku, Kuopio and Oulu. Staff of the institute is working mainly with ordinary endemic and epidemic bacteria and viruses with main emphasis on vaccine preventable diseases, enteric pathogens, zoonoses, mycobacteria, enteroviruses, polioviruses, influenza (including 2009 pandemic influenza H1N1), HIV, hepatitis viruses and environmental fungi and bacteria causing human health problems. The Institute manages regional influenza and polio laboratory facilities. The Institute is in charge of biothreat preparedness in public health context, and is the national focal point for International Health Regulations.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>5</sup> on a State Party's territory:**

Biosafety level 3	yes
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**Any additional relevant information as appropriate:**

Three BSL-3 level laboratories: 120m<sup>2</sup> and 20 m<sup>2</sup> in Helsinki (the latter was closed down in 2011) and 80m<sup>2</sup> in Turku.

<sup>5</sup> Microorganisms pathogenic to humans and/or animals

### Exchange of Data on Research Centres and Laboratories #3

**1. Name(s) of the Facility**

Yersinia Research Laboratory

**2. Responsible public or private organization or company**

University of Helsinki

**3. Location and postal address**

Department of Bacteriology and Immunology  
Haartman Institute, University of Helsinki  
Haartmaninkatu 3  
P.O Box 21  
FI-00014 University of Helsinki  
Helsinki, Finland

Yersinia-research home page: [Http://www.helsinki.fi/yersinia/](http://www.helsinki.fi/yersinia/)

**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Academy of Finland, Centre for Military Medicine.

**5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**

No BSL-4 laboratories.

**6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The research is focused on genetics and biosynthesis of lipopolysaccharide (LPS) of *Yersinia pestis*, as well as on the role of LPS in virulence. Molecular evolution studies elucidate the relationships between the species of the genus *Yersinia*. Research work is also conducted on the identification of *Y. pestis* specific bacteriophage receptors.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>6</sup> on a State Party's territory:**

Biosafety level 3	no
Biosafety level 2 (if applicable)	yes

<sup>6</sup> Microorganisms pathogenic to humans and/or animals

**Exchange of Data on Research Centres and Laboratories #4**

**1. Name(s) of the research centre and/or laboratory**

Department of Virology

**2. Responsible public or private organization or company**

University of Helsinki

**3. Location and postal address**

P.O. Box 21  
Haartman Institute  
00014 University of Helsinki

**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

In 2011 funding was received from Helsinki University Hospital EVO-fund, University of Helsinki, National Technology Agency of Finland, Academy of Finland, and Sigrid Jusélius Foundation. A project on detection of biothreat agents (RNA viruses) has been funded by the Centre for Military Medicine (Ministry of Defence), also on-going (funded previous and the next year) a project on haemorrhagic fever diagnostic by the Finnish Advisory Board for Defence.

**5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**

There are no BSL-4 laboratories.

**6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The Helsinki University Viral Zoonoses Group conducts research on virology, cell biology, ecology and epidemiology of zoonotic viruses, especially hantaviruses and certain other rodent-borne and arboviruses occurring in Northern Europe. The research group operates within the Faculty of Medicine, Haartman Institute Department of Virology, and partially the Department of Veterinary Biosciences at the Veterinary Faculty. There is a BSL-3 facility in both faculties. The Viral Zoonoses group is connected to the diagnostic laboratory of viral zoonoses at HUSLAB, Helsinki, and also acts as a WHO Collaborating Centre for Arbo- and Zoonotic Viruses. Principal investigators of the group are Alexander Plyusnin, Antti Vaheeri and Olli Vapalahti.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>7</sup> on a State Party's territory:**

Biosafety level 3	yes
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<sup>7</sup> Microorganisms pathogenic to humans and/or animals

**Exchange of Data on Research Centres and Laboratories #5**

**1. Name(s) of the Facility**

Finnish Food Safety Authority (Evira)

**2. Responsible public or private organization or company**

Finnish Food Safety Authority under the Ministry of Agriculture and Forestry

**3. Location and postal address**

Mustialankatu 3  
FI-00790 Helsinki

**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Financing from the Ministry of Agriculture and Forestry

**5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m<sup>2</sup>)**

None

**6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

Diagnostics, surveillance and reference laboratory activities of animal diseases, zoonotic agents and foodborne pathogens, for example rabies, avian influenza, swine influenza (including pandemic H1N1 in pigs), Newcastle disease, foot and mouth disease, classical swine fever, anthrax, tuberculosis, verotoxic *E. coli*.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>8</sup> on a State Party's territory:**

Biosafety level 3	yes
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**Any additional relevant information as appropriate:**

Evira has six containment level 3+ laboratories, total size 473,5m<sup>2</sup> in addition to biosafety level 2 laboratories.

<sup>8</sup> Microorganisms pathogenic to humans and/or animals



## Exchange of Data on Research Centres and Laboratories #6

**1. Name(s) of the Facility**

Finnish Defence Forces Technical Research Centre (PVTT)

**2. Responsible public or private organization or company**

Finnish Defence Forces Technical Research Centre (PVTT), Finnish Defence Forces under the Ministry of Defence

**3. Location and postal address**

P.O. Box 5 (Paloistentie 20)  
FI-34111 Lakiala  
Finland

**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Finnish Defence Forces

**5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**

No BSL-4 laboratories.

**6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The objective of the research work has been in the development of detection/identification methods for biowarfare microbes and toxins. The main activity in 2011 focused on the mapping of outdoor microbial contamination and testing and evaluation air sampling methods for airborne microbes. A deployable BC-laboratory participated in Nordic military exercises. All biodefence research and exercises were carried out with non-pathogenic strains, or otherwise harmless microbes. In addition, PVTT has been involved in developing of bio affinity molecules based detection kits for ricin toxins.

**If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents<sup>9</sup> on a State Party's territory:**

Biosafety level 3	<input type="checkbox"/>
Biosafety level 2 (if applicable)	<input checked="" type="checkbox"/>

**Any additional relevant information as appropriate:**

\_The deployable BC laboratory was used at BSL2 level during 2011.

<sup>9</sup> Microorganisms pathogenic to humans and/or animals

## **Part 2 Exchange of information on national biological defence research and development programmes**

### **Form A, part 2 (i)**

#### **National biological defence research and development programme Declaration**

Are there any national programmes to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such programmes would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes/No

### **Form A, part 2 (ii, iii)**

#### **National biological defence research and development programmes**

The Finnish Strategy to Secure Vital Functions of Society (2003 and 2006), as well as The Security Strategy for Society (2010) have defined vital functions of Finnish society and established targets and development policies that guide each administrative branch of the government in dealing with its strategic tasks. These strategies called for co-operation between each government sector in combating against new threats towards society. According to the Government Reports on Finnish Security and Defence Policy of 2004 and 2009, terrorism and epidemics caused by infectious diseases were listed as key threats affecting national security.

Based on the above resolutions The Centre for Biothreat Preparedness started operations in Helsinki in May 2005. The Centre combines Finnish scientific and laboratory know-how on biological defence, as well as on biothreat assessment and preparedness. The Centre has actively sought domestic and international collaboration, especially in the field of rapid detection and identification methodologies of selected biological agents. The Centre is composed of two units: the Biological Defence Unit of the Finnish Defence Forces, and the Department of Infectious Disease Surveillance and Control at the National Institute of Health and Welfare (THL). Scientific work is carried out at a biological safety level 3 laboratory at the THL facilities. In addition, the Centre functions within the Biomedicum Helsinki Institute, where work is carried out in close contact with the CB Defence and Environmental Health Centre of the Centre for Military Medicine.

## **Confidence-Building Measure "B"**

### **Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins**

#### **Form B**

#### **Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern<sup>10</sup>**

No unusual animal disease outbreaks were detected. As for human outbreaks, there were two botulism cases, which were shown to be food-borne. More information is available in public:

K Jalava, K Selby, A Pihlajasaari, E Kolho, E Dahlsten, N Forss, T Bäcklund, H Korkeala, T Honkanen-Buzalski, T Hulkko, Y Derman, A Järvinen, H Kotilainen, L Kultanen, P Ruutu, O Lyytikaäinen, M Lindström. Two cases of food-borne botulism in Finland caused by conserved olives, October 2011. *Eurosurveillance*, Volume 16, Issue 49, 08 December 2011

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20034>

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<sup>10</sup> See paragraph 2 of the chapeau to Confidence-Building Measure B.

## Confidence-Building Measure "C"

### Encouragement of publication of results and promotion of use of knowledge

Biedzka-Sarek, M. and Skurnik, M. 2011. **Bacterial escape from the complement system.** In Bacterial Pathogenesis. Molecular and Cellular Mechanisms. Camille Loch and Michel Simonet (Eds.). Horizon Press. pp. 287-304.

Biedzka-Sarek, M., Metso, J., Kateifides, A., Meri, T., Jokiranta, S., Muszynski, A., Radziejewska-Lebrecht, J., Zannis, V., Skurnik, M., and Jauhiainen, M. 2011. Apolipoprotein A-I exerts bactericidal activity against **Yersinia enterocolitica** serotype O:3. Journal of Biological Chemistry 286: 38211-9.

De Castro, C., Kenyon, J.J. Cunneen, M.M., Reeves, P.R., Molinaro, A., Holst, O., and Skurnik, M. 2011. Genetic characterization and structural analysis of the O-specific polysaccharide of **Yersinia pseudotuberculosis** serotype O:1c. Innate Immunity 17: 183-190.

Fredriksson-Ahomaa, M., Nesbakken, T., Skurnik, M., Thisted Lambertz, S., Dickson, J.S., Hoorfar, J., Korkeala, H. 2011. **Yersinia enterocolitica** in pork. In Rapid detection, characterization and enumeration of food-borne pathogens. Hoorfar, J. (Ed.). ASM Press. pp. 195-207.

Guo WP, Lin XD, Wang W, Zhang XH, Chen Y, Cao JH, Ni QX, Li WC, Li MH, Plyusnin A, Zhang YZ. A new subtype of **Thottapalayam virus** carried by the Asian house shrew (*Suncus murinus*) in China. Infect Genet Evol. 2011 Dec;11(8):1862-7. Epub 2011 Jul 27.

Hautala T, Hautala N, Mähönen SM, Sironen T, Pääkkö E, Karttunen A, Salmela PI, Vainio O, Rytty S, Plyusnin A, Vaheri A, Vapalahti O, Kauma H. Young male patients are at elevated risk of developing serious central nervous system complications during acute **Puumala hantavirus** infection. BMC Infectious Diseases 2011, 11:217 doi:10.1186/1471-2334-11-217

*Hautala N, Kauma H, Vapalahti O, Mähönen SM, Vainio O, Vaheri A, Hautala T. Prospective study on ocular findings in acute Puumala hantavirus infection in hospitalised patients. Br J Ophthalmol. 2011 Apr;95(4):559-62. Epub 2010 Aug 1.*

Heyman P, Ceianu CS, Christova I, Tordo N, Beersma M, João Alves M, Lundkvist A, Hukic M, Papa A, Tenorio A, Zelená H, Essbauer S, Visontai I, Golovljova I, Connell J, Nicoletti L, Van Esbroeck M, Gjeruldsen Dudman S, Aberle SW, Avšič-Županc T, Korukluoglu G, Nowakowska A, Klempa B, Ulrich RG, Bino S, Engler O, Opp M, Vaheri A. A five-year perspective on the situation of **haemorrhagic fever with renal syndrome** and status of the hantavirus reservoirs in Europe, 2005-2010. Euro Surveill. 2011 Sep 8;16(36).

Jalava K., Ollgren J., Eklund M., Siitonen A., Kuusi M. Agricultural, socioeconomic and environmental variables as risks for human **verotoxigenic Escherichia coli** (VTEC) infection in Finland. BMC Infect Dis. 2011 Oct 18;11:275.

Jääskeläinen AE, Tonteri E, Sironen T, Pakarinen L, Vaehri A, Vapalahti O. European subtype **tick-borne encephalitis virus** in Ixodes persulcatus ticks. *Emerg Infect Dis.* 2011 Feb;17(2):323-5.

Kenyon, J.J., De Castro, C., Cunneen, M.M., Reeves, P.R., Molinaro, A., Holst, O., and Skurnik, M. 2011. Genetics and Structure of the O-specific polysaccharide of **Yersinia pseudotuberculosis** serotype O:10 and its relationship to *Escherichia coli* O111 and *Salmonella enterica* O35. *Glycobiology* 21:1131-9.

Kiljunen, S., Datta, N., Bengoechea, J. A., Anisimov, A., Dentovskaya, S., Knirel, Y., Holst, O. and Skurnik, M. 2011. Identification of the LPS core of **Yersinia pestis** and **Yersinia pseudotuberculosis** as the receptor for bacteriophage  $\phi$ A1122. *J. Bact.* 193: 4963-4972.

Kinnunen PM, Inkeroinen H, Ilander M, Kallio ER, Heikkilä HP, Koskela E, Mappes T, Palva A, Vaehri A, Kipar A, Vapalahti O. Intracerebral **Borna disease virus** infection of bank voles leading to peripheral spread and reverse transcription of viral RNA. *PLoS One.* 2011;6(8):e23622. Epub 2011 Aug 22.

Kinnunen PM, Henttonen H, Hoffmann B, Kallio ER, Korhase C, Laakkonen J, Niemimaa J, Palva A, Schlegel M, Ali HS, Suominen P, Ulrich RG, Vaehri A, Vapalahti O. **Orthopox virus** infections in Eurasian wild rodents. *Vector Borne Zoonotic Dis.* 2011 Aug;11(8):1133-40. Epub 2011 Mar 31.

Kinnunen PM. Detection, epidemiology and host spectrum of **cowpox and Borna disease virus** infections. Academic dissertation. 2011. University of Helsinki.

Laine J., Uotila T., Anttonen J., Korpela M., Kujansuu E., Lumio J., Huovinen E., Mustonen J., Ruutu P., Virtanen MJ., Kuusi M.; the Pirkanmaa Waterborne Outbreak Study Group. Joint symptoms after a large **waterborne gastroenteritis** outbreak--a controlled, population-based questionnaire study. *Rheumatology (Oxford).* 2011 Nov 24.

Laine O, Joutsu-Korhonen L, Mäkelä S, Mikkelsen J, Pessi T, Tuomisto S, Huhtala H, Libraty D, Vaehri A, Karhunen P, Mustonen J. Polymorphisms of PAI-1 and platelet GP Ia may associate with impairment of renal function and thrombocytopenia in **Puumala hantavirus** infection. *Thromb Res.* 2011 Nov 29.

Laine O, Mäkelä S, Mustonen J, Helminen M, Vaehri A, Lassila R, Joutsu-Korhonen L. Platelet ligands and ADAMTS13 during **Puumala hantavirus** infection and associated thrombocytopenia. *Blood Coagul Fibrinolysis.* 2011 Sep;22(6):468-72.

Laukkanen-Ninios Riikka, Xavier Didelot, Keith A Jolley, Giovanna Morelli, Hannu Korkeala, Vartul Sangal, Paula Kristo, Carina Brehony, Priscilla Imori, Hiroshi Fukushima, Anja Siitonen, Galina Tseneva, Ekaterina Voskressenskaya, Juliana P. Falcao, Camila Mazzoni, Martin CJ Maiden, Elisabeth Carniel, Mikael Skurnik, Mark Achtman. 2011. Population structure of the **Yersinia pseudotuberculosis** complex according to Multilocus Sequence Typing. *Environmental Microbiology* 13: 3114-3127.

Leo, J.C., and Skurnik, M. 2011. Adhesins of human pathogens from the genus **Yersinia**. *Adv. Exp. Med. Biol.* 715:1-15.

Lin XD, Guo WP, Wang W, Zou Y, Hao ZY, Zhou DJ, Dong X, Qu YG, Li MH, Tian HF, Wen JF, Plyusnin A, Xu J, Zhang YZ. Migration of norway rats resulted in the worldwide distribution of **seoul hantavirus** today. *J Virol.* 2012 Jan;86(2):972-81. Epub 2011 Nov 16.

Lyytikäinen O, Kuusi M, Snellman M, Virtanen MJ, Eskola J, Rönkkö E, Ikonen N, Julkunen I, Ziegler T, Ruutu P. Surveillance of **influenza** in Finland during the 2009 pandemic, 10 May 2009 to 8 March 2010. *Euro Surveill.* 2011;16(27).

Mamat, U., Skurnik, M., and Bengoechea, J.A. 2011. **LPS** Core biosynthesis and genetics. In *Bacterial lipopolysaccharides*. Valvano, M. and Knirel, Y. (Eds). Springer Verlag. pp. 237-274.

Matero, P., Hemmilä, H., Tomaso, H., Piiparinen, H., Rantakokko-Jalava, K., Nuotio, L., Nikkari, S. Rapid field detection assays for **Bacillus anthracis**, **Brucella spp.**, **Francisella tularensis** and **Yersinia pestis**. *Clin Microbiol Infect.* 2011 Jan;17(1): 34-43.

Mäkinen J, Marjamäki M, Haanperä-Heikkinen M, Marttila H, Endourova LB, Presnova SE, Mathys V, Bifani P, Ruohonen R, Viljanen MK, Soini H. (2011) Extremely high prevalence of multidrug resistant **tuberculosis** in Murmansk, Russia: a population-based study. *Eur J Clin Microbiol Infect Dis.* 2011 30(9):1119-26

Outinen TK, Mäkelä S, Huhtala H, Hurme M, Meri S, Pörsti I, Sane J, Vaheri A, Syrjänen J, Mustonen J. High pentraxin-3 plasma levels associate with thrombocytopenia in acute **Puumala hantavirus**-induced nephropathia epidemica. *Eur J Clin Microbiol Infect Dis.* 2011 Sep 7.

Outinen TK, Mäkelä SM, Ala-Houhala IO, Huhtala HS, Hurme M, Libraty DH, Oja SS, Pörsti IH, Syrjänen JT, Vaheri A, Mustonen JT. High activity of indoleamine 2,3-dioxygenase is associated with renal insufficiency in **Puumala hantavirus** induced nephropathia epidemica. *J Med Virol.* 2011 Apr;83(4):731-7. doi: 10.1002/jmv.22018.

Plyusnina A, Krajinović LC, Margaletić J, Niemimaa J, Nemirov K, Lundkvist Å, Markotić A, Miletić-Medved M, Avšič-Županc T, Henttonen H, Plyusnin A. Genetic evidence for the presence of two distinct **hantaviruses** associated with Apodemus mice in Croatia and analysis of local strains. *J Med Virol.* 2011 Jan;83(1):108-14.

Rabsztyń, K., Kasperkiewicz, K., Duda, K.A. Li, C-M. Łukasik, M. Radziejewska-Lebrecht, J. Skurnik, M. 2011. Characterization of the anti-ECA antibodies in rabbit antiserum against rough **Yersinia enterocolitica** O:3. *Biochemistry (Moscow).* 76: 832-839.

Ranta J., Matjushin D., Virtanen T., Kuusi M., Viljugrein H., Hofshagen M., Hakkinen M. Bayesian temporal source attribution of foodborne zoonoses: **Campylobacter** in Finland and Norway. *Risk Anal.* 2011 Jul;31(7):1156-71.

Razzauti M, Plyusnina A, Niemimaa J, Henttonen H, Plyusnin A. Co-circulation of two **Puumala hantavirus** lineages in Latvia: a Russian lineage described previously and a novel Latvian lineage. *J Med Virol.* 2012 Feb;84(2):314-8. doi: 10.1002/jmv.22263.

Ravanini P, Hasu E, Huhtamo E, Crobu MG, Ilaria V, Brustia D, Salerno AM, Vapalahti O. Rhabdomyolysis and severe muscular weakness in a traveler diagnosed with **Alkhurma hemorrhagic fever virus** infection. *J Clin Virol.* 2011 Nov;52(3):254-6. Epub 2011 Sep 1.

Ravanini P, Huhtamo E, Hasu E, Rosa F, Costantino S, Crobu MG, Ilaria V, Nicosia AM, Garavelli PL, Vapalahti O. Imported **dengue virus** serotype 3, Yemen to Italy, 2010. *Emerg Infect Dis.* 2011 May;17(5):929-31.

Rimhanen-Finne R., Sakari Jokiranta T., Virtanen MJ., Kuusi M. **Giardia and Cryptosporidium** infection in Finland: a registry-based study of their demographic determinants. *APMIS*. 2011 Nov;119(11):735-40. doi: 10.1111/j.1600-0463.2011.02759.x. Epub 2011 Jul 22.

Sane J, Kurkela S, Levanov L, Nikkari S, Vaehri A, Vapalahti O. Development and evaluation of a real-time RT-PCR assay for **Sindbis** virus detection. *J Virol Methods*. Epub 2011 Nov 3.

Sane J, Laine O, Mäkelä S, Paakkala A, Jarva H, Mustonen J, Vapalahti O, Meri S, Vaehri A. Complement activation in **Puumala hantavirus** infection correlates with disease severity. *Ann Med*. 2011 Apr 15.

Sihvonen, L.M., Toivonen, S., Haukka, K., Kuusi, M., Skurnik, M., and Siitonen, A. 2011. Multilocus variable-number tandem-repeat analysis, pulsed-field electrophoresis, and antibiotic susceptibility patterns in differentiation of sporadic and outbreak-related strains of **Yersinia enterocolitica**. *BMC Microbiology*, 11: 42.

Sihvonen, L.M., Hallanvuo, S., Haukka, K., Skurnik, M., and Siitonen, A. 2011. The ail gene is present in some **Yersinia enterocolitica** biotype 1A strains. *Foodborne Pathogens and Disease* 8: 455-457.

Sihvonen LM, Toivonen S, Haukka K, Kuusi M, Skurnik M, Siitonen A. Multilocus variable-number tandem-repeat analysis, pulsed-field gel electrophoresis, and antimicrobial susceptibility patterns in discrimination of sporadic and outbreak-related strains of **Yersinia enterocolitica**. *BMC Microbiol*. 2011 Feb 25;11:42.

Skurnik, M., Rådström, P., Knutsson, R., Segerman, B., Hallanvuo, S., Thisted Lambertz, S., Korkeala, H., and Fredriksson-Ahomaa, M. 2011. **Yersinia**. In *Molecular Detection of Human Bacterial Pathogens*. Dongyou Liu (ed). CRC Press.

Skurnik, M. and Toivonen, S. 2011. Identification of distinct lipopolysaccharide patterns among **Yersinia enterocolitica** and *Y. enterocolitica* -like bacteria. *Biochemistry (Moscow)*. 76: 823-831.

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## Confidence-Building Measure "E"

### Form E

#### Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures <sup>11</sup>	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(b) Exports of micro-organisms <sup>12</sup> and toxins	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(c) Imports of micro-organisms <sup>11</sup> and toxins	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(d) Biosafety <sup>13</sup> and biosecurity <sup>14</sup>	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No

#### Additional information to form E

Finland's legislation on biological weapons is based on the Biological Weapons Act 257/1975 and Decree 258/1975. Corresponding penal provisions were included in the Penal Code, chapter 11, section 7 b (Breach of the prohibition of biological weapons), with amendment 17/2003. Penal Code (39/1889) chapter 11, section 1 (War Crime), chapter 5, section 3 (Complicity in an offence) and section 6 (Abetting), chapter 34, sections 4 (Health endangerment) and 5 (Aggravated health endangerment), and chapter 34 a (Terrorist offences) are also applicable.

<sup>11</sup> Including guidelines.

<sup>12</sup> Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

<sup>13</sup> In accordance with the latest version of the WHO Laboratory Biosafety Manual or equivalent national or international guidance.

<sup>14</sup> In accordance with the latest version of the WHO Laboratory Biosecurity Guidance or equivalent national or international guidance.

Exports of micro-organisms and toxins are regulated by the Act on the Control of Export of Dual-Use Goods (562/1996, as amended by Acts 891/2000, 884/2001 and 581/2003), Government Decree on the Control of Export of Dual-Use Goods (924/2000 as amended by Decree 924/2000) and EC Council Regulation 1334/2000. Corresponding penal provisions were incorporated in the Penal Code (39/1889), chapter 46, sections 1-3 by Acts 769/1990, 1522/1994 and 706/1997. Since 2003, the authority responsible for export controls of micro-organisms and toxins is the Ministry for Foreign Affairs (Export Control Unit).

Imports of micro-organisms and toxins are regulated by the Biological Weapons Act 257/1975 and Decree 258/1975. Transports of micro-organisms and toxins are also regulated by the EC Council Directives 94/55/EEC and 96/49/EEC, the Communicable Diseases Act 583/1986 (as amended), section 33; Communicable Diseases Decree 786/1986 (as amended); Act on the Transport of Dangerous Goods (719/1994 as amended) and related decrees, Act on Protecting Plant Health (702/2003), section 7, and related decrees, Act on Animal Diseases (55/1980 as amended) and related decrees, Act on Veterinary Border Control (1192/1996 as amended) and related decrees. The corresponding penal provisions are included in the Penal Code (39/1889 as amended), chapter 44, section 2 (Health protection violation), chapter 44, section 13 (Transport of dangerous substances offence) and chapter 46, section 4 (Smuggling).

Biosafety is regulated by the Occupational Safety and Health Act (738/2002), as amended by the Government Decision for Protecting Employees from Work-related Threat Caused by Biological Agents (1155/1993), and Decision of the Ministry of Social Affairs and Health on the Classification of Biological Agents (921/2010). Furthermore, regulations concerning biosafety are included in the Communicable Diseases Act (583/1986) and Decree (786/1986), as well as Gene Technology Act (377/1995) and Government Decree on Gene Technology (928/2004). These biosafety regulations partly overlap with biosecurity; no specific biosecurity legislation exists.

## **Confidence-Building Measure "F"**

### **Form F**

#### **Declaration of past activities in offensive and/or defensive biological research and development programmes**

Nothing to declare.

## **Confidence-Building Measure "G"**

### **Form G**

#### **Declaration of vaccine production facilities**

There are no vaccine production facilities in Finland.