Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction

Confidence Building Measures 2013

Switzerland

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Annual Report by Switzerland in accordance with the final declaration of the Seventh Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction

Covering the year 2012

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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	☐	☐	
A, part 2 (i)	☐	☒	2009
A, part 2 (ii)	☐	☐	
A, part 2 (iii)	☐	☐	
B	☐	☐	
C	☐	☒	2010
E	☐	☐	
F	☐	☒	2001
G	☐	☐	

(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: 15 April 2013
State Party to the Convention: Switzerland
Date of ratification/accession to the Convention: 4 May 1976

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Active promotion of contacts

The Third Review Conference agreed that States parties continue to implement the following:

"Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis."

In order to actively promote professional contacts between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international cooperation in the field of peaceful bacteriological (biological) activities, the Seventh Review Conference encouraged States parties to share forward looking information, to the extent possible,

- *on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention, and*

- *on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention,*

including through the Implementation Support Unit (ISU) within the United Nations Office for Disarmament Affairs.

Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

"Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention."

Modalities

The Third Review Conference agreed on the following, later amended by the Seventh Review Conference:

Data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the latest edition of the WHO[1] Laboratory Biosafety Manual and/or OIE[2] Terrestrial Manual or other equivalent guidelines adopted by relevant international organisations, such as those designated as biosafety level 4 (BL4, BSL4 or P4) or equivalent standards.

States Parties that do not possess a facility meeting criteria for such maximum containment should continue to Form A, part 1 (ii).

[1] World Health Organization
[2] World Organization for Animal Health

Exchange of data on research centres and laboratories

At the end of 2012, the following facilities, within the territory of Switzerland or under Swiss jurisdiction or control anywhere, were within the scope of Form A, part 1:

- One BSL4 laboratory in commissioning phase holding an unrestricted license by fulfilling all necessary requirements for e.g. culturing and enrichment of BSL4 agents etc.;
- Two operational BSL4 laboratories, each one holding a license limited to strictly diagnostic purposes;
- One operational BSL3Ag laboratory serving as national reference center for exotic animal diseases.

Exchange of data on research centres and laboratories[3]

Name of facility[4]	**Labor Spiez** (Spiez Laboratory)
Affiliation	Bundesamt für Bevölkerungsschutz, Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport (Federal Office for Civil Protection, Federal Department of Defence, Civil Protection and Sports)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 28 to 34].

Of note, as of 31 December 2012 the BSL4 unit is in commissioning phase and holds an unrestricted license as follows:

- "Development of methods to detect and analyze viral pathogens of risk group 4 (clinical samples, environmental samples, including samples suspect of bioterrorism origin) through cultivation, inactivation and molecular biological detection of DNA and RNA from any matrix, as well as maintenance of a culture collection for reference purposes".

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

[4] 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)".

Exchange of data on research centres and laboratories[3]

Name of facility[4]	**Centre National de Référence pour les Infections Virales Emergentes** (National Reference Center for Emerging Viral Infections)
Affiliation	Laboratoire de Virologie, Hôpitaux Universitaires de Genève (Virological Laboratory, University Hospitals of Geneva)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 40 to 44].

Of note, the BSL4 unit is operational and holds a license for diagnostic purposes as follows:

- "Detection of viruses in clinical samples".

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

[4] 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)".

Exchange of data on research centres and laboratories[3]

Name of facility[4]	**Institut für Medizinische Virologie** (Institute of Medical Virology)
Affiliation	Medizinische Fakultät, Universität Zürich (Faculty of Medicine, University of Zurich)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 74 to 77].

Of note, the BSL4 unit is operational and holds a license for diagnostic purposes as follows:

- "Inactivation of environmental samples and of potentially highly-pathogenic viruses for diagnostic purposes within the framework of the Regional Laboratory Network".

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

[4] 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)".

Exchange of data on research centres and laboratories[3]

Name of facility[4]	**Institut für Viruskrankheiten und Immunprophylaxe** (Institute of Virology and Immunoprophylaxis)
Affiliation	Bundesamt für Veterinärwesen, Eidgenössisches Departement des Innern (Federal Veterinary Office, Federal Department of Home Affairs)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 35 to 39].

Of note, the maximum containment level is BSL3Ag. BSL3Ag facilities have special features not comparable to standard BSL3 or BSL4. In this particular case, the shell is considered as BSL4, whereas inside the containment area most of the space is BSL1 and BSL2 with a small BSL3 area. Licenses are as follows:

- "Veterinary virus-diagnostics";
- "Quality controls of immuno-biological products for use in applications of veterinary medicine";
- "Establishment of a cell-based rapid test to determine protection provided by vaccination against foot-and-mouth disease virus";
- "Opsonizing antibodies against foot-and-mouth disease virus: characterization and establishment of a quantitative cell-based test"
- "Storage of rinderpest virus".

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

[4] 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)".

Exchange of data on research centres and laboratories

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

Biosafety level 3[7]	n/a
Biosafety level 2[8] (if applicable)	n/a

Any additional relevant information as appropriate:

n/a

[6] Microorganisms pathogenic to humans and/or animals

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

[8] 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 information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. States Parties agreed to provide, annually, detailed information on their biological defence research and development programmes including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a null report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

(1) The objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;

(2) Whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;

(3) The organizational structure of the programme and its reporting relationships; and

(4) The following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated;

(a) location;

(b) the floor areas (sqM) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;

(c) the total number of staff employed, including those contracted full time for more than six months;

(d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;

(e) a list of the scientific disciplines of the scientific/engineering staff;

(f) the source and funding levels in the following three areas: research, development, and test and evaluation; and

(g) the policy regarding publication and a list of publicly-available papers and reports.

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, 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 each programme.

National biological defence research and development programmes – Description

National Biological Defense Program

1. State the objectives and funding of each 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.

The objective is to establish national biological defense proficiency by developing and improving precise and accurate identification and characterization tests for the rapid diagnosis of different biological agents and toxins using various methods. Spiez Laboratory is assigned to fulfill this task and to close any gaps to reach national biological defense excellence. To improve the national biological defense capabilities of Switzerland, Spiez Laboratory has funds available to run a dedicated program with the goal of added research and development mainly benefitting detection and diagnostic techniques. A major part of the program is conducted under contract with national and international industries, academic institutions as well as domestic and foreign governmental agencies, as detailed in paragraph 5 below.
Spiez Laboratory is part of the Federal Office for Civil Protection FOCP within the Federal Department of Defence, Civil Protection and Sports DDPS of the Swiss Confederation. Spiez Laboratory is the Swiss center of expertise in protection against nuclear, biological and chemical (NBC) threats and hazards. Besides delivering its expertise to relevant stakeholders, the Biology Section of Spiez Laboratory is concerned with the detection of biological agents and toxins, as well as supports military biological protection units. The Biology Section has three main branches that are engaged in the fields of virology, bacteriology and toxinology, respectively.
Spiez Laboratory is in process of commissioning an all new high containment facility that will allow the safe handling of biological agents of risk groups 3 and 4. It is the only BSL4 high containment facility in Switzerland licensed without any special restrictions or limitations. It will serve towards the comprehensive detection and identification of human pathogens. This will also enable Spiez Laboratory to act in the Regional Laboratory Network (➢ pages 20 to 26) as both a Regional Competence Center and National Reference Center having all necessary capabilities and capacities at hand.
For additional information and more on the vision of a world without weapons of mass destruction please visit: http://www.labor-spiez.ch/enindex.htm

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

Swiss Confederation, Federal Department of Defence, Civil Protection and Sports DDPS, Federal Office for Civil Protection FOCP:

CHF 5'000'000.- per year

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

Yes

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

15 %

5. Summarize the objectives and research areas of each programme performed by contractors and in other facilities with the funds identified under paragraph 4.

All contracted research and development of the program is supervised by Spiez Laboratory. Please also refer to paragraph 1 above for additional details. The contractors part of the program in 2012 were as follows:

- Forschungsanstalt Agroscope Changins-Wädenswil – ACW
  Schloss
  CH-8820 Wädenswil
  Switzerland
  Project title: „Development of a DNA Chip for the detection of biological warfare agents"

- Istituto Cantonale di Microbiologia – ICM
  Via Mirasole 22A
  CH-6500 Bellinzona
  Switzerland
  Project title: „Microbiological monitoring of mosquitoes in Switzerland that may act as vectors for viruses pathogenic to humans and animals"

- Schweizerisches Tropen- und Public Health Institut – STPHI
  Socinstrasse 57
  CH-4002 Basel
  Project title: „Production and characterization of monoclonal antibodies against bacterial agents"
  Project title: „Molecular diagnostics and epidemiology of viruses categorized as possible tools of biological terrorism"

- Universität Bern – UniBE
  Institut für Infektionskrankheiten – IFIK
  Friedbühlstrasse 51
  CH-3010 Bern
  Switzerland
  Project title: „Evaluation of siRNA for antiviral therapy of encephalitogenic viruses: Studies in cell cultures and animal models"

- Universität Bern – UniBE
  Institut für Ökologie und Evolution
  Beltzerstrasse 6
  CH-3012 Bern
  Switzerland
  Project title: „Hanta viruses in mice"

- Universität Bern – UniBE
  Institut für Parasitologie der Vetsuisse Fakultät und der Medizinischen Fakultät
  Länggassstrasse 122
  CH-3012 Bern
  Switzerland
  Project title: "Analysis of mechanisms of pathogenicity in *Naegleria fowleri*"

- Université de Lausanne / Centre Hospitalier Universitaire Vaudois – Unil / CHUV
  Institut de microbiologie – IMUL
  Rue du Bugnon 48
  CH-1011 Lausanne
  Switzerland
  Project title: „Screening of ticks by the national reference center for tick-transmitted diseases"

- Universität Zürich – UZH
  Institut für Sozial- und Präventivmedizin – ISPM
  Hirschengraben 84
  CH-8001 Zürich
  Switzerland
  Project title: „Hantaviral serology of patients exhibiting acute renal failure in regions of Switzerland close to the border"

- Zürcher Hochschule für angewandte Wissenschaften – ZHAW
  Institut für Chemie und biologische Chemie – ICBC
  Einsiedlerstrasse 31
  CH-8820 Wädenswil
  Switzerland
  Project title: „Detection of proteinaceous toxins"

- Medizinische Hochschule Hannover
  Institut für Toxikologie
  Carl-Neuberg-Strasse 1
  DE-30625 Hannover
  Germany
  Project title: „Assessing proteolytic stability and transepithelial transport of the proteinaceous toxins ricin, BoNT and SEB"

- miprolab GmbH / Universität Göttingen
  Marie-Curie-Strasse 7
  DE-37079 Göttingen
  Germany
  Project title: „Detection and risk assessment of biological toxins"
  Project title: „Lateral flow assays for the detection of biological agents"

- Robert Koch Institut - RKI
  Zentrum für Biologische Sicherheit
  Nordufer 20
  DE-13353 Berlin
  Germany
  Project title: „Expansion of the *C. botulinum* culture collection"

- Институт Химической Биологии и Фундаментальной Медицины – ИХБФМ
  (Institute for Chemical Biology and Fundamental Medicine – ICBFM)
  Lavrent'eva pr. 8
  RU-630090 Novosibirsk
  Russian Federation
  Project title: „Electron microscopy development"

6. Provide a diagram of the organizational structure of each programme and the reporting relationships (include individual facilities participating in the programme).

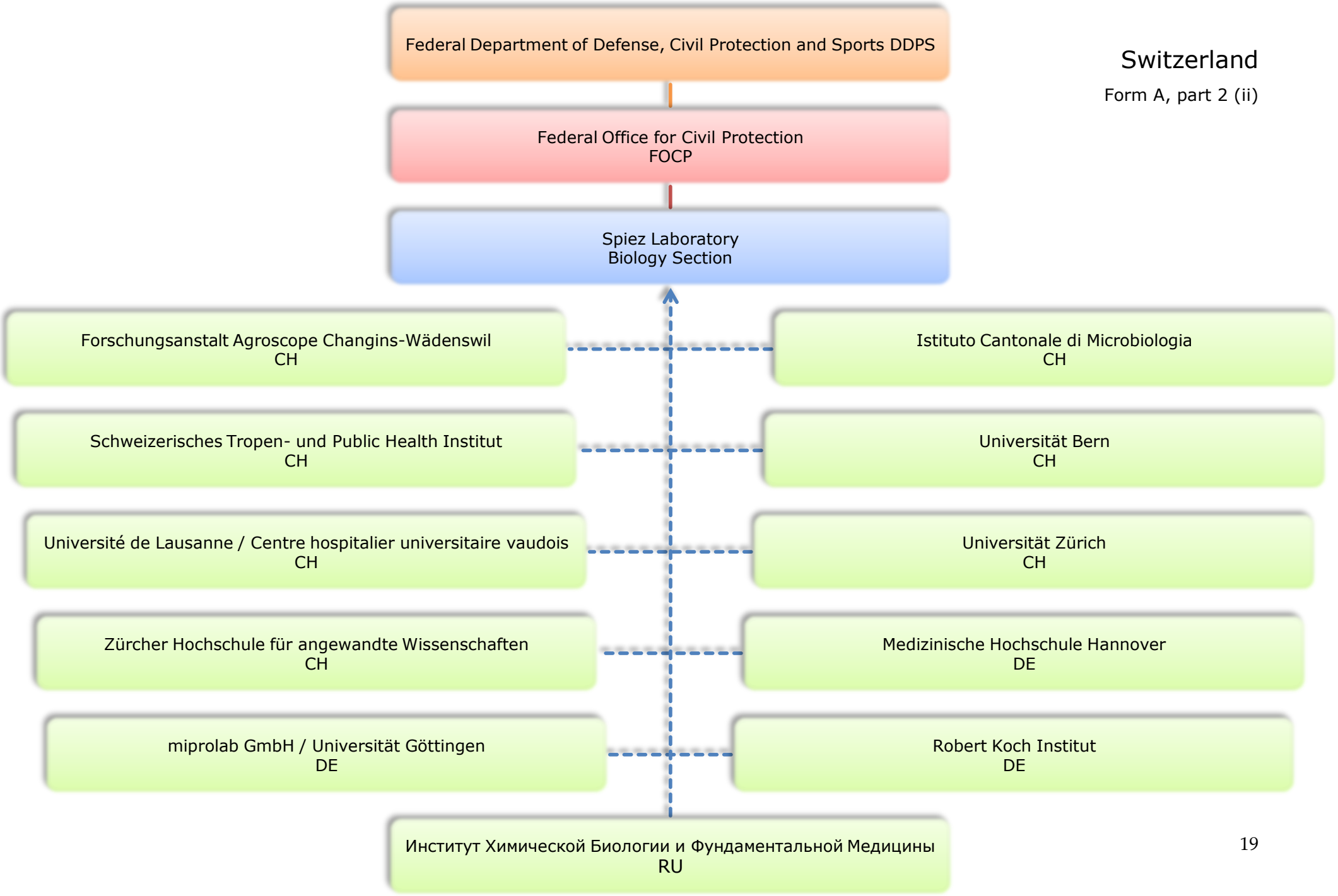
Please refer to the diagram on the following page.

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to each national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Please refer to Form A, part 2 (iii) [➢ pages 28 to 34].

Switzerland

Form A, part 2 (ii)



National biological defence research and development programmes – Description

Regional Laboratory Network

1. State the objectives and funding of each 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.

The objective is the establishment and maintenance of capability and capacity for the rapid laboratory-based initial diagnosis of pathogens in case of a biological emergency, whether it be of natural or accidental origin or due to deliberate release. This forms the basis for any adequate countermeasures that need to be planned and implemented to ensure the protection of the population. The consequent integration of state of the art detection and diagnostic techniques as well as their constant refinement and improvement is therefore indispensable for a holistic biological emergency concept.
The implemented structure is a decentralized network of Regional Competence Centers and National Reference Centers, all of which have been mandated by the Federal Office of Public Health. This network benefits from already existing infrastructure. The network is embedded in the Swiss CBRN concept and is coordinated by the Regional Laboratory Coordination Committee that consists of federal, cantonal and scientific experts. There is a total of three National Reference Centers and six Regional Competence Centers called Regional Laboratories. The task for Regional Laboratories is the rapid initial diagnosis of pathogens, whereas National Reference Centers are qualified for initial as well as confirmational diagnoses. All facilities pursue civil duties and are put on assignments of the Regional Laboratory Network in the event of biological emergencies only. All cantons are part of the network either as a host canton of a Regional Laboratory (underlined) or as an affiliated canton, as shown in the table below.

Regional Laboratory	**Host cantons and affiliated cantons**
West	FR, GE, NE, VD, VS
West Central	BE, JU
East Central	LU, NW, OW, SZ, UR
East	AI, AR, GL, GR, SG, SH, TG, ZG, ZH (+FL)
North	AG, BL, BS, SO
South	TI

Of note, the two cantons of Genève and Vaud share the authority over the Regional Laboratory West. The Principality of Liechtenstein (FL) is part of the Regional Laboratory East. For an explanation of abbreviations, please refer to the comprehensive map on the next page.

Switzerland

Form A, part 2 (ii)

SWITZERLAND
AG Aargau
AI Appenzell Innerrhoden
AR Appenzell Ausserrhoden
BE Bern / Berne
BL Basel Landschaft
BS Basel Stadt
FR Fribourg / Freiburg
GE Genève
GL Glarus
GR Graubünden / Grischun /Grigioni
JU Jura
LU Luzern
NE Neuchâtel
NW Nidwalden
OW Obwalden
SG Sankt Gallen
SH Schaffhausen
SO Solothurn
SZ Schwyz
TG Thurgau
TI Ticino
UR Uri
VD Vaud
VS Valais / Wallis
ZG Zug
ZH Zürich

The network consists of the following facilities that are described on Form A, part 2 (iii) in more detail:

Function	Authority	Facility
National Reference Center	GDK*	Institut für Viruskrankheiten und Immunprophylaxe
National Reference Center	GDK*	Centre National de Référence pour les Infections Virales Emergentes
National Reference Center	GDK*	Nationales Zentrum für Anthrax
Regional Laboratory West	Canton of Genève	Laboratoire de Bactériologie Centre National de Référence pour les Infections Virales Emergentes
	Canton of Vaud	Laboratoires de Diagnostic de l'Institut de Microbiologie
Regional Laboratory West Central	Canton of Bern	Labor Spiez
Regional Laboratory East Central	Canton of Luzern	Institut für Medizinische Mikrobiologie
Regional Laboratory East	Canton of Zürich	Institut für Medizinische Mikrobiologie Institut für Medizinische Virologie
Regional Laboratory North	Canton of Basel-Stadt	Kantonales Laboratorium Basel-Stadt
Regional Laboratory South	Canton of Ticino	Istituto Cantonale di Microbiologia

* Swiss Conference of Cantonal Ministers of Public Health

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

All personnel involved in activities in relation to the Regional Laboratory Network is tasked with other civil duties. Many of these other activities, such as development of related methods, sample preparation and processing, training, etc., although at least indirectly of benefit to the activities in relation to the Regional Laboratory Network, remain unaccounted for and are not singled out as being of such nature. Furthermore, the whole network relies on existing infrastructures in use for other civil purposes. Due to these facts it is not possible to sort out personnel costs, cost of materials and consumables, as well as dedicated infrastructure costs for the program, however, it is possible to name the funding sources as follows:

- Swiss Confederation, Federal Department of Home Affairs FDHA
- All twenty-six cantons of Switzerland
- Principality of Liechtenstein

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

No

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

n/a

5. Summarize the objectives and research areas of each programme performed by contractors and in other facilities with the funds identified under paragraph 4.

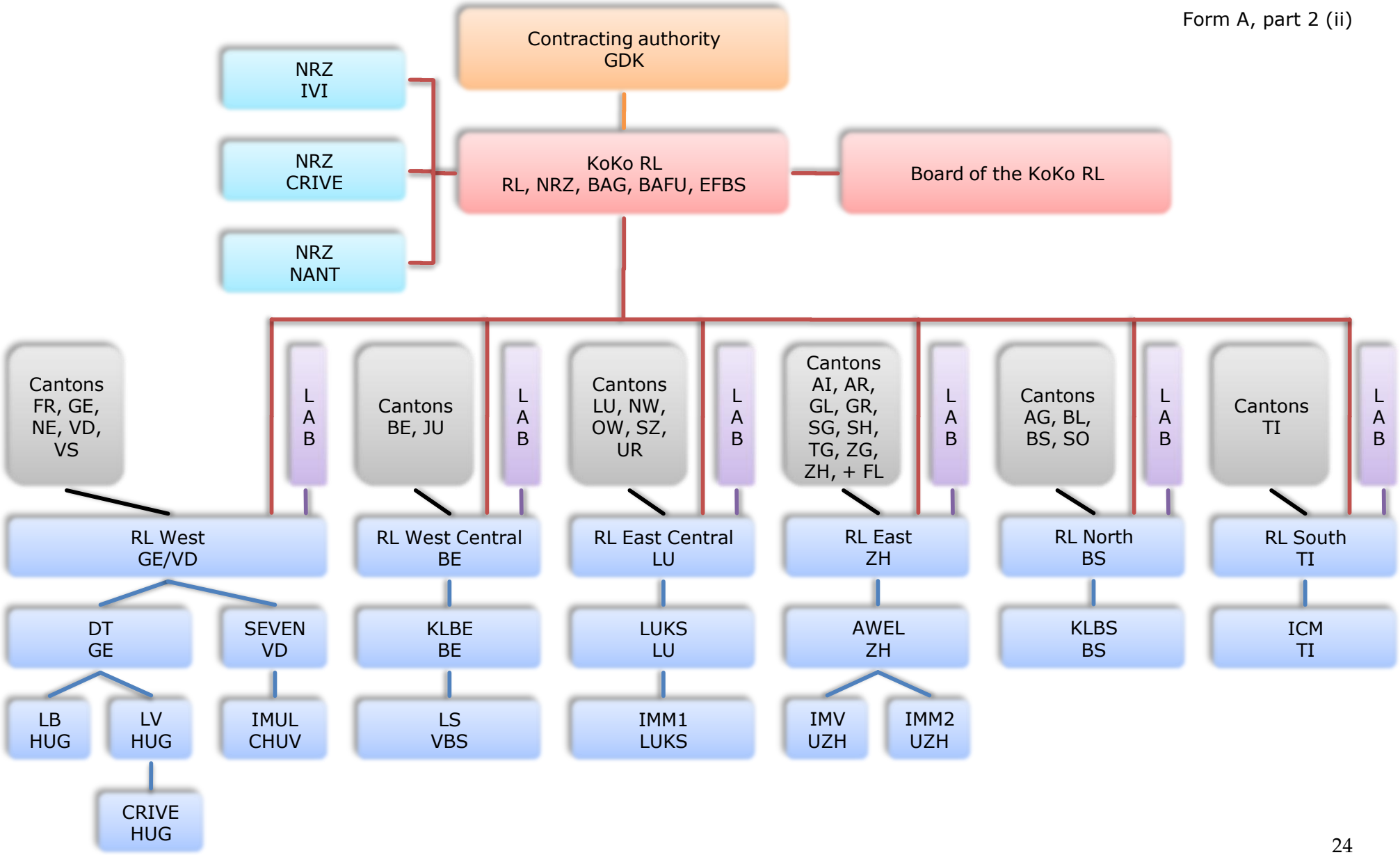
n/a

6. Provide a diagram of the organizational structure of each programme and the reporting relationships (include individual facilities participating in the programme).

Please refer to the diagram on the next page.

Switzerland

Form A, part 2 (ii)



Abbreviations used in the diagram on the previous page:

AWEL:	Section for Waste Management and Operations
BAFU:	Federal Office for the Environment
BAG:	Federal Office of Public Health
Cantons:	Please refer to the map in paragraph 1 above
CHUV:	University Hospital Center of Vaud
CRIVE:	National Reference Center for Emerging Viral Infections
DT:	Department of Territory
EFBS:	Swiss Expert Committee for Biosafety
GDK:	Swiss Conference of Cantonal Ministers of Public Health
HUG:	University Hospitals of Geneva
ICM:	Cantonal Institute of Microbiology
IMM1:	Department of Medical Microbiology
IMM2:	Institute of Medical Microbiology
IMUL:	Diagnostic Laboratories of the Institute of Microbiology
IMV:	Institute of Medical Virology
IVI:	Institute of Virology and Immunoprophylaxis
KLBE:	Cantonal Laboratory of Berne
KLBS:	Cantonal Laboratory of Basel-Stadt
KoKo:	Coordination Committee
LAB:	Laboratory Advisory Board
LB:	Bacteriological Laboratory
LS:	Spiez Laboratory
LUKS:	Cantonal Hospital of Luzern
LV:	Virological Laboratory
NANT:	National Reference Center for Anthrax
NRZ:	National Reference Center
RL:	Regional Laboratory
SEVEN:	Service of Environment and Energy
UZH:	University of Zurich
VBS:	Federal Department of Defense, Civil Protection and Sports

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to each national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Please refer to Form A, part 2 (iii) [➢ pages 35 to 84].

National biological defence research and development programmes – Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Schweizerisches Fachinstitut für den ABC Schutz (Swiss Center of Expertise in NBC Protection)
Name of facility	**Labor Spiez** (Spiez Laboratory)
Affiliation	Bundesamt für Bevölkerungsschutz, Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport (Federal Office for Civil Protection, Federal Department of Defence, Civil Protection and Sports)

2. *Where is it located (include both address and geographical location)?*

Location	Austrasse CH-3700 Spiez
Geographical location	N 46° 41' 26.32", E 7° 38' 39.41"

3. *Floor area of laboratory areas by containment level:*

BSL2	483 m^2
BSL3	126 m^2
BSL3Ag	0 m^2
BSL4	118 m^2
Total	727 m^2

Of note, as of 31 December 2012 the BSL4 unit is in commissioning phase. Further information on the facility is presented on pages 32 to 34.

4. The organizational structure of each facility.

(i) Total number of personnel

20

Of note, as of 1 January 2013 the total number of personnel at Spiez Laboratory amounts to 93, 16 of which in the Biology Section and 4 of which in the Logistics, Quality & Security Section dealing with technical and security issues related to the Biology Section.

(ii) Division of personnel:

Military	0
Civilian	20

(iii) Division of personnel by category:

Scientists	10
Engineers	0
Technicians	10
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Virology, bacteriology, toxinology, biosafety and biosecurity

(v) Are contractor staff working in the facility? If so, provide an approximate number.

5

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Swiss Confederation (Federal Department of Defence, Civil Protection and Sports)

(vii) What are the funding levels for the following programme areas:

Total	CHF 5'000'000.-
Research	15 %
Development	10 %
Test & Evaluation	5 %
Analysis / Diagnosis	15 %
Education & Training	5 %
Other activities	50 % (costs for operation, maintenance and amortization)

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Burri DC, Gottstein B, Zumkehr B, Hemphill A, Schürch N, Wittwer M, Müller N. Development of a High- Versus Low-Pathogenicity Model of the Free-Living Amoeba Naegleria fowleri. Microbiology 2012 Oct;158(10):2652-60.

Maffioli C, Grandgirard D, Leib SL, Engler O. siRNA Inhibits Replication of Langat Virus, a Member of the Tick-Borne Encephalitis Virus Complex in Organotypic Rat Brain Slices. PLoS One 2012 Sep;7(9):e44703.

Keserue HA, Füchslin HP, Wittwer M, Nguyen-Viet H, Nguyen TT, Surinkul N, Koottatep T, Schürch N, Egli T. Comparison of Rapid Methods for Detection of Giardia spp. and Cryptosporidium spp. (oo)Cysts Using Transportable Instrumentation in a Field Deployment. Environ Sci Technol 2012 Aug;46(16):8952-9.

Wittwer M, Lasch P, Drevinek M, Schmoldt S, Indra A, Jacob D, Grunow R. First Report: Application of MALDI-TOF MS within an External Quality Assurance Exercise for the Discrimination of Highly Pathogenic Bacteria from Contaminant Flora. Appl Biosafety 2012;17(2).

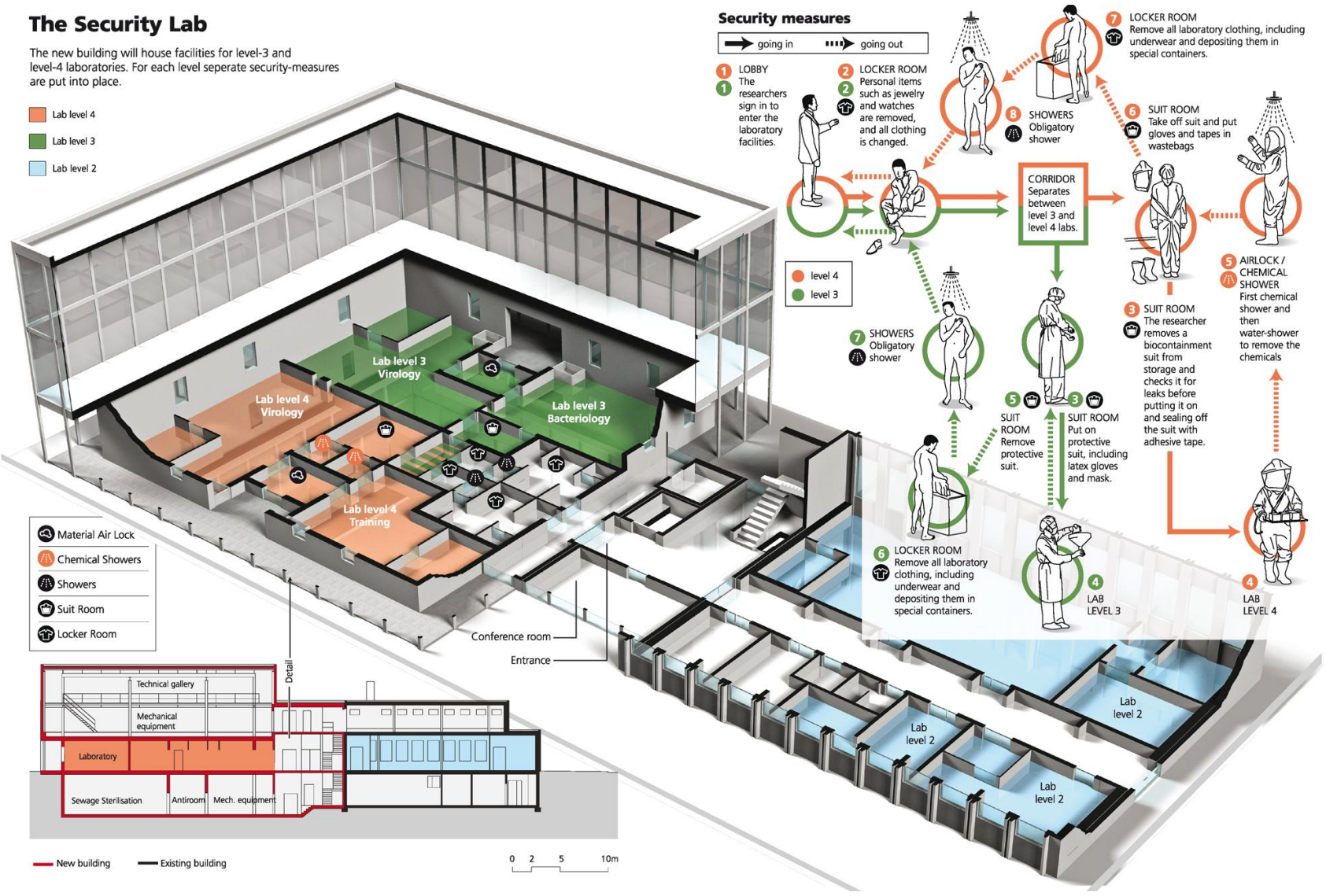
Weingart OG, Gao H, Crevoisier F, Heitger F, Avondet M, Sigrist H. A Bioanalytical Platform for Simultaneous Detection and Quantification of Biological Toxins. Sensors 2012 Feb;12(2):2324-39.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

Spiez Laboratory, which is part of the Federal Department for Civil Protection, is the Swiss Center of Expertise in NBC Protection. Its Biology Section has a range of activities including research, development, test & evaluation, training, as well as diagnosis in the fields of virology, bacteriology, toxinology and biosafety. The tasks include analysis of unknown samples, diagnostics of potential biological warfare and bioterror agents, food and water analysis for the Swiss Armed Forces, and research & development in coordination with contractors. Spiez Laboratory deals with many different biological agents and toxins known to be pathogenic for humans.

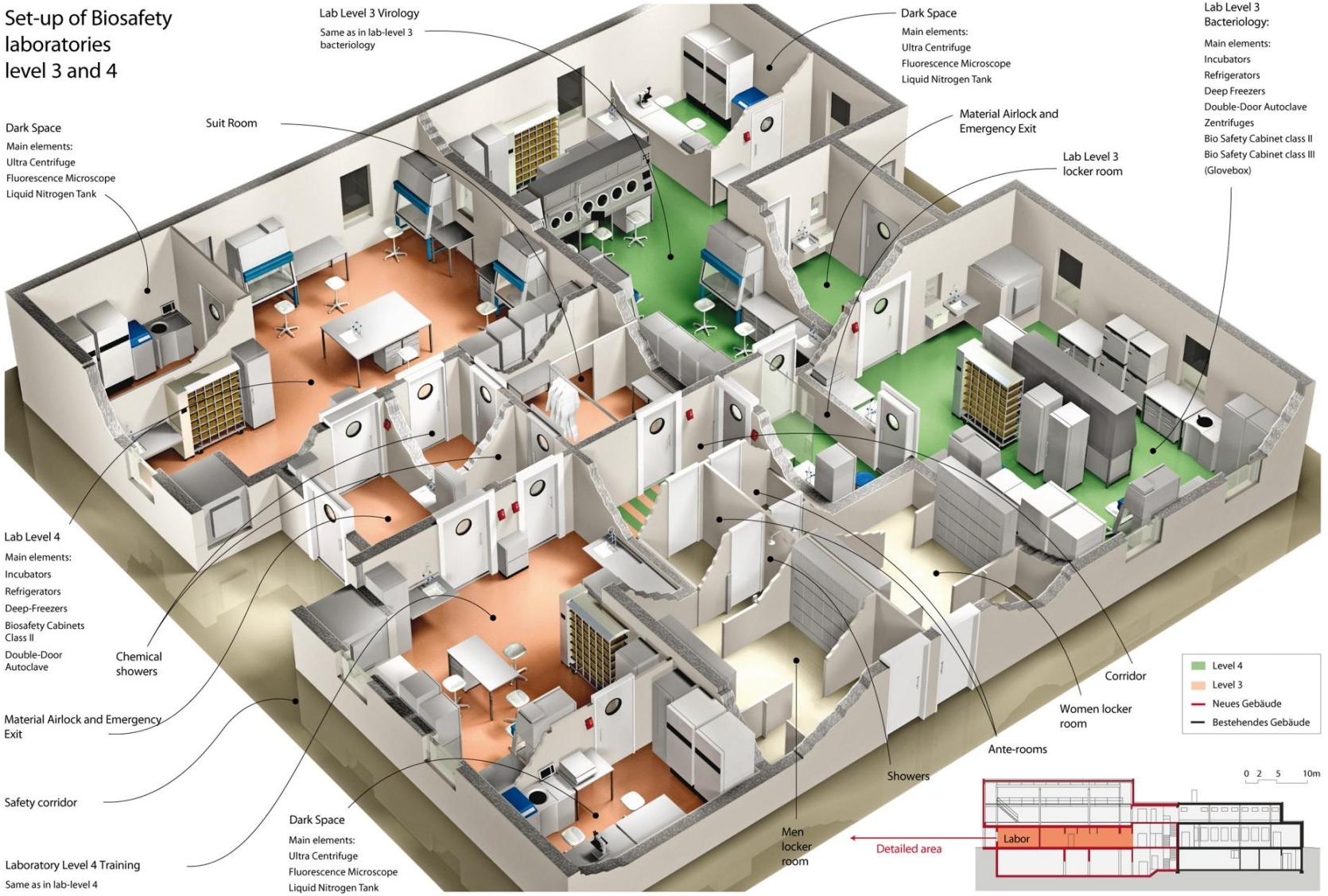
For more detailed information please refer to Form A, part 2 (ii) [➢ pages 14 to 19] and visit: http://www.labor-spiez.ch/enindex.htm

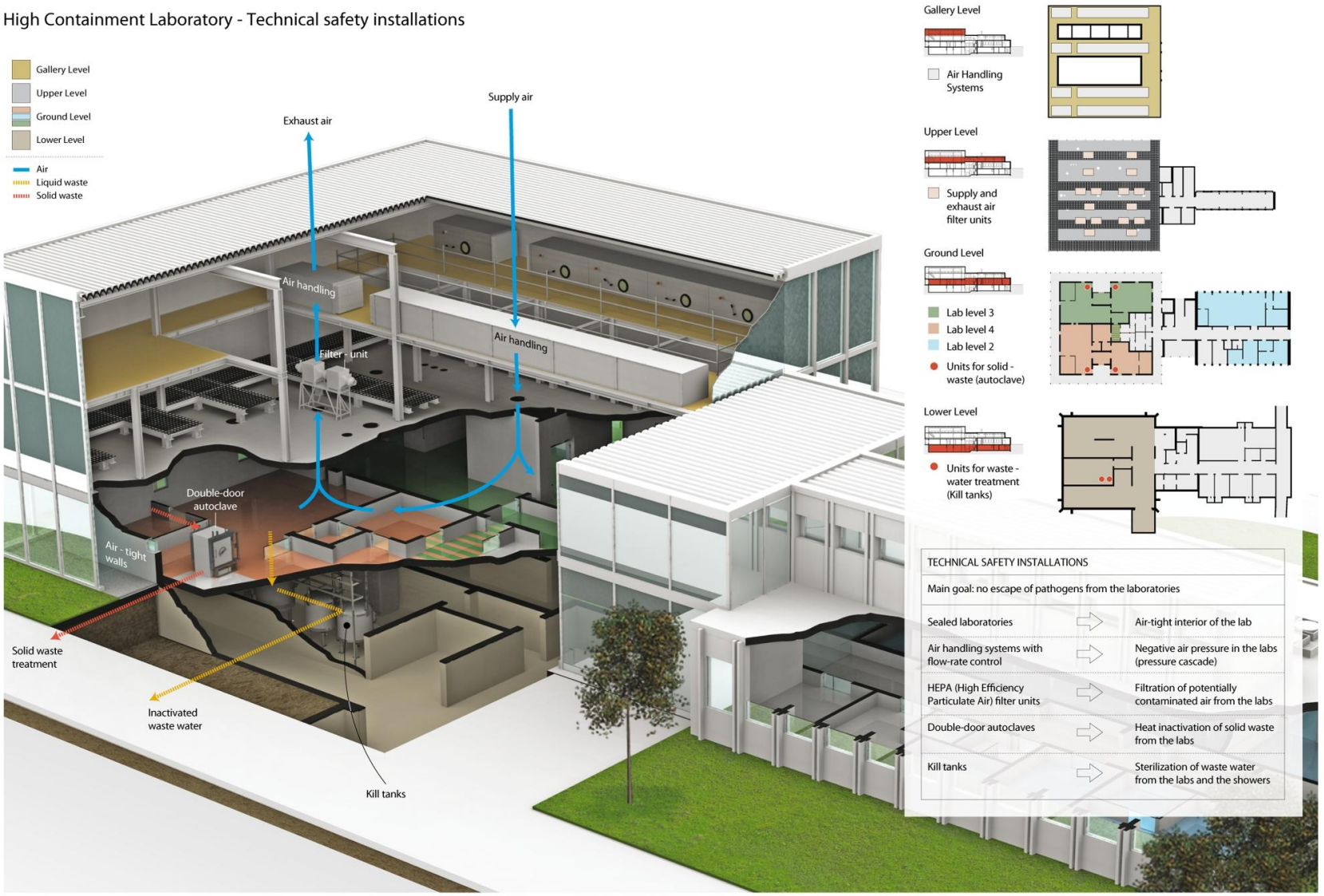
[9] Including viruses and prions.


The Security Lab
The new building will house facilities for level-3 and level-4 laboratories. For each level seperate security-measures are put into place.
Lab level 4
Lab level 3
Lab level 2
Lab level 4 Virology
Lab level 3 Virology
Lab level 3 Bacteriology
Lab level 4 Training
Material Air Lock
Chemical Showers
Showers
Suit Room
Locker Room
Conference room
Entrance
Detail
Technical gallery
Mechanical equipment
Laboratory
Sewage Sterilisation
Antiroom
Mech. equipment
New building
Existing building
0 2 5 10m
Security measures
going in
going out
1 LOBBY The researchers sign in to enter the laboratory facilities.
2 LOCKER ROOM Personal items such as jewelry and watches are removed, and all clothing is changed.
8 SHOWERS Obligatory shower
7 LOCKER ROOM Remove all laboratory clothing, including underwear and depositing them in special containers.
6 SUIT ROOM Take off suit and put gloves and tapes in wastebags
5 AIRLOCK / CHEMICAL SHOWER First chemical shower and then water-shower to remove the chemicals
CORRIDOR Separates between level 3 and level 4 labs.
level 4
level 3
3 SUIT ROOM The researcher removes a biocontainment suit from storage and checks it for leaks before putting it on and sealing off the suit with adhesive tape.
7 SHOWERS Obligatory shower
5 SUIT ROOM Remove protective suit.
3 SUIT ROOM Put on protective suit, including latex gloves and mask.
6 LOCKER ROOM Remove all laboratory clothing, including underwear and depositing them in special containers.
4 LAB LEVEL 3
4 LAB LEVEL 4
Lab level 2
Lab level 2
Lab level 2

Switzerland

Form A, part 2 (iii)




High Containment Laboratory - Technical safety installations
Gallery Level
Upper Level
Ground Level
Lower Level
Air
Liquid waste
Solid waste
Exhaust air
Supply air
Air handling
Air handling
Filter - unit
Double-door autoclave
Air - tight walls
Solid waste treatment
Inactivated waste water
Kill tanks
Gallery Level
Air Handling Systems
Upper Level
Supply and exhaust air filter units
Ground Level
Lab level 3
Lab level 4
Lab level 2
Units for solid - waste (autoclave)
Lower Level
Units for waste - water treatment (Kill tanks)
TECHNICAL SAFETY INSTALLATIONS
Main goal: no escape of pathogens from the laboratories
Sealed laboratories
Air-tight interior of the lab
Air handling systems with flow-rate control
Negative air pressure in the labs (pressure cascade)
HEPA (High Efficiency Particulate Air) filter units
Filtration of potentially contaminated air from the labs
Double-door autoclaves
Heat inactivation of solid waste from the labs
Kill tanks
Sterilization of waste water from the labs and the showers

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Nationales Referenzzentrum (National Reference Center)
Name of facility	**Institut für Viruskrankheiten und Immunprophylaxe** (Institute of Virology and Immunoprophylaxis)
Affiliation	Bundesamt für Veterinärwesen, Eidgenössisches Departement des Innern (Federal Veterinary Office, Federal Department of Home Affairs)

2. *Where is it located (include both address and geographical location)?*

Location	Sensemattstrasse 293 CH-3147 Mittelhäusern
Geographical location	N 46° 52' 50.20", E 7° 21' 46.81"

3. *Floor area of laboratory areas by containment level:*

BSL2	210 m^2
BSL3	44 m^2
BSL3Ag	10’446 m^2
BSL4	0 m^2
Total	10’700 m^2

Of note, BSL3Ag facilities have special features not comparable to standard BSL3 or BSL4 facilities. The shell is considered BSL4, whereas inside the containment area BSL1 and BSL2 space is common standard. All authorized personnel enters through a shower barrier, works inside the containment area in clothing suitable to BSL1 or BSL2, and showers out when leaving. Due to these special features of BSL3Ag facilities, the BSL3Ag area is not limited to laboratory units, but also includes technical space and animal units, which is all located within the containment area. Therefore all maintenance work can be done during operation – the facility has never been shut down so far. This also means that a direct comparison with BSL4 facilities is not practicable.

4. The organizational structure of each facility.

(i) Total number of personnel

55

(ii) Division of personnel:

Military	0
Civilian	55

(iii) Division of personnel by category:

Scientists	10
Engineers	10
Technicians	30
Administrative and support staff	5

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Virology, immunology, vaccine control, diagnostics, development and validation of methods, biosafety, engineering, animal breeding

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Swiss Confederation (Federal Department of Home Affairs)

(vii) What are the funding levels for the following programme areas:

Research	15 %
Development	10 %
Test & Evaluation	10 %
Analysis / Diagnosis	25 %
Education & Training	10 %
Other activities	30 % (costs for safety, infrastructure and administration)

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Blome S, Aebischer A, Lange E, Hofmann M, Leifer I, Loeffen W, Koenen F, Beer M. Comparative evaluation of live marker vaccine candidates "CP7_E2alf" and "flc11" along with C-strain "Riems" after oral vaccination. Veterinary Microbiology 2012, 158:42-59.

Golde WT, de Los Santos T, Robinson L, Grubman MJ, Sevilla N, Summerfield A, Charleston B. Evidence of activation and suppression during the early immune response to foot-and-mouth disease virus. Transboundary Emerging Disease 2012, 584:283-90.

Hüsser L, Ruggli N, Summerfield A. Npro of classical swine fever virus prevents type I IFN mediated priming of conventional dendritic cells for enhanced IFN-a response. Journal of Interferon Cytokine Research 2012, 32:221-229.

Kemter E, Lieke T, Kessler B, Kurome M, Wuensch A, Summerfield A, Ayares D, Nagashima H, Baars W, Schwinzer R, Wolf E. Human TNF-related apoptosis-inducing ligand-expressing dendritic cells from transgenic pigs attenuate human xenogeneic T cell responses. Xenotransplantation 2012, 19:40-51.

Liniger M, Summerfield A, Ruggli N. MDA5 can be exploited as efficacious genetic adjuvant for DNA vaccination against lethal H5N1 influenza virus infection in chickens. PLOS ONE 2012, 7:e49952.

Liniger M, Summerfield A, Zimmer G, McCullough KC, Ruggli N. Chicken cells sense influenza A virus infection through MDA5 and CARDIF signaling involving LGP2. Journal of Virology 2012, 86:705-717.

Liniger M, Moulin HR, Sakoda Y, Ruggli R, Summerfield A. Highly pathogenic avian influenza virus H5N1 controls type I IFN induction in chicken macrophage HD-11 cells: a polygenic trait that involves NS1 and the polymerase complex. Virology Journal 2012, 9:7.

McCullough KC, Bassi I, Démoulins T, Thomann-Harwood LJ, Ruggli N. Functional RNA delivery targeted to dendritic cells by synthetic nanoparticles. Therapeutic Delivery 2012, 3(9):1077-1099.

Meyer D, Aebischer A, Müller M, Grummer B, Greiser-Wilke I, Moennig V, Hofmann MA. New insights into the antigenic structure of the glycoprotein Erns of classical swine fever virus by epitope mapping. Virology 2012, 433:54-54.

Müntener CR, Bruckner L, Stürer A, Althaus FR, Caduff-Janosa P. Vigilance der Tierarzneimittel: Gemeldete unerwünschte Wirkungen im Jahr 2010. Schweizer Archiv für Tierheilkunde 2012, 154:57-65.

Müntener CR, Bruckner L, Kupper J, Althaus FR, Caduff-Janosa P. Vigilance der Tierarzneimittel: Gemeldete unerwünschte Wirkungen im Jahr 2011. Schweizer Archiv für Tierheilkunde 2012, 154:513-519.

Ocaña-Macchi M, Ricklin ME, Python S, Gsell Albrecht M, Stech J, Stech O, Summerfield A. Avian influenza A virus PB2 promotes interferon type I inducing properties of a swine strain in porcine dendritic cells. Virology 2012, 427:1-9.

Reber A, Kreienbrock L, Casati S, Chaignat V, Schwermer, HP. Putative risk factors for infections with Toggenburg Orbivirus in goat herds in Southern Switzerland (Canton of Ticino). Veterinary Microbiology 2012, 160(1-2):29-34.

Schorer M, Vögtlin A, Hilbe M, Thür B, Posthaus H, Braam P, Hadorn D, Schwermer H. Überwachung des Schmallenberg-Virus in der Schweiz. Schweizer Archiv für Tierheilkunde 2012, 154:543-547.

Sharma R, Ghasparian A, Robinson JA, McCullough KC. Synthetic virus-like particles target dendritic cell lipid rafts for rapid endocytosis primarily but not exclusively by macropinocytosis. PLoS One 2012, 7(8):e43248.

Stärk K, Griot C. Does the emergence of the Schmallenberg virus pose a public health risk in Europe? Disease report series for the Working Group Zoonotic Diseases, #6, 2012.

Summerfield A. Viewpoint: Factors involved in type I interferon responses during porcine virus infections. Veterinary Immunology and Immunopathology 2012, 148(1-2):168-71.

Tamura T, Sakoda Y, Yoshino F, Nomura T, Yamamoto N, Sato Y, Okamatsu M, Ruggli N, Kida H. Selection of classical swine fever virus with enhanced pathogenicity reveals synergistic virulence determinants in E2 and NS4B. Journal of Virology 2012, 86:8602-8613.

Vazquez-Calvoa A, Saizb JC, McCullough KC, Sobrino F, Martin-Acebesa MA. Acid-dependent viral entry. Virus Research 2012, 167:125-137.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Institute of Virology and Immunoprophylaxis (IVI), which is part of the Swiss Federal Veterinary Office, is the ISO 17025 accredited institute for the diagnosis, surveillance and control of highly contagious epizootics. In addition, the IVI pursues research both on these viruses and emerging viral diseases, as well as their potential transmission to man. The IVI is also the competent authority issuing the licenses required for the sale of veterinary immunobiological products. Basic research is carried out in the fields of immunology and virology, and involves influenza virus, foot-and-mouth disease virus, classical swine fever virus and porcine circovirus type 2. The development and diagnostics branches focus on assays and tests for classical and african swine fever, foot-and-mouth disease, avian influenza, bluetongue, and other highly contagious infectious diseases. In this domain, the IVI occupies a leading position internationally.

For further information please visit: http://www.bvet.admin.ch/ivi/index.html?lang=en

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Centre National de Référence (National Reference Center)
Name of facility	**Centre National de Référence pour les Infections Virales Emergentes** (National Reference Center for Emerging Viral Infections)
Affiliation	Laboratoire de Virologie, Hôpitaux Universitaires de Genève (Virological Laboratory, University Hospitals of Geneva)

2. Where is it located (include both address and geographical location)?

Location	Rue Gabrielle Perret-Gentil 4 CH-1211 Genève 14
Geographical location	N 46° 11' 34.01", E 6° 9' 02.47"

3. Floor area of laboratory areas by containment level:

BSL2	0 m^2
BSL3	0 m^2
BSL3Ag	0 m^2
BSL4	22 m^2
Total	22 m^2

Of note, the BSL4 unit is approved for diagnostic purposes only.

4. The organizational structure of each facility.

(i) Total number of personnel

6

(ii) Division of personnel:

Military	0
Civilian	6

(iii) Division of personnel by category:

Scientists	3
Engineers	0
Technicians	3
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Medicine, biology, microbiology, molecular biology, viral genetics, infectious diseases

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Swiss Confederation (Federal Department of Home Affairs)

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	60 %
Test & Evaluation	15 %
Analysis / Diagnosis	15 %
Education & Training	1 %
Other activities	9 % (costs for maintenance and administration)

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Tapparel C, Siegrist F, Petty TJ, Kaiser L. Picornavirus and enterovirus diversity with associated human diseases. Infect Genet Evol. 2012 Nov 29;14C:282-293.

Schibler M, Gerlach D, Martinez Y, Belle SV, Turin L, Kaiser L, Tapparel C. Experimental human rhinovirus and enterovirus interspecies recombination. J Gen Virol. 2012 Jan;93(Pt 1):93-101.

Siegrist CA, van Delden C, Bel M, Combescure C, Delhumeau C, Cavassini M, Clerc O, Meier S, Hadaya K, Soccal PM, Yerly S, Kaiser L, Hirschel B, Calmy A; H1N1 Study Group, Swiss HIV Cohort Study (SHCS). Higher memory responses in HIV-infected and kidney transplanted patients than in healthy subjects following priming with the pandemic vaccine. PLoS One. 2012 7(7):e40428.

Hottinger AF, George AC, Bel M, Favet L, Combescure C, Meier S, Grillet S, Posfay-Barbe K, Kaiser L, Siegrist CA, Dietrich PY; H1N1 Study Group. A prospective study of the factors shaping antibody responses to the AS03-adjuvanted influenza A/H1N1 vaccine in cancer outpatients. Oncologist. 2012 17(3):436-45.

Schäppi MG, Meier S, Bel M, Siegrist CA, Posfay-Barbe KM; H1N1 Study Group. Protective antibody responses to influenza A/H1N1/09 vaccination in children with celiac disease. J Pediatr Gastroenterol Nutr. 2012 Jun 54(6):817-9.

Ambrosioni J, Junier T, Delhumeau C, Calmy A, Hirschel B, Zdobnov E, Kaiser L, Yerly S; Swiss HIV Cohort Study. Impact of highly active antiretroviral therapy on the molecular epidemiology of newly diagnosed HIV infections. AIDS. 2012 Oct 23;26(16):2079-86.

Cordey S, Petty TJ, Schibler M, Martinez Y, Gerlach D, van Belle S, Turin L, Zdobnov E, Kaiser L, Tapparel C. Identification of site-specific adaptations conferring increased neural cell tropism during human enterovirus 71 infection. PLoS Pathog. 2012;8(7):e1002826.

Luyt CE, Kaiser L. Virus detection in patients with severe pneumonia: still more questions than answers? Am J Respir Crit Care Med. 2012 Aug 15;186(4):301-2.

Ambrosioni J, Junier T, Delhumeau C, Calmy A, Hirschel B, Zdobnov E, Kaiser L, Yerly S; and the Swiss HIV Cohort Study. Impact of HAART on the molecular epidemiology of newly diagnosed HIV infections in Geneva, Switzerland. AIDS. 2012 Jul 20.

Mangeat B, Cavagliotti L, Lehmann M, Gers-Huber G, Kaur I, Thomas Y, Kaiser L, Piguet V. Influenza virus partially counteracts restriction imposed by tetherin/BST-2. J Biol Chem. 2012 Jun 22;287(26):22015-29.

Ambrosioni J, Kaiser L, Giostra E, Meylan P, Mentha G, Toso C, Genevay-Infante M, Rubbia-Brandt L, van Delden C. Herpes simplex virus load to monitor antiviral treatment after liver transplantation for acute herpetic hepatitis. Antivir Ther. 2012;17(2):401-4.

Crisinel PA, Barazzone C, Kaiser L, L'Huillier AG, Taguebue J, Wagner N, Delcò C, Siegrist CA, Posfay-Barbe KM; H1N1 Pediatric Epidemiology Study Group. Comparison of clinical presentation of respiratory tract infections in H1N1/09-positive and H1N1/09-negative patients. Eur J Pediatr. 2012 Jan;171(1):159-66.

Cordey S, Thomas Y, Suter P, Kaiser L. Pilot Evaluation of RT-PCR/Electrospray Ionization Mass Spectrometry (PLEX-ID/Flu assay) on Influenza-Positive Specimens. Open Virol J. 2012;6:64-7.

Scherrer AU, Böni J, Yerly S, Klimkait T, Aubert V, Furrer H, Calmy A, Cavassini M, Elzi L, Vernazza PL, Bernasconi E, Ledergerber B, Günthard HF; Swiss HIV Cohort Study (SHCS). Long-lasting protection of activity of nucleoside reverse transcriptase inhibitors and protease inhibitors (PIs) by boosted PI containing regimens. PLoS One. 2012;7(11):e50307.

Scherrer AU, Ledergerber B, von Wyl V, Böni J, Yerly S, Klimkait T, Cellerai C, Furrer H, Calmy A, Cavassini M, Elzi L, Vernazza PL, Bernasconi E, Günthard HF; Swiss HIV Cohort Study. Minor protease inhibitor mutations at baseline do not increase the risk for a virological failure in HIV-1 subtype B infected patients. PLoS One. 2012;7(6):e37983.

Schibler M, Yerly S, Vieille G, Docquier M, Turin L, Kaiser L, Tapparel C. Critical analysis of rhinovirus RNA load quantification by real-time reverse transcription-PCR. J Clin Microbiol. 2012 Sep;50(9):2868-72.

Schüpbach J, Bisset LR, Gebhardt MD, Regenass S, Bürgisser P, Gorgievski M, Klimkait T, Andreutti C, Martinetti G, Niederhauser C, Yerly S, Pfister S, Schultze D, Brandenberger M, Schöni-Affolter F, Scherrer AU, Günthard HF; Swiss HIV Cohort Study. Diagnostic performance of line-immunoassay based algorithms for incident HIV-1 infection. BMC Infect Dis. 2012 Apr 12;12:88.

Leventhal GE, Kouyos R, Stadler T, Wyl Vv, Yerly S, Böni J, Cellerai C, Klimkait T, Günthard HF, Bonhoeffer S. Inferring epidemic contact structure from phylogenetic trees. PLoS Comput Biol. 2012;8(3):e1002413.

Yerly S, Hirschel B. Diagnosing acute HIV infection. Expert Rev Anti Infect Ther. 2012 Jan;10(1):31-41.

von Wyl V, Yerly S, Böni J, Shah C, Cellerai C, Klimkait T, Battegay M, Bernasconi E, Cavassini M, Furrer H, Hirschel B, Vernazza PL, Ledergerber B, Günthard HF; Swiss HIV Cohort Study. Incidence of HIV-1 drug resistance among antiretroviral treatment-naive individuals starting modern therapy combinations. Clin Infect Dis. 2012 Jan 1;54(1):131-40.

Scherrer AU, von Wyl V, Götte M, Klimkait T, Cellerai C, Yerly S, Böni J, Held L, Ledergerber B, Günthard HF; Swiss HIV Cohort Study. Polymorphic mutations associated with the emergence of the multinucleoside/tide resistance mutations 69 insertion and Q151M. J Acquir Immune Defic Syndr. 2012 Feb 1;59(2):105-12.

Stadler T, Kouyos R, von Wyl V, Yerly S, Böni J, Bürgisser P, Klimkait T, Joos B, Rieder P, Xie D, Günthard HF, Drummond AJ, Bonhoeffer S; Swiss HIV Cohort Study. Estimating the basic reproductive number from viral sequence data. Mol Biol Evol. 2012 Jan;29(1):347-57.

Siegrist CA, Ambrosioni J, Bel M, Combescure C, Hadaya K, Martin PY, Soccal PM, Berney T, Noble S, Meier S, Posfay-Barbe K, Grillet S, Kaiser L, van Delden C; H1N1 study group. Responses of solid organ transplant recipients to the AS03-adjuvanted pandemic influenza vaccine. Antivir Ther. 2012;17(5):893-903.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The National Reference Center for Emerging Viral Infections is a federal reference laboratory by order of the Federal Office of Public Health. Its task is the detection of emerging and reemerging viruses of all biosafety levels, especially hemorrhagic fever viruses and variola virus. The BSL4 unit is approved for diagnostic purposes only, which does not allow any culturing or enrichment of such viruses. The National Reference Center for Emerging Viral Infections is part of the Virological Laboratory at the University Hospitals of Geneva. Besides its function as a reference laboratory it also carries out all other tasks related to the Regional Laboratory Network, such as the function of the Virological Laboratory acting as the Regional Competence Center for the primary analysis of virological samples suspicious of a bioterror-related background.

For further information please visit (website in French): http://virologie.hug-ge.ch/

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Nationales Referenzzentrum (National Reference Center)
Name of facility	**Nationales Zentrum für Anthrax** (National Reference Center for Anthrax)
Affiliation	Institut für Veterinärbakteriologie, Vetsuisse Fakultät, Universität Bern (Institute of Veterinary Bacteriology, Vetsuisse Faculty, University of Berne)

2. Where is it located (include both address and geographical location)?

Location	Länggassstrasse 122b CH-3012 Bern
Geographical location	N 46° 57' 24.13", E 7° 25' 40.37"

3. Floor area of laboratory areas by containment level:

BSL2	0 m^2
BSL3	20 m^2
BSL3Ag	0 m^2
BSL4	0 m^2
Total	20 m^2

4. The organizational structure of each facility.

(i) Total number of personnel

2

(ii) Division of personnel:

Military	0
Civilian	2

(iii) Division of personnel by category:

Scientists	2
Engineers	0
Technicians	0
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Swiss Confederation (Federal Department of Home Affairs)

(vii) What are the funding levels for the following programme areas:

Research	10 %
Development	20 %
Test & Evaluation	20 %
Analysis / Diagnosis	40 %
Education & Training	10 %
Other activities	0 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Antwerpen M, Pilo P, Wattiau P, Butaye P, Frey J, Frangoulidis D. Bacillus anthracis: Anthrax. 2012. In: BSL3 and BSL4 Agents, Epidemiology, Microbiology and Practical Guidelines. M.C. Elschner, S.J. Cutler, M. Weidmann and P. Butaye (Eds). Wiley Blackwell, Weinheim Germany, ISBN 978-3-527-31715-8; pp 5 – 18.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The National Reference Center for Anthrax is a federal reference laboratory by order of the Federal Office of Public Health. The main task of the Reference Center is its contribution to the epidemiologic surveillance in Switzerland of critical bacteriological agents that include *Bacillus anthracis*, *Francisella tularensis*, *Yersinia pestis* and *Brucella sp*.

For further information please visit:
http://www.vbi.unibe.ch/content/nant/index_eng.html

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Centre Régional de Compétence – Laboratoire Régional Ouest (GE) (Regional Competence Center – Regional Laboratory West (GE))
Authority	Département du Territoire, Canton de Genève (Department of Territory, Canton of Geneva)
Name of facility	**Laboratoire de Bactériologie** (Bacteriological Laboratory)
Affiliation	Hôpitaux Universitaires de Genève (University Hospitals of Geneva)

2. Where is it located (include both address and geographical location)?

Location	Rue Gabrielle Perret-Gentil 4 CH-1211 Genève 14
Geographical location	N 46° 11' 36.99", E 6° 8' 57.37"

3. Floor area of laboratory areas by containment level:

BSL2	535 m²
BSL3	58 m²
BSL3Ag	0 m²
BSL4	0 m²
Total	593 m²

4. The organizational structure of each facility.

(i) Total number of personnel

5

(ii) Division of personnel:

Military	0
Civilian	5

(iii) Division of personnel by category:

Scientists	2
Engineers	0
Technicians	3
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Medicine, biology, microbiology, molecular biology, bacterial genetics, infectious diseases

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Fribourg, Genève, Neuchâtel, Valais, Vaud

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	5 %
Test & Evaluation	40 %
Analysis / Diagnosis	40 %
Education & Training	13 %
Other activities	2 % (costs for maintenance and administration)

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Resch G, François P, Morisset D, Stojanov M, Bonetti EJ, Schrenzel J, Sakwinska O, Moreillon P. Human-to-bovine Jump of Staphylococcus aureus CC8 is Associated with the Loss of Prophage phiSa3 and the Acquisition of a New Staphylococcal Cassette Chromosome. In Press. PloS One 2012.

Lamamy C, Berthelot A, Bertrand X, Valentin AS, dos Santos S, Thiais S, Morange V, Girard N, Donnio PY, Quentin R, Schrenzel J, François P, van der Mee-Marquet N. CC9 livestock-associated Staphylococcus aureus emerge in bloodstream infections in French patients unconnected with farming. In Press. Clin Infect Dis 2012.

Fenner L, Egger M, Bodmer T, Furrer H, Baillif M, Battegay M, Helbling P, Fehr J, Gsponer T, Rieder HL, Zwahlen M, Hoffmann M, Bernasconi E, Cavassini M, Calmy A, Dolina M, Frei R, Janssens JP, Borrell S, Stucki D, Schrenzel J, Boettger EC, Gagneux S; for the Swiss HIV Cohort and Molecular Epidemiology of Tuberculosis Study Groups. HIV infection disrupts the sympatric host-pathogen relationship in human tuberculosis. In Press. PLoS Genetics 2012.

van der Mee-Marquet N, Valentin AS, Corvaglia AR, Bertrand X, Girard M, Kluytmans J, Donnio PY, Quentin R, Schrenzel J, François P. Bacteriophage encoded immune escape in CC398 Staphylococcus aureus In Press. Clin Microbiol Infect 2012.

Pileggi G, Wataha JC, Girard M, Lange N, Schrenzel J, Grad I, Bouillaguet S. Blue light-mediated inactivation of Enterococcus faecalis in vitro. In Press. Photodiagnosis and Photodynamic Therapy 2012.

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5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Bacteriological Laboratory, which is part of the University Hospitals of Geneva, is the Regional Competence Center for the primary analysis of bacteriological samples suspicious of a bioterror-related background. Protocols for the detection of bacteria causing anthrax, plague, tularemia and brucellosis have been established in close collaboration with the National Reference Center for Anthrax. Furthermore, there is a strong link between the Bacteriological Laboratory and the Genomic Research Laboratory that is almost exclusively executing basic and applied research projects under joint leadership. Translational research is actively promoted through this channel of cooperation.

For further information please visit:
http://laboratoire-bacteriologie.hug-ge.ch/en/index.htm

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Centre Régional de Compétence – Laboratoire Régional Ouest (GE) (Regional Competence Center – Regional Laboratory West (GE))
Authority	Département du Territoire, Canton de Genève (Department of Territory, Canton of Geneva)
Name of facility	**Laboratoire de Virologie – Centre National de Référence pour les Infections Virales Emergentes** (Virological Laboratory – National Reference Center for Emerging Viral Infections)
Affiliation	Hôpitaux Universitaires de Genève (University Hospitals of Geneva)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 40 to 44].

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Centre Régional de Compétence – Laboratoire Régional Ouest (VD) (Regional Competence Center – Regional Laboratory West (VD))
Authority	Service de l'Environnement et de l'Énergie, Département de la Sécurité et de l'Environnement, Canton de Vaud (Service of Environment and Energy, Department of Security and Environment, Canton of Vaud)
Name of facility	**Laboratoires de Diagnostic de l'Institut de Microbiologie** (Diagnostic Laboratories of the Institute of Microbiology)
Affiliation	Département de Pathologie et Médecine de Laboratoire, Centre Hospitalier Universitaire Vaudois (Department of Pathology and Laboratory Medicine, University Hospital Center of Vaud)

2. *Where is it located (include both address and geographical location)?*

Location	Rue du Bugnon 48 CH-1011 Lausanne
Geographical location	N 46° 31' 30.57", E 6° 38' 29.15"

3. *Floor area of laboratory areas by containment level:*

BSL2	not specified
BSL3	not specified
BSL3Ag	0 m²
BSL4	0 m²
Total	not specified

4. The organizational structure of each facility.

(i) Total number of personnel

not specified

(ii) Division of personnel:

Military	0
Civilian	not specified

(iii) Division of personnel by category:

Scientists	not specified
Engineers	not specified
Technicians	not specified
Administrative and support staff	not specified

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Bacteriology, mycology, parasitology, virology

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Fribourg, Genève, Neuchâtel, Valais, Vaud

(vii) What are the funding levels for the following programme areas:

Research	not specified
Development	not specified
Test & Evaluation	not specified
Analysis / Diagnosis	not specified
Education & Training	not specified
Other activities	not specified

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

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Arendrup MC, Bille J, Dannaoui E, Ruhnke M, Heussel CP, Kibbler C. ECIL-3 classical diagnostic procedures for the diagnosis of invasive fungal diseases in patients with leukaemia. Bone Marrow Transplant. 2012 Aug;47(8):1030-45.

Baud D, Bizzini A, Jaton K, Achtari C, Prod'hom G, Greub G. Pasteurella multocida zoonotic ascending infection: an unusual cause of tubo-ovarian abscess. Vector Borne Zoonotic Dis. 2012 Jan;12(1):84-5.

Cottier F, Raymond M, Kurzai O, Bolstad M, Leewattanapasuk W, Jiménez-López C, Lorenz MC, Sanglard D, Váchová L, Pavelka N, Palková Z, Mühlschlegel FA. The bZIP transcription factor Rca1p is a central regulator of a novel CO_2 sensing pathway in yeast. PLoS Pathog. 2012 Jan;8(1):e1002485.

Dhamgaye S, Devaux F, Manoharlal R, Vandeputte P, Shah AH, Singh A, Blugeon C, Sanglard D, Prasad R. In vitro effect of malachite green on Candida albicans involves multiple pathways and transcriptional regulators UPC2 and STP2. Antimicrob Agents Chemother. 2012 Jan;56(1):495-506.

Eklund C, Unger ER, Nardelli-Haefliger D, Zhou T, Dillner J. International collaborative proficiency study of Human Papillomavirus type 16 serology. Vaccine. 2012 Jan 5;30(2):294-9.

Glass TR, Rotger M, Telenti A, Decosterd L, Csajka C, Bucher HC, Günthard HF, Rickenbach M, Nicca D, Hirschel B, Bernasconi E, Wandeler G, Battegay M, Marzolini C; Swiss HIV Cohort Study. Determinants of sustained viral suppression in HIV-infected patients with self-reported poor adherence to antiretroviral therapy. PLoS One. 2012;7(1):e29186.

Kebbi-Beghdadi C, Lienard J, Uyttebroeck F, Baud D, Riederer BM, Greub G. Identification of immunogenic proteins of Waddlia chondrophila. PLoS One. 2012;7(1):e28605.

Kucera P, Gerber S, Marques-Vidal P, Meylan PR. Seroepidemiology of herpes simplex virus type 1 and 2 in pregnant women in Switzerland: an obstetric clinic based study. Eur J Obstet Gynecol Reprod Biol. 2012 Jan;160(1):13-7.

Manuel O, Baid-Agrawal S, Moradpour D, Pascual M. Immunosuppression in hepatitis C virus-infected patients after kidney transplantation. Contrib Nephrol. 2012;176:97-107.

Wölk B, Trautwein C, Büchele B, Kersting N, Blum HE, Rammensee HG, Cerny A, Stevanovic S, Moradpour D, Brass V. Identification of naturally processed hepatitis C virus-derived major histocompatibility complex class I ligands. PLoS One. 2012;7(1):e29286.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Diagnostic Laboratories of the Institute of Microbiology, which are part of the University Hospital Center of Vaud, are the Regional Competence Center for the primary analysis of samples suspicious of a bioterror-related background. Due to its other diagnostic activities, it is able to cover the whole spectrum of microbiology.

For further information please visit (website in French):
http://www.chuv.ch/dml/dml_home/dml_imu_home.htm

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Regionales Kompetenzzentrum – Regionallabor Zentrum West (BE) (Regional Competence Center – Regional Laboratory West Central (BE))
Authority	Kantonales Laboratorium Bern, Gesundheits- und Fürsorgedirektion, Kanton Bern (Cantonal Laboratory of Berne, Directorate of Public Health and Welfare, Canton of Berne)
Name of facility	**Labor Spiez** (Spiez Laboratory)
Affiliation	Bundesamt für Bevölkerungsschutz, Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport (Federal Office for Civil Protection, Federal Department of Defence, Civil Protection and Sports)

This facility is declared in accordance with Form A, part 2 (iii) [➢ pages 28 to 34].

National biological defence research and development programmes – Facilities

1. What is the name of the facility?

Title / Function	Regionales Kompetenzzentrum – Regionallabor Zentrum Ost (LU) (Regional Competence Center – Regional Laboratory East Central (LU))
Authority	Luzerner Kantonsspital, Kanton Luzern (Cantonal Hospital of Lucerne, Canton of Lucerne)
Name of facility	**Institut für Medizinische Mikrobiologie** (Department of Medical Microbiology)
Affiliation	Zentrum für LaborMedizin, Luzerner Kantonsspital (Center for Laboratory Medicine, Cantonal Hospital of Luzern)

2. Where is it located (include both address and geographical location)?

Location	Luzerner Kantonsspital Haus 47 CH-6000 Luzern 16
Geographical location	N 47° 3' 32.45", E 8° 18' 1.17"

3. Floor area of laboratory areas by containment level:

BSL2	716 m²
BSL3	62 m²
BSL3Ag	0 m²
BSL4	0 m²
Total	778 m²

4. The organizational structure of each facility.

(i) Total number of personnel

7

(ii) Division of personnel:

Military	0
Civilian	7

(iii) Division of personnel by category:

Scientists	2
Engineers	0
Technicians	4
Administrative and support staff	1

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Clinical microbiology (all disciplines; diagnostics and applied research)

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Luzern, Nidwalden, Obwalden, Schwyz, Uri

(vii) What are the funding levels for the following programme areas:

Research	10 %
Development	0 %
Test & Evaluation	10 %
Analysis / Diagnosis	70 %
Education & Training	10 %
Other activities	0 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Pfyffer, GE, Wittwer, F. Incubation time of mycobacterial cultures: how long is long enough to issue a final negative report to the clinician? J Clin Microbiol 2012. 50:4188-9.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Department of Medical Microbiology, Luzerner Kantonsspital, is accredited (ISO / EN 17025) for clinical bacteriology, mycology, mycobacteriology, parasitology, molecular diagnostics, serology, blood banking (serological and molecular markers of donor blood). The current focus of research activities is on mycobacteria in general, as well as on specified bacteriological topics (e.g. MALDI-TOF vs. sequencing). In addition, it is the Regional Competence Center for primary analysis of samples suspicious of a bioterror-related background.

For further information please visit (website in German):
http://www.ksl.ch/standorte/luzern/kliniken/zentrum-fuer-labormedizin/institut-fuer-medizinische-mikrobiologie.html

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Regionales Kompetenzzentrum – Regionallabor Ost (ZH) (Regional Competence Center – Regional Laboratory East (ZH))
Authority	Amt für Abfall, Wasser, Energie und Luft, Baudirektion, Kanton Zürich (Office for Waste, Water, Energy and Air, Directorate of Construction, Canton of Zurich)
Name of facility	**Institut für Medizinische Mikrobiologie** (Institute of Medical Microbiology)
Affiliation	Medizinische Fakultät, Universität Zürich (Faculty of Medicine, University of Zurich)

2. *Where is it located (include both address and geographical location)?*

Location	Gloriastrasse 30/32 CH-8006 Zürich
Geographical location	N 47° 22' 36.20", E 8° 33' 11.18"

3. *Floor area of laboratory areas by containment level:*

BSL2	0 m²
BSL3	20 m²
BSL3Ag	0 m²
BSL4	0 m²
Total	20 m²

4. *The organizational structure of each facility.*

(i) *Total number of personnel*

2

(ii) Division of personnel:

Military	0
Civilian	2

(iii) Division of personnel by category:

Scientists	1
Engineers	0
Technicians	1
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology (bacteriology)

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Appenzell Ausserrhoden, Appenzell Innerrhoden, Glarus, Graubünden, Sankt Gallen, Schaffhausen, Thurgau, Zug, Zürich, and the Principality of Liechtenstein

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	0 %
Test & Evaluation	10 %
Analysis / Diagnosis	80 %
Education & Training	10 %
Other activities	0 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Matt T, Ng CL, Lang K, Sha SH, Akbergenov R, Shcherbakov D, Meyer M, Duscha S, Xie J, Dubbaka SR, Perez-Fernandez D, Vasella A, Ramakrishnan V, Schacht J, Böttger EC. Dissociation of antibacterial activity and aminoglycoside ototoxicity in the 4-monosubstituted 2-deoxystreptamine apramycin. Proc Natl Acad Sci USA 2012, 109:10984-9.

Polsfuss S, Bloemberg GV, Giger J, Meyer V, Hombach M. Comparison of EUCAST and CLSI screening parameters for the detection of extended spectrum beta-lactamase (ESBL) production in clinical Enterobacteriaceae isolates. J Antimicrob Chemother 2012, 67:159-66.

Lucke K, Hombach M, Friedel U, Ritter C, Böttger EC. Automated quantitative drug susceptibility testing of nontuberculous mycobacteria using MGIT960 / EpiCenter TBeXIST. J Antimicrob Chemother 2012, 67:154-8.

Dengler V, Stutzmann-Meier P, Heusser R, Kupferschmied P, Fazekas J, Friebe S, Burger-Staufer S, Majcherczyk PA, Moreillon P, Berger-Bächi B, McCallum N. Deletion of hypothetical wall teichoic acid ligases in Staphylococcus aureus activates the cell wall stress response. FEMS Microbiol Lett 2012, 333:109-20.

Grau T, Selchow P, Tigges M, Burri R, Gitzinger M, Böttger EC, Fussenegger M, Sander P. Phenylethyl-butyrate enhances the potency of second-line drugs against clinical isolates of M. tuberculosis. Antimicrob Agents Chemother 2012, 56:1142-5.

Tschumi A, Grau T, Albrecht D, Rezwan M, Antelmann H, Sander P. Functional analyses of mycobacterial lipoprotein diacylglyceryl transferase and comparative secretome analysis of a mycobacterial lgt mutant. J Bacteriol 2012, 194:3938-49.

Rosenberger T, Brülle JK, Sander P. A β-Lactamase based reporter system for ESX dependent protein translocation in mycobacteria. PLoS One 2012, 7:e35453.

Schulthess B, Bloes DA, Berger-Bächi B. Opposing roles of Sigma B and Sigma B-controlled SpoVG in the global regulation of esxA in Staphylococcus aureus. BMC Microbiol 2012, 12:17.

Hombach M, Bloemberg GV, Böttger EC. Effects of clinical breakpoint changes in CLSI guidelines 2010/2011 and EUCAST guidelines 2011 on antibiotic susceptibility test reporting of Gram-negative bacilli. J Antimicrob Chemother 2012, 67:622-32.

Zbinden A, Müller NJ, Tarr PE, Eich G, Schulthess B, Bahlmann AS, Keller PM, Bloemberg GV. Streptococcus tigurinus, a novel member of the Streptococcus mitis group, causes invasive infections. J Clin Microbiol 2012, 50:2969-73.

Houghton J, Townsend C, Williams AR, Rodgers A, Rand L, Walker KB, Böttger EC, Springer B, Davis EO. Important role for Mycobacterium tuberculosis UvrD1 in pathogenesis and persistence apart from its function in nucleotide excision repair. J Bacteriol 2012, 194:2916-23.

Fenner L, Gagneux S, Helbling P, Battegay M, Rieder H, Pfyffer G, Zwahlen M, Furrer H, Siegrist H, Fehr J, Dolina M, Calmy A, Stucki D, Jaton K, Janssens JP, Mazza Stalder J, Bodmer T, Ninet B, Böttger EC, Egger M. Mycobacterium tuberculosis transmission in a low-incidence country: role of immigration and HIV infection. J Clin Microbiol 2012, 50:388-95.

Fenner L, Gagneux S, Janssens JP, Fehr J, Cavassini M, Hoffman M, Bernasconi E, Schrenzel J, Bodmer T, Böttger EC, Helbling P, Egger M. Tuberculosis in HIV-negative and HIV-infected patients in a low-incidence country: clinical characteristics and treatment outcome. PLoS One 2012, 7:e34186.

Streicher E, Bergval I, Dheda K, Böttger EC, Gey van Pitius N, Bosman M, Coetzee G, Anthony R, van Helden PD, Victor TC, Warren RM. Mycobacterium tuberculosis population structure determines the outcome of genetic based second-line drug resistance testing. Antimicrob Agents Chemother 2012, 56:2420-7.

Fenner L, Egger M, Bodmer T, Altpeter E, Zwahlen M, Jaton K, Pfyffer GE, Borrell S, Dubuis O, Bruderer T, Siegrist HH, Furrer H, Calmy A, Fehr J, Stalder JM, Ninen B, Böttger EC, Gagneux S. Effect of mutation and genetic background on drug resistance in Mycobacterium tuberculosis. Antimicrob Agents Chemother 2012, 56:3047-53.

Polsfuss S, Bloemberg GV, Giger J, Meyer V, Böttger EC, Hombach M. Evaluation of a diagnostic flow-chart for detection and confirmation of extended spectrum beta-lactamases (ESBL) in Enterobacteriaceae. Clin Microbiol Infect 2012, epub ahead of print.

Sirgel FA, Warren RM, Streicher EM, Victor TC, van Helden PD, Böttger EC. gyrA mutations and phenotypic susceptibility levels to ofloxacin and moxifloxacin in clinical isolates of Mycobacterium tuberculosis. J Antimicrob Chemother 2012, 67:1088-93.

Sirgel FA, Tait M, Warren RM, Streicher EM, Böttger EC, van Helden PD, Gey van Pittius NC, Coetzee G, Hoosain EY, Chabula-Nxiweni M, Hayes C, Victor TC, Trollip A. Mutations in the rrs A1401G gene and phenotypic resistance to amikacin and capreomycin in Mycobacterium tuberculosis. Microb Drug Resist 2012, 18:193-7.

Sirgel FA, Warren RM, Streicher EM, Victor TC, van Helden PD, Böttger EC. embB306 mutations as molecular indicators to predict ethambutol susceptibility in Mycobacterium tuberculosis. Chemotherapy 2012, 58:358-63.

Salian S, Matt T, Akbergenov R, Harish S, Meyer M, Duscha S, Shcherbakov D, Bernet BB, Vasella A, Westhof E, Böttger EC. Structure-activity relationships among the kanamycin aminoglycosides: role of ring I hydroxy and amino groups. Antimicrob Agents Chemother 2012, 56:6104-8.

Thierfelder C, Keller PM, Kocher C, Gaudenz R, Hombach M, Bloemberg GV, Ruef C. Vancomycin-resistant Enterococcus. Swiss Med Wkly 2012, 142:w13540.

Maurer F, Rüegger V, Ritter C, Bloemberg GV, Böttger EC. Acquisition of clarithromycin resistance mutations in the 23S rRNA gene of Mycobacterium abscessus in the presence of inducible erm(41) methylase. J Antimicrob Chemother 2012, 67:2606–11.

Zbinden A, Müller NJ, Tarr PE, Spröer C, Keller PM, Bloemberg GV. Streptococcus tigurinus sp. nov., isolated from blood of patients with endocarditis, meningitis and spondylodiscitis. Int J Syst Evol Microbiol 2012, epub ahead of print.

Zbinden A, Imhof A, Wilhelm MJ, Ruschitzka F, Wild P, Bloemberg GV. Fatal outcome after heart transplantation caused by Aspergillus lentulus. Transpl Infect Dis 2012, epub ahead of print.

Maurer F, Keller PM, Beuret C, Joha C, Achermann Y, Gubler J, Bircher D, Karrer U, Fehr J, Zimmerli L, Bloemberg GV. Close geographic association of human neoehrlichiosis and tick populations carrying Candidatus Neoehrlichia mikurensis in Eastern Switzerland. J Clin Microbiol 2012, epub ahead of print.

Böttger EC. Interferon-gamma release assays and the risk of developing active tuberculosis. Am J Respir Crit Care Med 2012, 185:786-7.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Institute of Medical Microbiology at the University of Zurich is the Regional Competence Center for the primary analysis of bacteriological samples suspicious of a bioterror-related background. This represents an additional and not a continuous task of the diagonstics laboratory proficient in bacteriology, mycology and serology.

For further information please visit: http://www.imm.uzh.ch/index_en.html

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Regionales Kompetenzzentrum – Regionallabor Ost (ZH) (Regional Competence Center – Regional Laboratory East (ZH))
Authority	Amt für Abfall, Wasser, Energie und Luft, Baudirektion, Kanton Zürich (Office for Waste, Water, Energy and Air, Directorate of Construction, Canton of Zurich)
Name of facility	**Institut für Medizinische Virologie** (Institute of Medical Virology)
Affiliation	Medizinische Fakultät, Universität Zürich (Faculty of Medicine, University of Zurich)

2. *Where is it located (include both address and geographical location)?*

Location	Winterthurerstrasse 190 CH-8057 Zürich
Geographical location	N 47° 23' 52.08", E 8° 33' 01.92"

3. *Floor area of laboratory areas by containment level:*

BSL2	0 m²
BSL3	0 m²
BSL3Ag	0 m²
BSL4	25 m²
Total	25 m²

4. *The organizational structure of each facility.*

(i) *Total number of personnel*

2

(ii) Division of personnel:

Military	0
Civilian	2

(iii) Division of personnel by category:

Scientists	1
Engineers	0
Technicians	1
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology (virology)

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Appenzell Ausserrhoden, Appenzell Innerrhoden, Glarus, Graubünden, Sankt Gallen, Schaffhausen, Thurgau, Zug, Zürich, and the Principality of Liechtenstein

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	0 %
Test & Evaluation	10 %
Analysis / Diagnosis	80 %
Education & Training	10 %
Other activities	0 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Scherrer AU, Böni J, Yerly S, Klimkait T, Aubert V, Furrer H, Calmy A, Cavassini M, Elzi L, Vernazza PL, Bernasconi E, Ledergerber B, Günthard HF; Swiss HIV Cohort Study (SHCS). Long-lasting protection of activity of nucleoside reverse transcriptase inhibitors and protease inhibitors (PIs) by boosted PI containing regimens. PLoS One 2012; 7(11):e50307.

Scherrer AU, Ledergerber B, von Wyl V, Böni J, Yerly S, Klimkait T, Cellerai C, Furrer H, Calmy A, Cavassini M, Elzi L, Vernazza PL, Bernasconi E, Günthard HF; Swiss HIV Cohort Study. Minor protease inhibitor mutations at baseline do not increase the risk for a virological failure in HIV-1 subtype B infected patients. PLoS One 2012; 7(6):e37983.

Leventhal GE, Kouyos R, Stadler T, Wyl Vv, Yerly S, Böni J, Cellerai C, Klimkait T, Günthard HF, Bonhoeffer S. Inferring epidemic contact structure from phylogenetic trees. PLoS Comput Biol 2012; 8(3):e1002413.

von Wyl V, Yerly S, Böni J, Shah C, Cellerai C, Klimkait T, Battegay M, Bernasconi E, Cavassini M, Furrer H, Hirschel B, Vernazza PL, Ledergerber B, Günthard HF; Swiss HIV Cohort Study. Incidence of HIV-1 drug resistance among antiretroviral treatment-naive individuals starting modern therapy combinations. Clin Infect Dis 2012; 54(1):131-40.

Scherrer AU, von Wyl V, Götte M, Klimkait T, Cellerai C, Yerly S, Böni J, Held L, Ledergerber B, Günthard HF; Swiss HIV Cohort Study. Polymorphic mutations associated with the emergence of the multinucleoside/tide resistance mutations 69 insertion and Q151M. J Acquir Immune Defic Syndr 2012; 59(2):105-12.

Stadler T, Kouyos R, von Wyl V, Yerly S, Böni J, Bürgisser P, Klimkait T, Joos B, Rieder P, Xie D, Günthard HF, Drummond AJ, Bonhoeffer S; Swiss HIV Cohort Study. Estimating the basic reproductive number from viral sequence data. Mol Biol Evol 2012; 29(1):347-57.

Schüpbach J, Bisset LR, Gebhardt MD, Regenass S, Bürgisser P, Gorgievski M, Klimkait T, Andreutti C, Martinetti G, Niederhauser C, Yerly S, Pfister S, Schultze D, Brandenberger M, Schöni-Affolter F, Scherrer AU, Günthard HF; Swiss HIV Cohort Study. Diagnostic performance of line-immunoassay based algorithms for incident HIV-1 infection. BMC Infect Dis 2012; 12:88.

Mekker A, Tchang VS, Haeberli L, Oxenius A, Trkola A, Karrer U. Immune senescence: relative contributions of age and cytomegalovirus infection. PLoS Pathog 2012; 8(8):e1002850.

Abela IA, Berlinger L, Schanz M, Reynell L, Günthard HF, Rusert P, Trkola A. Cell-cell transmission enables HIV-1 to evade inhibition by potent CD4bs directed antibodies. PLoS Pathog 2012; 8(4):e1002634.

Althaus CF, Vongrad V, Niederöst B, Joos B, Di Giallonardo F, Rieder P, Pavlovic J, Trkola A, Günthard HF, Metzner KJ, Fischer M. Tailored enrichment strategy detects low abundant small noncoding RNAs in HIV-1 infected cells. Retrovirology 2012; 9:27.

Reynell L, Trkola A. HIV vaccines: an attainable goal? Swiss Med Wkly 2012; 142:w13535.

Ota T, Doyle-Cooper C, Cooper AB, Huber M, Falkowska E, Doores KJ, Hangartner L, Le K, Sok D, Jardine J, Lifson J, Wu X, Mascola JR, Poignard P, Binley JM, Chakrabarti BK, Schief WR, Wyatt RT, Burton DR, Nemazee D. Anti-HIV B Cell lines as candidate vaccine biosensors. J Immunol 2012; 189(10):4816-24.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Institute of Medical Virology at the University of Zurich is the Regional Competence Center for the primary analysis of viral samples suspicious of a bioterror-related background. This represents an additional and not a continuous task of the viral diagonstics laboratory.

For further information please visit: http://www.virology.uzh.ch/index_en.html

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Regionales Kompetenzzentrum – Regionallabor Nord (BS) (Regional Competence Center – Regional Laboratory North (BS))
Authority	Kantonales Laboratorium Basel-Stadt, Kanton Basel-Stadt (Cantonal Laboratory of Basel-Stadt, Canton of Basel-Stadt)
Name of facility	**Kantonales Laboratorium Basel-Stadt** (Cantonal Laboratory of Basel-Stadt)
Affiliation	Bereich Gesundheitsschutz, Gesundheitsdepartement, Kanton Basel-Stadt (Health Protection Division, Public Health Department, Canton of Basel-Stadt)

2. *Where is it located (include both address and geographical location)?*

Location	Kannenfeldstrasse 2 CH-4056 Basel
Geographical location	N 47° 33' 43.48", E 7° 34' 26.85"

3. *Floor area of laboratory areas by containment level:*

BSL2	14 m²
BSL3	36 m²
BSL3Ag	0 m²
BSL4	0 m²
Total	50 m²

4. *The organizational structure of each facility.*

(i) *Total number of personnel*

4

(ii) Division of personnel:

Military	0
Civilian	4

(iii) Division of personnel by category:

Scientists	2
Engineers	0
Technicians	2
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology, molecular biology, chemistry, inspection

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Cantons of Aargau, Basel-Landschaft, Basel-Stadt, Solothurn

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	15 %
Test & Evaluation	40 %
Analysis / Diagnosis	40 %
Education & Training	5 %
Other activities	0 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Bagutti, C, Schmidlin, M, Mueller, M, Brodmann, P. Washout kinetics of viral vectors from cultured mammalian cells. Appl Biosafety J 2012. 17 (4):188-197.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Cantonal Laboratory of Basel-Stadt is the Regional Competence Center for the primary analysis of samples suspicious of a bioterror-related background. The Regional Laboratory North is also appointed reference laboratory by the Federal Office of Environment for the two following fields of activities: Analysis of samples taken in and around laboratories subjected to the Containment Ordinance, and analysis of samples taken in the environment for the surveillance of the Release Ordinance. Microbiological and molecular biological methods have been established for the identification of a wide range of microorganisms in environmental samples, including relevant pathogens such as *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Bacillus anthracis*, as well as adenoviruses and lentiviruses. Further methods for the detection of bioterror agents have been implemented according to the Regional Laboratory Network.

For further information please visit (website in German):
http://www.kantonslabor-bs.ch/kl/home.cfm

[9] Including viruses and prions.

National biological defence research and development programmes – Facilities

1. *What is the name of the facility?*

Title / Function	Centro Regionale di Competenza – Laboratorio Regionale Sud (TI) (Regional Competence Center – Regional Laboratory South (TI))
Authority	Istituto Cantonale di Microbiologia, Cantone Ticino (Cantonal Institute of Microbiology, Canton of Ticino)
Name of facility	**Istituto Cantonale di Microbiologia** (Cantonal Institute of Microbiology)
Affiliation	Divisione della Salute Pubblica, Dipartimento della Sanità e della Socialità, Cantone Ticino (Public Health Division, Department of Public Health and Welfare, Canton of Ticino)

2. *Where is it located (include both address and geographical location)?*

Location	Via Mirasole 22A CH-6500 Bellinzona
Geographical location	N 46° 11' 54.24", E 9° 01' 04.80"

3. *Floor area of laboratory areas by containment level:*

BSL2	54 m²
BSL3	36 m²
BSL3Ag	0 m²
BSL4	0 m²
Total	90 m²

4. The organizational structure of each facility.

(i) Total number of personnel

2

(ii) Division of personnel:

Military	0
Civilian	2

(iii) Division of personnel by category:

Scientists	2
Engineers	0
Technicians	0
Administrative and support staff	0

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Bacteriology, serology

(v) Are contractor staff working in the facility? If so, provide an approximate number.

0

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Canton of Ticino

(vii) What are the funding levels for the following programme areas:

Research	0 %
Development	0 %
Test & Evaluation	40 %
Analysis / Diagnosis	40 %
Education & Training	0 %
Other activities	20 %

(viii) Briefly describe the publication policy of the facility:

Publication in open literature

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references.)

List of publicly available papers and reports published in 2012:

Peduzzi S, Storelli N, Welsh A, Peduzzi R, Hahn D, Perret X, Tonolla M. Candidatus "Thiodictyon syntrophicum", sp. nov., a new purple sulfur bacterium isolated from the chemocline of Lake Cadagno forming aggregates and specific associations with Desulfocapsa sp. Syst Appl Microbiol 2012; 35(3): 139-44.

Ravasi DF, Peduzzi S, Guidi V, Peduzzi R, Wirth SB, Gilli A, Tonolla M. Development of a real-time PCR method for the detection of fossil 16S rDNA fragments of phototrophic sulfur bacteria in the sediments of Lake Cadagno. Geobiology 2012; 10(3): 196-204.

Fenner L, Gagneux S, Helbling P, Battegay M, Rieder HL, Pfyffer GE, Zwahlen M, Furrer H, Siegrist HH, Fehr J, Dolina M, Calmy A, Stucki D, Jaton K, Janssens JP, Stalder JM, Bodmer T, Ninet B, Böttger EC, Egger M; for the Swiss HIV Cohort and Molecular Epidemiology of Tuberculosis Study Groups. Mycobacterium tuberculosis Transmission in a Country with Low Tuberculosis Incidence: Role of Immigration and HIV Infection. J Clin Microbiol 2012; 50(2): 388-395.

Bochud PY, Bibert S, Kutalik Z, Patin E, Guergnon J, Nalpas B, Goossens N, Kuske L, Müllhaupt B, Gerlach T, Heim MH, Moradpour D, Cerny A, Malinverni R, Regenass S, Dollenmaier G, Hirsch H, Martinetti G, Gorgiewski M, Bourlière M, Poynard T, Theodorou I, Abel L, Pol S, Dufour JF, Negro F; on behalf of the Swiss Hepatitis C Cohort Study Group the ANRS HC EP 26 Genoscan Study Group. IL28B alleles associated with poor hepatitis C virus (HCV) clearance protect against inflammation and fibrosis in patients infected with non-1 HCV genotypes. Hepatology 2012; 55(2): 384-394.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms[9] and/or toxins studied, as well as outdoor studies of biological aerosols.

The Cantonal Institute of Microbiology is the Regional Competence Center for the primary analysis of samples suspicious of a bioterror-related background.

For further information please visit (website in Italian):
http://www.ti.ch/DSS/DSP/IstCM/

[9] Including viruses and prions.

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

At the Third Review Conference it was agreed that States Parties continue to implement the following:

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins, and on all such events that seem to deviate from the normal pattern as regards type, development, place, or time of occurrence. The information provided on events that deviate from the norm will include, as soon as it is available, data on the type of disease, approximate area affected, and number of cases.

The Seventh Review Conference agreed the following:

No universal standards exist for what might constitute a deviation from the normal pattern.

Modalities

The Third Review Conference agreed on the following, later amended by the Seventh Review Conference:

1. Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

- *When the cause of the outbreak cannot be readily determined or the causative agent[10] is difficult to diagnose,*
- *When the disease may be caused by organisms which meet the criteria for risk groups III or IV, according to the classification in the latest edition of the WHO Laboratory Biosafety Manual,*
- *When the causative agent is exotic to a given geographical region,*
- *When the disease follows an unusual pattern of development,*
- *When the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,*
- *When suspicions arise of the possible occurrence of a new disease.*

[10] It is understood that this may include organisms made pathogenic by molecular biology techniques, such as genetic engineering.

2. In order to enhance confidence, an initial report of an outbreak of an infectious disease or a similar occurrence that seems to deviate from the normal pattern should be given promptly after cognizance of the outbreak and should be followed up by annual reports. To enable States Parties to follow a standardized procedure, the Conference has agreed that Form B should be used, to the extent information is known and/or applicable, for the exchange of annual information.

3. The declaration of electronic links to national websites or to websites of international, regional or other organizations which provide information on disease outbreaks (notably outbreaks of infectious diseases and similar occurrences caused by toxins that seem to deviate from the normal pattern) may also satisfy the declaration requirement under Form B.

4. In order to improve international cooperation in the field of peaceful bacteriological (biological) activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions, States Parties are encouraged to invite experts from other States Parties to assist in the handling of an outbreak, and to respond favourably to such invitations, respecting applicable national legislation and relevant international instruments.

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

Human diseases
The Swiss Federal Office of Public Health (FOPH) is responsible for the surveillance and reporting of human diseases. A nationwide notification system is regulated by the Ordinance on the Notification of Communicable Human Diseases (*RS 818.141.1 Ordonnance du 13 janvier 1999 sur la déclaration des maladies transmissibles de l'homme*), which is based on the Federal Law on the Control of Communicable Human Diseases (*RS 818.101 Loi fédérale du 18 décembre 1970 sur la lute contre les maladies transmissibles de l'homme*). On the basis of this ordinance and the Ordinance on the Declaration by Practitioners and Laboratories (*RS 818.141.11 Ordonnance du 13 janvier 1999 sur les déclarations de médecin et de laboratoire*) every medical practitioner and laboratory is obliged to report the occurrence or identification of certain notifiable diseases. The results of this survey are published in the weekly *Bulletin de l'office federal de la santé publique*. The Bulletin (http://www.admin.ch/bag/infreporting/bulletin.html), which also contains detailed reports on the epidemiological situation in the country, is transmitted to the World Health Organization (WHO).

Animal diseases
The Swiss Federal Veterinary Office (FVO) is responsible for the surveillance and reporting of animal diseases. According to the Federal Law on Animal Epidemics (*RS 916.40 Loi du 1er juillet 1966 sur les épizooties*) and the corresponding ordinance (*RS 916.401 Ordonnance du 27 juin 1995 sur les épizooties*), notifiable animal diseases have to be reported to the FVO, which in turn is responsible for the reporting to the World Organization for Animal Health (OIE). Epidemiological data are published in the weekly *Bulletin de l'office vétérinaire fédéral* (http://www.infosm.bvet.admin.ch/public/bulletin/aktuell).

Plant diseases and pests
The Swiss Federal Plant Protection Service (FPPS) is responsible for any kind of phytosanitary measures in order to prevent the introduction and spread of particularly harmful pests and diseases that affect plants and plant products. The FPPS is run jointly by the Swiss Federal Office for Agriculture (FOAG) and the Swiss Federal Office for the Environment (FOEN). The FOAG is responsible for the sector of agricultural and horticultural crops, whereas the FOEN is responsible for forest plants, wood and wood products, including invasive plants. According to the Federal Law on Agriculture (*RS 910.1 Loi fédérale du 29 avril 1998 sur l'agriculture*) and the corresponding ordinance (*RS 916.20 Ordonnance du 27 octobre 2010 sur la protection des végétaux*), notifiable plant diseases and pests are reported to either the FOAG or the FOEN that transmit reports to the European and Mediterranean Plant Protection Organization (EPPO). Reporting of invasive plants to the FOEN, which then communicates with the EPPO, is primarily regulated in the Ordinance on the Release of Organisms into the Environment (*RS 814.911 Ordonnance du 10 septembre 2008 sur l'utilisation d'organismes dans l'environnement*).

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern[11]

Human diseases

No outbreaks of infectious diseases or similar occurrences that seemed to deviate from the normal pattern in terms of human diseases were observed during the reporting period.

[11] See paragraph 2 of the chapeau to Confidence-Building Measure B.

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern[11]

Animal diseases

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern in terms of animal diseases that occurred during the reporting period is provided as follows:

1. Outbreak of a novel Orthobunyavirus called Schmallenberg-Virus in July 2012 in Switzerland. The virus was most likely introduced by infected insect vectors from neighbouring countries. Cases have been notified to the World Organization for Animal Health (OIE) as follows:

   http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=12146

   The virus was first described in samples from cattle taken in autumn in Germany:

   http://www.fli.bund.de/en/startseite/current-news/animal-disease-situation/new-orthobunyavirus-detected-in-cattle-in-germany.html

   The publication with the first description of the virus:

   http://wwwnc.cdc.gov/eid/article/18/3/11-1905_article.htm

   The virus has spread in 2012 to several European countries. The epidemiological situation for Europe is described in a Report published by the European Food Safety Authority:

   http://www.efsa.europa.eu/en/efsajournal/pub/2768.htm

2. Outbreak of Newcastle Disease (Paramyxovirus serotype 1) in January 2012 in one flock of pigeons. The Cases have been notified to the World Organization for Animal Health (OIE) as follows:

   http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=11475

[11] See paragraph 2 of the chapeau to Confidence-Building Measure B.

3. Outbreak of Procine Respiratory and Reproductive Syndrom (PRRS) in pigs in December 2012. All cases were linked to imported semen and have been notified to the World Organization for Animal Health (OIE) as follows:

   http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=12656

4. Individual case of atypical bovine spongiform encephalopathy (BSE) in cattle as follows:

Time of cognizance of the outbreak	23rd of March 2012
Location and approximate area affected	3617 Fahrni bei Thun, Canton BE
Type of disease / intoxication	Prion-disease Atypical BSE; H-Type
Suspected source of disease / intoxication	Animal infected in Germany Imported in 2006
Possible causative agent(s)	Atypical BSE; H-Type
Main characteristics of systems	
Detailed symptoms, when applicable: respiratory circulatory neurological / behavioral intestinal dermatological nephrological other	No clinical symptoms
Deviation(s) from the normal pattern as regards: type development place of occurrence time of occurrence	Switzerland can be considered as free of BSE, especially in cattle born after 2000. Atypical cases may occur sporadically.
symptoms virulence pattern drug resistance pattern agent(s) difficult to diagnose presence of unusual vectors other	

Approximate number of primary cases	1
Approximate number of total cases	1
Number of deaths	
Development of the outbreak	One isolated case in an individual animal
Measures taken	

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern[11]

Plant diseases and pests

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern in terms of plant diseases and pests that occurred during the reporting period is provided as follows:

1. *Anoplophora glabripennis*. First outbreak detected in July 2012 in Switzerland (Winterthur, canton of Zurich), where, according to symptoms and the level of infestation, the pest had been introduced probably 6 years ago. The outbreak was notified on 27 July 2012 to the European and Mediterranean Plant Protection Organisation (EPPO) as outlined on the following page.

2. *Chalara fraxinea*. Reports had not been taken correctly into account, since the fungus was detected already in 2008 (distribution maps: http://www.wsl.ch/forest/wus/beob-db/index.php?TextID=213). The infectious agent is now wide spread on the north side of the Alps.

3. *Pseudomonas syringae* pv. *actinidae*. Is considered as eradicated.

[11] See paragraph 2 of the chapeau to Confidence-Building Measure B.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Office for Agriculture FOAG
Federal Office of Environment FOE
Swiss Federal Plant Protection Service SPP

PEST REPORT[1]

1. **NPPO from:**	Switzerland
2. **Date:**	27.07.2012
3. **Reason for reporting:** (first report, updated situation, eradication, new pest, …)	First outbreak
4. **Identity of the pest:** (scientific name)	*Anoplophora glabripennis* (Forster)
5. **Categorization of the pest:** (Quarantine pest, EPPO A1/A2, Alert List, none)	Quarantine pest (Annex I-A-I)
6. **Host plants or articles concerned**	
a. ***plant name:*** (Latin name, and cultivars if known):	*Acer pseudoplatanus* and, to a lesser extent, *Salix caprea*
b. ***type of plant*** *or mode of cultivation:* (commercial crops / nurseries / gardens / forests / wild plants / indoors / outdoors etc.)	Avenue trees (*A. pseudoplatanus*) and public green (*S. caprea*)
c. ***severity / extent of damage:***	30 avenue trees (*A. pseudoplatanus*) and 1 plant (*S. caprea*) within an area of 30 m x 150 m were found infested
7. **Location:**	Winterthur (canton of Zurich)
8. **Short description:**	
a. ***Date of finding*** *(or eradication):*	18.07.2012
b. ***General context of the pest report:*** - how the pest was found: incidental pest finding / survey results (specify whether the survey was official or not) - how the pest was detected and identified (e.g. diagnostic methods used, confirmation by …) - if the pest finding is not directly related to plants or plant products, describe the general circumstances with details such as number of specimens found - possible origin of the pest (whenever possible, provide information or suggestions on what could be the most likely origin or pathways of introduction).	The outbreak was discovered by a gardener of the public green service of the Municipality of Winterthur in the frame of maintenance activities. Since an extensive information campaign was carried out at the beginning of this year, professionals in the area of horticulture and forestry have become most attentive regarding symptoms caused by longhorn beetles. The majority of the infested trees exhibited several exit holes and egg deposits. Larvae (including last instar larvae) were found in cut tree parts. All together 30

[1] Format based on EPPO-Draft Standard **PM 1/5(1)**

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2011-09-28/27

	among the 66 *A. pseudoplatanus*, which were planted in 2008 along the street 'Sulzer-Allee' were attacked. Approximately 140 adult Asian Longhorn Beetles had been caught and killed during the felling of the trees (see below). However, some beetles have been able to escape. Identification by Dr. Doris Hölling, WSL (www.wsl.ch/index_EN), on the base of adult beetles permitted to confirm that the species involved is *A. glabripennis*. How and when the pest was introduced is not known so far. The 'Sulzer-Allee' is located in a former industrial area, being re-converted as a residential quarter. According to the extent of the outbreak it is assumed that *A. glabripennis* was introduced 4 to 6 years ago, probably with infested wood packaging material. The history of the trees (origin, pest status of the place of production) is also investigated, as the hypothesis of an introduction of the pest by means of nursery stock cannot yet be excluded.
c. ***Are official control measures being taken?*** (if yes, briefly describe the phytosanitary measures which are taken)	Immediate action consisted in the complete destruction of all 66 trees of the 'Sulzer-Allee' and the infested *Salix*. An ongoing extensive detection survey is conducted by the Cantonal Plant Protection Service, presently within a radius of 500 m around the infested area, where also 3 sniffer dogs have been deployed. The monitoring design and the exact control measures will be decided upon results of the current survey.
d. ***References/Links:*** (if available, provide references to publications/websites where the pest record has already been published and to other useful sources of information if the pest concerned is not well known)	www.waldwissen.net/fokus/wissen/wsl_laubholzbock_winterthur/index_DE (only in german)
9. **Official status of the pest** (ISPM no. 8):	Present, under eradication

Encouragement of publication of results and promotion of use of knowledge

At the Third Review Conference it was agreed that States parties continue to implement the following:

Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowledge gained in this research.

Modalities

The Third Review Conference agreed on the following:

1. It is recommended that basic research in biosciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified.

2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating, inter alia, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.

3. The Third Review Conference discussed the question of cooperation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such cooperation.

Encouragement of publication of results and promotion of use of knowledge

Switzerland does not impose any restrictions on the publication of basic and applied research in biosciences related to the Convention:

CBM "A": No restrictions implemented on the publication of research carried out within the frameworks of the National Biological Defense Program and the Regional Laboratory Network as well as their contractors.

CBM "B": No restrictions implemented on the publication of research. Full cooperation with international organizations (WHO, OIE, EPPO) in their respective frameworks.

CBM "G": Public institutions (universities, institutes, hospitals, state-run facilities): No restrictions implemented on the publication of research.

Private companies: Publication of research is encouraged, however, companies are responsible for their own publication policy that are in line with the protection of any commercial interests.

Publishers of scientific and medical journals and other publications based in Switzerland:

Birkhäuser Verlag AG, Basel	http://www.springer.com/birkhauser
EMH Schweizerischer Ärzteverlag AG, Muttenz	http://www.emh.ch/
S. Karger AG, Basel	http://www.karger.com/
WHO Press, Genève	http://apps.who.int/bookorders

Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following, later amended by the Seventh Review Conference:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

(a) To prohibit and prevent the development, production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, within their territory or anywhere under their jurisdiction or under their control anywhere;

(b) In relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention;

(c) In relation to biosafety and biosecurity.

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the Implementation Support Unit (ISU) within the United Nations Office for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Declaration of legislation, regulations and other measures

Switzerland adheres to a monistic system, i.e. treaties of international law become effective upon ratification and are part of the Swiss Federal Legislation. This fact is reflected as follows:

Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (*RS 0.515.07 Convention du 10 avril 1972 sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques (biologiques) ou à toxines et sur leur destruction*)
http://www.admin.ch/ch/f/rs/i5/0.515.07.fr.pdf

Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (*RS 0.515.105 Protocole du 17 juin 1925 concernant la prohibition d'emploi à la guerre de gaz asphyxiants, toxiques ou similaires et de moyens bactériologiques*)
http://www.admin.ch/ch/f/rs/i5/0.515.105.fr.pdf

Declaration of legislation, regulations and other measures

The current status of the further implementation of the Convention into the Swiss Federal Legislation as well as by other measures is as follows:

Relating to	Legislation	Regulations	Other measures[12]	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[a]	Yes[b]	Yes	Yes
b) Exports of micro-organisms[13] and toxins	Yes[c]	Yes[d]	Yes	Yes
c) Imports of micro-organisms[13] and toxins	Yes[e]	Yes[f]	Yes	Yes
d) Biosafety[14] and biosecurity[15]	Yes[g]	Yes[h]	Yes	Yes

[12] Including guidelines.
[13] Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.
[14] In accordance with the latest version of the WHO Laboratory Biosafety Manual or equivalent national or international guidance.
[15] In accordance with the latest version of the WHO Laboratory Biosecurity Guidance or equivalent national or international guidance.

Declaration of legislation, regulations and other measures

Legislation and regulations concerned with the implementation of the Convention in Switzerland is detailed as follows:

[a,g] Federal Constitution of the Swiss Confederation (*RS 101 Constitution fédérale de la Confédération suisse du 18 avril 1999*)
http://www.admin.ch/ch/f/rs/1/101.fr.pdf

[a] Federal Act on Measures Ensuring Homeland Security (*RS 120 Loi fédérale du 21 mars 1997 instituant des mesures visant au maintien de la sûreté intérieure*)
http://www.admin.ch/ch/f/rs/1/120.fr.pdf

[b] Ordinance on the Intelligence Service of the Confederation (*RS 121.1 Ordonnance du 4 décembre 2009 sur le Service de renseignement de la Confédération*)
http://www.admin.ch/ch/f/rs/1/121.1.fr.pdf

[b] Ordinance on Information Systems of the Intelligence Service of the Confederation (*RS 121.2 Ordonnance du 4 décembre 2009 sur les systèmes d'information du Service de renseignement de la Confédération*)
http://www.admin.ch/ch/f/rs/1/121.2.fr.pdf

[b,d] Ordinance on the Prohibition of the al-Qaeda Group and related Organizations (*RS 122 Ordonnance de l'Assemblée fédérale du 23 décembre 2011 interdisant le groupe Al-Qaïda et les organisations apparentées*)
http://www.admin.ch/ch/f/rs/1/122.fr.pdf

[b,h] Ordinance on the Federal Expert Commission for Biosafety (*RS 172.327.8 Ordonnance du 20 novembre 1996 sur la Commission fédérale d'experts pour la sécurité biologique*)
http://www.admin.ch/ch/f/rs/1/172.327.8.fr.pdf

[a] Swiss Criminal Code (*RS 311.0 Code pénal suisse du 21 décembre 1937*)
http://www.admin.ch/ch/f/rs/3/311.0.fr.pdf

[a] Swiss Code of Criminal Procedure (*RS 312.0 Code de procédure pénale suisse du 5 octobre 2007*)
http://www.admin.ch/ch/f/rs/3/312.0.fr.pdf

[b] Ordinance on the Communication of Penal Decisions Taken by Cantonal Authorities (*RS 312.3 Ordonnance du 10 novembre 2004 réglant la communication des décisions pénales prises par les autorités cantonales*)
http://www.admin.ch/ch/f/rs/3/312.3.fr.pdf

[a] Military Criminal Code (*RS 321.0 Code pénal militaire du 13 juin 1927*)
http://www.admin.ch/ch/f/rs/3/321.0.fr.pdf

[a] Federal Act on International Legal Aid in Criminal Cases (*RS 351.1 Loi fédérale du 20 mars 1981 sur l'entraide internationale en matière pénale*)
http://www.admin.ch/ch/f/rs/3/351.1.fr.pdf

[b] Ordinance on the National Central Bureau Interpol Bern (*RS 351.21 Ordonnance du 1er décembre 1986 concernant le Bureau central national Interpol Bern*)
http://www.admin.ch/ch/f/rs/3/351.21.fr.pdf

[a] Federal Act on Main Offices of Criminal Investigation Departments of the Confederation (*RS 360 Loi fédérale du 7 octobre 1994 sur les Offices centraux de police criminelle de la Confédération*)
http://www.admin.ch/ch/f/rs/3/360.fr.pdf

[b] Ordinance on the Information System of the Federal Criminal Police (*RS 360.2 Ordonnance du 15 octobre 2008 sur le système informatisé de la Police judiciaire fédérale*)
http://www.admin.ch/ch/f/rs/3/360.2.fr.pdf

[b] Ordinance on the Coordinated Medical Service (*RS 501.31 Ordonnance du 27 avril 2005 sur le Service sanitaire coordonné*)
http://www.admin.ch/ch/f/rs/5/501.31.fr.pdf

[b] Ordinance on the Coordination of the Veterinary Service in line with General Defence (*RS 501.7 Ordonnance du 3 mai 1978 sur la coordination du service vétérinaire dans le domaine de la défense générale*)
http://www.admin.ch/ch/f/rs/5/501.7.fr.pdf

[a] Federal Act on the Army and the Military Administration (*RS 510.10 Loi fédérale du 3 février 1995 sur l'armée et l'administration militaire*)
http://www.admin.ch/ch/f/rs/5/510.10.fr.pdf

[b] Ordinance on Measures Taken by the Army against Human and Animal Epidemics (*RS 510.35 Ordonnance du 25 octobre 1955 concernant les mesures à prendre par l'armée contre les épidémies et épizooties*)
http://www.admin.ch/ch/f/rs/5/510.35.fr.pdf

[b] Ordinance on Domestic Disaster Management by the Army (*RS 513.75 Ordonnance du 29 octobre 2003 sur l'aide militaire en cas de catastrophe dans le pays*)
http://www.admin.ch/ch/f/rs/5/513.75.fr.pdf

[a] Federal Act on War Material (*RS 514.51 Loi fédérale du 13 décembre 1996 sur le materiel de guerre*)
http://www.admin.ch/ch/f/rs/5/514.51.fr.pdf

[b,d,f] Ordinance on War Material (*RS 514.511 Ordonnance du 25 février 1998 sur le matériel de guerre*)
http://www.admin.ch/ch/f/rs/5/514.511.fr.pdf

[a] Federal Act on the Protection of the Population and Civil Protection (*RS 520.1 Loi fédérale du 4 octobre 2002 sur la protection de la population et sur la protection civile*)
http://www.admin.ch/ch/f/rs/5/520.1.fr.pdf

[b] Ordinance on the Organization of Deployments in case of NBC Incidents and Natural Incidents (*RS 520.17 Ordonnance du 20 octobre 2010 sur l'organisation des interventions en cas d'événement ABC et d'événement naturel*)
http://www.admin.ch/ch/f/rs/5/520.17.fr.pdf

[b] Ordinance on the National Emergency Operations Centre (*RS 520.18 Ordonnance du 17 octobre 2007 sur la Centrale nationale d'alarme*)
http://www.admin.ch/ch/f/rs/5/520.18.fr.pdf

[a] Federal Act on Customs (*RS 631.0 Loi du 18 mars 2005 sur les douanes*)
http://www.admin.ch/ch/f/rs/6/631.0.fr.pdf

[b,d,f] Ordinance on Customs (*RS 631.01 Ordonnance du 1er novembre 2006 sur les douanes*)
http://www.admin.ch/ch/f/rs/6/631.01.fr.pdf

[b] Ordinance on Competencies of the Federal Customs Administration in Criminal Matters (*RS 631.09 Ordonnance du 4 avril 2007 réglant les compétences de l'Administration fédérale des douanes en matière pénale*)
http://www.admin.ch/ch/f/rs/6/631.09.fr.pdf

[b,h] Ordinance on the Transportation of Hazardous Goods on the Road (*RS 741.621 Ordonnance du 29 novembre 2002 relative au transport des marchandises dangereuses par route*)
http://www.admin.ch/ch/f/rs/7/741.621.fr.pdf

[b,h] Ordinance on Hazardous Goods Representatives for the Transportation of Hazardous Goods on the Road, by Air or by Sea (*RS 741.622 Ordonnance du 15 juin 2001 sur les conseillers à la sécurité pour le transport de marchandises dangereuses par route, par rail ou par voie navigable*)
http://www.admin.ch/ch/f/rs/7/741.622.fr.pdf

[b,h] Ordinance on the Transportation of Hazardous Goods by Railway and Aerial Railway (*RS 742.412 Ordonnance du 31 octobre 2012 sur le transport de marchandises dangereuses par chemin de fer et par installation à câbles*)
http://www.admin.ch/ch/f/rs/7/742.412.fr.pdf

[a] Federal Act on Surveillance of Postal Mail and Telecommunications (*RS 780.1 Loi fédérale du 6 octobre 2000 sur la surveillance de la correspondance par poste et télécommunication*)
http://www.admin.ch/ch/f/rs/7/780.1.fr.pdf

[b] Ordinance on Surveillance of Postal Mail and Telecommunications (*RS 780.11 Ordonnance du 31 octobre 2001 sur la surveillance de la correspondance par poste et télécommunication*)
http://www.admin.ch/ch/f/rs/7/780.11.fr.pdf

[b,h] Ordinance on the Transplantation of Organs, Tissues and Cells of Animal Origin (*RS 810.213 Ordonnance du 16 mars 2007 sur la transplantation d'organes, de tissus et de cellules d'origine animale*)
http://www.admin.ch/ch/f/rs/8/810.213.fr.pdf

[b,f,h] Ordinance on Pharmaceuticals (*RS 812.212.21 Ordonnance du 17 octobre 2001 sur les médicaments*)
http://www.admin.ch/ch/f/rs/8/812.212.21.fr.pdf

[b,h] Ordinance on Clinical Trials with Therapeutic Products (*RS 812.214.2 Ordonnance du 17 octobre 2001 sur les essais cliniques de produits thérapeutiques*)
http://www.admin.ch/ch/f/rs/8/812.214.2.fr.pdf

[a,g] Federal Act on the Protection against Dangerous Substances and Preparations (*RS 813.1 Loi fédérale du 15 décembre 2000 sur la protection contre les substances et les préparations dangereuses*)
http://www.admin.ch/ch/f/rs/8/813.1.fr.pdf

[b,h] Ordinance on Good Laboratory Practice (*RS 813.112.1 Ordonnance du 18 mai 2005 sur les bonnes pratiques de laboratoire*)
http://www.admin.ch/ch/f/rs/8/813.112.1.fr.pdf

[b,f,h] Ordinance on Marketing and Handling Biocidal Products (*RS 813.12 Ordonnance du 18 mai 2005 concernant la mise sur le marché et l'utilisation des produits biocides*)
http://www.admin.ch/ch/f/rs/8/813.12.fr.pdf

[a,g] Federal Act on the Protection of the Environment (*RS 814.01 Loi fédérale du 7 octobre 1983 sur la protection de l'environnement*)
http://www.admin.ch/ch/f/rs/8/814.01.fr.pdf

[b,d,f,h] Ordinance on the Protection against Major Accidents (*RS 814.012 Ordonnance du 27 février 1991 sur la protection contre les accidents majeurs*)
http://www.admin.ch/ch/f/rs/8/814.012.fr.pdf

[b,h] Ordinance on Waste Management (*RS 814.600 Ordonnance du 10 décembre 1990 sur le traitement des déchets*)
http://www.admin.ch/ch/f/rs/8/814.600.fr.pdf

[a,g] Federal Act on non-Human Genetic Engineering (*RS 814.91 Loi fédérale du 21 mars 2003 sur l'application du génie génétique au domaine non humain*)
http://www.admin.ch/ch/f/rs/8/814.91.fr.pdf

[b,h] Ordinance on the Release of Organisms into the Environment (*RS 814.911 Ordonnance du 10 septembre 2008 sur l'utilisation d'organismes dans l'environnement*)
http://www.admin.ch/ch/f/rs/8/814.911.fr.pdf

[b,h] Ordinance on the Contained Use of Organisms (*Ordonnance du 9 mai 2012 sur l'utilisation des organismes en milieu confiné*)
http://www.admin.ch/ch/f/rs/8/814.912.fr.pdf

[b,h] Ordinance on Transborder Traffic of Genetically Modified Organisms (*RS 814.912.21 Ordonnance du 3 novembre 2004 sur les mouvements transfrontières des organismes génétiquement modifiés*)
http://www.admin.ch/ch/f/rs/8/814.912.21.fr.pdf

[a] Federal Act on Foods and Commodities (*RS 817.0 Loi fédérale du 9 octobre 1992 sur les denrées alimentaires et les objets usuels*)
http://www.admin.ch/ch/f/rs/8/817.0.fr.pdf

[b,h] Ordinance on Foods and Commodities (*RS 817.02 Ordonnance du 23 novembre 2005 sur les denrées alimentaires et les objets usuels*)
http://www.admin.ch/ch/f/rs/8/817.02.fr.pdf

[b] Ordinance on Impurities and Ingredients in Foods (*RS 817.021.23 Ordonnance du DFI du 26 juin 1995 sur les substances étrangères et les composants dans les denrées alimentaires*)
http://www.admin.ch/ch/f/rs/8/817.021.23.fr.pdf

[b,h] Ordinance on Genetically Modified Foods (*RS 817.022.51 Ordonnance du DFI du 23 novembre 2005 sur les denrées alimentaires génétiquement modifiées*)
http://www.admin.ch/ch/f/rs/8/817.022.51.fr.pdf

[b,h] Ordinance on Hygiene (*RS 817.024.1 Ordonnance du DFI du 23 novembre 2005 sur l'hygiène*)
http://www.admin.ch/ch/f/rs/8/817.024.1.fr.pdf

[b,h] Ordinance on the Enforcement of the Legislation on Foods (*RS 817.025.21 Ordonnance du DFI du 23 novembre 2005 sur l'exécution de la législation sur les denrées alimentaires*)
http://www.admin.ch/ch/f/rs/8/817.025.21.fr.pdf

[b,h] Ordinance on Animal Slaughter and Meat Control (*RS 817.190 Ordonnance du 23 novembre 2005 concernant l'abattage d'animaux et le contrôle des viandes*)
http://www.admin.ch/ch/f/rs/8/817.190.fr.pdf

[b,h] Ordinance on Animal Slaughter Hygiene (*RS 817.190.1 Ordonnance du DFE du 23 novembre 2005 concernant l'hygiène lors de l'abattage d'animaux*)
http://www.admin.ch/ch/f/rs/8/817.190.1.fr.pdf

[a,c,e,g] Federal Act on the Control of Communicable Human Diseases (*RS 818.101 Loi fédérale du 18 décembre 1970 sur la lutte contre les maladies transmissibles de l'homme*)
http://www.admin.ch/ch/f/rs/8/818.101.fr.pdf

[b,d] Ordinance on Countermeasures against an Influenza Pandemic (*RS 818.101.23 Ordonnance du 27 avril 2005 sur les mesures de lutte contre une pandémie d'influenza*)
http://www.admin.ch/ch/f/rs/8/818.101.23.fr.pdf

[b,h] Ordinance on Microbiological and Serological Laboratories (*RS 818.123.1 Ordonnance du 26 juin 1996 sur les laboratoires de microbiologie et de sérologie*)
http://www.admin.ch/ch/f/rs/8/818.123.1.fr.pdf

[d,f] Ordinance on the Border Medical Service (*RS 818.125.1 Ordonnance du 17 juin 1974 sur le Service sanitaire de frontière*)
http://www.admin.ch/ch/f/rs/8/818.125.1.fr.pdf

[f] Ordinance on Measures Taken by the Border Medical Service (*RS 818.125.11 Ordonnance du DFI du 9 décembre 2005 sur les mesures à prendre par le Service sanitaire de frontière*)
http://www.admin.ch/ch/f/rs/8/818.125.11.fr.pdf

[f] Ordinance on Preventing the Introduction of New Emerging Infectious Diseases (*RS 818.125.12 Ordonnance du DFI du 15 décembre 2003 sur la prévention de l'introduction de nouvelles maladies infectieuses émergentes*)
http://www.admin.ch/ch/f/rs/8/818.125.12.fr.pdf

[b,h] Ordinance on the Notification of Communicable Human Diseases (*RS 818.141.1 Ordonnance du 13 janvier 1999 sur la déclaration des maladies transmissibles de l'homme*)
http://www.admin.ch/ch/f/rs/8/818.141.1.fr.pdf

[b,h] Ordinance on Declarations by Practitioners and Laboratories (*RS 818.141.11 Ordonnance du 13 janvier 1999 sur les déclarations de médecin et de laboratoire*)
http://www.admin.ch/ch/f/rs/8/818.141.11.fr.pdf

[d,f] Ordinance on the Transportation and Sepulture of Contagious Cadavers and the Transportation of Cadavers to or from Abroad (*RS 818.61 Ordonnance du 17 juin 1974 sur le transport et la sépulture de cadavres présentant un danger de contagion ainsi que le transport de cadavres en provenance ou à destination de l'étranger*)
http://www.admin.ch/ch/f/rs/8/818.61.fr.pdf

[b,h] Ordinance Relating to the Act of Labour (*RS 822.114 Ordonnance 4 du 18 août 1993 relative à la loi sur le travail*)
http://www.admin.ch/ch/f/rs/8/822.114.fr.pdf

[b,h] Ordinance on the Protection of Workforce against Microbiological Risks (*Ordonnance du 25 août 1999 sur la protection des travailleurs contre les risques liés aux micro-organismes*)
http://www.admin.ch/ch/f/rs/8/832.321.fr.pdf

[a,c,e,g] Federal Act on Agriculture (*RS 910.1 Loi fédérale du 29 avril 1998 sur l'agriculture*)
http://www.admin.ch/ch/f/rs/9/910.1.fr.pdf

[b] Ordinance on the Coordination of Controls on Agricultural Farms (*RS 910.15 Ordonnance du 26 octobre 2011 sur la coordination des contrôles dans les exploitations agricoles*)
http://www.admin.ch/ch/f/rs/9/910.15.fr.pdf

[b,h] Ordinance on Primary Production (*RS 916.020 Ordonnance du 23 novembre 2005 sur la production primaire*)
http://www.admin.ch/ch/f/rs/9/916.020.fr.pdf

[b,h] Ordinance on the Release of Phytopharmaceutical Products (*RS 916.161 Ordonnance du 12 mai 2010 sur la mise en circulation des produits phytosanitaires*)
http://www.admin.ch/ch/f/rs/9/916.161.fr.pdf

[b,f,h] Ordinance on Plant Protection (*RS 916.20 Ordonnance du 27 octobre 2010 sur la protection des végétaux*)
http://www.admin.ch/ch/f/rs/9/916.20.fr.pdf

[b] Ordinance on the Control of Milk (*RS 916.351.021.1 Ordonnance du 20 octobre 2010 sur le contrôle du lait*)
http://www.admin.ch/ch/f/rs/9/916.351.0.fr.pdf

[b,h] Ordinance on the Milk Production Hygiene (*RS 916.351.021.1 Ordonnance du DFE du 23 novembre 2005 réglant l'hygiène dans la production laitière*)
http://www.admin.ch/ch/f/rs/9/916.351.021.1.fr.pdf

[a,c,e,g] Federal Act on Animal Diseases (*RS 916.40 Loi du 1er juillet 1966 sur les épizooties*)
http://www.admin.ch/ch/f/rs/9/916.40.fr.pdf

[b,d,f,h] Ordinance on the Control of Animal Diseases (*RS 916.401 Ordonnance du 27 juin 1995 sur les épizooties*)
http://www.admin.ch/ch/f/rs/9/916.401.fr.pdf

[b,h] Ordinance on the Disposal of Animal Side Products (*RS 916.441.22 Ordonnance du 25 mai 2011 concernant l'élimination des sous-produits animaux*)
http://www.admin.ch/ch/f/rs/9/916.441.22.fr.pdf

[b,d,f] Ordinance on Import, Transit and Export of Animals and Animal Products (*RS 916.443.10 Ordonnance du 18 avril 2007 concernant l'importation, le transit et l'exportation d'animaux et de produits animaux*)
http://www.admin.ch/ch/f/rs/9/916.443.10.fr.pdf

[d,f] Ordinance on Import and Transit of Animals by Air from Abroad (*RS 916.443.12 Ordonnance du 18 avril 2007 concernant l'importation et le transit d'animaux par voie aérienne en provenance de pays tiers*)
http://www.admin.ch/ch/f/rs/9/916.443.12.fr.pdf

[d,f] Ordinance on Import and Transit of Animal Products by Air from Abroad (*RS 916.443.13 Ordonnance du 27 août 2008 concernant l'importation et le transit de produits animaux par voie aérienne en provenance de pays tiers*)
http://www.admin.ch/ch/f/rs/9/916.443.13.fr.pdf

[a,c,e,g] Federal Act on the Control of Goods Suitable for Civilian and Military Purposes and Specific Military Goods (*RS 946.202 Loi fédérale du 13 décembre 1996 sur le contrôle des biens utilisables à des fins civiles et militaires et des biens militaires spécifiques*)
http://www.admin.ch/ch/f/rs/9/946.202.fr.pdf

[b,d,f] Ordinance on the Export, Import and Transit of Goods Suitable for Civilian and Military Purposes and Specific Military Goods (*RS 946.202.1 Ordonnance du 25 juin 1997 sur l'exportation, l'importation et le transit des biens utilisables à des fins civiles et militaires et des biens militaires spécifiques*)
http://www.admin.ch/ch/f/rs/9/946.202.1.fr.pdf

[b,d,f] Ordinance on the Control of Chemicals Suitable for Civilian and Military Purposes (*RS 946.202.21 Ordonnance du 17 octobre 2007 sur le contrôle des produits chimiques utilisables à des fins civiles et militaires*)
http://www.admin.ch/ch/f/rs/9/946.202.21.fr.pdf

[b,d] Ordinance Establishing Measures against Persons and Entities Linked to Osama bin Laden, the al-Qaeda Group or the Taliban (*RS 946.203 Ordonnance du 2 octobre 2000 instituant des mesures à l'encontre de personnes et entités liées à Oussama ben Laden, au groupe «Al-Qaïda» ou aux Taliban*)
http://www.admin.ch/ch/f/rs/9/946.203.fr.pdf

[a,c] Federal Act on Sanctions on Trade with Foreign Countries (*RS 946.231 Loi fédérale du 22 mars 2002 sur l'application de sanctions internationales*)
http://www.admin.ch/ch/f/rs/9/946.231.fr.pdf

[b,d] Ordinance on Measures against the Democratic People's Republic of Korea (*RS 946.231.127.6 Ordonnance du 25 octobre 2006 instituant des mesures à l'encontre de la République populaire démocratique de Corée*)
http://www.admin.ch/ch/f/rs/9/946.231.127.6.fr.pdf

[b] Ordinance of the Swiss Financial Market Supervisory Authority on the Prevention of Money Laundering and Financing of Terrorism (*RS 955.033.0 Ordonnance de l'Autorité fédérale de surveillance des marchés financiers du 8 décembre 2010 sur la prévention du blanchiment d'argent et du financement du terrorisme*)
http://www.admin.ch/ch/f/rs/9/955.033.0.fr.pdf

[b] Ordinance on the Reporting Bureau in Matters of Money Laundering (*RS 955.23 Ordonnance du 25 août 2004 sur le Bureau de communication en matière de blanchiment d'argent*)
http://www.admin.ch/ch/f/rs/9/955.23.fr.pdf

Titles in English are inofficial translations that are provided for information purposes only and have no legal force. To access legal documents please consult the Swiss Federal Legislation in either French (links above), German or Italian. Some additional information may also be obtained in the framework of UNSCR 1540 at: http://www.un.org/sc/1540/legisdocuments.shtml

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

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with 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*

4 May 1976

2. *Past offensive biological research and development programmes*

No

Period of activities

n/a

Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.

n/a

3. *Past defensive biological research and development programmes*

Yes

Period of activities

1997 to present

Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

Please refer to Form A, part 2 (ii) [➢ pages 14 to 26] as well as past CBM declarations.

Declaration of vaccine production facilities

To further increase the transparency of biological research and development related to the Convention and to broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form G attached.

Declaration of vaccine production facilities

Name of company / facility	**Crucell Switzerland AG**	
Location of production facility	Rehhagstrasse 79 CH-3018 Bern	/ Oberriedstrasse 68 / CH-3174 Thörishaus
Geographical location	N 46° 56' 06.79", E 7° 23' 09.50"	/ N 46° 53' 25.95", E 7° 21' 24.23"

Disease(s) targeted		**Name of vaccine**	**Trial phase**	**Licensed**	
1.	Hepatitis A	Epaxal / Epaxal Junior	☐	☒	AR, AT, BE, BR, CA, CH, CL, CN, CO, DE, DK, ES, FI, FR, GB, GR, GT, HK, IE, IL, IN, IT, KR, LU, MO, MX, MY, NL, NO, PE, PH, PK, PT, RU, SE, SG, TH, TN, TR, UA, VN, ZA
2.	Influenza (seasonal)	Inflexal V	☐	☒	AR, AT, BE, BG, BR, CH, CL, CN, CO, CU, CZ, DE, DK, ES, FI, GB, HK, HU, IE, IT, KR, LU, MX, MY, NL, NO, PA, PE, PH, PL, PT, RO, RU, SE, SG, UA, VN

Disease(s) targeted (continued)	Name of vaccine	Trial phase		Licensed	
3. Meningitis C	*Meningitec (Pfizer)*	☐		☒	*Licensed by Pfizer*
4. Tuberculosis	-	☒ II	KE, ZA	☐	
5. Typhoid fever	Vivotif	☐		☒	AR, AT, AU, BD, BE, CA, CH, CL, CO, DE, DK, ES, FI, GB, HK, IT, KG, LU, MX, MY, NG, NL, NO, NZ, PH, PK, SE, SG, TR, US, VN

Note: Abbreviations are according to ISO 3166-1 *"Codes for the representation of names of countries and their subdivisions – Part 1: Country codes"*.

Declaration of vaccine production facilities

Name of company / facility	**Pevion Biotech Ltd.**
Location of production facility	Worblentalstrasse 32 CH-3063 Ittigen
Geographical location	N 46° 58' 37.72", E 7° 28' 23.22"

Disease(s) targeted	**Name of vaccine**	**Trial phase**	**Licensed**
1. Candidiasis	PEV7	☒ I CH	☐
2. HIV	*Production for Mymetics SA*	☒ I CH	☐

Note: Abbreviations are according to ISO 3166-1 *"Codes for the representation of names of countries and their subdivisions – Part 1: Country codes"*.