

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 checked="" 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 April 2018

State Party to the Convention: Finland _____

Date of ratification/accession to the Convention: February 4, 1974 _____

National point of contact: Mikael Långström / 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 agents¹ on a State Party's territory:

Biosafety level 3 ²	<input checked="" type="checkbox"/> yes / no
Biosafety level 2 ³ (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; *i*) Yersinia Research Laboratory, *ii*) Department of Virology, *iii*) Department of Food and Environmental Sciences, *iv*) *Clostridium botulinum* laboratory, Finnish Food Safety Authority (Evira) and Finnish Defence Research Agency (FDRA).

¹ Microorganisms pathogenic to humans and/or animals

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

³ 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 for Biothreat Preparedness 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 (m2)

There are no BSL-4 units at the Centre for Biothreat Preparedness.

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 2017, the Centre developed rapid 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 agents⁴ on a State Party's territory:

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

Exchange of Data on Research Centres and Laboratories #2

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 (m²)

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 agents¹ on a State Party's territory:

Biosafety level 3	yes
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¹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #3

1. Name(s) of the Facility

Finnish Defence Research Agency (FDRA)

2. Responsible public or private organization or company

Finnish Defence Research Agency (FDRA), Finnish Defence Forces under the Ministry of Defence.

3. Location and postal address

P.O. Box 5 (Paroistentie 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 and identification methods for biological warfare agents; microbes and toxins. A deployable CBRN field laboratory participated in international military exercises. The BSL-3 level CBRN field laboratory was operated as BSL-2 and BSL-3 containment facility during 2017.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹ on a State Party's territory:

Biosafety level 3	yes
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¹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #4

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 (m2)

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 in Helsinki, and Kuopio. The institute is working mainly with ordinary occurring endemic and epidemic bacteria and viruses with main emphases on vaccine preventable diseases, enteric pathogens, zoonoses, *tuberculosis spp*, polioviruses, avian influenza, coronaviruses, zikavirus, 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. National focal point for IHR started June 2007.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹ on a State Party's territory:

Biosafety level 3	yes
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Any additional relevant information as appropriate:

A BSL-3 level laboratory in Helsinki (120m²).

¹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #5

1. Name(s) of the Facility

Clostridium botulinum laboratory

2. Responsible public or private organization or company

Faculty of Veterinary Medicine, University of Helsinki, Finland

3. Location and postal address

Location

Agnes Sjöbergin katu 2

00790 Helsinki, Finland

Postal address

P.O. Box 66

00014 University of Helsinki, 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

The laboratory is financed by the University of Helsinki. External research funding is received from various sources, including European Research Council, European Commission, Academy of Finland, Finnish Ministry of Agriculture and Forestry, Walter Ehrström Foundation, Finnish Foundation for Veterinary Research, and Finnish food industry.

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

Academic scientific research on the prevalence, epidemiology, genetic heterogeneity, and genetic regulatory mechanisms in *Clostridium botulinum*. Diagnostic services for confirmation of suspected human botulism outbreaks and food safety testing.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹ on a State Party's territory:

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

¹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #6:

- 1. Name(s) of the research centre and/or laboratory**
Department of Virology, Viral Zoonoses Group
- 2. Responsible public or private organization or company**
University of Helsinki
- 3. Location and postal address**
Dept of Virology
Medicum, P.O. Box 21
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**
Major funding from Helsinki University Hospital Funds (EVO), University of Helsinki, Academy of Finland, and Sigrid Jusélius Foundation. EU-IMI ("EbolaMoDRAD" project)
- 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 (HUVZG) 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. Typical viruses that we are growing are Puumala virus, tick-borne encephalitis virus, dengue and Zika viruses. The research group operates within the Faculty of Medicine, 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. The group is led by Olli Vapalahti, other principal investigators are Alexander Plyusnin, and professor Emeritus Antti Vaheri.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹ on a State Party's territory:

Biosafety level 3	yes
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¹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #7

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

Medicum, 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/>

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

Special state subsidy (EVO) for health science research in Finland, the 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-3 or 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 agents¹ on a State Party's territory:

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

¹ 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 programmes 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, toxicology, physical protection, decontamination and other related research.

yes / no

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of each programme.

Form A, part 2 (ii, iii)

National biological defence research and development programmes

The Finnish Security Strategy for Society has 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 since 2003. These strategies (2010, 2017) called for co-operation between each government sector in combating against new threats towards society and outline the general principles for preparedness in Finland. According to the Government Reports on Finnish Foreign and Security Policy 2016, Finland promotes the prevention of proliferation of weapons of mass destruction as well as associated hazardous materials and know-how. Terrorism, epidemics and pandemics are also considered as security threats. The Government's Defence Report 2017 also recognizes CBRN threats. In addition, CBRN protection including biotechnology and engineering have been listed critical for the national defence in Securing the Finnish Defence Technological and Industrial Base –resolution (2016).

The Centre for Biothreat Preparedness started operations in Helsinki in 2005. The Centre combines Finnish scientific and laboratory knowhow 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 Sector of the Finnish Defence Forces, and the Department of Health Security at the National Institute for 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 Research and Development Department 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 pattern⁵

No unusual human or animal disease outbreaks were detected in 2017.

⁵ 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

Selected publications and references in 2017

Bozcal E, Dagdeviren M, Uzel A, Skurnik M. 2017. LuxCDE-LuxAB-based promoter reporter system to monitor the *Yersinia enterocolitica* O:3 gene expression in vivo. *Plos One*, 12(2): e0172877. doi:10.1371/journal.pone.0172877.

Diagne CA, Charbonnel N, Henttonen H, Sironen T, Brouat C. Serological Survey of Zoonotic Viruses in Invasive and Native Commensal Rodents in Senegal, West Africa. *Vector Borne Zoonotic Dis*. 2017 Oct;17(10):730-733. doi: 10.1089/vbz.2017.2135.

Gabriel E, Ramani A, Karow U, Gottardo M, Natarajan K, Gooi LM, Goranci-Buzhala G, Krut O, Peters F, Nikolic M, Kuivanen S, Korhonen E, Smura T, Vapalahti O, Papantonis A, Schmidt-Chanasit J, Riparbelli M, Callaini G, Krönke M, Utermöhlen O, Gopalakrishnan J. Recent Zika Virus Isolates Induce Premature Differentiation of Neural Progenitors in Human Brain Organoids. *Cell Stem Cell*. 2017 Mar 2;20(3):397-406.e5. PMID:28132835 Imp 22.387

Grönthal T, Eklund M, Thomson K, Piiparinen H, Sironen T, Rantala M. Antimicrobial resistance in *Staphylococcus pseudintermedius* and the molecular epidemiology of methicillin-resistant *S. pseudintermedius* in small animals in Finland. *J Antimicrob Chemother*. 2017 Apr 1;72(4):1021-1030. doi: 10.1093/jac/dkw559.

Heitmann A, Jansen S, Lühken R, Leggewie M, Badusche M, Pluskota B, Becker N, Vapalahti O, Schmidt-Chanasit J, Tannich E. Experimental transmission of Zika virus by mosquitoes from central Europe. *Euro Surveill*. 2017 Jan 12;22(2). PMID: 28106528 Imp. 5.983

Kantala T, Kinnunen PM, Oristo S, Jokelainen P, Vapalahti O, Maunula L. Hepatitis E Virus Antibodies in Finnish Veterinarians. *Zoonoses Public Health*. 2017 May;64(3):232-238. Imp 2.574

Kasperkiewicz, K, Eppa, L, Świerzko, AS, Bartłomiejczyk, MA, Żuber, ZM, Siniewicz-Luzeńczyk, K, Mężyk, E, Matsushita, M, Bąk-Romaniszyn, L, Zeman, K, Skurnik, M, Cedzyński, M. Lectin pathway factors in patients suffering from juvenile idiopathic arthritis. *Immunology and Cell Biology*. doi:10.1038/icb.2017.31.

Keller S, Hetzel U, Sironen T, Korzyukov Y, Vapalahti O, Kipar A, Hepojoki J. Co-infecting Reptarenaviruses Can Be Vertically Transmitted in Boa Constrictor. *PLoS Pathog*. 2017 Jan 23;13(1):e1006179.PMID: 28114434 Imp. 7.004

Kuivanen S, Beshpalov MM, Nandania J, Ianevski A, Velagapudi V, De Brabander JK, Kainov DE, Vapalahti O. Obatoclox, saliphenylhalamide and gemcitabine inhibit Zika virus infection in vitro and differentially affect cellular signaling, transcription and metabolism. *Antiviral Res*. 2017 Mar; 139:117-128. PMID: 28049006. Imp 4.909

Kuivanen S, Korhonen EM, Helisten AA, Huhtamo E, Smura T, Vapalahti O. Differences in the growth properties of Zika virus foetal brain isolate and related epidemic strains in vitro. *J Gen Virol*. 2017 Jul;98(7):1744-1748. PubMed PMID: 28699857. Imp. 2.8

Leskinen, K, Pajunen, MI, Varjosalo, M, Fernández-Carrasco H, Bengoechea JA, and Skurnik, M. Several Hfq-dependent alterations in physiology of *Yersinia enterocolitica* O:3 are mediated by derepression of the transcriptional regulator RovM. *Mol Micro* 103: 1065-1091. Doi: 10.1111/mmi.13610.

Leskinen, K, Tuomala, T, Wicklund, A, Horsma-Heikkinen, J, Kuusela, P, Skurnik, M, Kiljunen, S. 2017. Characterization of fRuSau-02, a Twort-like Myoviridae phage isolated from a therapeutic phage cocktail. *Viruses*, Sep 14;9(9). pii: E258. doi: 10.3390/v9090258.

Lindh E, Ek-Kommonen C, Isomursu M, Alasaari J, Vaheri A, Vapalahti O, Huovilainen A. Genetic Characterization of H13 and H16 Influenza A Viruses in Gulls (*Larus* spp.) with Clinically Severe Disease and Concurrent Circovirus Infection. *J Wildl Dis*. 2017 [Epub ahead of print] PMID: 28384060

Mascher, G., Mertaaja, A., Korkeala, H. & Lindström, M. 2017. Neurotoxin synthesis is positively regulated by the sporulation transcription factor Spo0A in *Clostridium botulinum* type E. *Environmental Microbiology*. 19, 10, p. 4287-4300.

Melén K, Kakkola L, He F, Airene K, Vapalahti O, Karlberg H, Mirazimi A, Julkunen I. Production, purification and immunogenicity of recombinant Ebola virus proteins - A comparison of Freund's adjuvant and adjuvant system 03. *J Virol Methods*. 2017;242:35-45. PMID: 28025125

Müller JA, Harms M, Schubert A, Mayer B, Jansen S, Herbeuval JP, Michel D, Mertens T, Vapalahti O, Schmidt-Chanasit J, Münch J. Development of a high-throughput colorimetric Zika virus infection assay. *Med Microbiol Immunol*. 2017 Apr;206(2):175-185. Epub 2017 Feb 7. PMID: 28176006 Imp 2.302

Nokireki T, Sironen T, Smura T, Karkamo V, Sihvonen L, Gadd T. Second case of European bat lyssavirus type 2 detected in a Daubenton's bat in Finland. *Acta Vet Scand*. 2017 Sep 25;59(1):62. doi: 10.1186/s13028-017-0331-y.

Ottman, N., Reunanen, J., Meijerink, M, Pietilä, T., Kainulainen, V., Klievink, J., Huuskonen, L., Aalvink, S., Skurnik, M., Boeren, S., Satokari, R., Mercenier, A., Palva, A., Smidt, H., de Vos, W.M., and Belzer, C. 2017. Pili like proteins of *Akkermansia muciniphila* modulate host immune responses and gut barrier function. *Plos One*, 12(3):e0173004. doi: 10.1371/journal.pone.0173004.

Pöntinen, A., Lindström, M., Skurnik, M., Korkeala, H. Screening of the two-component-system histidine kinases of *Listeria monocytogenes* EGD-e. LiaS is needed for growth under heat, acid, alkali, osmotic, ethanol and oxidative stresses. *Food Microbiology* 65: 36-43.

Rasetti-Escargueil, C., Avril, A., Miethe, S., Mazuet, C., Derman, Y., Selby, K., Thullier, P., Pelat, T., Urbain, R., Fontayne, A., Korkeala, H., Sesardic, D., Hust, M. & Popoff, M. R. 2017. The European AntibotABE Framework Program and Its Update: Development of Innovative Botulinum Antibodies. *Toxins*. 9(10), 309.

Rönnerberg B, Gustafsson Å, Vapalahti O, Emmerich P, Lundkvist Å, Schmidt-Chanasit J, Blomberg J. Compensating for cross-reactions using avidity and computation in a suspension multiplex immunoassay for serotyping of Zika versus other flavivirus infections. *Med Microbiol Immunol*. 2017 Aug 29. [Epub ahead of print] PubMed PMID: 28852878. Imp 3.09

Rönnberg B, Vapalahti O, Goeijenbier M, Reusken C, Gustafsson Å, Blomberg J, Lundkvist Å. Serogrouping and seroepidemiology of North European hantaviruses using a novel broadly targeted synthetic nucleoprotein antigen array. *Infect Ecol Epidemiol*. 2017 Jul 26;7(1):1350086. Imp. not available

Sabouri, S., Sepehrizadeh, Z., Amirpour-Rostami, S., Skurnik, M. 2017. A minireview on the in vitro and in vivo experiments with anti Escherichia coli O157:H7 phages as potential biocontrol and phage therapy agents. *Int J Food Microbiology* 243:52-57.

Seecharran, T, Kalin-Mänttari, L, Koskela, K, Nikkari, S, Dickins, B, Corander, J, Skurnik, M, McNally, A. 2017. Phylogeographic separation and formation of sexually discrete lineages in a global population of *Yersinia pseudotuberculosis*. *Microbial Genomics* Sep 18;3(10):e000133. doi: 10.1099/mgen.0.000133.

Selby, K., Mascher, G., Somervuo, P., Lindström, M. & Korkeala, H. 2017. Heat shock and prolonged heat stress attenuate neurotoxin and sporulation gene expression in group I *Clostridium botulinum* strain ATCC 3502. *PLoS One*. 12, 5: e0176944.

Stefanova, D, Raychev, A, Arezes, J, Ruchala, PP, Gabayan, VR, Skurnik, M, Dillon, BJ, Horwitz, M, Ganz, T, Bulut, Y, and Nemeth, E. 2017. Endogenous hepcidin and its agonist mediate resistance to selected infections by clearing non-transferrin-bound iron. *Blood* 130: 245-257.

Weirich, J., Bräutigam, C., Mühlkamp, M., Franz-Wachtel, M., Macek, B., Meuskens, I, Skurnik, M., Leskinen, K., Bohn, E., Autenrieth, I. and Schütz, M. Identifying components required for OMP biogenesis as novel targets for antivirulence drugs. *Virulence*, DOI: 10.1080/21505594.2016.1278333.

Youssef El Mouali, Hyunehee Kim, Irfan Ahmad, Annelie Brauner, Ying Liu, Mikael Skurnik, Michael Y. Galperin, and Ute Römling. 2017. Stand-alone EAL domain proteins form a distinct subclass of EAL proteins involved in regulation of cell motility and biofilm formation in enterobacteria. *Journal of Bacteriology* 199, doi: 10.1128/JB.00179-17.

<https://www.evira.fi/tietoa-evirasta/esittely/toiminta/tieteellinen-tutkimus/julkaisut/julkaisut-2017/2017-asiantuntijatarkastetut-tieteelliset-artikkelit/>

Confidence-Building Measure "E"

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures ⁶	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 type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(b) Exports of micro-organisms ⁷ and toxins	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(c) Imports of micro-organisms ¹¹ and toxins	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No
(d) Biosafety ⁸ and biosecurity ⁹	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" 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.

⁶ Including guidelines.

⁷ Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

⁸ In accordance with the latest version of the WHO Laboratory Biosafety Manual or equivalent national or international guidance.

⁹ 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).

Exports of biological toxic agents "adapted for use in war" and related equipment, components and materials as listed in the EU Common Military List are regulated by the Act on the Export of Defence Materiel (282/2012). The authority responsible for export controls of the above mentioned biological toxic agents and related equipment, component and materials is the Ministry of Defence.

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 Infectious Diseases Act 1227/2016, section 87; 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 (441/2013), section 63 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 (1227/2016) and Decree (146/2017), 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.