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
A, part I	☐	☐
A, part 2 (i)	☐	☐
A, part 2 (ii)	☐	☐
A, part 2 (iii)	☐	☐
B (i)	☐	☐
B (ii)	☐	☐
C	☐	☐
D	☐	☐
E	☐	☐
F	☐	☐
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: *15 April 2008*

State Party to the Convention: ***Sweden***

Form A, part 1

Exchange of data on research centres and laboratories[1]**#1**

1. Name(s) of facility[2] ***Swedish Defence Research Agency***
   CBRN Defence and Security

2. Responsible public or private organization or company ***Swedish Defence Research Agency***

3. Location and postal address ***Cementvägen 20, SE-901 82 Umeå, Sweden***

   www.foi.se

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

   Ministry of Defence, Ministry for Foreign Affairs, Private Research Grants

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   0

6. If no maximum containment unit, indicate highest level of protection

   BSL3

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

Medical countermeasures against BW

The bacterial pathogens Yersinia pseudotuberculosis, Yersinia pestis (vaccine strains EV76 or KIM5), Francisella tularensis subsp holarctica and Pseudomonas aeruginosa as well as the viruses Hantaviruses, genotype, Puumala, Seoul, Hantaan and Dobrava and Rift Valley Fever virus (phlebovirus) are studied. The focus of the research is to identify and characterise key virulence factors of these pathogens and to evaluate the potential of theses factors as targets for therapy or as protective antigens in component vaccines. In another line of research bioinformatics and functional genomics is used to identify generic targets common to many bacterial pathogens that could serve as targets for generic treatment methods.

[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3]In accordance with the WHO Laboratory Biosafety Manual, 3rd ed. 2004 or equivalent

Methods for identification of BW

Methods are developed for detection and identification of bacteria, viruses and toxins using laser-induced Fluorescence, chip array, a variety of PCR methods, immunological techniques and masspectrometric methods. To be able to evaluate B-detection instruments using BW-stimulants, train NBC-company conscripts and to verify dispersion models field trial capacity for outdoor biological detection is established. The results are published in scientific journals.

Form A, part 1

Exchange of data on research centres and laboratories[4] #2

1. Name(s) of facility[5] — ***SMI:s säkerhetslaboratorium (BSL3-BSL4 Laboratory)***

2. Responsible public or private organization or company — ***Swedish Institute for Infectious Disease Control (SMI)***

3. Location and postal address — ***SMI, SE-171 82 Solna, Sweden***

   www.smittskyddsinstitutet.se

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

   Ministry of Health and Social Affairs (additional grants from Swedish Emergency Management Agency)

5. Number of maximum containment units[6] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   3 (20, 24 and 47)

6. If no maximum containment unit, indicate highest level of protection

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

[4]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
[5]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
[6]In accordance with the WHO Laboratory Biosafety Manual, 3rd ed. 2004 or equivalent

Work on BSL-3 agents

Bacteria. Containment units (BSL-3) are used for diagnostic and research work on bacteria: Bacillus anthracis, Brucella spp, Francisella tularensis, Mycobacterium tuberculosis and Yersinia pestis. Viruses. Containment units (BSL-3) are used for diagnostic and research work on virus: Bunyaviruses, Flaviviruses, Arenaviruses, Rabies viruses, Avian Influensa virus.

Work on BSL-4 agents

Containment units (BSL-4) are used for diagnostic and research work on virus: Bunyaviruses, Flaviviruses, Arenaviruses, Filoviruses, SARS CoV and highly pathogenic Avian influensa virus.

Methods for detection and evaluation of antibiotic resistance

National and international standard methods are used for detection. Cultivation, staining, ELISA, PCR, Q-PCR and microarrays are examples of methods in use. Development of diagnostic methods for BSL-3and BSL-4 agents is based on genetic techniques as well as recombinant technology.

The general goals are to: improve laboratory diagnostics and basic knowledge on highly pathogenic agents. The studies include, in addition to development of efficient and reliable diagnostics, e.g. virulence, pathogenesis, animal models and vaccine development.

The activities are funded mainly by the Swedish Emergency Management Agency, National Board of Health (SoS), Swedish Research Council, and the European Union.

Form A, part 1

Exchange of data on research centres and laboratories[7] **#3**

1. Name(s) of facility[8] — ***National Veterinary Institute***

2. Responsible public or private organization or company — ***National Veterinary Institute***

3. Location and postal address — ***Ulls väg 2 B, Ultuna Campus***
SE-751 89 Uppsala, Sweden

www.sva.se

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

Ministry of Agriculture and grants from the Swedish Emergency Management Agency

5. Number of maximum containment units[9] within the research centre and/or laboratory, with an indication of their respective size (m^2)

0

6. If no maximum containment unit, indicate highest level of protection

4 different containment units are designed according to BSL 3 laboratory work with a total size of 296 m^2

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

[7]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
[8]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
[9]In accordance with the WHO Laboratory Biosafety Manual, 3rd ed. 2004 or equivalent

General description of activities of the National Veterinary Institute

The National Veterinary Institute (SVA) is a Swedish national authority that strives for good animal and human health, a good environment and sustainable food production. SVA is a national and international reference laboratory of some contagious and other serious infectious diseases of animals that may imply a threat to both animal and human health. SVA's most important task is to be well prepared in dealing with these diseases by rapid and reliable diagnosis in order to establish and limit possible outbreaks, to prevent the spread of infection, and to limit economic losses. Research and development is of the utmost importance for solving the tasks and a publication list of relevant biological research can be obtained from SVA. Grants from the Swedish Emergency Management Agency are used for preparedness purposes applied to the development of diagnostic methods for an emergency situation such as natural outbreaks, accidents and/or deliberate release of BSL-3 agents.

Work on BSL-3 micro-organisms

Containment units (BSL 3, 81 m^2) are used for diagnostic work on bacteria: Bacillus anthracis, Brucella spp, Chlamydophila psittaci, Francisella tularensis, Mycobacterium bovis, Mycobacterium tuberculosis and Yersinia pestis.

Containment units (BSL 3, 155 m^2) are used for diagnostic work on virus: Classical Swine Fever (CSF), Hanta virus, Heptatitis E virus, Lymphocytic choriomeningitis virus (LCM), High Pathogenic Avian Influenza (HPAI) virus, Rabies virus, Transmissible Spongiform Encephalopati (TSE), West Nile virus.

Methods for detection and evaluation of antibiotic resistance

National and international standard methods are used for detection. Cultivation, staining, ELISA and PCR are examples of methods in use. Development of diagnostic methods for BSL-3 agents is based on genetic techniques such as real-time PCR. Development of methods to characterise antibiotic resistance in BSL-3 agents is based on phenotypic micro dilutions methods such as (VETmic™), and genetic methods such as PCR and sequencing.

Form A, part 2 (i)

National biological defence research and development programme Declaration

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

YES

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

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Objectives:

Medical countermeasures against BW

The bacterial pathogens Yersinia pseudotuberculosis, Yersinia pestis (vaccine strains EV76 or KIM5), Francisella tularensis subsp holarctica and Pseudomonas aeruginosa as well as the viruses Hantaviruses, genotype, Puumala, Seoul, Hantaan and Dobrava and Rift Valley Fever virus (phlebovirus) are studied. The focus of the research is to identify and characterise key virulence factors of these pathogens and to evaluate the potential of theses factors as targets for therapy or as protective antigens in component vaccines. In another line of research bioinformatics and functional genomics is used to identify generic targets common to many bacterial pathogens that could serve as targets for generic treatment methods.

Methods for identification of BW

Methods are developed for detection and identification of bacteria, viruses and toxins using laser-induced Fluorescence, chip array, a variety of PCR methods, immunological techniques and masspectrometric methods. To be able to evaluate B-detection instruments using BW-stimulants, train NBC-company conscripts and to verify dispersion models field trial capacity for outdoor biological detection is established. The results are published in scientific journals.

2. State the total funding for the programme and its source.

25 million SEK by Ministry of Defence and Ministry for Foreign Affairs

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

YES

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

2%

Form A, part 2 (iii)

National biological defence research and development programme #1

Information under paragraph IX for year 2007 (list of publicly-available papers and reports resulting from the work during the previous 12 months)

Publication of relevant biological research at FOI NBC Defence

The recommendation for publication, at the Swedish Defence Research Agency, is to publish results of biological research in international journals. Some results are published as public FOI-reports, abstract of which are submitted to the NTIS Database (National Technical Information Service). Reprints of scientific papers and FOI-reports can be ordered by writing to:
Swedish Defence Research Agency, SE-901 82 Umeå, Sweden.

List of publications for 2007

Forsberg Å., Guina T. 2007. Type II secretion and type IV pili of *Francisella*. Ann N Y Acad Sci. 1105:187-201.

Bröms, J.E., Francis, M.S., and Forsberg, Å. 2007. Diminished LcrV secretion attenuates Yersinia pseudotuberculosis virulence. J. Bacteriol. 189:8417-8429.

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Larsson P, Svensson K, Karlsson L, Guala D, Granberg M, Forsman M, Johansson A. 2007. Canonical insertion-deletion markers for rapid DNA-based typing of Francisella tularensis. Emerg Infect Dis. 13:1725-32.

Milne TS, Michell SL, Diaper H, Wikström P, Svensson K, Oyston PC, Titball RW. 2007. A 55 kDa hypothetical membrane protein is an iron-regulated virulence factor of Francisella tularensis subsp. novicida U112. J Med Microbiol. 2007 56:1268-76.

Rohmer L, Fong C, Abmayr S, Wasnick M, Larson Freeman TJ, Radey M, Guina T, Svensson K, Hayden HS, Jacobs M, Gallagher LA, Manoil C, Ernst RK, Drees B, Buckley D, Haugen E, Bovee D, Zhou Y, Chang J, Levy R, Lim R, Gillett W, Guenthener D, Kang A, Shaffer SA, Taylor G, Chen J, Gallis B, D'Argenio DA, Forsman M, Olson MV, Goodlett DR, Kaul R, Miller SI, Brittnacher MJ. 2007. Comparison of Francisella tularensis genomes reveals evolutionary events associated with the emergence of human pathogenic strains. Genome Biol. Jun 5;8(6):R102

WHO, Guidelines on Tularemia 2007. Contributors: Tärnvik A, Grunow R., Petersen J., Sjöstedt A.,Titball R., Anda P, Broman T., Chu M., Elkins K., Forsman M., Johansson A., Kosoy M., Pearson A., and Nano F. WHO/CDS/EPR/2007.7, WHO Press, Geneva, ISBN 978 92 4 154737 6
http://www.who.int/csr/resources/publications/deliberate/WHO_CDS_EPR_2007_7/en/index.html

Thelaus J, Forsman M, Andersson A. 2007. Role of productivity and protozoan abundance for the occurrence of predation-resistant bacteria in aquatic system. Microb. Ecol.. Sep 16; [Epub ahead of print]

Chaudhuri R. R, Chuan-Peng Ren C-P, Desmond L, Vincent G, Silman N. J., Brehm J, Elmore M.J., Hudson M.J, Forsman M, Isherwood K. E., Guryčová D., Minton N. P., Titball R.W, Pallen M.J. and

Vipond R. 2007. Genome sequencing shows that European isolates of Francisella tularensis subspecies tularensis isolate are almost identical to US laboratory strain Schu S4. PLoS ONE. Apr 4;2(4):e352

Juraj Lenčo, Martin Hubálek, Pär Larsson, Alena Fučíková, Martin Brychta, Aleš Macela, Jiří Stulík 2007. Proteomics analysis of the Francisella tularensis LVS response to iron restriction: induction of the F. tularensis pathogenicity island proteins IglABC. FEMS Microbiology Letters 269 (1), 11–21.

Keim, P Johansson A, Wagner D. M. 2007 Molecular Epidemiology, Evolution, and Ecology of Francisella. In: Francisella Tularensis: Biology, Pathogenicity, Epidemiology, and Biodefense (Eds. Sjostedt A., Kwaik A. W..Y. A. Metzger D. W., Nano F), Ann N Y Acad Sci. 2007 Jun;1105:30-66.

Larsson P.,2007 The genetic composition and diversity of Francisella tularensis. Thesis, Umeå University. New series No. 1094, ISBN 978-91-7264-288-1

Jonsson P, Kullander F, Vahlberg C, Wästerby P, Tjärnhage T, Olofsson G, Lindgren M, Tiihonen M, Jelger P. 2007. Ultraviolet optical techniques for early-warning detection of biological threats. (FOI-S--2584--SE), (9th International symp. on protection against chemical and biological warfare agents. Proc. CD), (p. 1-6)

Kullander F, Olofsson G, Tjärnhage T. 2007. Slutrapportering projekt 26.2 : fluorescenstekniker för B-detektion. FOI Memo 2294

Kullander F, Jonsson P, Wästerby P, Tjärnhage T, Olofsson G, Lindgren M, Gustafsson O. 2007. Ultraviolett laser- och detektionsteknik för kemisk och biologisk övervakning - förstudie. FOI-R--2332—SE.

Jonsson Per, Kullander Fredrik, Vahlberg Claes, Gustafsson Ove, Tiihonen Mikael, Jelger Pär, Wästerby Per, Tjärnhage Torbjörn, Lindgren Mikael. 2007. Spectral detection of ultraviolet laser induced flurescence from dry biological particles. FOI-S--2623--SE), (7th Joint conf. on Standoff detection for chemical and biological defense.), (p. 1-10)

Form A, part 2 (iii)

National biological defence research and development programme #2

Information under paragraph IX for year 2007 (list of publicly-available papers and reports resulting from the work during the previous 12 months)

Publication of relevant biological research at Swedish Institute for Infectious Disease Control (SMI)

The recommendation for publication, at the Swedish Institute for Infectious Disease Control, is to publish results of biological research in international journals. Reprints of scientific papers can be ordered by writing to:

Centre for microbiological preparedness and Swedish Institute for Infectious Diseases Control, SE-171 82 Solna, Sweden.

A Study of Invasiveness of Different Salmonella serovars based on analysis of the Enter-net database. Eurosuveillance 12(9) Ralfh Wollin

Edvinsson B, Dardé ML, Pelloux H, Evengård B; ESCMID Study Group on Toxoplasmosis.
Rapid genotyping of Toxoplasma gondii by pyrosequencing.
Clin Microbiol Infect. 2007 Apr;13(4):424-9.

Denny J, Threlfall J, Takkinen J, Lofdahl S, Westrell T, Varela C, Adak B,
Boxall N, Ethelberg S, Torpdahl M, Straetemans M, van Pelt W.
Multinational Salmonella Paratyphi B variant Java (Salmonella Java) outbreak,
August - December 2007.
Euro Surveill. 2007 Dec 20;12(12):E071220.2.

Werner S, Boman K, Einemo I, Erntell M, de Jong B, Lindqvist A, Löfdahl M,
Lofdahl S, Meeuwisse A, Ohlen G, Olsson M, Stamer U, Sellstrom E, Andersson Y.
Outbreak of Salmonella Stanley in Sweden associated with alfalfa sprouts,
July-August 2007.
Euro Surveill. 2007 Oct 18;12(10):E071018.2.

Sartz L, De Jong B, Hjertqvist M, Plym-Forshell L, Alsterlund R, Löfdahl S,
Osterman B, Ståhl A, Eriksson E, Hansson HB, Karpman D.
An outbreak of Escherichia coli O157:H7 infection in southern Sweden associated
with consumption of fermented sausage; aspects of sausage production that
increase the risk of contamination.
Epidemiol Infect. 2008 Mar;136(3):370-80. Epub 2007 Apr 20.

Stoltz M, Ahlm C, Lundkvist A, Klingström J. Lambda interferon (IFN-lambda) in serum is decreased in hantavirus-infected patients, and in vitro-established infection is insensitive to treatment

with all IFNs and inhibits IFN-gamma-induced nitric oxide production.
J Virol. 2007 Aug;81(16):8685-91.

Hardestam J, Simon M, Hedlund KO**,** Vaheri A**,** Klingström J, Lundkvist A**.** Ex vivo stability of the rodent-borne Hantaan virus in comparison to that of arthropod-borne members of the Bunyaviridae family.
Appl Environ Microbiol. 2007 Apr;73(8):2547-51.

Morrison HG, McArthur AG, Gillin FD, Aley SB, Adam RD, Olsen GJ, Best AA, Cande WZ, Chen F, Cipriano MJ, Davids BJ, Dawson SC, Elmendorf HG, Hehl AB, Holder ME, Huse SM, Kim UU, Lasek-Nesselquist E, Manning G, Nigam A, Nixon JE, **Palm D**, Passamaneck NE, Prabhu A, Reich CI, Reiner DS, Samuelson J, Svard SG, Sogin ML. Genomic minimalism in the early diverging intestinal parasite Giardia lamblia.
Science. 2007 Sep 28;317(5846):1921-6.
Lauwaet T, Davids BJ, Torres-Escobar A, Birkeland SR, Cipriano MJ, Preheim SP, **Palm D**, Svärd SG, McArthur AG, Gillin FD. Protein phosphatase 2A plays a crucial role in Giardia lamblia differentiation. Mol Biochem Parasitol. 2007 Mar;152(1):80-9. Epub 2006 Dec 22.

S. Bereczky, A. Liljander, I. Rooth, L. Faraja, F. Granath, S.M. Montgomery, A. Färnert. Multiclonal asymptomatic Plasmodium falciparum infections predict a reduced risk of malaria disease in a Tanzanian population. Microbes Infect 9(1), 103-10. (2007).

D. Carpenter, H. Abushama, S. Bereczky, A. Färnert, I. Rooth, M. Troye-Blomberg, R.J. Quinnell, M. Shaw. Immunogenetic control of antibody responsiveness in a malaria endemic area. Hum Immunol 68(3), 165-9. (2007).

M. Vafa, B. Maiga, K. Berzins, M. Hayano, S. Bereczky, A. Dolo, M. Daou, C. Arama, B. Kouriba, A. Färnert, O.K. Doumbo, M. Troye-Blomberg. Associations between the IL-4 -590 T allele and Plasmodium falciparum infection prevalence in asymptomatic Fulani of Mali. Microbes

Abd H. Saeed A**.** Weintraub A. Nair GB. Sandstrom G. Vibrio cholerae O1 strains are facultative intracellular bacteria, able to survive and multiply symbiotically inside the aquatic free-living amoeba Acanthamoeba castellanii. FEMS Microbiology Ecology. 60(1):33-9, 2007 Apr.

Saeed, A., Abd H., Edvinsson Benjamin and Gunnar Sandström (2007). Vibrio cholerae Acanthamoeba castellanii interaction showing endosymbiont-host relation. Symbiosis, 44:153-158

Abd H, Bengt Wretlind, Saeed, Amir, Eva Idsund, Kjell Hultenby, and Gunnar Sandström (2007) Pseudomonas aeruginosa utilises its type III secretion system to kill the free-living amoeba Acanthamoeba castellanii. Accepted. J. Eukaryot. Microbiol. 06-5371 R4.

Hardestam J. Simon M. Hedlund KO. Vaheri A. Klingstrom J. Lundkvist A. Ex vivo stability of the rodent-borne Hantaan virus in comparison to that of arthropod-borne members of the Bunyaviridae family. Applied & Environmental Microbiology. 73(8):2547-51, 2007 Apr.

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Sartorius B. Andersson Y. Velicko I. De Jong B. Löfdahl M. Hedlund KO. Allestam G. Wångsell C. Bergstedt O. Horal P. Ulleryd P. Söderström A. Outbreak of norovirus in Västra Götaland associated with recreational activities at two lakes during August 2004. Scandinavian Journal of Infectious Diseases. 39: 323-32, 2007.

Akerström, S., Mirazimi, A**.,** Tan Y J. Inhibition of SARS-CoV replication cycle by small interference RNAs silencing specific SARS proteins, 71/7b, 3a/3b and S. Antiviral Research. 2007 Mar;73(3):219-27

Birgersdotter, A., Baumforth, K.R.N., Porwit, A., Sundblad, A., Falk, K.I., Wei, W., Sjöberg, J., Murray, P.G., Björkholm, M. & Ernberg, I.: Three-dimensional culturing of the Hodgkin lymphoma cell-line L1236 induces a HL tissue-like gene expression pattern. Leukemia & Lymphoma 48:2042-2053, 2007

Waldenström, J., Lundkvist, Å., Falk, K.I., Garpmo, U., Bergström, S., Lindegren, G., Sjöstedt, A., Mejlon, H., Fransson, T., Haemig, P.D. & Olsen, B.: Migrating birds and tickborne encephalitis virus. Emerging Infet. Dis. 13:1215-1218, 2007

Vene, S., Haglund, M., Lundkvist, Å., Lindquist, L. & Forsgren, M.: Study of the serological response after vaccination against tick-borne encephalitis in Sweden. Vaccine 25:366-372, 2007

Olsson, G.E., Hörnfeldt, B., Hjertqvist, M. & Lundkvist, Å. Sorkfeberprognos: stor smittrisk i Norrland i vinter. Läkartidn. 104:3450-3453, 2007

Nordström, H., Falk, K.I., Nilsson, P. & Lundkvist, Å: DNA microarray technique for detection and identification of viruses causing encephalitis and hemorrhagic fever. In: Cost B28 WG1 Booklet, eds. T. Kostic, P. Butaye, J. Schrenzel, pp. 101-112, 2007

Massa, J., Munger, K.L., O'Reilly, E.J., Falk, K.I. & Ascherio, A.: Plasma titers of antibodies against Epstein-Barr virus BZLF1 and risk of multiple sclerosis. Neuroepi. 28:214-215, 2007

Linde, A. & Falk, K.: Epstein-Barr virus. Chapter 103. In: P.R. Murray, E.J. Baron, J.H. Jorgensen, M.L. Landry & M.A. Pfaller, eds., Manual of Clinical Microbiology 9th edition, vol. 2, pp. 1564-1573, 2007

Kinch, A., Öberg, G., Arvidson, J., Falk, K.I., Linde, A. & Pauksens, K.: Post-transplant lymphoproliferative disease and other Epstein-Barr virus diseases in allogeneic haematopoietic stem cell transplantation after introduction of monitoring of viral load by polymerase chain reaction. Scand. J. Infect. Dis. 39:235-244, 2007

Karlsson, M., Wallensten, A., Lundkvist, Å., Olsen, B. & Brytting, M.: A real-time PCR assay for the monitoring of influenza a virus in wild birds. J. Virol. Meth. 144:27-31, 2007

Chène, A., Donati, D., Guerreiro-Cacais, A., Levitsky, V., Chen, Q., Falk, K.I., Orem, J., Kironde, F., Wahlgren, M. & Bejarano, M.T.: A molecular link between malaria and Epstein-Barr virus reactivation. PLOS Pathogens 3:826-834, 2007

Avsic-Zupanc, T., Petrovec, M., Duh, D., Plyusnina, A., Lundkvist, Å. & -: Puumala hantavirus in Slovenia: Analyses of S and M segment sequences recovered from patients and rodents. Virus Res. 123:204-210, 2007

Form A, part 2 (iii)

National biological defence research and development programme #3

Information under paragraph IX for year 2007 (list of publicly-available papers and reports resulting from the work during the previous 12 months)

Publication of relevant biological research at the National Veterinary Institute:

A list of relevant publications 2007 at the National Veterinary Institute is available for downloading at: http://www.sva.se/sv/navigera/Forskning/Publikationer/

Form B (i)

Background information on outbreaks of reportable infectious human diseases

Disease	2007	2006	Number of reported cases per year 2001	2002	2003	2004	2005
Population	*9182927*		*8908*	*8940*	*8961,593*	*8961,593*	
Amoeba infection	321	259	456	419	416	416	
Atypical mycobacteria	388	348	247	250	269	269	348
Botulism	o	2	0	0	2	2	1
Campylobacter infection	7106	6078	8577	7137	7149	7149	6796
Diphteria	o	0	0	0	0	0	0
EHEC	263	265	96	129	73	73	
Giardiosis	1419	1282	1438	1436	1360	1360	1151
Gonorrhoea	642	677	529	505	596	596	691
Yellow fever	0	0	0	0	0	0	0
Haemophilus infl. type b	-	123	19	21	23	23	
Hepatitis A	69	80	169	76	122	122	93
Hepatitis B	1465	1208	1517	1734	1940	1940	1438
Hepatitis C	2134	1976	3493	3382	3222	3222	2610
Hepatitis D	23	22	9	12	6	6	11
Hepatitis E	8	5	2	5	3	3	10
HIV infection	576	390	277	287	379	379	392

HTLV	10	5	4	7	6	6	7
Pertussis	689	795	979	1350	664	664	1360
Chlamydia	47101	32518	22266	24692	26803	26803	33060
Cholera	0	1	0	0	1	1	1
Legionellosis	130	105	84	94	80	80	107
Listeriosis	56	42	67	40	48	48	40
Malaria	88	93	161	140	113	113	114
Meningococcal infection	49	52	75	47	56	56	58
MRSA	1128	1057	425	442	549	549	975
Anthrax	0	0	0	0	0	0	0
Measels	1	20	5	9	3	3	13
Puumala virus infection (HFRS)	2195	213	361	262	180	180	329
Ornithosis	9	2	12	13	12	12	5
Paratyphoid	27	31	21	25	16	16	21
Plague	0	0	0	0	0	0	0
Pc-resist. Pneumococci	672	631	627	525	562	562	664
Polio	0	0	0	0	0	0	0
Mumps	46	60	22	15	8	8	81
Rabies	0	0	0	0	0	0	0
Rubella	2	3	3	1	0	0	0
Salmonellosis (total)	3933	4056	4711	3894	3794	3794	3571
Salmonellosis (domestic)		1010	671	819	805	805	655

Shigellosis	470	429	540	379	372	372	571
Tetanus	0	1	1	0	0	0	1
Syphilis	239	172	78	128	179	179	99
Toxoplasmosis	-	0	18	10	17	17	
Trichinosis	1	0	0	0	0	0	0
Tuberculosis	508	498	428	418	445	445	575
Tularemia	174	241	27	160	698	698	246
Typhoid	19	12	10	12	14	14	8
Ulcus molle	0	0	1	1	0	0	2
VRE	53	24	18	19	46	46	33
Viral hemorragic fevers		0	0	0	0	0	0
Yersiniosis	567	558	579	610	714	714	742
Relapsing fever		0		0	0	0	0
Total		**55344**	**48352**	**48686**	**50945**	**50945**	**47847**

Brucellosis	10	4				3	14
Cryptosporidiosis	110	103				46	69
Dengue fever	59	54				24	62
Echinococcosis	24	7				9	12
Entamoeba histolytica	8	5					
Streptococcal infection, group A	410	321				119	252
Haemophilius influenzae invasiv	144	123				73	118
Leptospiriosis	1	2				2	3

Pneumococcal infection, invasive	1441	1334				406	1420
Q fever	3	1				1	3
Total						**56822**	

Form B (ii)

Information on outbreaks of infectious human diseases and similar occurrences, that seem to deviate from the normal pattern

There are no cases for the reporting period on outbreaks of infectious human diseases and similar occurrences that seem to deviate from the normal pattern.

Form B (i)

Background information on outbreaks of reportable infectious animal diseases

Disease		Number of outbreaks per year					
	2001	2002	2003	2004	2005	20069	2007[10]
Listeriosis (sheep)	-[11]	-	-	-	-	-	28
Listeriosis (cattle)	-	-	-	-	-	-	4
Listeriosis (Fallow deer)	-	-	-	-	-	-	1
Lymphoma (other than EBL) (Cattle)	-	-	-	-	-	-	18
Lymphoma (Pig)	-	-	-	-	-	-	39
Lymphoma (Ovine)	-	-	-	-	-	-	4
Lymphoma (Dog)	-	-	-	-	-	-	38
Lymphoma (Horse)	-	-	-	-	-	-	6
Lymphoma (Roe deer)	-	-	-	-	-	-	1
VTEC[12]	4	2	0	1	4	1	1
Botulims[13]	0	3	4	5	2	5	4
Blackleg (Cattle)							7
Bovine Malignant catarrh[14]	9	7	7	5	8	2	3
Leptospirosis (Dog)	-	-	-	-	-	-	4
Leptospirosis (Horse)	-	-	-	-	-	-	2
Babesiosis	-	-	-	-	-	-	2
Strangles	-	-	-	-	-	-	82
Equine rhinopneumonitis	-	-	-	-	-	-	6
Contagious eguine metritis / CEM	-	-	-	-	-	-	4
Equine influenza (virus type A)	-	-	-	-	-	-	82
Infectious arteritis of horses	-	-	-	-	-	-	1
Infectious laryngotracheitis (ILT)	-	-	-	-	-	-	12
Avian chlamydiosis (Psittacos)[15]	1	4	3	5	1	5	4

[10] From January – September 2007

[11] Several of the diseases that are reported for 2007 have occurred in past years. They have until now however not been included in this report.

[12] Infections caused by Verocytotoxic E. coli 0157 (often referred to EHEC in many reports) are notifiable in animal if there is an epidemiological link to human infection. Animal species: cattle, goat, elk.

[13] The cases originate from cattle, poultry, mallard, jackdaw, dog, gull

[14] The cases originate from following animals: cattle, sheep

[15] The cases originate from following animals: birds, partridge, parrot

Avian tuberculosis	-	-	-	-	-	-	2
Newcastle disease[16]	1	0	1	1	2	1	1
Post-weaning multisystemic wasting syndrome	-	-	-	-	-	-	37
Porcine reproductive and respiratory syndrome	-	-	-	-	-	-	8
Caprine arthritis/encephalitis	-	-	-	-	-	-	14
TSE in sheep-NOR 98	-	-	-	-	-	-	2
Hepatitis contagiosa canis (HCC) (Dog)	-	-	-	-	-	-	1
Leishmaniosis (Dog)	-	-	-	-	-	-	24
Leishmaniosis (Horse)	-	-	-	-	-	-	1
FeLV (Cat)	-	-	-	-	-	-	19
FIV (Cat)	-	-	-	-	-	-	7
Tularemia[17]	0	4	11	2	5	4	2
Myxomatos (Rabbit)	-	-	-	-	-	-	1
Salmonella infection (Salmonellosis)[18]	-	-	-	-	-	-	
Renibacteriosis (BKD)	-	-	-	-	-	-	2
Infectious pancreatic necrosis (serotype ab)	-	-	-	-	-	-	1
Infectious pancreatic necrosis (other than serotype ab)	-	-	-	-	-	-	2
Other rhabdovirusinfection than VHS	-	-	-	-	-	-	1
Furunculosis	-	-	-	-	-	-	2
Yersinosis	-	-	-	-	-	-	2
Proliferative kidney disease	-	-	-	-	-	-	1
Koi Herpes Virus	-	-	-	-	-	-	4
Epizootic bovine leukosis	-	-	-	-	-	-	1
Maedi-visna	-	-	-	-	-	-	51
Bovine viral diarrhoea	-	-	-	-	-	-	4
Tuberculosis[19]	1	0	0	1	1	0	0

[16] The cases originate from following animals: poultry, fowls, pigeon

[17] The cases originate from following animals: hare, squirrel, monkey

[18] Any findings of Salmonella in animals, humans, feed and food of animal origin is notifiable. Reprints of the annual report “Trends and sources of zoonotic infections recorded in Sweden” can be obtained from the Swedish Zoonosis Center at SVA, which includes Salmonella cases in animals, humans, feed and food.

[19] The cases originate from following animals: elephant. The outbreak of 2004 was diagnosed and confirmed during 2005.

[1] From January – September 2007

[1] Several of the diseases that are reported for 2007 have occurred in past years. They have until now however not been included in this report.

[1] Infections caused by Verocytotoxic E. coli 0157 (often referred to EHEC in many reports) are notifiable in animal if there is an epidemiological link to human infection. Animal species: cattle, goat, elk.

[1] The cases originate from cattle, poultry, mallard, jackdaw, dog, gull

[1] The cases originate from following animals: cattle, sheep

[1] The cases originate from following animals: birds, partridge, parrot

[1] The cases originate from following animals: poultry, fowls, pigeon

[1] The cases originate from following animals: hare, squirrel, monkey

[1] Any findings of Salmonella in animals, humans, feed and food of animal origin is notifiable. Reprints of the annual report “Trends and sources of zoonotic infections recorded in Sweden” can be obtained from the Swedish Zoonosis Center at SVA, which includes Salmonella cases in animals, humans, feed and food.

[1] The cases originate from following animals: elephant. The outbreak of 2004 was diagnosed and confirmed during 2005.

Form B (ii)

Information on outbreaks of infectious animal diseases and similar occurrences, that seem to deviate from the normal pattern

There are no cases for the reporting period on outbreaks of infectious animal diseases and similar occurrences that seem to deviate from the normal pattern.

4. **CONFIDENCE-BUILDING MEASURE "C":**

- **<u>Encouragement of publication of results and promotion of use of knowledge</u>**

See under Form A, part 2 (iii), information provided under paragraph IX.

Form D

Active promotion of contacts #1

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

   For each such event, the following information should be provided:

   - name of the conference, etc.
   - arranging organization(s), etc.
   - time

   - place
   - main subject(s) for the conference, etc.
   - conditions for participation

   - point of contact for further information, registration, etc.

Form E

Declaration of legislation, regulations and other measures

Relating to		Legislation	Regulations	Other measures	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	***YES***	***YES***	***YES***	***NO***
(b)	Exports of micro-organisms* and toxins	***YES***	***YES***	***YES***	***NO***
(c)	Imports of micro-organisms* and toxins	***YES***	***YES***	***YES***	***NO***

Comments: A list of Swedish laws and regulations can be found in documents:

BWC/MSP.2003/MX/WP.62 of 4 September 2003
(BTWC and related legislation prepared by Austria, Belgium, Finland, France, Germany, Ireland, Italy, The Netherlands, Portugal, Spain, Sweden and the United Kingdom).

"Provisions of the Swedish Work Environment Authority on Microbiological Work Environment Risks – Infection, Toxigenic Effect, Hypersensitivity" (AFS 2005:1). Regulate biosafety at work including laboratory safety and classification of biological agents (based on Directive 2000/54/EC).

BWC/MSP/2004/MX/WP.17 of 16 July 2004
(A short introduction to the Swedish system to manage outbreaks of infectious diseases among humans and animals).

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

Form F

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

1. Date of entry into force of the Convention for the State party.

   5 February 1976

   (The Convention was signed by Sweden on 27 February 1975. The Convention was ratified by Sweden on 5 February 1976 and entered into force for Sweden the same date. The text of the Convention is published in the Swedish Treaty Series, SÖ 1976:18)

2. Past offensive biological research and development programmes:

   - ***NO***

3. Past defensive biological research and development programmes:

   - ***NO***

Form G

Declaration of vaccine production facilities#1

1. Name of facility:

SBL Vaccin AB (Solna)

2. Location (mailing address):

SE-105 21 Stockholm, Sweden

3. General description of the types of diseases covered:

Diarrhoea, ETEC/Cholerae (one vaccine component for pooling with other components)

Form G

Declaration of vaccine production facilities#2

1. Name of facility:

UniTech Biopharma

2. Location (mailing address):

Box 219, SE-864 31 Matfors, Sweden

3. General description of the types of diseases covered:

Diarrhoea, ETEC/Cholerae (culturing on commission)