

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

## **Confidence Building Measures 2011**

### **Switzerland**



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Annual Report by Switzerland in accordance with the final declaration of the Third 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 2010

Date: 15 April 2011

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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
A, part 1	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (i)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A, part 2 (ii)	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (iii)	<input type="checkbox"/>	<input type="checkbox"/>
B (i)	<input type="checkbox"/>	<input type="checkbox"/>
B (ii)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>
F	<input type="checkbox"/>	<input checked="" type="checkbox"/>
G	<input type="checkbox"/>	<input type="checkbox"/>

Date:

15 April 2011

State Party to the Convention:

Switzerland

Date of entry into force of the Convention for the State Party:

4 May 1976

## Exchange of data on research centres and laboratories

In Switzerland, there is currently no operational high containment facility (BSL4) with an unrestricted license, i.e. fulfilling all necessary requirements for e.g. culturing and enrichment of BSL4 agents etc. This status will change in 2011 when the BSL4 laboratory at the Spiez Laboratory will go operational after successful commissioning currently in progress. At the end of 2010, there was one operational BSL4 laboratory with a license limited to strictly diagnostic purposes and one operational BSL3Ag laboratory serving as national reference center for exotic animal diseases.

In the foreseeable future, there will only be one BSL4 laboratory with an unrestricted license in Switzerland (full BSL4), however, there may be a need for additional BSL4 laboratories with a license limited to strictly diagnostic purposes or an even smaller subset of activities (BSL4 diagnostic).

## Exchange of data on research centres and laboratories

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 20 to 25].

Of note, the high containment facility (BSL4) is in commissioning phase and not yet operational.

## Exchange of data on research centres and laboratories

Name of facility	<b>Institut für Viruskrankheiten und Immunprophylaxe</b> (Institute of Virology and Immunoprophylaxis)
Affiliation	Bundesamt für Veterinärwesen, Eidgenössisches Volkswirtschafts-departement (Federal Veterinary Office, Federal Department of Economic Affairs)

This facility is declared in accordance with Form A, part 2 (iii) [[➤ pages 27 to 30](#)].  
Of note, the maximum containment level is BS3Ag.

## Exchange of data on research centres and laboratories

Name of facility	<b>Centre National de Référence pour les Infections Virales Emergentes</b> (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 31 to 33].  
Of note, the BSL4 unit is licensed for diagnostic purposes only.

## National biological defence research and development programme declaration

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

Yes

## National biological defence research and development programme declaration

### National Biological Defense Program

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

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. The 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, the 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 outlined in more detail in paragraph 5 below.

The 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. The 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 the 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.

The 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 will be the first BSL4 high containment facility on Swiss territory licensed without any special restrictions or limitations. It is expected to be fully operational in 2011 and will serve towards the comprehensive detection and identification of human pathogens. This will also enable the Spiez Laboratory to act in the Regional Laboratory Network (► pages 14 to 19) as both a Regional Competence Center and a National Reference Center having all necessary capabilities and capacities at hand.

For additional information and more on our vision of a world without weapons of mass destruction please visit: <http://www.labor-spiez.ch/enindex.htm>

2. *State the total funding for the 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

The increase from last year's declared total funding is mostly due to the commissioning of the new high containment facility (BSL4) and all related activities. Funding is expected to remain at a similar level in the foreseeable future.

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

Yes

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

15 %

The decrease from last year's declared proportion of the total funds is mostly due to significantly higher costs as a direct consequence of the new high containment facility (BSL4) as explained in paragraph 2.

5. *Summarize the objectives and research areas of the 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 the Spiez Laboratory. Please also refer to paragraph 1 above for additional details. The contractors part of the program in 2010 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“

- Universität Zürich - UZH  
Institut für Sozial- und Präventivmedizin – ISPM  
Hirschengraben 84  
CH-8001 Zürich  
Switzerland  
Project title: „Medical concept for the high containment facility“
- Universität Bern – UniBE  
Institut für Infektionskrankheiten – IFIG  
Friedbühlstrasse 51  
CH-3010 Bern  
Switzerland  
Project title: „Study on tick-borne encephalitis virus in Swiss ticks“  
Project title: „ Evaluation of siRNA for antiviral therapy of encephalitogenic viruses:  
Studies in cell cultures and animal models“
- Universität Bern – UniBE  
Institut für Parasitologie der Vetsuisse Fakultät und der Medizinischen Fakultät  
Länggassstrasse 122  
CH-3012 Bern  
Switzerland  
Project title: „Study on the habitat of free-living pathogenic amoebae“  
Project title: “Analysis of mechanisms of pathogenicity in *Naegleria fowleri*”
- Universität Bern – UniBE  
Institut für Ökologie und Evolution  
Baltzerstrasse 6  
CH-3012 Bern  
Switzerland  
Project title: „Hantaviruses in mice populations of Switzerland“
- Max-Planck-Institut für Kolloid- und Grenzflächenforschung - MPIKG  
Departement für Biomolekulare Systeme  
Freie Universität Berlin  
Arnimallee 22  
D-14195 Berlin  
Germany  
Project title: „Development of antibodies against *Yersinia pestis*“

- miprolab GmbH / Universität Göttingen  
Marie-Curie-Strasse 7  
D-37079 Göttingen  
Germany  
Project title: „Development of detection methods for Botulinum neurotoxins“
  
- Robert Koch Institut - RKI  
Zentrum für Biologische Sicherheit  
Nordufer 20  
D-13353 Berlin  
Germany  
Project title: „Development of antibodies against B-toxins“

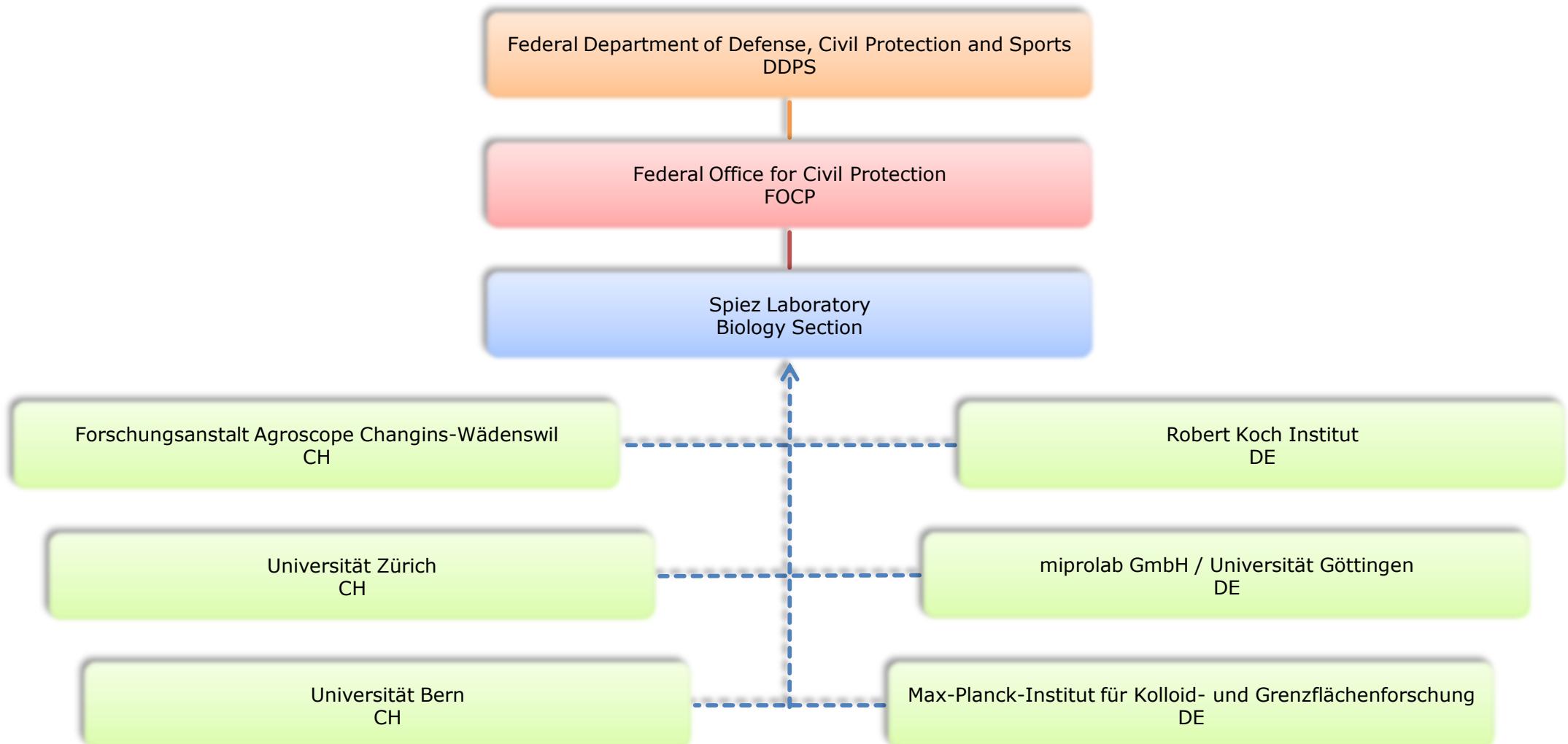
6. *Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).*

Please refer to the diagram on the next 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 the 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 20 to 25].

Switzerland  
Form A, part 2 (ii)



# National biological defence research and development programme declaration

## Regional Laboratory Network

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

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 four 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, <u>GE</u> , NE, <u>VD</u> , VS
West Central	<u>BE</u> , JU
East Central	<u>LU</u> , NW, OW, SZ, UR
East	AI, AR, GL, GR, SG, SH, TG, ZG, <u>ZH</u> (+FL)
North	AG, BL, <u>BS</u> , SO
South	<u>TI</u>

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

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

## Switzerland

Form A, part 2 (ii)



Switzerland  
Form A, part 2 (ii)

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

<b>Function</b>	<b>Authority</b>	<b>Facility</b>
National Reference Center	GDK*	Labor Spiez**
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
	Canton of Vaud	Laboratoire de Virologie
		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  
\*\* Has yet to be established as a National Reference Center

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

Due to the fact that the whole network relies on existing infrastructures in use for other civil purposes, it is not possible to give any concrete numbers.

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

No

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

n/a

5. *Summarize the objectives and research areas of the 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 the programme and the reporting relationships (include individual facilities participating in the programme).*

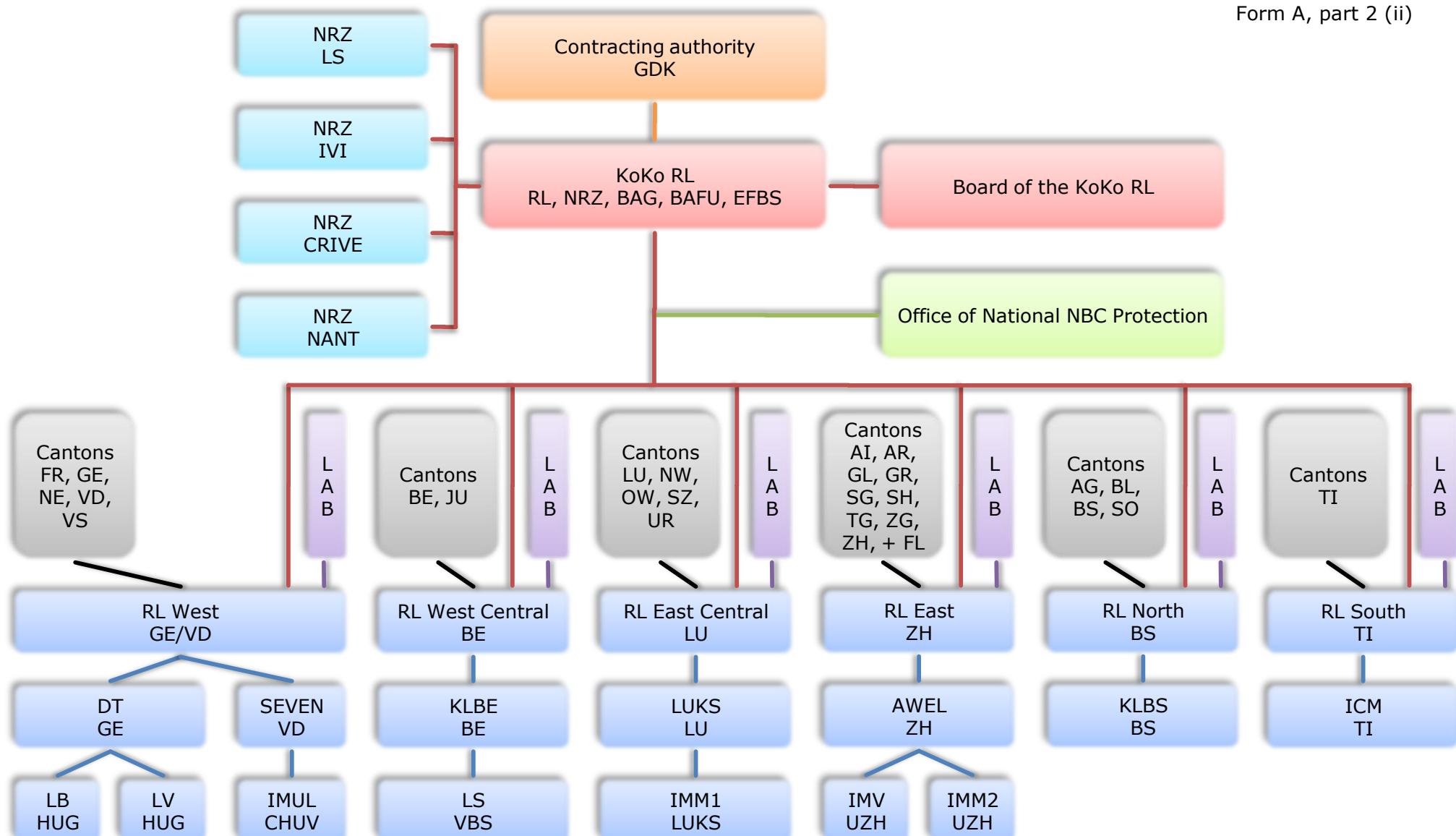
Please refer to the diagram on the next page.

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 the 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 26 to 65].

# Switzerland

Form A, part 2 (ii)



**Switzerland**  
Form A, part 2 (ii)

Abbreviations used in the diagram on the previous page:

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

## National biological defence research and development programme declaration

Title / Function	Schweizerisches Fachinstitut für den ABC Schutz (Swiss Center of Expertise in NBC Protection)
Name of facility	<b>Labor Spiez</b> (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)
Location	Austrasse CH-3700 Spiez
Geographical location	N 46° 41' 26.32", E 7° 38' 39.41"
Floor area	
BSL2	483 m <sup>2</sup>
BSL3	126 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	118 m <sup>2</sup>
Total	727 m <sup>2</sup>
Personnel*	
Total	15
Personnel	
Military	0
Civilian	15
Personnel	
Scientists	9
Engineers	0
Technicians	6
Administrative staff	0
Scientific disciplines	Virology Bacteriology Toxinology
Contractor staff	6

Source(s) of funding	Swiss Confederation (Federal Department of Defence, Civil Protection and Sports)
Funding	CHF 5'000'000.- (see also explanations on Form A, part 2 (ii), paragraph 2 on page 10)
Funding levels	
Research	15 %
Development	10 %
Test & Evaluation	5 %
Diagnosis	15 %
Education & Training	5 %
Other activities	50 % (costs for operation, maintenance and amortization)
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Schwendener RA, Ludewig B, Cerny A, Engler O. Liposome-based vaccines. <i>Methods Mol Biol.</i> 2010;605:163-75.</p> <p>Pasquer F, Pelludat C, Duffy B, Frey JE. Broad spectrum microarray for fingerprint-based bacterial species identification. <i>BMC Biotechnol.</i> 2010 Feb 17;10:13.</p> <p>Blaser C, Klein M, Grandgirard D, Wittwer M, Peltola H, Weigand M, Koedel U, Leib SL. Adjuvant glycerol is not beneficial in experimental pneumococcal meningitis. <i>BMC Infect Dis.</i> 2010 Mar 30;10:84.</p> <p>Gottstein B, Wittwer M, Schild M, Merli M, Leib SL, Müller N, Müller J, Jaggi R. Hepatic gene expression profile in mice perorally infected with <i>Echinococcus multilocularis</i> eggs. <i>PLoS One.</i> 2010 Apr 1;5(4):e9779.</p> <p>Weingart OG, Schreiber T, Mascher C, Pauly D, Dorner MB, Berger TF, Egger C, Gessler F, Loessner MJ, Avondet MA, Dorner BG. The case of botulinum toxin in milk: experimental data. <i>Appl Environ Microbiol.</i> 2010 May;76(10):3293-300.</p> <p>Wittwer M, Grandgirard D, Rohrbach J, Leib SL. Tracking the transcriptional host response from the acute to the regenerative phase of experimental pneumococcal meningitis. <i>BMC Infect Dis.</i> 2010 Jun 17;10:176.</p>

Schmutz S, Däpp C, Wittwer M, Durieux AC, Mueller M, Weinstein F, Vogt M, Hoppeler H, Flück M. A hypoxia complement differentiates the muscle response to endurance exercise. *Exp Physiol.* 2010 Jun;95(6):723-35.

Gäumann R, Mühlmann K, Strasser M, Beuret CM. High-throughput procedure for tick surveys of tick-borne encephalitis virus and its application in a national surveillance study in Switzerland. *Appl Environ Microbiol.* 2010 Jul;76(13):4241-9.

Tamborrini M, Holzer M, Seeberger PH, Schürch N, Pluschke G. Anthrax spore detection by a luminex assay based on monoclonal antibodies that recognize anthrose-containing oligosaccharides. *Clin Vaccine Immunol.* 2010 Sep;17(9):1446-51.

Gianinazzi C, Schild M, Zumkehr B, Wüthrich F, Nüesch I, Ryter R, Schürch N, Gottstein B, Müller N. Screening of Swiss hot spring resorts for potentially pathogenic free-living amoebae. *Exp Parasitol.* 2010 Sep;126(1):45-53.

Brief description

The 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 three fields of virology, bacteriology and toxinology. 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. The 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 9 to 13] and visit: <http://www.labor-spiez.ch/enindex.htm>

\* As of 1 January 2011 the total number of personnel at the Swiss Center of Expertise in NBC Protection amounts to 92, 15 of which in the Biology Section. Further details can be obtained from the annual report 2010 at: <http://www.labor-spiez.ch/en/dok/ge/index.htm>

Of note, the high containment facility (BSL4) is currently in commissioning phase and not yet operational. Further information on the facility is presented on pages 23 to 25.

## SiLAB PROJECT

Once the authorities had established the budget for the new safety laboratory (SiLab) and the building and operating licences had been issued (2006), the SiLab project management team could finally continue their planning activities and the building of the new safety laboratory could also begin by late Autumn 2007. An important milestone was reached with the ground-breaking ceremony on 12 November 2007, attended by Willi Scholl (Director FOCP), Alfred Markwalder (Chief of Armament), Ulrich Appenzeller (Head of DDPS Real Estate, armasuisse), Peter Stutz (Chief of the Armed Forces Joint Staff), Roland Charrière, (Vice-Director FOPH), Hans-Jürg Käser (cantonal government, Bern) and Franz Arnold (Spiez municipal president). That so many high-ranking officials took part in this symbolic act reflects the fact that not only will the SiLab satisfy the security and health and safety needs of both the civilian population and the armed forces, but also that it enjoys, and will continue to enjoy, the staunch political backing of the canton of Berne, and the town of Spiez especially. This support is also decisive for how the future work of the new safety laboratory will be perceived nationally and internationally, and is essential for the smooth running of SiLab generally.

### CORE ACTIVITIES OF SiLAB:

#### 1. Development of diagnostics for pathogens:

This service, which has an extensive range of differential diagnosis resources at its disposal, will be routinely offered around the clock to military and civilian customers. The laboratory will also become the national reference centre for special pathogens.

4). Specialist national organisations and the WHO work closely on the design of the course work and the practical training.

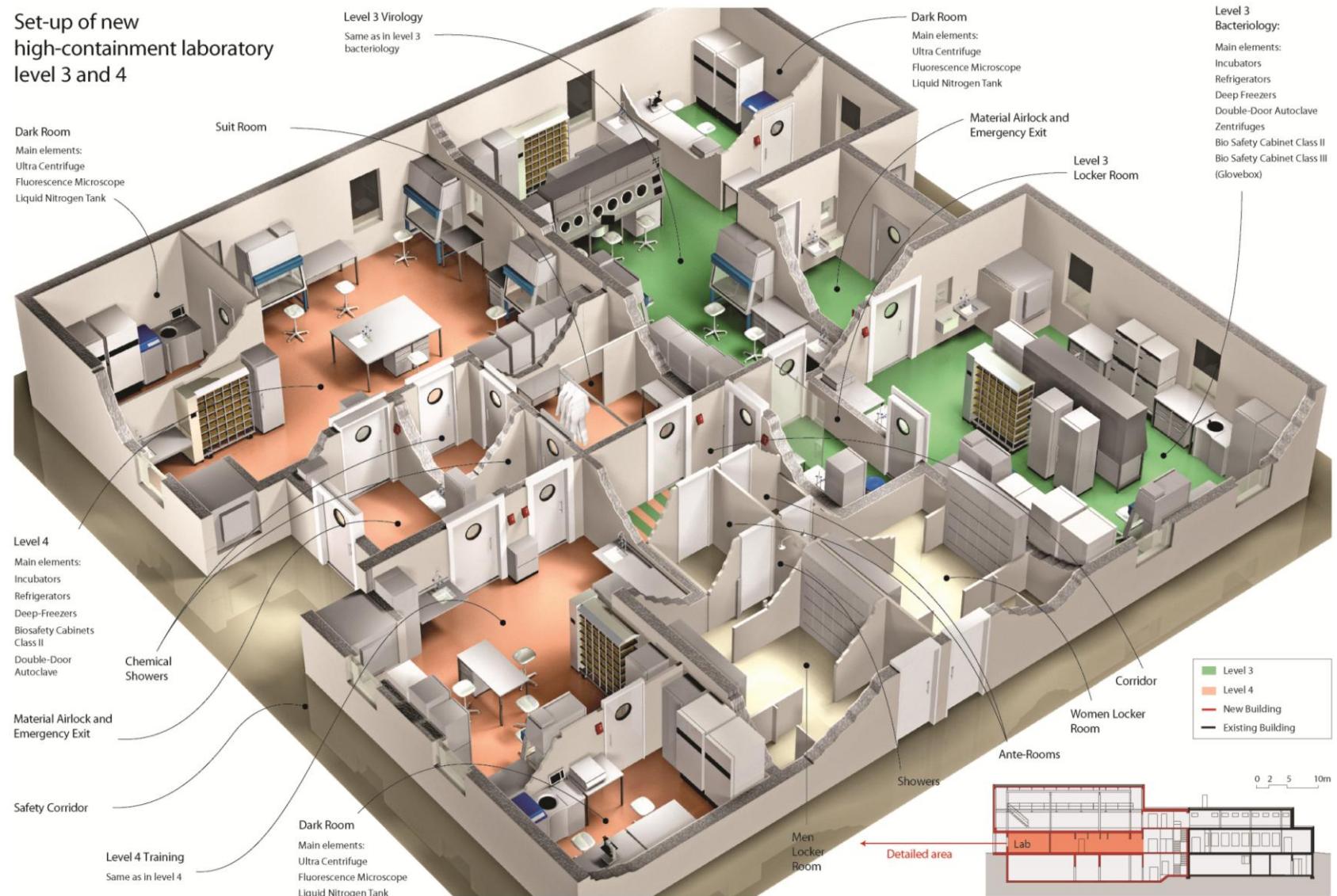
#### 2. Analysis of unidentified (environmental) samples:

Experience has shown that such a task requires the pooling of nuclear, biological and chemical protection expertise. The SPIEZ LABORATORY is unrivalled in this regard. It has the necessary capabilities to quickly examine a suspicious sample for the presence of chemical, biological and radioactive substances.

#### 3. Training of military biological specialists and civilian laboratory technicians:

Every year, specialists from the Swiss Armed Forces will spend around nine weeks in the second highest biosafety laboratory in Switzerland (Level 3). Every course participant, military and civilian alike, will receive practical biosafety training (up to the highest biosafety level

Switzerland  
Form A, part 2 (iii)



Switzerland

Form A, part 2 (iii)



High containment facility SiLab (above), inauguration ceremony (below)



## National biological defence research and development programme declaration

Title / Function	Nationales Referenzzentrum (National Reference Center)
Name of facility	<b>Labor Spiez</b> (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 20 to 25].  
Of note, operations as a National Reference Center have not yet started.

## National biological defence research and development programme declaration

Title / Function	Nationales Referenzzentrum (National Reference Center)
Name of facility	<b>Institut für Viruskrankheiten und Immunprophylaxe</b> (Institute of Virology and Immunoprophylaxis)
Affiliation	Bundesamt für Veterinärwesen, Eidgenössisches Volkswirtschaftsdepartement (Federal Veterinary Office, Federal Department of Economic Affairs)
Location	Sensemattstrasse 293 CH-3147 Mittelhäusern
Geographical location	N 46° 52' 50.20", E 7° 21' 46.81"
Floor area	
BSL2	approx. 300 m <sup>2</sup>
BSL3	approx. 100 m <sup>2</sup>
BSL3Ag	approx. 2600 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	approx. 3000 m <sup>2</sup>
Personnel	
Total	75
Personnel	
Military	0
Civilian	75
Personnel	
Scientists	11
Engineers	7
Technicians	14
Administrative staff	4
Students & Postdocs	15
Other	24
Scientific disciplines	Virology Immunology Veterinary Public Health Epidemiology

Contractor staff	0
Source(s) of funding	Swiss Confederation (Federal Department of Economic Affairs) Funds from scientific programs (European Union Framework Programs, Swiss National Science Foundation, and others)
Funding levels	
Research	40 %
Development	20 %
Test & Evaluation	0 %
Diagnosis	30 %
Education & Training	10 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Basta, S., Gerber, H., Schaub, A., Summerfield, A., McCullough, K.C.: Cellular processes essential for African swine fever virus to infect and replicate in primary macrophages. <i>Veterinary Microbiology</i> 140, 9-17, 2010.</p> <p>Baumer, A., Feldmann, J., Renzullo, S., Müller, M., Thür, B., Hofmann, M.A.: Epidemiology of avian influenza virus in wild birds in Switzerland between 2006 and 2009. <i>Avian Diseases</i> 54, 875-884, 2010.</p> <p>Bruckner, L.: Duration of protection in animals: the point of view of regulators. <i>Journal of Comparative Pathology</i> 142, 109-110, 2010.</p> <p>Bruckner, L.: Viral safety and extraneous agents testing for veterinary vaccines: rationale for requirements, the European approach. <i>Biologicals</i> 38 (3), 338-339, 2010.</p> <p>Brunhart, I., Baumer, A., Reist, M., Stärk, K., Griot, C.: Projekt "Constanze": Erkenntnisse aus drei Jahren aviärer Influenza-Forschung im Bodenseegebiet. <i>Schweizer Archiv für Tierheilkunde</i> 152 (11), 507-513, 2010.</p> <p>Chaignat, V., Nitzsche, S., Schärrer, S., Feyer, D., Schwermer, H., Thur, B.: Milk concentration improves Bluetongue antibody detection by use of an indirect ELISA. <i>Veterinary Microbiology</i> 143 (2-4), 179-183, 2010.</p> <p>Griot, C., Wunderli, W.: Neue Viren, neue Krankheiten. <i>Pipette</i> 2, 18-20, 2010.</p>

- Guylack-Piriou, L., Alves, M.P., McCullough, K.C., Summerfield, A.: Porcine Flt3 ligand and its receptor: Generation of dendritic cells and identification of a new marker for porcine dendritic cells. *Developmental and Comparative Immunology* 34, 455-464, 2010.
- Hoffmann, M., Wu, Y-J., Gerber, M., Berger-Rentsch, M., Heimrich, B., Schwemmle, M., Zimmer, G.: Fusion-active glycoprotein G mediates the cytotoxicity of vesicular stomatitis virus M mutants lacking host shut-off activity. *Journal of General Virology* 91, 2782-2793, 2010.
- Hofmann, M.A., Renzullo, S., Planzer, J., Mader, M., Chaignat, V., Thür, B.: Detection of Toggenburg Orbivirus by a segment 2-specific quantitative RT-PCR. *Journal of Virological Methods* 165, 325-329, 2010.
- Motitschke, A., Ottiger, H.P., Jungbäck, C.: Evaluation of the sensitivity of PCR methods for the detection of extraneous agents and comparison with in vivo testing. *Biologicals* 38 (3), 389-392, 2010.
- Mueller, M., Renzullo, S., Brooks, R., Ruggli, N., Hofmann, M.A.: Antigenic characterization of recombinant hemagglutinin proteins derived from different avian Influenza virus subtypes. *PLoS ONE* 5 (2), e9097, 2010.
- Müntener, C.R., Bruckner, L., Stürer, A., Althaus, F.R., Caduff-Janosa, P.: Vigilance der Tierarzneimittel: Gemeldete unerwünschte Wirkungen im Jahr 2009. *Schweizer Archiv für Tierheilkunde*, 152 (12), 575-583, 2010.
- Ottiger, H.P.: Development, standardization and assessment of PCR systems for purity testing of avian viral vaccines. *Biologicals* 38 (3), 381-388, 2010.
- Ricklin Gutzwiler, M.E., Moulin, H.R., Zurbriggen, A., Roosje, P., Summerfield, A.: Comparative analysis of canine monocyte- and bone-marrow-derived dendritic cells. *Veterinary Research* 41, 40, 2010.
- Ruggli, N., Summerfield, A., Eymann Häni, R.: From pigs to cells: virulence of classical swine fever virus is predictable in cell cultures. *3R-Info-Bulletin*, 44, 2010.
- Steiner, E., Balmelli, C., Gerber, H., Summerfield, A., McCullough, K.: Cellular adaptive immune response against porcine circovirus type 2 in subclinically infected pigs. *BMC Veterinary Research* 5, 45-57, 2010.

Summerfield, A.: Are adenoviral vectors the future for foot-and-mouth disease vaccines? Future Virology 5, 1-3, 2010.

Worwa, G., Hilbe, M., Chaignat, V., Hofmann, M.A., Griot, C., Ehrensperger, F., Doherr, M.G., Thür, B.: Virological and pathological findings in Bluetongue virus serotype 8 infected sheep. Veterinary Microbiology 144, 264-273, 2010.

Zanolari, P., Chaignat, V., Kaufmann, C., Mudry, M., Griot, C., Thuer, B., Meylan, M.: Serological survey of Bluetongue virus serotype-8 infection in South American camelids in Switzerland (2007-2008). Journal of veterinary internal medicine 24, 426-430, 2010.

Zanolari, P., Bruckner, L., Fricker, R., Kaufmann, C., Murdry, M., Griot, C., Meylan, M.: Humoral response to 2 inactivated Bluetongue virus serotype-8 vaccines in South American camelids. Journal of veterinary internal medicine 24, 956-959, 2010.

Zimmer, G.: RNA Replicons - A New Approach for Influenza Virus Immunoprophylaxis. Viruses 2, 413-434, 2010.

Zimmerli, U., Herholz, C., Schwermer, H., Hofmann, M., Griot, C.: Afrikanische Pferdepest und equine Encephalosis: Muss sich die Schweiz vorbereiten? Schweizer Archiv für Tierheilkunde 152 (4), 165-175, 2010.

Brief description

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>

## National biological defence research and development programme declaration

Title / Function	Centre National de Référence (National Reference Center)
Name of facility	<b>Centre National de Référence pour les Infections Virales Emergentes</b> (National Reference Center for Emerging Viral Infections)
Affiliation	Laboratoire de Virologie, Hôpitaux Universitaires de Genève (Virological Laboratory, University Hospitals of Geneva)
Location	Rue Gabrielle Perret-Gentil 4 CH-1211 Genève 14
Geographical location	N 46° 11' 34.01", E 6° 9' 02.47"
Floor area	
BSL2	0 m <sup>2</sup>
BSL3	0 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	18 m <sup>2</sup>
Total	18 m <sup>2</sup>
	The BSL4 unit is approved for diagnostic purposes only.
Personnel	
Total	4 (all part-time only)
Personnel	
Military	0
Civilian	4
Personnel	
Scientists	2
Engineers	0
Technicians	2
Administrative staff	0
Scientific disciplines	Virology (diagnostic)
Contractor staff	0
Source(s) of funding	Swiss Confederation (Federal Department of Home Affairs)

**Funding levels**

Research	0 %
Development	40 %
Test & Evaluation	40 %
Diagnosis	10 %
Education & Training	10 %

**Publication policy** Publication in open literature.

**List of publications** List of publicly available papers and reports in English published in 2010:

Kaiser L, Cherpillod P, Cordey S. Centre National de Référence pour les Infections Virales Emergentes (CRIVE) de Genève: suspicion d'une fièvre hémorragique de Lassa. FOPH Bulletin. 2010;2:20-21 (in French).

Cordey S, Junier T, Gerlach D, Gobbini F, Farinelli L, Zdobnov EM, Winther B, Tapparel C, Kaiser L. Rhinovirus genome evolution during experimental human infection. PLoS One. 2010 May 11;5(5):e10588.

Tapparel C, Cordey S, Van Belle S, Turin L, Lee WM, Regamey N, Meylan P, Mühlemann K, Gobbini F, Kaiser L. New molecular detection tools adapted to emerging rhinoviruses and enteroviruses. J Clin Microbiol. 2009 Jun;47(6):1742-9.

Soccal PM, Aubert JD, Bridevaux PO, Garbino J, Thomas Y, Rochat T, Rochat TS, Meylan P, Tapparel C, Kaiser L. Upper and lower respiratory tract viral infections and acute graft rejection in lung transplant recipients. Clin Infect Dis. 2010 Jul 15;51(2):163-70.

Simmonds P, McIntyre C, Savolainen-Kopra C, Tapparel C, Mackay IM, Hovi T. Proposals for the classification of human rhinovirus species C into genotypically assigned types. J Gen Virol. 2010 Oct;91(Pt 10):2409-19.

Kherad O, Kaiser L, Bridevaux PO, Sarasin F, Thomas Y, Janssens JP, Rutschmann OT. Upper-respiratory viral infection, biomarkers, and COPD exacerbations. Chest. 2010 Oct;138(4):896-904.

And some articles on HIV

**Brief description**

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

**Switzerland**

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

variola virus. The BSL4 unit is approved for diagnostic purposes only, which does not allow any culturing or enrichment of such viruses.

For further information please visit (website in French and partially in German only):

[http://virologie.hug-ge.ch/centres\\_reference/crime.html](http://virologie.hug-ge.ch/centres_reference/crime.html)

## National biological defence research and development programme declaration

Title / Function	Nationales Referenzzentrum (National Reference Center)
Name of facility	<b>Nationales Zentrum für Anthrax</b> (National Reference Center for Anthrax)
Affiliation	Institut für Veterinärakteniologie, Vetsuisse Fakultät, Universität Bern (Institute of Veterinary Bacteriology, Vetsuisse Faculty, University of Berne)
Location	Länggassstrasse 122b CH-3012 Bern
Geographical location	N 46° 57' 24.13", E 7° 25' 40.37"
Floor area	
BSL2	0 m <sup>2</sup>
BSL3	22 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	22 m <sup>2</sup>
Personnel	
Total	1
Personnel	
Military	0
Civilian	1
Personnel	
Scientists	1 (80% research assistant)
Engineers	0
Technicians	0
Administrative staff	0
Scientific disciplines	Microbiology
Contractor staff	0
Source(s) of funding	Swiss Confederation (Federal Department of Home Affairs)

## Funding levels

Research	not specified
Development	not specified
Test & Evaluation	not specified
Diagnosis	not specified
Education & Training	not specified

Publication policy Publication in open literature.

List of publications List of publicly available papers and reports in English published in 2010:

Kuhnert P, Scholten E, Haefner S, Mayor D, Frey J. Basfia succiniciproducens gen. nov., sp. nov., a new member of the family Pasteurellaceae isolated from bovine rumen. *Int J Syst Evol Microbiol*. 2010 Jan;60(Pt 1):44-50.

Hinić V, Brodard I, Petridou E, Filioussis G, Contos V, Frey J, Abril C. Brucellosis in a dog caused by *Brucella melitensis* Rev 1. *Vet Microbiol*. 2010 Mar 24;141(3-4):391-2.

Vilei EM, Frey J. Detection of *Mycoplasma mycoides* subsp. *mycoides* SC in bronchoalveolar lavage fluids of cows based on a TaqMan real-time PCR discriminating wild type strains from an lppQ(-) mutant vaccine strain used for DIVA-strategies. *J Microbiol Methods*. 2010 Jun;81(3):211-8.

Dedieu L, Totte P, Rodrigues V, Vilei EM, Frey J. Comparative analysis of four lipoproteins from *Mycoplasma mycoides* subsp. *mycoides* Small Colony identifies LppA as a major T-cell antigen. *Comp Immunol Microbiol Infect Dis*. 2010 Jul;33(4):279-90.

Gurtner C, Popescu F, Wyder M, Sutter E, Zeeh F, Frey J, von Schubert C, Posthaus H. Rapid cytopathic effects of *Clostridium perfringens* beta-toxin on porcine endothelial cells. *Infect Immun*. 2010 Jul;78(7):2966-73.

Zimmermann L, Peterhans E, Frey J. RGD motif of lipoprotein T, involved in adhesion of *Mycoplasma conjunctivae* to lamb synovial tissue cells. *J Bacteriol*. 2010 Jul;192(14):3773-9.

Unger-Torroledo L, Straub R, Lehmann AD, Gruber F, Stahl C, Frey J, Gerber V, Hoppeler H, Baum O. Lethal toxin of *Clostridium sordellii* is associated with fatal equine atypical myopathy. *Vet Microbiol*. 2010 Aug 26;144(3-4):487-92.

## Switzerland

### Form A, part 2 (iii)

Rossetti BC, Frey J, Pilo P. Direct detection of *Mycoplasma bovis* in milk and tissue samples by real-time PCR. Mol Cell Probes. 2010 Oct;24(5):321-3.

Irenge LM, Durant JF, Tomaso H, Pilo P, Olsen JS, Ramisse V, Mahillon J, Gala JL. Development and validation of a real-time quantitative PCR assay for rapid identification of *Bacillus anthracis* in environmental samples. Appl Microbiol Biotechnol. 2010 Nov;88(5):1179-92.

Ögredici Ö, Erb S, Langer I, Pilo P, Kerner A, Haack HG, Cathomas G, Danuser J, Pappas G, Tarr PE. Brucellosis reactivation after 28 years. Emerg Infect Dis. 2010 Dec;16(12):2021-2.

Burr SE, Gobeli S, Kuhnert P, Goldschmidt-Clermont E, Frey J. *Pseudomonas chlororaphis* subsp. *piscium* subsp. nov., isolated from freshwater fish. Int J Syst Evol Microbiol. 2010 Dec;60(Pt 12):2753-7.

#### Brief description

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 (website in German only):  
[http://www.vbi.unibe.ch/content/nant/index\\_ger.html](http://www.vbi.unibe.ch/content/nant/index_ger.html)

## National biological defence research and development programme declaration

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	<b>Laboratoire de Bactériologie</b> (Bacteriological Laboratory)
Affiliation	Hôpitaux Universitaires de Genève (University Hospitals of Geneva)
Location	Rue Gabrielle Perret-Gentil 4 CH-1211 Genève 14
Geographical location	N 46° 11' 36.99", E 6° 8' 57.37"
Floor area	
BSL2	0 m <sup>2</sup>
BSL3	45 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	45 m <sup>2</sup>
Personnel	
Total	6
Personnel	
Military	0
Civilian	6
Personnel	
Scientists	1
Engineers	0
Technicians	5
Administrative staff	0
Scientific disciplines	Molecular microbiology
Contractor staff	0
Source(s) of funding	Cantons of Fribourg, Genève, Neuchâtel, Valais, Vaud

**Funding levels**

Research	0 %
Development	0 %
Test & Evaluation	20 %
Diagnosis	80 %
Education & Training	0 %

Publication policy      Publication in open literature.

List of publications      List of publicly available papers and reports in English published in 2010:

Mégevand C, Gervaix A, Heininger U, Berger C, Aebi C, Vaudaux B, Kind C, Gnehm HP, Hitzler M, Renzi G, Schrenzel J, François P. Molecular epidemiology of the nasal colonization by methicillin-susceptible *Staphylococcus aureus* in Swiss children. *Clin Microbiol Infect.* 2010 Sep;16(9):1414-1420.

François P, Scherl A, Hochstrasser D, Schrenzel J. Proteomic approaches to study *Staphylococcus aureus* pathogenesis. *J Proteomics.* 2010 Feb 10;73(4):701-8.

Kuhn G, Koessler T, Melles DC, Francois P, Huyghe A, Dunman P, Vos MC, Zanetti G, Schrenzel J, van Belkum A, Blanc DS. Comparative genomics of epidemic versus sporadic *Staphylococcus aureus* strains does not reveal molecular markers for epidemicity. *Infect Genet Evol.* 2010 Jan;10(1):89-96.

Vaezzadeh AR, Deshusses JM, Waridel P, François P, Zimmermann-Ivol CG, Lescuyer P, Schrenzel J, Hochstrasser DF. Accelerated digestion for high-throughput proteomics analysis of whole bacterial proteomes. *J Microbiol Methods.* 2010 Jan;80(1):56-62.

Ferry T, Uçkay I, Vaudaux P, François P, Schrenzel J, Harbarth S, Laurent F, Bernard L, Vandenesch F, Etienne J, Hoffmeyer P, Lew D. Risk factors for treatment failure in orthopedic device-related methicillin-resistant *Staphylococcus aureus* infection. *Eur J Clin Microbiol Infect Dis.* 2010 Feb;29(2):171-80.

Bouillaguet S, Wataha JC, Zapata O, Campo M, Lange N, Schrenzel J. Production of reactive oxygen species from photosensitizers activated with visible light sources available in dental offices. *Photomed Laser Surg.* 2010 Aug;28(4):519-25.

Beaume M, Hernandez D, Francois P, Schrenzel J. New approaches for functional genomic studies in staphylococci. *Int J Med Microbiol.* 2010 Feb;300(2-3):88-97.

Eggimann P, Schrenzel J. Another small step on the long way to control methicillin-resistant *Staphylococcus aureus* cross-transmission. Crit Care Med. 2010 Jan;38(1):311-2.

Cherkaoui A, Hibbs J, Emonet S, Tangomo M, Girard M, Francois P, Schrenzel J. Comparison of two matrix-assisted laser desorption ionization-time of flight mass spectrometry methods with conventional phenotypic identification for routine identification of bacteria to the species level. J Clin Microbiol. 2010 Apr;48(4):1169-75.

Heymans F, Fischer A, Stow NW, Girard M, Vourexakis Z, Des Courtis A, Renzi G, Huggler E, Vlaminck S, Bonfils P, Mladina R, Lund V, Schrenzel J, François P, Lacroix JS. Screening for staphylococcal superantigen genes shows no correlation with the presence or the severity of chronic rhinosinusitis and nasal polypsis. PLoS One. 2010 Mar 5;5(3):e9525.

Murthy A, De Angelis G, Pittet D, Schrenzel J, Uckay I, Harbarth S. Cost-effectiveness of universal MRSA screening on admission to surgery. Clin Microbiol Infect. 2010 Dec;16(12):1747-53.

Ceroni D, Cherkaoui A, Ferey S, Kaelin A, Schrenzel J. Kingella kingae osteoarticular infections in young children: clinical features and contribution of a new specific real-time PCR assay to the diagnosis. J Pediatr Orthop. 2010 Apr-May;30(3):301-4.

Al-Obeid S, Haddad Q, Cherkaoui A, Schrenzel J, François P. First detection of an invasive *Staphylococcus aureus* strain (D958) with reduced susceptibility to glycopeptides in Saudi Arabia. J Clin Microbiol. 2010 Jun;48(6):2199-204.

Jackson Y, Sebo P, Aeby G, Bovier P, Ninet B, Schrenzel J, Sudre P, Haller D, Gaspoz JM, Wolff H. Prevalence and associated factors for Chlamydia trachomatis infection among undocumented immigrants in a primary care facility in Geneva, Switzerland: a cross-sectional study. J Immigr Minor Health. 2010 Dec;12(6):909-14.

Beaume M, Hernandez D, Farinelli L, Deluen C, Linder P, Gaspin C, Romby P, Schrenzel J, Francois P. Cartography of methicillin-resistant *S. aureus* transcripts: detection, orientation and temporal expression during growth phase and stress conditions. PLoS One. 2010 May 20;5(5):e10725.

Uçkay I, Bouchuiguir-Wafa K, Ninet B, Emonet S, Assal M, Harbarth S, Schrenzel J. Posttraumatic ankle arthritis due to a novel Nocardia species. Infection. 2010 Oct;38(5):407-12.

Corvaglia AR, François P, Hernandez D, Perron K, Linder P, Schrenzel J. A type III-like restriction endonuclease functions as a major barrier to horizontal gene transfer in clinical *Staphylococcus aureus* strains. *Proc Natl Acad Sci U S A.* 2010 Jun 29;107(26):11954-8.

Barbier F, Ruppé E, Hernandez D, Lebeaux D, Francois P, Felix B, Desprez A, Maiga A, Woerther PL, Gaillard K, Jeanrot C, Wolff M, Schrenzel J, Andremont A, Ruimy R. Methicillin-resistant coagulase-negative staphylococci in the community: high homology of SCCmec IVa between *Staphylococcus epidermidis* and major clones of methicillin-resistant *Staphylococcus aureus*. *J Infect Dis.* 2010 Jul 15;202(2):270-81.

Leggieri N, Rida A, François P, Schrenzel J. Molecular diagnosis of bloodstream infections: planning to (physically) reach the bedside. *Curr Opin Infect Dis.* 2010 Aug;23(4):311-9.

Focke M, Stumpf F, Faltin B, Reith P, Bamarni D, Wadle S, Müller C, Reinecke H, Schrenzel J, Francois P, Mark D, Roth G, Zengerle R, von Stetten F. Microstructuring of polymer films for sensitive genotyping by real-time PCR on a centrifugal microfluidic platform. *Lab Chip.* 2010 Oct 7;10(19):2519-26.

De Tejada BM, Pfister RE, Renzi G, François P, Irion O, Boulvain M, Schrenzel J. Intrapartum Group B Streptococcus Detection by Rapid Polymerase Chain Reaction Assay for the Prevention of Neonatal Sepsis. *Clin Microbiol Infect.* 2010 Sep 22.

Lazarevic V, Whiteson K, Hernandez D, François P, Schrenzel J. Study of inter- and intra-individual variations in the salivary microbiota. *BMC Genomics.* 2010 Sep 28;11:523.

Menzel TM, Tischer M, François P, Nickel J, Schrenzel J, Bruhn H, Albrecht A, Lehmann L, Holzgrabe U, Ohlsen K. Mode of action studies of the novel bisquaternary bisnaphthalimide MT02 against *Staphylococcus aureus*. *Antimicrob Agents Chemother.* 2010 Oct 11.

Roger T, Lugrin J, Le Roy D, Goy G, Mombelli M, Koessler T, Ding XC, Chanson AL, Knaup Reymond M, Miconnet I, Schrenzel J, François P, Calandra T. Histone deacetylase inhibitors impair innate immune responses to Toll-like receptor agonists and to infection. *Blood.* 2010 Oct 18.

Emonet S, Shah HN, Cherkaoui A, Schrenzel J. Application and use of various mass spectrometry methods in clinical microbiology. *Clin Microbiol Infect.* 2010 Nov;16(11):1604-13.

Kaleta EJ, Clark AE, Johnson DR, Gamage DC, Wysocki VH, Cherkaoui A, Schrenzel J, Wolk DM. Use of Polymerase Chain Reaction Coupled to Electrospray Ionization Mass Spectrometry for Rapid Identification of Bacteria and Yeast Bloodstream Pathogens from Blood Culture Bottles. *J Clin Microbiol.* 2010 Nov 3.

Martínez de Tejada B, Stan CM, Boulvain M, Renzi G, François P, Irion O, Schrenzel J. Development of a rapid PCR assay for screening of maternal colonization by group B streptococcus and neonatal invasive Escherichia coli during labor. *Gynecol Obstet Invest.* 2010;70(4):250-5.

Jonsson IM, Juuti JT, François P, Almajidi R, Pietäinen M, Girard M, Lindholm C, Saller MJ, Driessen AJ, Kuusela P, Bokarewa M, Schrenzel J, Kontinen VP. Inactivation of the Ecs ABC Transporter of *Staphylococcus aureus* Attenuates Virulence by Altering Composition and Function of Bacterial Wall. *PLoS One.* 2010 Dec 2;5(12):e14209.

Brief description

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.

For further information please visit:

<http://laboratoire-bacteriologie.hug-ge.ch/en/index.htm>

## National biological defence research and development programme declaration

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	<b>Laboratoire de Virologie</b> (Virological Laboratory)
Affiliation	Hôpitaux Universitaires de Genève (University Hospitals of Geneva)
Location	Rue Gabrielle Perret-Gentil 4 CH-1211 Genève 14
Geographical location	N 46° 11' 34.01", E 6° 9' 02.47"
Floor area	
BSL2	not specified
BSL3	not specified
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	not specified
Personnel	
Total	not specified
Personnel	
Military	0
Civilian	not specified
Personnel	
Scientists	not specified
Engineers	not specified
Technicians	not specified
Administrative staff	not specified
Scientific disciplines	Virology
Contractor staff	0
Source(s) of funding	Cantons of Fribourg, Genève, Neuchâtel, Valais, Vaud

**Funding levels**

Research	not specified
Development	not specified
Test & Evaluation	not specified
Diagnosis	not specified
Education & Training	not specified

Publication policy      Publication in open literature.

List of publications      List of publicly available papers and reports in English published in 2010:

Uçkay I, Gasche-Soccal PM, Kaiser L, Stern R, Mazza-Stalder J, Aubert JD, van Delden C. Low incidence of severe respiratory syncytial virus infections in lung transplant recipients despite the absence of specific therapy. *J Heart Lung Transplant*. 2010 Mar;29(3):299-305.

Iten A, Kaiser L. [Influenza A (H1N1) 2009 and uncertainties: lessons from a pandemic]. *Rev Med Suisse*. 2010 Apr 7;6(243):704-7 (in French).

Kherad O, Kaiser L, Bridevaux PO, Sarasin F, Thomas Y, Janssens JP, Rutschmann OT. Upper-respiratory viral infection, biomarkers, and COPD exacerbations. *Chest*. 2010 Oct;138(4):896-904.

Cordey S, Junier T, Gerlach D, Gobbiini F, Farinelli L, Zdobnov EM, Winther B, Tapparel C, Kaiser L. Rhinovirus genome evolution during experimental human infection. *PLoS One*. 2010 May 11;5(5):e10588.

**Brief description**

The Virological Laboratory, which is part of the University Hospitals of Geneva, is the regional competence center for the primary analysis of virological samples suspicious of a bioterror-related background. Due to its other diagnostic activities, the laboratory is proficient in molecular testing, infectious serology and virus cultures.

For further information please visit (website in French only):

<http://virologie.hug-ge.ch/>

## National biological defence research and development programme declaration

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	<b>Laboratoires de Diagnostic de l'Institut de Microbiologie</b> (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)
Location	Rue du Bugnon 48 CH-1011 Lausanne
Geographical location	N 46° 31' 30.57", E 6° 38' 29.15"
Floor area	
BSL2	not specified
BSL3	not specified
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	not specified
Personnel	
Total	not specified
Personnel	
Military	0
Civilian	not specified
Personnel	
Scientists	not specified
Engineers	not specified
Technicians	not specified
Administrative staff	not specified

Scientific disciplines	Bacteriology Mycology Parasitology Virology
Contractor staff	0
Source(s) of funding	Cantons of Fribourg, Genève, Neuchâtel, Valais, Vaud
Funding levels	
Research	not specified
Development	not specified
Test & Evaluation	not specified
Diagnosis	not specified
Education & Training	not specified
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Croxatto A, Greub G. Early intracellular trafficking of <i>Waddlia chondrophila</i> in human macrophages. <i>Microbiology</i>. 2010 Feb;156(Pt 2):340-55.</p> <p>Prod'hom G, Bizzini A, Durussel C, Bille J, Greub G. Matrix-assisted laser desorption ionization-time of flight mass spectrometry for direct bacterial identification from positive blood culture pellets. <i>J Clin Microbiol</i>. 2010 Apr;48(4):1481-3.</p> <p>Althaus F, Greub G, Raoult D, Genton B. African tick-bite fever: a new entity in the differential diagnosis of multiple eschars in travelers. Description of five cases imported from South Africa to Switzerland. <i>Int J Infect Dis</i>. 2010 Sep;14 Suppl 3:e274-6.</p> <p>Corsaro D, Michel R, Walochnik J, Müller KD, Greub G. <i>Saccamoeba lacustris</i>, sp. nov. (Amoebozoa: Lobosea: Hartmannellidae), a new lobose amoeba, parasitized by the novel chlamydia '<i>Candidatus Metachlamydia lacustris</i>' (Chlamydiae: Parachlamydiaceae). <i>Eur J Protistol</i>. 2010 May;46(2):86-95.</p> <p>Corsaro D, Pages GS, Catalan V, Loret JF, Greub G. Biodiversity of amoebae and amoeba-associated bacteria in water treatment plants. <i>Int J Hyg Environ Health</i>. 2010 Jun;213(3):158-66.</p> <p>Loret JF, Greub G. Free-living amoebae: Biological by-passes in water treatment. <i>Int J Hyg Environ Health</i>. 2010 Jun;213(3):167-75.</p>

- Deuchande R, Gidlow J, Caldow G, Baily J, Longbottom D, Wheelhouse N, Borel N, Greub G. Parachlamydia involvement in bovine abortions in a beef herd in Scotland. *Vet Rec.* 2010 May 8;166(19):598-9.
- Schroeder D, Foguena AK, Cometta A, Greub G, Cavassini M. A 48-year-old man with laryngeal mass and vocal cord palsy. *Clin Infect Dis.* 2010 Jun 15;50(12):1635, 1680-1.
- Bertelli C, Collyn F, Croxatto A, Rückert C, Polkinghorne A, Kebbi-Beghdadi C, Goesmann A, Vaughan L, Greub G. The *Waddlia* genome: a window into chlamydial biology. *PLoS One.* 2010 May 28;5(5):e10890.
- Thomas V, Greub G. Amoeba/amoebal symbiont genetic transfers: lessons from giant virus neighbours. *Intervirology.* 2010 Jun;53(5):254-67.
- Lamoth F, Greub G. Fastidious intracellular bacteria as causal agents of community-acquired pneumonia. *Expert Rev Anti Infect Ther.* 2010 Jul;8(7):775-90.
- Richter M, Matheis F, Gönczi E, Aeby S, Spiess B, Greub G. Parachlamydia acanthamoebae in domestic cats with and without corneal disease. *Vet Ophthalmol.* 2010 Jul;13(4):235-7.
- Greub G. A new piece added to the whipple puzzle: *Tropheryma Whipplei* primary infection with bacteremia and cough. *Clin Infect Dis.* 2010 Sep 1;51(5):522-4.
- Gabus V, Grenak-Degoumois Z, Jeanneret S, Rakotoarimanana R, Greub G, Genné D. *Tropheryma whipplei* tricuspid endocarditis: a case report and review of the literature. *J Med Case Reports.* 2010 Aug 4;4:245.
- Pascual A, Jaton K, Ninet B, Bille J, Greub G. New Diagnostic Real-Time PCR for Specific Detection of *Mycoplasma hominis* DNA. *Int J Microbiol.* 2010;2010. pii: 317512.
- Myers PO, Khabiri E, Greub G, Kalangos A. *Mycoplasma hominis* mediastinitis after acute aortic dissection repair. *Interact Cardiovasc Thorac Surg.* 2010 Dec;11(6):857-8.
- Roger T, Casson N, Croxatto A, Entenza JM, Pusztaszteri M, Akira S, Reymond MK, Le Roy D, Calandra T, Greub G. Role of MyD88 and Toll-like receptors 2 and 4 in the sensing of Parachlamydia acanthamoebae. *Infect Immun.* 2010 Dec;78(12):5195-201.

Cattoir V, Varca A, Greub G, Prod'hom G, Legrand P, Lienhard R. In vitro susceptibility of *Actinobaculum schaalii* to 12 antimicrobial agents and molecular analysis of fluoroquinolone resistance. *J Antimicrob Chemother.* 2010 Dec;65(12):2514-7.

Jaton K, Ninet B, Bille J, Greub G. False-negative PCR result due to gene polymorphism: the example of *Neisseria meningitidis*. *J Clin Microbiol.* 2010 Dec;48(12):4590-1.

Greub G. International Committee on Systematics of Prokaryotes. Subcommittee on the taxonomy of the Chlamydiae: minutes of the inaugural closed meeting, 21 March 2009, Little Rock, AR, USA. *Int J Syst Evol Microbiol.* 2010 Nov;60(Pt 11):2691-3.

Greub G. International Committee on Systematics of Prokaryotes. Subcommittee on the taxonomy of the Chlamydiae: minutes of the closed meeting, 21 June 2010, Hof bei Salzburg, Austria. *Int J Syst Evol Microbiol.* 2010 Nov;60(Pt 11):2694.

Ferry T, Hirschel B, Dang T, Meylan P, Delhumeau C, Rauch A, Weber R, Elzi L, Bernasconi E, Schmid P, Calmy A; Swiss HIV Cohort Study. Infrequent replication of parvovirus B19 and erythrovirus genotypes 2 and 3 among HIV-infected patients with chronic anemia. *Clin Infect Dis.* 2010 Jan 1;50(1):115-8.

Jaquiéry E, Jilek S, Schluep M, Meylan P, Lysandropoulos A, Pantaleo G, Du Pasquier RA. Intrathecal immune responses to EBV in early MS. *Eur J Immunol.* 2010 Mar;40(3):878-87.

Perrottet N, Manuel O, Lamoth F, Venetz JP, Sahli R, Decosterd LA, Buclin T, Pascual M, Meylan P. Variable viral clearance despite adequate ganciclovir plasma levels during valganciclovir treatment for cytomegalovirus disease in D+/R- transplant recipients. *BMC Infect Dis.* 2010 Jan 6;10:2.

Manuel O, Pascual M, Perrottet N, Lamoth F, Venetz JP, Decosterd LA, Buclin T, Meylan PR. Ganciclovir exposure under a 450 mg daily dosage of valganciclovir for cytomegalovirus prevention in kidney transplantation: a prospective study. *Clin Transplant.* 2010 Nov;24(6):794-800.

Widmer N, Meylan P, Ivanyuk A, Aouri M, Decosterd LA, Buclin T. Oseltamivir in seasonal, avian H5N1 and pandemic 2009 A/H1N1 influenza: pharmacokinetic and pharmacodynamic characteristics. *Clin Pharmacokinet.* 2010 Nov 1;49(11):741-65.

Brief description

The Diagnostic Laboratories of the Institute of Microbiology, which is part of the University Hospital Center of Vaud, is 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 only):

[http://www.chuv.ch/dml/dml\\_home/dml\\_imu\\_home.htm](http://www.chuv.ch/dml/dml_home/dml_imu_home.htm)

## National biological defence research and development programme declaration

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	<b>Labor Spiez</b> (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) [[➤ page 20 to 25](#)].

## National biological defence research and development programme declaration

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	<b>Institut für Medizinische Mikrobiologie</b> (Department of Medical Microbiology)
Affiliation	Zentrum für LaborMedizin, Luzerner Kantonsspital (Center for Laboratory Medicine, Cantonal Hospital of Luzern)
Location	Kantonsspital Haus 47 CH-6000 Luzern 16
Geographical location	N 47° 3' 32.45", E 8° 18' 1.17"
Floor area	
BSL2	716 m <sup>2</sup>
BSL3	62 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	778 m <sup>2</sup>
Personnel	
Total	34
Personnel	
Military	0
Civilian	34
Personnel	
Scientists	4
Engineers	0
Technicians	26
Administrative staff	4
Scientific disciplines	Medical microbiology
Contractor staff	0

Source(s) of funding	Cantons of Luzern, Nidwalden, Obwalden, Schwyz, Uri
Funding levels	
Research	10 %
Development	0 %
Test & Evaluation	10 %
Diagnosis	70 %
Education & Training	10 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Valsesia G, Rossi M, Bertschy S, Pfyffer GE. Emergence of SCCmec type IV and SCCmec type V methicillin-resistant <i>Staphylococcus aureus</i> containing the Panton-Valentine leukocidin genes in a large academic teaching hospital in Central Switzerland: external invaders or persisting circulators? <i>J Clin Microbiol</i> 2010;48:720-7.</p> <p>Lucke K, Hombach M, Hug M, Pfyffer GE. Rapid detection of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) in diverse clinical specimens by the BD GeneOhm MRSA assay and comparison with culture. <i>J Clin Microbiol</i> 2010;48:981-4.</p> <p>Rohacek M, Weisser M, Kobza R, Schoenenberger AW, Pfyffer GE, Frei R, Erne P, Trampuz A. Bacterial colonization and infection of electrophysiological cardiac devices detected with sonication and swab culture. <i>Circulation</i> 2010;121:1691-7.</p> <p>Hombach M, Pfyffer GE, Roos M, Lucke K. Detection of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) in specimens from various body sites: performance characteristics of the BD GeneOhm MRSA assay, the Xpert MRSA assay, and broth-enriched culture in an area with a low prevalence of MRSA infections. <i>J Clin Microbiol</i> 2010;48:3882-7.</p> <p>Macheras E, Roux AL, Bastian S, Leao SC, Palaci M, Sivadon-Tardy V, Gutierrez C, Richter E, Rüsch-Gerdes S, Pfyffer GE, Bodmer T, Cambau E, Gaillard JL, Heym B. Multilocus sequence analysis and <i>rpoB</i> sequencing of <i>Mycobacterium abscessus</i> (sensu lato) strains. <i>J Clin Microbiol</i> 2010 (Epub ahead of print).</p>
Brief description	The Department of Medical Microbiology, which is part of the Cantonal Hospital of Luzern, is the regional competence center for the primary analysis of samples suspicious of a bioterror-related

background. It is accredited for clinical bacteriology, mycology, mycobacteriology, parasitology, molecular diagnostics, serology, blood banking (serological and molecular markers of donor blood). The main focus of research activities is on mycobacteria as well as on molecular aspects of MRSA.

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

## National biological defence research and development programme declaration

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	<b>Institut für Medizinische Mikrobiologie</b> (Institute of Medical Microbiology)
Affiliation	Medizinische Fakultät, Universität Zürich (Faculty of Medicine, University of Zurich)
Location	Gloriastrasse 30/32 CH-8006 Zürich
Geographical location	N 47° 22' 36.20", E 8° 33' 11.18"
Floor area	
BSL2	0 m <sup>2</sup>
BSL3	20 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	20 m <sup>2</sup>
Personnel	
Total	2
Personnel	
Military	0
Civilian	2
Personnel	
Scientists	1
Engineers	0
Technicians	1
Administrative staff	0
Scientific disciplines	Microbiology (Bacteriology)
Contractor staff	0

Source(s) of funding	Cantons of Appenzell Ausserrhoden, Appenzell Innerrhoden, Glarus, Graubünden, Sankt Gallen, Schaffhausen, Thurgau, Zug, Zürich, and the Principality of Liechtenstein
Funding levels	
Research	0 %
Development	0 %
Test & Evaluation	10 %
Diagnosis	80 %
Education & Training	10 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Shcherbakov D, Akbergenov R, Matt T, Sander P, Andersson DI, Böttger EC (2010). Directed mutagenesis of <i>Mycobacterium smegmatis</i> 16S rRNA to reconstruct the in-vivo evolution of aminoglycoside resistance in <i>Mycobacterium tuberculosis</i>. <i>Mol. Microbiol.</i> 77:830-840.</p> <p>Peter-Getzlaff S, Lüthy J, Voit A, Bloemberg GV, Böttger EC (2010). Detection and identification of <i>Mycobacterium</i> spp. in clinical specimens by combining the Roche Cobas Amplicor <i>Mycobacterium tuberculosis</i> assay with <i>Mycobacterium</i> genus detection and nucleic acid sequencing. <i>J. Clin. Microbiol.</i> 48:3943-3948.</p> <p>Ciardo DE, Lucke K, Imhof A, Bloemberg GV, Böttger EC (2010). Systematic ITS sequence analysis for identification of clinical mold isolates in diagnostic mycology: a 5-year study. <i>J. Clin. Microbiol.</i> 48:2809-2813.</p> <p>Long KS, Munck C, Andersen TMB, Schaub MA, Hobbie SN, Böttger EC, Vester B (2010). Mutations in 23S rRNA at the peptidyl transferase center and their relationship to linezolid binding and cross resistance. <i>Antimicrob. Agents Chemother.</i> 54:4705-4713.</p> <p>Tortoli E, Böttger EC, Fabio A, Falsen E, Gitti Z, Grottola A, Klenk H-P, Mannino R, Mariottini A, Messinò M, Pecorari M, Rumpianesi F (2010). <i>Mycobacterium europaeum</i> sp. nov., a scotochromogenic species related to <i>Mycobacterium simiae</i> complex. <i>Int. J. Syst. Evol. Microbiol.</i>, epub ahead of print.</p>

Kalapala SK, Hobbie SN, Böttger EC, Shcherbakov D (2010). Mutation K42R in ribosomal protein S12 does not affect susceptibility of *Mycobacterium smegmatis* 16S rRNA A-site mutants to 2-deoxystreptamines. PLoS One 5:e11960.

Keller PM, Rampini SK, Büchler AG, Eich G, Wanner RM, Speck RF, Böttger EC, Bloemberg GV (2010). Recognition of potentially novel human disease-associated pathogens by implementation of systematic 16S rRNA gene sequencing in the diagnostic laboratory. J. Clin. Microbiol. 48:3397-3402.

Fehr JS, Bloemberg GV, Ritter C, Hombach M, Lüscher TF, Weber R, Keller PM (2010). Septicemia caused by tick-borne bacterial pathogen *Candidatus Neoehrlichia mikurensis*. Emerg. Infect. Dis. 16:1127-1129.

Keller PM, Rampini SK, Bloemberg GV (2010). Detection of a mixed infection in a culture-negative brain abscess by broad-spectrum bacterial 16S rRNA gene PCR. J. Clin. Microbiol. 48:2250-2252.

Kuster SP, Hasse B, Huebner V, Bansal V, Zbinden R, Ruef C, Ledergerber B, Weber R (2010). Risks factors for infections with extended-spectrum beta-lactamase-producing *Escherichia coli* and *Klebsiella pneumoniae* at a tertiary care university hospital in Switzerland. Infection 38:33-40.

Imkamp F, Rosenberger T, Striebel F, Keller PM, Amstutz B, Sander P, Weber-Ban E (2010). Deletion of dop in *Mycobacterium smegmatis* abolishes phosphorylation of protein substrates in vivo. Mol. Microbiol. 75:744-754.

Brüllé JK, Grau T, Tschumi A, Auchli Y, Burri R, Polsfuss S, Keller PM, Hunziker P, Sander P (2010). Cloning, expression and characterization of *Mycobacterium tuberculosis* lipoprotein LprF. Biochem Biophys Res Commun 391:679-684.

Böttger EC (2010). Mutant A1555G mitochondrial 12S rRNA and aminoglycoside susceptibility. Antimicrob. Agents Chemother. 54:3073-3074.

Ciardo DE, Burger S, Payer M, Lee C, McCallum N (2010). GeneXpert captures unstable MRSA prone to rapidly losing the *mecA* gene. J. Clin. Microbiol. 48:3030-3032.

McCallum N, Hinds J, Ender M, Berger-Bächi B, Stutzmann-Meier P (2010). Transcriptional profiling of XdrA: a new regulator of spa transcription in *Staphylococcus aureus*. J. Bacteriol. 192:5151-5164.

Lucke K, Kuster SP, Berteia M, Ruef C, Bloemberg GV (2010). A deep sternal wound infection caused by Ureaplasma urealyticum. *J. Med. Microbiol.* 59:1254-1256.

Sahraoui N, Ballif M, Zelleg S, Yousfi N, Ritter C, Friedel U, Amstutz B, Yala D, Boulahbal F, Guetarni D, Zinsstag J, Keller PM, Weber-Ban E (2010). *Mycobacterium algericum* sp. nov., a novel rapidly growing species related to *M. terrae* complex and associated with goat lung lesions. *Int. J. Syst. Evol. Microbiol.*, epub ahead of print.

Nicoletti J, Kuster SP, Sulser T, Zbinden R, Ruef C, Ledergerber B, Weber R (2010). Risk factors for urinary tract infections due to ciprofloxacin-resistant *Escherichia coli* in a tertiary care urology department in Switzerland. *Swiss Med. Wkly.* 140:w13059.

Preiswerk B, Ullrich S, Speich R, Bloemberg GV, Hombach M (2010). Human infection with *Delftia tsuruhatensis* isolated from a central venous catheter. *J. Med. Microbiol.*, epub ahead of print.

Imkamp F, Striebel F, Sutter M, Özcelik D, Sander P, Weber-Ban E (2010). Dop functions as a depupyrase in the prokaryotic ubiquitin-like modification pathway. *EMBO Reports* 11:791-797.

Braun D, Horovitz A, Jenni R, Berteia M, Günthard HF (2010). Aortic homograft endocarditis caused by *Cardiobacterium hominis* and complicated by agranulocytosis due to ceftriaxone. *BMJ Case Reports*, in press.

Matt T, Akbergenov R, Dmitry Shcherbakov, Böttger EC (2010). The ribosomal A-site: decoding, drug target and disease. *Israel Journal of Chemistry* 50:60-70.

McCallum N, Berger-Bächi B, Senn MM (2010). Regulation of antibiotic resistance in *Staphylococcus aureus*. *Int. J. Med. Microbiol.* 300:118-129.

Brief description

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 diagnostics laboratory proficient in bacteriology, mycology and serology.

For further information please visit:  
[http://www.imm.uzh.ch/index\\_en.html](http://www.imm.uzh.ch/index_en.html)

## National biological defence research and development programme declaration

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	<b>Institut für Medizinische Virologie</b> (Institute of Medical Virology)
Affiliation	Medizinische Fakultät, Universität Zürich (Faculty of Medicine, University of Zurich)
Location	Winterthurerstrasse 190 CH-8057 Zürich
Geographical location	N 47° 23' 52.08", E 8° 33' 01.92"
Floor area	
BSL2	0 m <sup>2</sup>
BSL3	25 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	25 m <sup>2</sup>
Personnel	
Total	2
Personnel	
Military	0
Civilian	2
Personnel	
Scientists	1
Engineers	0
Technicians	1
Administrative staff	0
Scientific disciplines	Microbiology (Virology)
Contractor staff	0

Source(s) of funding	Cantons of Appenzell Ausserrhoden, Appenzell Innerrhoden, Glarus, Graubünden, Sankt Gallen, Schaffhausen, Thurgau, Zug, Zürich, and the Principality of Liechtenstein
Funding levels	
Research	0 %
Development	0 %
Test & Evaluation	10 %
Diagnosis	80 %
Education & Training	10 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Dorner M, Zucol F, Alessi D, Haerle SK, Bossart W, Weber M, Byland R, Bernasconi M, Berger C, Tugizov S, Speck RF, Nadal D. beta1 integrin expression increases susceptibility of memory B cells to Epstein-Barr virus infection. <i>J Virol.</i> 2010 Jul;84(13):6667-77.</p> <p>Haas A, Rehr M, Graw F, Rusert P, Bossart W, Kuster H, Trkola A, Günthard HF, Oxenius A. HIV-1 replication activates CD4+ T cells with specificities for persistent herpes viruses. <i>EMBO Mol Med.</i> 2010 Jun;2(6):231-44.</p> <p>Schorn R, Höhne M, Meerbach A, Bossart W, Wüthrich RP, Schreier E, Müller NJ, Fehr T. Chronic norovirus infection after kidney transplantation: molecular evidence for immune-driven viral evolution. <i>Clin Infect Dis.</i> 2010 Aug 1;51(3):307-14.</p> <p>Cusini A, Günthard HF, Stussi G, Schwarz U, Fehr T, Grueter E, Meerbach A, Bossart W, Schaer DJ, Rudiger A. Hemophagocytic syndrome caused by primary herpes simplex virus 1 infection: report of a first case. <i>Infection.</i> 2010 Oct;38(5):423-6.</p> <p>Millard AL, Häberli L, Sinzger C, Ghielmetti M, Schneider MK, Bossart W, Seebach JD, Mueller NJ. Efficiency of porcine endothelial cell infection with human cytomegalovirus depends on both virus tropism and endothelial cell vascular origin. <i>Xenotransplantation.</i> 2010 Jul-Aug;17(4):274-87.</p>

von Wyl V, Ehteshami M, Symons J, Bürgisser P, Nijhuis M, Demeter LM, Yerly S, Böni J, Klimkait T, Schuurman R, Ledergerber B, Götte M, Günthard HF; Swiss HIV Cohort Study. Epidemiological and biological evidence for a compensatory effect of connection domain mutation N348I on M184V in HIV-1 reverse transcriptase. *J Infect Dis.* 2010 Apr 1;201(7):1054-62.

Metzner KJ, Rauch P, von Wyl V, Leemann C, Grube C, Kuster H, Böni J, Weber R, Günthard HF. Efficient suppression of minority drug-resistant HIV type 1 (HIV-1) variants present at primary HIV-1 infection by ritonavir-boosted protease inhibitor-containing antiretroviral therapy. *J Infect Dis.* 2010 Apr 1;201(7):1063-71.

Advani A, Coiffier B, Czuczmar MS, Dreyling M, Foran J, Gine E, Gisselbrecht C, Ketterer N, Nasta S, Rohatiner A, Schmidt-Wolf IG, Schuler M, Sierra J, Smith MR, Verhoef G, Winter JN, Boni J, Vandendries E, Shapiro M, Fayad L. Safety, pharmacokinetics, and preliminary clinical activity of inotuzumab ozogamicin, a novel immunoconjugate for the treatment of B-cell non-Hodgkin's lymphoma: results of a phase I study. *J Clin Oncol.* 2010 Apr 20;28(12):2085-93.

Kouyos RD, von Wyl V, Yerly S, Böni J, Taffé P, Shah C, Bürgisser P, Klimkait T, Weber R, Hirschl B, Cavassini M, Furrer H, Battegay M, Vernazza PL, Bernasconi E, Rickenbach M, Ledergerber B, Bonhoeffer S, Günthard HF. Molecular epidemiology reveals long-term changes in HIV type 1 subtype B transmission in Switzerland. *J Infect Dis.* 2010 May 15;201(10):1488-97.

Rieder P, Joos B, von Wyl V, Kuster H, Grube C, Leemann C, Böni J, Yerly S, Klimkait T, Bürgisser P, Weber R, Fischer M, Günthard HF; Swiss HIV Cohort Study. HIV-1 transmission after cessation of early antiretroviral therapy among men having sex with men. *AIDS.* 2010 May 15;24(8):1177-83.

von Wyl V, Ehteshami M, Demeter LM, Bürgisser P, Nijhuis M, Symons J, Yerly S, Böni J, Klimkait T, Schuurman R, Ledergerber B, Götte M, Günthard HF; Swiss HIV Cohort Study. HIV-1 reverse transcriptase connection domain mutations: dynamics of emergence and implications for success of combination antiretroviral therapy. *Clin Infect Dis.* 2010 Sep 1;51(5):620-8.

Alizon S, von Wy1 V, Stadler T, Kouyos RD, Yerly S, Hirscher B, Böni J, Shah C, Klimkait T, Furrer H, Rauch A, Vernazza PL, Bernasconi E, Battegay M, Bürgisser P, Telenti A, Günthard HF, Bonhoeffer S; Swiss HIV Cohort Study. Phylogenetic approach reveals that virus genotype largely determines HIV set-point viral load. PLoS Pathog. 2010 Sep 30;6(9). pii: e1001123.

Brief description

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 diagnostics laboratory.

For further information please visit:

[http://www.virology.uzh.ch/index\\_en.html](http://www.virology.uzh.ch/index_en.html)

## National biological defence research and development programme declaration

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	<b>Kantonales Laboratorium Basel-Stadt</b> (Cantonal Laboratory of Basel-Stadt)
Affiliation	Bereich Gesundheitsschutz, Gesundheitsdepartement, Kanton Basel-Stadt (Health Protection Division, Public Health Department, Canton of Basel-Stadt)
Location	Kannenfeldstrasse 2 CH-4056 Basel
Geographical location	N 47° 33' 43.48", E 7° 34' 26.85"
Floor area	
BSL2	14 m <sup>2</sup>
BSL3	36 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	50 m <sup>2</sup>
Personnel	
Total	4
Personnel	
Military	0
Civilian	4
Personnel	
Scientists	3
Engineers	0
Technicians	1
Administrative staff	0
Scientific disciplines	Microbiology Molecular biology

## Switzerland

### Form A, part 2 (iii)

Contractor staff	0
Source(s) of funding	Cantons of Aargau, Basel-Landschaft, Basel-Stadt, Solothurn
Funding levels	
Research	0 %
Development	25 %
Test & Evaluation	50 %
Diagnosis	25 %
Education & Training	0 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Schmidlin M, Alt M, Vogel G, Voegeli U, Brodmann P, Bagutti C. Contaminations of laboratory surfaces with <i>Staphylococcus aureus</i> are affected by the carrier status of laboratory staff. <i>J Appl Microbiol</i>. 2010 Oct;109(4):1284-93.</p>
Brief description	<p>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 <i>Staphylococcus aureus</i>, <i>Pseudomonas aeruginosa</i>, <i>Bacillus anthracis</i>, as well as adenoviruses and lentiviruses. Further methods for the detection of bioterror agents have been implemented according to the Regional Laboratory Network.</p> <p>For further information please visit: <a href="http://www.kantonslabor-bs.ch/content.cfm?nav=1&amp;content=3">http://www.kantonslabor-bs.ch/content.cfm?nav=1&amp;content=3</a></p>

## National biological defence research and development programme declaration

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	<b>Istituto Cantonale di Microbiologia</b> (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)
Location	Via Mirasole 22A CH-6500 Bellinzona
Geographical location	N 46° 11' 54.24", E 9° 01' 04.80"
Floor area	
BSL2	800 m <sup>2</sup>
BSL3	40 m <sup>2</sup>
BSL3Ag	0 m <sup>2</sup>
BSL4	0 m <sup>2</sup>
Total	840 m <sup>2</sup>
Personnel	
Total	66
Personnel	
Military	0
Civilian	66
Personnel	
Scientists	29
Engineers	0
Technicians	31
Administrative staff	5

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Scientific disciplines	Microbiology Mycology Serology Veterinary microbiology
Contractor staff	0
Source(s) of funding	Canton of Ticino
Funding levels	
Research	10 %
Development	5 %
Test & Evaluation	5 %
Diagnosis	80 %
Education & Training	5 %
Publication policy	Publication in open literature.
List of publications	<p>List of publicly available papers and reports in English published in 2010:</p> <p>Chaignat V, Schwermer H, Casati S, Planzer J, Worwa G, Vanzetti T, Batten C, Hofmann M, Thür B. 2010. Occurrence and spatial distribution of Toggenburg Orbivirus in Switzerland. Small Ruminant Research DOI: 10.1016/j.smallrumres.2010.05.016</p> <p>Petrini O, Limoni C. 2010. Sensibilità e specificità: ovvero la verifica statistica di un nuovo metodo diagnostico. Tribuna Medica Ticinese 75: 241-242.</p> <p>Strambio-De-Castillia C, Niepel M, Rout MP. 2010. The nuclear pore complex: bridging nuclear transport and gene regulation. Nature Reviews Molecular Cell Biology 11: 490-501.</p> <p>Tonolla M, Benagli C, Rossi V, Fragoso C, Petrini O. 2010. MALDI-TOF MS: a new laboratory option for the diagnosis of clinical infections. Pipette Swiss Laboratory Medicine 3: 6-10.</p> <p>Guidi V, De Respinis S, Benagli C, Lüthi P, Tonolla M. 2010. A real-time PCR method to quantify spores carrying the <i>Bacillus thuringiensis</i> var. <i>israelensis</i> cry4Aa and cry4Ba genes in soil. Journal of Applied Microbiology. DOI: 10.1111/j.1365-2672.2010.04741.x</p> <p>Rezzonico F, Vogel G, Duffy B, Tonolla M. 2010. Whole Cell MALDI-TOF Mass Spectrometry Application for rapid identification and clustering analysis of <i>Pantoea</i> species. Appl. Environ. Microbiol. DOI: 10.1128/AEM.03112-09.</p>

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### Form A, part 2 (iii)

Samuels GJ, Ismaiel A, Bon M-C, De Respinis S, Petrini O. 2010. *Trichoderma asperellum* sensu lato consists of two cryptic species. *Mycologia* 102(4): 944-966.

Wicht B, Ruggeri-Bernardi N, Tetsuya Y, Minoru N, Peduzzi R, Akira I. 2010. Inter- and intra-specific characterization of tapeworms of the genus *Diphyllobothrium* (Cestoda: Diphyllobothriidea) from Switzerland, using nuclear and mitochondrial DNA targets. *Parasitology International* 59: 35-36.

De Respinis S, Vogel G, Benagli C, Tonolla M, Petrini O, Samuels GJ. 2010. MALDI-TOF MS of *Trichoderma*: a model system for the identification of microfungi. *Mycol Progress* 9: 79-100.

#### Brief description

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 only):  
<http://www.ti.ch/DSS/DSP/IstCM/>

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

### *General remarks*

#### **Human diseases**

The Swiss Federal Office of Public Health (FOPH) is responsible for the surveillance and reporting of 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 lutte 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**

The Swiss Federal Office of Agriculture (FOAG) is responsible for the surveillance and reporting of plant diseases. 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 28 février 2001 sur la protection des végétaux*), notifiable plant diseases are reported to the FOAG that transmits reports on communicable plant diseases to the European and Mediterranean Plant Protection Organization (EPPO). The Swiss Federal Office for the Environment (FOEN) is responsible for the surveillance and reporting of invasive plants, which 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*).

## Background information on outbreaks of reportable infectious diseases

### Human pathogens

Infectious agent	Number of cases per year					Comments
	2006	2007	2008	2009	2010	
<b>Viruses</b>						
Andes virus (ANDV)	0	0	0	0	0	Includes Araraquara virus (ARAV), Bermejo virus (BMJV), Castelo dos Sonhos virus (CASV), Central Plata virus, Hu39694 virus, Juquitiba virus (JUQV), Lechiguanas virus (LECV), Oran virus (ORNV)
Aroa virus (AROAV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Bussuquara virus (BSQV)
Australian bat lyssavirus (ABLV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Banna virus (BAV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Banzi virus (BANV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Barmah Forest virus (BFV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bayou virus (BAYV)	0	0	0	0	0	
Bhanja virus (BHAV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Black Creek Canal virus (BCCV)	0	0	0	0	0	
Bovine papular stomatitis virus (BPSV)	n.r.	n.r.	n.r.	n.r.	n.r.	

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<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Bundibugyo ebolavirus (BEBOV)	0	0	0	0	0	
Bunyamwera virus (BUNV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Batai virus (BATV), Cache Valley virus (CVV), Germiston virus (GERV), Ilesha virus (ILEV), Ngari virus (NRIV), Shokwe virus (SHOV), Tucunduba virus (TUCV), Xingu virus (XINV)
Bwamba virus (BWA V)	n.r.	n.r.	n.r.	n.r.	n.r.	
California encephalitis virus (CEV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Inkoo virus (INKV), La Crosse virus (LACV), Tahyna virus (TAHV), Trivittatus virus (TVTV)
Camelpox virus (CMLV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Caraparu virus (CARV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Apeu virus (APEUV)
Catu virus (CATUV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Cercopithecine herpesvirus 1 (CeHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
Chagres virus (CHGV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Chandipura virus (CHPV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Chandiru virus (CDUV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Alenquer virus (ALEV)
Chapare virus (CHPV)	0	0	0	0	0	
Chikungunya virus (CHIKV)	0	2	4	12	7	
Choclo virus (CHOV)	0	0	0	0	0	
Colorado tick fever virus (CTFV)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Cowpox virus (CPXV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Elephantpox virus (EPXV)
Crimean-Congo hemorrhagic fever virus (CCHFV)	0	0	0	0	0	
Dandenong virus (DANV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Dengue fever virus (DENV)	11	62	47	32	86	
Dobrava-Belgrade virus (DOBV)	0	0	0	0	0	Includes Saaremaa virus (SAAV)
Dugbe virus (DUGV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Nairobi sheep disease virus (NSDV)
Duvenhage virus (DUVV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Eastern equine encephalitis virus (EEEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Edge Hill virus (EHV)	n.r.	n.r.	n.r.	n.r.	n.r.	
European bat lyssavirus 1 (EBLV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
European bat lyssavirus 2 (EBLV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	
Flexal virus (FLEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Getah virus (GETV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Great Island virus (GIV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Kemerovo virus (KEMV)
Guama virus (GMAV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Guanarito virus (GTOV)	0	0	0	0	0	
Guaroa virus (GROV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Hantaan virus (HTNV)	0	0	0	0	0	Includes Amur virus (AMRV)
Hendra virus (HeV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Hepatitis A virus (HAV)	126	103	136	113	68	
Hepatitis B virus (HBV)	96	106	78	75	60	

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Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Hepatitis C virus (HCV)	63	45	39	75	55	
Hepatitis D virus (HDV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Hepatitis E virus (HEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human adenovirus D (HAdV-D)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human enterovirus A (HEV-A)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human herpesvirus 3 (HHV-3)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human herpesvirus 4 (HHV-4)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human herpesvirus 5 (HHV-5)	n.r.	n.r.	n.r.	n.r.	n.r.	
Human immunodeficiency virus 1 (HIV-1)	725	727	722	595	577	
Human immunodeficiency virus 2 (HIV-2)	3	5	3	6	2	
Ilheus virus (ILHV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Rocio virus (ROCV)
Influenza A virus (FLUAV)	362	366	608	13945	985	
Ivory Coast ebolavirus (CIEBOV)	0	0	0	0	0	
Japanese encephalitis virus (JEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Junin virus (JUNV)	0	0	0	0	0	
Jurona virus (JURV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Kedougou virus (KEDV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Kokobera virus (KOKV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Koutango virus (KOUV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Kyasanur Forest disease virus (KFDV)	0	0	0	0	0	Includes Alkhurma virus (ALKV)
Laguna Negra virus (LANV)	0	0	0	0	0	
Lake Victoria marburgvirus (MARV)	0	0	0	0	0	
Langat virus (LGTV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Lassa fever virus (LASV)	0	0	0	0	0	

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<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Louping ill virus (LIV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Lujo virus (LUJV)	0	0	0	0	0	
Lymphocytic choriomeningitis virus (LCMV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Machupo virus (MACV)	0	0	0	0	0	
Marituba virus (MTBV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Murutucu virus (MURV), Nepuyo virus (NEPV)
Mayaro virus (MAYV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Measels virus (MeV)	42	517	881	481	48	
Mokola virus (MOKV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Monkeypox virus (MPXV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Mucambo virus (MUCV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Mumps virus (MuV)	750	550	900	1000	n.a.	
Murray Valley encephalitis virus (MVEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
New York virus (NYV)	0	0	0	0	0	
Nipah virus (NiV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Norwalk virus (NV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Omsk hemorrhagic fever virus (OHFV)	0	0	0	0	0	
O'nyong-nyong virus (ONNV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Orf virus (ORFV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Oriboca virus (ORIV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Itaqui virus (ITQV)
Oropouche virus (OROV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Orungo virus (ORUV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Piry virus (PIRYV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Pixuna virus (PIXV)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Polio virus (PV)	0	0	0	0	0	
Powassan virus (POWV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Pseudocowpox virus (PCPV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Puumala virus (PUUV)	0	3	1	0	0	Includes Muju virus (MUJV) Information reflects hantavirus infections (species not determined, PUUV likely)
Rabies virus (RABV)	0	0	0	0	0	
Reston ebolavirus (REBOV)	0	0	0	0	0	
Rift Valley fever virus (RVFV)	0	0	0	0	0	
Rio Bravo virus (RBV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rio Mamore (RIOMV)	0	0	0	0	0	Includes Anajatuba virus (ANAJV)
Ross River virus (RRV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rotavirus A (RV-A)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rotavirus B (RV-B)	n.r.	n.r.	n.r.	n.r.	n.r.	
Royal Farm virus (RFV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Karshi virus (KSIV)
Rubella virus (RUBV)	350	200	200	250	n.a.	
Sabia virus (SABV)	0	0	0	0	0	
Sandfly fever Naples virus (SFNV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Toscana virus (TOSV)
Sandfly fever Sicilian virus (SFSV)	n.r.	n.r.	n.r.	n.r.	n.r.	
SARS coronavirus (SARS-CoV)	0	0	0	0	0	
Sealpox virus (SPXV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Semliki Forest virus (SFV)	n.r.	n.r.	n.r.	n.r.	n.r.	

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<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Seoul virus (SEOV)	0	0	0	0	0	
Sepik virus (SEPV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Sin nombre virus (SNV)	0	0	0	0	0	Includes Monongahela virus (MGLV)
Sindbis virus (SINV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Ockelbo virus (OCKV)
St Louis encephalitis virus (SLEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Sudan ebolavirus (SEBOV)	0	0	0	0	0	
Suid herpesvirus 1 (SuHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tacaribe virus (TCRV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tacaiuma virus (TCMV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tanapox virus (TANV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tataguine virus (TATV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tick-borne encephalitis virus (TBEV)	245	111	123	115	96	
Tula virus (TULV)	0	0	0	0	0	
Tyuleniy virus (TYUV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Usutu virus (USUV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Vaccinia virus (VACV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Buffalopox virus (BPXV)
Variola virus (VARV)	0	0	0	0	0	
Venezuelan equine encephalitis virus (VEEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Wesselsbron virus (WEVV)	n.r.	n.r.	n.r.	n.r.	n.r.	
West Nile virus (WNV)	0	0	0	0	0	Includes Kunjin virus (KUNV)
Western equine encephalitis virus (WEEV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Whitewater Arroyo virus (WWAV)	0	0	0	0	0	

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<b>Viruses (continued)</b>	2006	2007	2008	2009	2010	Comments
Wyeomyia virus (WYOV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Yellow fever virus (YFV)	0	0	0	0	0	
Zaire virus (ZEBOV)	0	0	0	0	0	
Zika virus (ZIKV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Spondweni virus (SPOV)

<b>Bacteria</b>	2006	2007	2008	2009	2010	Comments
Actinomyces gerencseriae (Actinomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Actinomyces israelii (Actinomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Anaplasma phagocytophilum (Anaplasmosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bacillus anthracis (Anthrax)	0	0	0	0	0	
Bartonella baciliformis (Bartonellosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bartonella quintana (Trench fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bordetella pertussis (Whooping cough)	n.r.	n.r.	n.r.	n.r.	n.r.	
Borrelia burgdorferi group (Lyme disease)	n.r.	n.r.	n.r.	n.r.	n.r.	
Borrelia duttoni (Relapsing fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Borrelia hispanica (Relapsing fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Borrelia mazottii (Relapsing fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Borrelia recurrentis (Relapsing fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Brucella abortus (Brucellosis)	0	0	0	0	0	
Brucella melitensis (Brucellosis)	1	0	2	2	2	
Brucella suis (Brucellosis)	0	0	0	0	0	
Burkholderia mallei (Glanders)	n.r.	n.r.	n.r.	n.r.	n.r.	
Burkholderia pseudomallei (Melioidosis)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Campylobacter coli (Campylobacteriosis)	230	228	223	221	272	
Campylobacter fetus (Campylobacteriosis)	19	21	23	16	17	
Campylobacter jejuni (Campylobacteriosis)	3080	3482	4176	4175	3338	
Chlamydia trachomatis (Chlamydia infection)	4936	5252	6052	6367	6660	
Chlamydophila psittaci (Psittacosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium botulinum (Botulism)	1	0	0	0	1	
Clostridium novyi (Gas gangrene)	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium perfringens (Gas gangrene)	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium septicum (Gas gangrene)	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium tetani (Tetanus)	2	1	1	3	2	
Corynebacterium diphtheriae (Diphtheria)	0	0	0	0	0	
Coxiella burnetii (Q-fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Ehrlichia chaffeensis (Ehrlichiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Ehrlichia ewingii (Ehrlichiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Escherichia coli (enterohemorrhagic)	48	61	70	45	42	
Francisella tularensis (Tularemia)	2	6	7	4	12	
Haemophilus ducreyi (Chancroid)	n.r.	n.r.	n.r.	n.r.	n.r.	
Haemophilus influenzae (Epiglottitis)	63	74	81	101	80	
Legionella pneumophila (Legionellosis)	193	220	251	224	277	
Leptospira spp (Leptospirosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Listeria monocytogenes (Listeriosis)	68	60	43	43	69	
Mycobacterium leprae (Leprosy)	n.r.	n.r.	n.r.	n.r.	n.r.	
Mycobacterium marinum (Mycobacteriosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Mycobacterium tuberculosis complex (Tuberculosis)	522	475	520	556	548	
Mycobacterium ulcerans (Buruli ulcer)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Neisseria gonorrhoeae (Gonorrhoea)	904	960	944	962	1255	
Neisseria meningitidis (Meningococcal septicemia)	66	68	60	72	56	
Neorickettsia sennetsu (Sennetsu fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Nocarida asteroides (Nocardiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Nocarida brasiliensis (Nocardiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Nocarida farcinica (Nocardiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Orientia tsutsugamushi (Scrub typhus)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia africae (African tick bite fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia akari (Rickettsialpox)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia australis (Australian tick typhus)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia conorii (Boutonneuse fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia japonica (Oriental spotted fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia prowazekii (Typhus)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia rickettsii (Rocky Mountain spotted fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia siberica (Siberian tick typhus)	n.r.	n.r.	n.r.	n.r.	n.r.	
Rickettsia typhi (Typhus)	n.r.	n.r.	n.r.	n.r.	n.r.	
Salmonella enterica s. paratyphi (Paratyphoid fever)	9	13	11	7	8	
Salmonella enterica s. typhi (Typhoid fever)	9	17	13	14	22	
Serratia marcescens	n.r.	n.r.	n.r.	n.r.	n.r.	
Shigella boydii (Shigellosis)	13	9	13	6	14	
Shigella dysenteriae (Shigellosis)	8	10	6	6	9	
Shigella flexneri (Shigellosis)	69	65	56	64	46	
Shigella sonnei (Shigellosis)	185	213	178	190	145	
Spirillum minus (Rat bite fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Staphylococcus aureus (MRSA)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Bacteria (continued)</b>	2006	2007	2008	2009	2010	Comments
Streptobacillus moniliformis (Rat bite fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Streptococcus pneumoniae (Pneumonia)	945	1041	1112	1149	905	
Streptococcus pyogenes (Scarlet fever)	n.r.	n.r.	n.r.	n.r.	n.r.	
Treponema pallidum (Syphilis)	635	582	739	809	1080	
Vibrio cholerae (Cholera)	0	0	0	0	0	
Yersinia enterocolitica (Yersiniosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Yersinia pestis (Plague)	0	0	0	0	0	
Yersinia pseudotuberculosis (Yersiniosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<b>Protists</b>	2006	2007	2008	2009	2010	Comments
Acanthamoeba spp (Acanthamoebiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Babesia divergens (Babesiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Babesia microti (Babesiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Balamuthia mandrillaris (Amoebiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Cryptosporidium parvum (Cryptosporidiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Entamoeba histolytica (Amoebiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Giardia intestinalis (Giardiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Isospora belli (Isosporiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania aethiopica complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania donovani complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania major complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania mexicana complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania tropica complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Leishmania (Vianna) braziliensis complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Protists (continued)</b>	2006	2007	2008	2009	2010	Comments
<i>Leishmania</i> (Vianna) guyanensis complex (Leishmaniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Naegleria australiensis</i> (Naegleriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Naegleria fowleri</i> (Naegleriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Plasmodium falciparum</i> (Malaria)	156	152	172	164	180	
<i>Plasmodium knowlesi</i> (Malaria)	0	0	0	0	0	
<i>Plasmodium malariae</i> (Malaria)	15	6	11	8	15	
<i>Plasmodium ovale</i> (Malaria)	11	9	20	8	16	
<i>Plasmodium vivax</i> (Malaria)	24	33	23	20	33	
<i>Sarcocystis suisominis</i> (Sarcosporidiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Toxoplasma gondii</i> (Toxoplasmosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Trypanosoma brucei gambiense</i> (Sleeping sickness)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Trypanosoma brucei rhodesiense</i> (Sleeping sickness)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Trypanosoma cruzi</i> (Chagas disease)	n.r.	n.r.	n.r.	n.r.	n.r.	
<b>Helminths</b>	2006	2007	2008	2009	2010	Comments
<i>Ancylostoma braziliense</i> (Larva migrans cutanea)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Ancylostoma duodenale</i> (Ancylostomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Angiostrongylus cantonensis</i> (Angiostrongyliasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Angiostrongylus costaricensis</i> (Angiostrongyliasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Baylisascaris procyonis</i> (Baylisascariasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Brugia malayi</i> (Elephantiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Brugia timori</i> (Elephantiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Dicrocoelium dendriticum</i> (Dicrocoeliasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Dicrocoelium hospes</i> (Dicrocoeliasis)	n.r.	n.r.	n.r.	n.r.	n.r.	

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<b>Helminths (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Diphyllobothrium latum (Diphyllobothriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Diphyllobothrium pacificum (Diphyllobothriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Echinococcus granulosus (Echinococcosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Echinococcus multilocularis (Echinococcosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Echinococcus oligarthrus (Echinococcosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Echinococcus vogeli (Echinococcosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Fasciola gigantica (Fasciolosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Fasciola hepatica (Fasciolosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Fasciolopsis buski (Fasciolopsiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Loa loa (Loiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Necator americanus (Ancylostomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Onchocerca volvulus (River blindness)	n.r.	n.r.	n.r.	n.r.	n.r.	
Opisthorchis felineus (Opisthorchiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Opisthorchis viverrini (Opisthorchiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Paragonimus westermani (Paragonimiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Schistosoma haematobium (Schistosomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Schistosoma intercalatum (Schistosomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Schistosoma japonicum (Schistosomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Schistosoma mansoni (Schistosomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Schistosoma mekongi (Schistosomiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Strongyloides fuelleborni (Strongyloidiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Strongyloides stercoralis (Strongyloidiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia asiatica (Taeniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia saginata (Taeniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia solium (Taeniasis)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Helminths (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Toxocara canis (Larva migrans visceralis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Toxocara mystax (Larva migrans visceralis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Trichinella spiralis (Trichinellosis)	0	0	0	4	1	
Trichuris suis (Trichuriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Trichuris trichiura (Trichuriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Trichuris vulpis (Trichuriasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Wuchereria bancrofti (Elephantiasis)	n.r.	n.r.	n.r.	n.r.	n.r.	
<b>Arthropods</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Sarcoptes scabiei (Scabies)	n.r.	n.r.	n.r.	n.r.	n.r.	
<b>Fungi</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Blastomyces dermatitidis (Blastomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Coccidioides immitis (Coccidioidomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Coccidioides posadasii (Coccidioidomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Cryptococcus gattii (Cryptococcosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Histoplasma capsulatum (Histoplasmosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Microsporidia spp (Microsporidiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Nocardia asteroides (Nocardiosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Paracoccidioides brasiliensis (Paracoccidioidomycosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Penicillium marneffei (Penicilliosis)	n.r.	n.r.	n.r.	n.r.	n.r.	
Sporothrix schenckii (Sporotrichosis)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Prions</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Creutzfeldt-Jakob disease (familial)	1	0	1	1	0	
Creutzfeldt-Jakob disease (iatrogenic)	1	1	0	0	0	
Creutzfeldt-Jakob disease (sporadic)	11	15	13	14	8	
Creutzfeldt-Jakob disease (variant)	0	0	0	0	0	
Fatal familial insomnia	n.r.	n.r.	n.r.	n.r.	n.r.	
Gerstmann-Sträussler-Scheinker syndrome	n.r.	n.r.	n.r.	n.r.	n.r.	
Kuru	n.r.	n.r.	n.r.	n.r.	n.r.	
<b>Toxins</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Abrin	n.r.	n.r.	n.r.	n.r.	n.r.	
Aflatoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Amatoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Anatoxin A	n.r.	n.r.	n.r.	n.r.	n.r.	
Apamin	n.r.	n.r.	n.r.	n.r.	n.r.	
Aplysiatoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Azaspiracids	n.r.	n.r.	n.r.	n.r.	n.r.	
Batrachotoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Botulinum toxins	0	0	0	0	0	
Brevetoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Bufoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Bungarotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Cholera toxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Ciguatoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium perfringens toxins	n.r.	n.r.	n.r.	n.r.	n.r.	

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Toxins (continued)	2006	2007	2008	2009	2010	Comments
Cobrotoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Conotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Dendrotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Diphtheria toxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Domoic acid	n.r.	n.r.	n.r.	n.r.	n.r.	
Fumonisins	n.r.	n.r.	n.r.	n.r.	n.r.	
Gliotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Maitotoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Microcystins	n.r.	n.r.	n.r.	n.r.	n.r.	
Modeccin	n.r.	n.r.	n.r.	n.r.	n.r.	
Myotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Notexin	n.r.	n.r.	n.r.	n.r.	n.r.	
Ochratoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Okadaic acid	n.r.	n.r.	n.r.	n.r.	n.r.	
Palytoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Patulin	n.r.	n.r.	n.r.	n.r.	n.r.	
Phallotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Ricin	n.r.	n.r.	n.r.	n.r.	n.r.	
Saxitoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Shiga toxins / Verotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Staphylococcal enterotoxins (SEB)	n.r.	n.r.	n.r.	n.r.	n.r.	
Tetanus toxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Tetrodotoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Textilotoxin	n.r.	n.r.	n.r.	n.r.	n.r.	
Trichothecenes	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

Toxins (continued)	2006	2007	2008	2009	2010	Comments
Viscumin	n.r.	n.r.	n.r.	n.r.	n.r.	
Volkensin	n.r.	n.r.	n.r.	n.r.	n.r.	
Yersinia enterocolitica enterotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Yessotoxins	n.r.	n.r.	n.r.	n.r.	n.r.	
Zearalenone	n.r.	n.r.	n.r.	n.r.	n.r.	

n.a. data not yet available

n.d. not determined

n.r. none reported

\* provisional or estimated data

## Background information on outbreaks of reportable infectious diseases

### Animal pathogens

Infectious agent	Number of cases per year					Comments
	2006	2007	2008	2009	2010	
<b>Viruses</b>						
Abalone viral ganglioneuritis virus (AVGV)	0	0	0	0	0	
African horse sickness virus (AHSV)	0	0	0	0	0	
African swine fever virus (ASFV)	0	0	0	0	0	
Akabane virus (AKAV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Alcelaphine herpesvirus 1 (AlHV-1)	34	25	37	3*	1*	Notifiable until 2008 Known to occur in Switzerland
Ambystoma tigrinum virus (ATV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Anatid herpesvirus 1 (AnHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
Australian bat lyssavirus (ABLV)	0	0	0	0	0	
Avian metapneumovirus (AMPV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bluetongue virus (BTV)	0	5	35	34	1	
Border disease virus (BDV)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Danuser R et al. Schweiz Arch Tierheilkd. 2009;151:109-17.)

## Switzerland

Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Borna disease virus (BDV)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Caplazi P et al. Schweiz Arch Tierheilkd. 1999;141:521-7.)
Bovine ephemeral fever virus (BEFV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Bovine herpesvirus 1 (BoHV-1)	0	0	0	3	0	
Bovine leukemia virus (BLV)	0	0	0	0	0	
Bovine viral diarrhea virus (BVDV)	414	719	7053	1420	403	2008: Start of a BVD eradication program that involves testing of all cattle in 2008 and testing of all newborn calves since 2009
Bunyamwera virus (BUNV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Cache Valley virus (CVV)
Camelpox virus (CPXV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Caprine arthritis encephalitis virus (CAEV)	66	55	61	105	97	
Caprine herpesvirus 2 (CpHV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	
Classical swine fever virus (CSFV)	0	0	0	0	0	
Crimean Congo hemorrhagic fever virus (CCHFV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Duck adenovirus A (DAdV-A)	n.r.	n.r.	n.r.	n.r.	n.r.	
Duck hepatitis virus 1 (DHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
Duvenhage virus (DUVV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Eastern equine encephalitis virus (EEEV)	0	0	0	0	0	
Epizootic haematopoietic necrosis virus (EHNV)	0	0	0	0	0	
Epizootic hemorrhagic disease virus (EHDV)	0	0	0	0	0	

Switzerland  
Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Equid herpesvirus 1 (EHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Equid herpesvirus 4 (EHV-4)	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Equine arteritis virus (EAV)	0	2	5	0	1	
Equine infectious anemia virus (EIAV)	0	0	0	0	0	
European bat lyssavirus 1 (EBLV-1)	0	0	0	0	0	
European bat lyssavirus 2 (EBLV-2)	0	0	0	0	0	
European brown hare syndrome virus (EBHSV)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but likely to occur in Switzerland (Frölich K et al. J Wildl Dis. 2001;37:803-7.)
Foot and mouth disease virus (FMDV)	0	0	0	0	0	
Fowlpox virus (FWPV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Frog virus 3 (FV-3)	n.r.	n.r.	n.r.	n.r.	n.r.	
Gallid herpesvirus 1 (GaHV-1)	9	14	7	9	8	
Gallid herpesvirus 2 (GaHV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	
Gallid herpesvirus 3 (GaHV-3)	n.r.	n.r.	n.r.	n.r.	n.r.	
Getah virus (GETV)	0	0	0	0	0	
Gill-associated virus (GAV)	0	0	0	0	0	Includes Yellow head virus (YHV)
Goatpox virus (GTPV)	0	0	0	0	0	
Hendra virus (HeV)	0	0	0	0	0	
Human enterovirus B (HEV-B)	n.r.	n.r.	n.r.	n.r.	n.r.	
Infectious bronchitis virus (IBV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Infectious bursal disease virus (IBDV)	n.r.	n.r.	n.r.	n.r.	n.r.	

## Switzerland

Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Infectious hematopoietic necrosis virus (IHNV)	0	0	0	0	0	
Infectious hypodermal and hematopoietic necrosis virus (IHHNV)	0	0	0	0	0	
Infectious myonecrosis virus (IMNV)	0	0	0	0	0	
Infectious pancreatic necrosis virus (IPNV)	1	1	2	0	3	
Infectious salmon anemia virus (ISAV)	0	0	0	0	0	
Infectious spleen and kidney necrosis virus (ISKNV)	0	0	0	0	0	Includes Red Sea bream iridovirus (RSIV)
Influenza A virus (FLUAV)	0	0	0	0	0	2006-2008: Figures reflect cases of highly pathogenic avian influenza strains
Jaagsiekte sheep retrovirus (JSRV)	1	1	3	8	5	
Japanese encephalitis virus (JEV)	0	0	0	0	0	
Koi herpesvirus (KHV)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Lagos bat virus (LBV)	0	0	0	0	0	
Louping ill virus (LIV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Lumpy skin disease virus (LSDV)	0	0	0	0	0	
Macrobrachium rosenbergii nodavirus (MrNV)	0	0	0	0	0	
Menangle virus (MENV)	0	0	0	0	0	
Mokola virus (MOKV)	0	0	0	0	0	
Monkeypox virus (MPXV)	0	0	0	0	0	
Myxoma virus (MYXV)	0	1	6	0	1	
Nairobi sheep disease virus (NSDV)	0	0	0	0	0	
Newcastle disease virus (NDV)	0	0	0	1	0	
Nipah virus (NiV)	n.r.	n.r.	n.r.	n.r.	n.r.	

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Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Orf virus (ORFV)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Ostreid herpesvirus 1 (OsHV-1)	n.r.	n.r.	n.r.	n.r.	n.r.	
Ovine herpesvirus 2 (OvHV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Albini S et al. Schweiz Arch Tierheilkd. 2003;145:61-8.)
Penaeus monodon nucleopolyhedrovirus (PemoNPV)	0	0	0	0	0	Includes Baculovirus penaei, Penaeus monodon-type baculovirus
Peste des petits ruminants virus (PPRV)	0	0	0	0	0	
Porcine circovirus 2 (PCV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Wiederkehr DD et al. Vet Microbiol. 2009;136:27-35.)
Porcine enterovirus 9 (PEV-9)	n.r.	n.r.	n.r.	n.r.	n.r.	
Porcine reproductive and respiratory syndrome virus (PRRSV)	0	0	0	0	0	
Porcine rubulavirus (PoRV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Porcine teschovirus 1 (PTV-1)	1	0	0	0	0	
Rabbit hemorrhagic disease virus (RHDV)	2	3	1	0	0	
Rabies virus (RABV)	0	0	0	0	0	
Rift Valley fever virus (RVFV)	0	0	0	0	0	
Rinderpest virus (RPV)	0	0	0	0	0	
Salmonid herpesvirus 2 (SaHV-2)	n.r.	n.r.	n.r.	n.r.	n.r.	
Sheppox virus (SPPV)	0	0	0	0	0	

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## Form B (i)

<b>Viruses (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
Shuni virus (SHUV)	n.r.	n.r.	n.r.	n.r.	n.r.	Includes Aino virus
Spring viremia of carp virus (SVCV)	0	0	0	0	0	
Suid herpesvirus 1 (SuHV-1)	0	0	0	0	0	
Taura syndrome virus (TSV)	0	0	0	0	0	
Transmissible gastroenteritis virus (TGEV)	0	0	0	0	0	
Venezuelan equine encephalitis virus (VEEV)	0	0	0	0	0	
Vesicular stomatitis virus (VSV)	0	0	0	0	0	
Viral hemorrhagic septicemia virus (VHSV)	6	1	4	1	2	
Visna/maedi virus (VISNAV)	7	16	11	11	12	
Wesselsbron virus (WESSV)	0	0	0	0	0	
West Nile virus (WNV)	n.r.	n.r.	n.r.	n.r.	n.r.	
Western equine encephalitis virus (WEEV)	0	0	0	0	0	
White spot syndrome virus 1 (WSSV-1)	0	0	0	0	0	
<b>Bacteria</b>	2006	2007	2008	2009	2010	<b>Comments</b>
Actinobacillus equuli	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Actinobacillus lignieresii	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Actinobacillus pleuropneumoniae	7	6	8	5	10	
Actinobacillus salpingitis	n.r.	n.r.	n.r.	n.r.	n.r.	
Actinobacillus seminis	n.r.	n.r.	n.r.	n.r.	n.r.	
Actinobacillus suis	n.r.	n.r.	n.r.	n.r.	n.r.	
Actinomyces bovis	n.r.	n.r.	n.r.	n.r.	n.r.	
Actinomyces viscosus	n.r.	n.r.	n.r.	n.r.	n.r.	

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Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Anaplasma centrale	n.r.	n.r.	n.r.	n.r.	n.r.	
Anaplasma marginale	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Dreher UM et al. Vet Microbiol. 2005;107:71-9.)
Anaplasma phagocytophilum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Bacillus anthracis	0	0	0	0	0	
Bordetella bronchiseptica	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Brucella abortus	0	0	0	0	0	
Brucella canis	n.r.	n.r.	n.r.	n.r.	n.r.	
Brucella melitensis	0	0	0	0	0	
Brucella ovis	0	0	0	0	0	
Brucella suis	0	0	0	3	0	
Burkholderia mallei	0	0	0	0	0	
Burkholderia pseudomallei	n.r.	n.r.	n.r.	n.r.	n.r.	
Campylobacter coli	n.r.	n.r.	n.r.	n.r.	n.r.	Campylobacteriosis is notifiable, but species is n.d.
Campylobacter fetus	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Campylobacter jejuni	9	6	12	26	8	<i>Ditto</i>
Campylobacter lari	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Campylobacter upsaliensis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Chlamydophila abortus	47	51	48	33	31	
Chlamydophila psittaci	7	6	10	3	10	

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Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Clostridium botulinum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Clostridium chauvoei	7	2	8	2	2	
Clostridium perfringens	n.r.	n.r.	n.r.	n.r.	n.r.	
Clostridium tetani	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Corynebacterium pseudotuberculosis	1	6	7	4	10	
Coxiella burnetii	70	60	67	77	74	
Dermatophilus congolensis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Ehrlichia bovis	n.r.	n.r.	n.r.	n.r.	n.r.	
Ehrlichia chaffeensis	n.r.	n.r.	n.r.	n.r.	n.r.	
Ehrlichia ewingii	n.r.	n.r.	n.r.	n.r.	n.r.	
Ehrlichia ruminantium	n.r.	n.r.	n.r.	n.r.	n.r.	
Erysipelothrix rhusiopathiae	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Escherichia coli (enterohemorrhagic)	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Francisella tularensis	1	0	2	1	3	
Leptospira spp	12	13	5	11	1	
Listeria ivanovii	n.r.	n.r.	n.r.	n.r.	n.r.	
Listeria monocytogenes	19	6	21	10	13	
Melissococcus plutonius	300	383	554	796	994	
Mycobacterium avium	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland Information given is in relation to <i>Mycobacterium avium</i> ssp. <i>avium</i>
Mycobacterium bovis	0	0	0	0	0	

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Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Mycobacterium fortuitum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Hoop RK et al. J Clin Microbiol. 1996;34:991-2.)
Mycobacterium genavese	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Mycobacterium marinum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Streit M et al. Eur J Dermatol. 2006;16:79-83.)
Mycoplasma agalactiae	0	0	0	0	0	
Mycoplasma capricolum s. capricolum	0	0	0	0	0	
Mycoplasma capricolum s. capripneumoniae (F38)	0	0	0	0	0	
Mycoplasma gallisepticum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Mycoplasma hyopneumoniae	18	12	13	7	15	
Mycoplasma iowae	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Mycoplasma meleagridis	n.r.	n.r.	n.r.	n.r.	n.r.	
Mycoplasma mycoides s. capri	0	0	0	0	0	
Mycoplasma mycoides s. mycoides LC	0	0	0	0	0	
Mycoplasma mycoides s. mycoides SC	0	0	0	0	0	
Mycoplasma putrefaciens	n.r.	n.r.	n.r.	n.r.	n.r.	
Mycoplasma synoviae	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Neorickettsia risticii	n.r.	n.r.	n.r.	n.r.	n.r.	
Paenibacillus larvae	83	91	87	58	48	

Switzerland  
Form B (i)

<b>Bacteria (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Pasteurella multocida	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Stahel AB et al. J Vet Diagn Invest. 2009;21:793-802.)
Salmonella enterica	56	73	57	81	70	Information given relates to <i>Salmonella spp.</i>
Staphylococcus aureus (MRSA)	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Streptococcus canis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Streptococcus equi	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Streptococcus iniae	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Streptococcus pyogenes	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Streptococcus suis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Taylorella asinigenitalis	n.r.	n.r.	n.r.	n.r.	n.r.	
Taylorella equigenitalis	5	3	2	0	0	
Xenohaliotis californiensis	0	0	0	0	0	
Yersinia enterocolitica	1	1	1	n.r.	1	Rarely notified, but known to occur in Switzerland (Stahel AB et al. J Vet Diagn Invest. 2009;21:793-802.)
Yersinia pseudotuberculosis	n.r.	n.r.	n.r.	n.r.	n.r.	Clinical cases of yersiniosis No differentiation between <i>Yersinia pseudotuberculosis</i> and <i>Yersinia enterocolitica</i>

Switzerland  
Form B (i)

<b>Protists</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Aphanomyces astaci	0	1	0	0	0	
Babesia bigemina	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Babesia bovis	n.r.	n.r.	n.r.	n.r.	n.r.	
Babesia caballi	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Babesia divergens	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Babesia jakimovi	n.r.	n.r.	n.r.	n.r.	n.r.	
Babesia major	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Babesia occultans	n.r.	n.r.	n.r.	n.r.	n.r.	
Babesia ovata	n.r.	n.r.	n.r.	n.r.	n.r.	
Besnoitia besnoiti	n.r.	n.r.	n.r.	n.r.	n.r.	
Bonamia exitiosa	0	0	0	0	0	
Bonamia ostreeae	0	0	0	0	0	
Cryptosporidium andersoni	n.r.	n.r.	n.r.	n.r.	n.r.	Clinical cases of cryptosporidiosis No species differentiation
Cryptosporidium baileyi	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Cryptosporidium galli	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Cryptosporidium meleagridis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Cryptosporidium parvum	69	83	49	63	61	<i>Ditto</i>
Giardia intestinalis	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Leishmania braziliensis complex	n.r.	n.r.	n.r.	n.r.	n.r.	No domestic cases, but imported cases are known
Leishmania donovani	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>

Switzerland  
Form B (i)

<b>Protists (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Leishmania infantum</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Leishmania mexicana complex</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Leishmania peruviana</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Leishmania tropica complex</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Martelia refringens</i>	0	0	0	0	0	
<i>Neospora caninum</i>	14	19	45	72	53	
<i>Perkinsus marinus</i>	0	0	0	0	0	
<i>Perkinsus olseni</i>	0	0	0	0	0	
<i>Sarcocystis bovihominis</i>	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
<i>Sarcocystis neurona</i>	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Sarcocystis suihominis</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Tetracapsuloides bryosalmonae</i>	15	13	2	2	5	
<i>Theileria annulata</i>	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Theileria equi</i>	n.r.	n.r.	n.r.	n.r.	2	Not notifiable, but known to occur in Switzerland
<i>Theileria lestoquardi</i>	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Theileria parva</i>	n.r.	n.r.	n.r.	n.r.	n.r.	
<i>Toxoplasma gondii</i>	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<i>Tritrichomonas foetus</i>	0	0	0	0	0	
<i>Trypanosoma brucei</i>	0	0	0	0	0	
<i>Trypanosoma congolense</i>	0	0	0	0	0	
<i>Trypanosoma equiperdum</i>	0	0	0	0	0	
<i>Trypanosoma evansi</i>	0	0	0	0	0	
<i>Trypanosoma godfreyi</i>	0	0	0	0	0	

Switzerland  
Form B (i)

<b>Protists (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Trypanosoma simiae	0	0	0	0	0	
Trypanosoma vivax	0	0	0	0	0	
<b>Helminths</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Ancylostoma braziliense	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but hook-, round- and whipworms are known to occur in cats and dogs in Switzerland, species n.d. (Sager H et al. Parasitol Res. 2006;98:333-8.)
Ancylostoma caninum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Ancylostoma ceylanicum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Ancylostoma tubaeforme	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Ascaris suum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Bunostomum phlebotomum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Dicrocoelium dendriticum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Ducommun D. & Pfister K. Parasitol Res. 1991;77:364-366.)

Switzerland  
Form B (i)

<b>Helminths (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Echinococcus granulosus	4	6	6	1	9	Not notifiable, but hook-, round- and whipworms are known to occur in cats and dogs in Switzerland, species n.d. (Sager H et al. Parasitol Res. 2006;98:333-8.)
Echinococcus multilocularis	n.r.	n.r.	n.r.	n.r.	n.r.	Findings of echinococcosis, not differentiated between <i>E. multilocularis</i> and <i>E. granulosus</i> . Affected species were dogs, foxes and some exotic zoo animal.
Fasciola gigantica	n.r.	n.r.	n.r.	n.r.	n.r.	
Fasciola hepatica	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Rapsch C et al. Vet Parasitol. 2008;154:242-9.)
Gyrodactylus salaris	n.r.	n.r.	n.r.	n.r.	n.r.	
Parafilaria bovicola	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia asiatica	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia brauni	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia crassiceps	n.r.	n.r.	n.r.	n.r.	n.r.	
Taenia hydatigena	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Taenia multiceps	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>

Switzerland  
Form B (i)

<b>Helminths (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Taenia ovis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Taenia saginata	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Taenia serialis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Taenia solium	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Taenia taeniaeformis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Toxocara canis	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but hook-, round- and whipworms are known to occur in cats and dogs in Switzerland, species n.d. (Sager H et al. Parasitol Res. 2006;98:333-8.)
Toxocara cati	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Toxocara vitulorum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Trichinella britovi	2	2	0	3	3	Found in wild species (lynx, fox, badger, etc.)
Trichinella nativa	0	0	0	0	0	
Trichinella pseudospiralis	0	0	0	0	0	
Trichinella spiralis	0	0	0	0	0	
Trichuris suis	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland

## Switzerland

Form B (i)

<b>Helminths (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
Trichuris trichiura	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but hook-, round- and whipworms are known to occur in cats and dogs in Switzerland, species n.d. (Sager H et al. Parasitol Res. 2006;98:333-8.)
Trichuris vulpis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Uncinaria stenocephala	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<b>Arthropods</b>	2006	2007	2008	2009	2010	<b>Comments</b>
Acarapis woodi	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Aethina tumida	0	0	0	0	0	
Chrysomya bezziana	n.r.	n.r.	n.r.	n.r.	n.r.	
Cochliomyia hominivorax	n.r.	n.r.	n.r.	n.r.	n.r.	
Hypoderma bovis	4	5	2	1	0	Clinical warble infestation is notifiable, no differentiation between species
Hypoderma lineatum	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Psoroptes ovis	7	5	2	1	n.r.	Notifiable until 2008 Known to occur in Switzerland
Sarcoptes scabiei	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Tropilaelaps clareae	0	0	0	0	0	
Tropilaelaps koenigerum	0	0	0	0	0	
Tropilaelaps mercedesae	0	0	0	0	0	
Tropilaelaps thaii	0	0	0	0	0	
Varroa destructor	7	22	1	14	12	
<b>Fungi</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Aphanomyces invadans	n.r.	n.r.	n.r.	n.r.	n.r.	
Batrachochytrium dendrobatidis	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Garner TWJ et al. Emerg Infect Dis. 2005 Oct.)
Cryptococcus neoformans	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland (Tintelnot K et al. Mycoses. 2004;47:455-64.)
Histoplasma capsulatum	n.r.	n.r.	n.r.	n.r.	n.r.	Not notifiable, but known to occur in Switzerland
Nosema apis	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Nosema ceranae	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
Sporothrix schenckii	n.r.	n.r.	n.r.	n.r.	n.r.	<i>Ditto</i>
<b>Prions</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Bovine spongiform encephalopathy	5	0	0	0	0	

## Switzerland

Form B (i)

<b>Prions (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Chronic wasting disease	0	0	0	0	0	
Feline spongiform encephalopathy	0	0	0	0	0	
Scrapie	0	0	0	0	0	
Transmissible mink encephalopathy	0	0	0	0	0	

n.a. data not yet available

n.d. not determined

n.r. none reported

\* provisional or estimated data

## Background information on outbreaks of reportable infectious diseases

### Plant pathogens

Infectious agent	Number of cases per year					Comments
	2006	2007	2008	2009	2010	
<b>Viruses</b>						
American plum line pattern virus (APLPV)	-	-	-	-	-	
Andean potato latent virus (APLV)	-	-	-	-	-	Synonym: Eggplant mosaic virus (EMV)
Andean potato mottle virus (APMoV)	-	-	-	-	-	
Apple mosaic virus (ApMV)	+	+	+	+	+	Widespread and therefore not under official control
Apple stem grooving virus (ASGV)	+	+	+	+	+	Includes Citrus tatter leaf virus (CiTLV), which was not regulated until 31.12.2010 ASGV is widespread and therefore not under official control, whereas CiTLV is not known to occur in Europe.
Arabis mosaic virus (ArMV)	+	+	+	+	+	Under official control only where plants of <i>Fragaria</i> L. and <i>Rubus</i> L. intended for planting are produced

## Switzerland

Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Arracacha virus B (AVB)				-	-	
Banana bunchy top virus (BBTV)				-*	-*	Not relevant for Switzerland - host plants are either absent or not grown
Bean golden mosaic virus (BGMV)				-	-	
Beet curly top virus (BCTV)				-	-	
Beet leaf curl virus (BLCV)				-	-	
Beet necrotic yellow vein virus (BNYVV)				+	+*	Widespread and therefore not under official control Present in most European countries where sugar beets are grown
Black raspberry latent virus (BRLV)				-	-	
Blueberry leaf mottle virus (BLMoV)				-	-	
Blueberry scorch virus (BlScV)				n.r.	n.r.	
Cherry leaf roll virus (CLRV)				-	n.r.	Under official control only where plants of <i>Rubus</i> L. intended for planting are produced
Cherry little cherry virus				-	-	Synonym: Little cherry virus (LChV) Only non-European isolates are reportable
Cherry rasp leaf virus (CRLV)				-	-	

Switzerland  
Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Chrysanthemum stem necrosis virus (CSNV)				-	-	
Chrysanthemum stunt viroid (CSVd)				-	0	
Citrus leprosis virus (CiLV)				-*	-*	Not known to occur in Europe Not regulated until 31.12.2010
Citrus mosaic virus (CMBV)				-*	-*	<i>Ditto</i>
Citrus psorosis virus (CPsV)				-*	-*	Includes Citrus ringspot virus Not known to occur in Europe Not regulated until 31.12.2010
Citrus tristeza virus (CTV)				-*	-*	Not known to occur in Europe Non-European isolates are regulated since 01.01.2011
Coconut cadang-cadang viroid (CCCVd)				-	-	
Cowpea mild mottle virus (CPMMV)				-	0	
Cucumber vein yellowing virus (CVYV)				n.r.	n.r.	
Cucurbit yellow stunting disorder virus (CYSDV)				n.r.	n.r.	
Euphorbia mosaic virus (EuMV)				-	-	
Fiji disease virus (FDV)				-*	-*	Not relevant for Switzerland - host plants are either absent or not grown
Impatiens necrotic spot virus (INSV)				+	0	Impatiens necrotic spot virus (INSV) and Tomato Spotted Wilt Virus (TSWV) are not distinguishable
Iris yellow spot virus (IYSV)				-	0	

Switzerland  
Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Lettuce infectious yellows virus (LIYV)				-	-	
Peach mosaic virus (PcMV)				-	-	
Peach rosette mosaic virus (PRMV)				-	-	
Pepino mosaic virus (PepMV)				+	0	
Pepper mild tigre virus (PepMTV)				-	-	
Plum pox virus (PPV)				+	1	Outbreak in a single orchard in canton TG (under eradication)
Potato black ringspot virus (PBRSV)				-	-	
Potato leafroll virus (PLRV)				-	-	Only non-European isolates are reportable
Potato spindle tuber viroid (PSTVd)				-	0	
Potato virus A (PVA)				-	-	<i>Ditto</i>
Potato virus M (PVM)				-	-	<i>Ditto</i>
Potato virus S (PVS)				-	-	<i>Ditto</i>
Potato virus T (PVT)				-	-	
Potato virus V (PVV)				-	-	<i>Ditto</i>
Potato virus X (PVX)				-	-	<i>Ditto</i>
Potato virus Y (PVY)				-	-	<i>Ditto</i>
Potato yellow dwarf virus (PYDV)				-	-	Implicitly regulated among the non-European potato viruses
Potato yellow vein virus (PYVV)				-	-	<i>Ditto</i>
Potato yellowing virus (PYV)				-	-	<i>Ditto</i>

Switzerland  
Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Prunus necrotic ringspot virus (PNRSV)				-	n.r.	Under official control only where plants of <i>Rubus</i> L. intended for planting are produced
Raspberry ringspot virus (RpLCV)				+	+*	Includes Raspberry leaf curl virus  Under official control only where plants of <i>Fragaria</i> L. and <i>Rubus</i> L. intended for planting are produced
Satsuma dwarf virus (SDV)				-*	-*	Not known to occur in Europe Not regulated until 31.12.2010
Squash leaf curl virus (SLCV)				-	-	
Strawberry crinkle virus (SCV)				-	0	
Strawberry latent C virus				-	-	
Strawberry latent ringspot virus (SLRSV)				-	0	
Strawberry mild yellow edge virus (SMYEV)				-	0	
Strawberry vein banding virus (SVBV)				-	-	
Tobacco ringspot virus (TRSV)				-	-	
Tobacco streak virus (TSV)				-	-	Synonym: Black raspberry latent virus (BRLV)
Tomato apical stunt viroid (TASVd)				n.r.	n.r.	

Switzerland  
Form B (i)

<b>Viruses (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Tomato black ring virus (TBRV)				-	0	Under official control only where plants of <i>Fragaria</i> L. and <i>Rubus</i> L. intended for planting are produced
Tomato chlorosis virus (ToCV)				-	-	Implicitly regulated among the non-European viruses transmitted by <i>Bemisia tabaci</i>
Tomato infectious chlorosis virus (TICV)				-	-	<i>Ditto</i>
Tomato mottle virus (ToMoV)				-	-	<i>Ditto</i>
Tomato ringspot virus (ToRSV)				-	-	
Tomato spotted wilt virus (TSWV)				+	0	Impatiens necrotic spot virus (INSV) and Tomato Spotted Wilt Virus (TSWV) are not distinguishable
Tomato torrado virus (ToTV)				n.r.	n.r.	
Tomato yellow leaf curl virus (TYLCV)				-	0	
Watermelon silver mottle virus (WSMOV)				-	n.r.	

<b>Bacteria</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Acidovorax citrulli				n.r.	n.r.	Phytosanitary risk assessment by EPPO in process
Apple proliferation phytoplasma				+	+	Monitoring & official control only in registered nurseries

## Switzerland

Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
<i>Burkholderia caryophylli</i>				-	-	Synonym: <i>Pseudomonas caryophylli</i>
<i>Clavibacter michiganensis</i>				0/+-	0/+-	Only the following subspecies are reportable: <i>C. m. ssp. insidiosus</i> / <i>C. m. ssp. michiganensis</i> / <i>C. m. spp. sepedonicus</i>
<i>Curtobacterium flaccumfaciens</i>				n.r.	0	Under official control only in connection with seed production of <i>Phaseolus</i> sp.
Elm yellows phytoplasma				-	-	
<i>Erwinia amylovora</i>				+	+	
<i>Erwinia chrysanthemi</i>				-	0	Only the pathovar <i>dianthicola</i> is reportable
European stone fruit yellows phytoplasma				+	+	Synonym: Apricot chlorotic leaf roll phytoplasma
Grapevine flavescence dorée phytoplasma				+	+	
<i>Liberibacter africanum</i>				n.r.	n.r.	
<i>Liberibacter asiaticum</i>				n.r.	n.r.	
<i>Liberibacter psyllaurous</i>				n.r.	n.r.	
<i>Liberibacter solanacearum</i>				n.r.	n.r.	
Lime witches' broom phytoplasma				-	-	Not known to occur in Europe Not regulated until 31.12.2010
Palm lethal yellowing phytoplasma				-	-	
<i>Pantoea stewartii</i>				-	0	

Switzerland  
Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
Peach phony rickettsia				-	-	
Peach rosette phytoplasma				-	-	
Peach X-disease phytoplasma				-	-	
Peach yellows phytoplasma				-	-	
Pear decline phytoplasma				+	+	Monitoring & official control only in registered nurseries
Potato purple top wilt phytoplasma				-	-	Belongs to Aster yellows phytoplasma (sensu lato) and is implicitly regulated among the non-European potato viruses and virus-like organisms
Potato stolbur phytoplasma				+	0	The causal agent of Black wood of grapevine and Potato stolbur phytoplasma are supposed to be the same, which is known to occur on vines ( <i>Vitis</i> ) and certain weeds, but was not found on potato in 2010
Pseudomonas syringae				-	0	Only the pathovar <i>persicae</i> is reportable
Ralstonia solanacearum				-	0	
Rathayibacter toxicus				n.r.	n.r.	

Switzerland  
Form B (i)

Bacteria (continued)	2006	2007	2008	2009	2010	Comments
<i>Spiroplasma citri</i>				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
<i>Spiroplasma kunkelii</i>				n.r.	-	Synonym: Corn stunt spiroplasma
Strawberry witches' broom phytoplasma				-	-	
Western X-disease phytoplasma				-	-	
<i>Xanthomonas albilineans</i>				n.r.	n.r.	
<i>Xanthomonas arboricola</i>				+	n.r.	
<i>Xanthomonas campestris</i>				+/-	0/0	Synonym: <i>Xanthomonas axonopodis</i> Only the following pathovars are reportable: <i>X. campestris</i> pv. <i>phaseoli</i> / <i>X. campestris</i> pv. <i>vesicatoria</i>
<i>Xanthomonas fragariae</i>				0	n.a.	
<i>Xanthomonas oryzae</i>				-*	-*	Not regulated until 31.12.2010
<i>Xanthomonas translucens</i>				n.r.	n.r.	Only <i>X. t.</i> pv. <i>translucens</i> is listed by EPPO
<i>Xylella fastidiosa</i>				-	-	
<i>Xylophilus ampelinus</i>				-	0	

## Switzerland

Form B (i)

<b>Protists</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Peronosclerospora sacchari</i>				n.r.	-	Not relevant for Switzerland – host plants are either absent or not grown
<i>Peronospora hyoscyami</i>				n.r.	+	
<i>Phytophthora cinnamomi</i>				n.r.	+	
<i>Phytophthora fragariae</i>				+	0	Monitoring & official control only in registered nurseries
<i>Phytophthora infestans</i>				+	+	Common in Switzerland
<i>Phytophthora kernoviae</i>				n.r.	n.r.	
<i>Phytophthora lateralis</i>				n.r.	n.r.	
<i>Phytophthora pinifolia</i>				n.r.	n.r.	
<i>Phytophthora ramorum</i>				4	2	Under eradication
<i>Plasmopara halstedii</i>				+	+	Presence diffuse
<i>Sclerotinia rayssiae</i>				n.r.	n.r.	
<b>Helminths</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Aphelenchoides besseyi</i>				-	0	
<i>Bursaphelenchus xylophilus</i>				-	0	
<i>Ditylenchus destructor</i>				+	+	
<i>Ditylenchus dipsaci</i>				+	+	
<i>Globodera pallida</i>				+	0	
<i>Globodera rostochiensis</i>				+	1	
<i>Heterodera glycines</i>				n.r.	n.r.	
<i>Hirschmanniella</i> spp (except gracilis)				-	-	

Switzerland  
Form B (i)

<b>Helminths (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Longidorus diadecturus</i>				-	-	
<i>Meloidogyne chitwoodi</i>				+	0	
<i>Meloidogyne enterolobii</i>				+	0	
<i>Meloidogyne fallax</i>				+	0	
<i>Nacobbus aberrans</i>				-	-	
<i>Radopholus citrophilus</i>				n.r.	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Radopholus similis</i>				-	-	
<i>Xiphinema americanum</i>				-	-	
<i>Xiphinema bricolense</i>				-	-	Regulated among non-European <i>Xiphinema americanum</i> sensu lato
<i>Xiphinema californicum</i>				-	-	
<i>Xiphinema rivesi</i>				n.r.	n.r.	
<b>Arthropods</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Acleris gloverana</i>				-	-	
<i>Acleris variana</i>				-	-	
<i>Aculops fuchsiae</i>				-	-	
<i>Aeolesthes sarta</i>				n.r.	n.r.	
<i>Agrilus anxius</i>				n.r.	n.r.	
<i>Agrilus planipennis</i>				-	-	
<i>Aleurocanthus spiniferus</i>				-	-	Regulated among reportable <i>Aleurocanthus</i> spp.

## Switzerland

Form B (i)

<b>Arthropods (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Aleurocanthus woglumi</i>				-	-	<i>Ditto</i>
<i>Amauromyza maculosa</i>				-	-	Synonym: <i>Nemorimyza maculosa</i>
<i>Anacridium melanorhodon</i>				n.r.	n.r.	
<i>Anastrepha fraterculus</i>				-	-	
<i>Anastrepha ludens</i>				-	-	
<i>Anastrepha obliqua</i>				-	-	
<i>Anastrepha suspensa</i>				-	-	
<i>Anomala orientalis</i>				-	-	Synonym: <i>Blitopertha orientalis</i>
<i>Anoplophora chinensis</i>				-	-	
<i>Anoplophora glabripennis</i>				-	-	
<i>Anthonomus bisignifer</i>				-	-	
<i>Anthonomus eugenii</i>				n.r.	n.r.	
<i>Anthonomus grandis</i>				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
<i>Anthonomus quadrigibbus</i>				-	-	Synonym: <i>Tachypterellus quadrigibbus</i>
<i>Anthonomus signatus</i>				-	-	
<i>Aonidiella citrina</i>				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Arrhenodes minutus</i>				-	-	
<i>Aschistonyx eppoi</i>				-	-	

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Bactrocera carambolae				-	-	Synonym: <i>Dacus dorsalis</i> Regulated among non-European Tephritidae
Bactrocera caryae				-	-	Regulated among non-European Tephritidae
Bactrocera cucumis				-	-	<i>Ditto</i>
Bactrocera cucurbitae				-	-	<i>Ditto</i>
Bactrocera dorsalis				-	-	<i>Ditto</i>
Bactrocera invadens				-	-	<i>Ditto</i>
Bactrocera kandiensis				-	-	<i>Ditto</i>
Bactrocera minax				-	-	<i>Ditto</i>
Bactrocera occipitalis				-	-	<i>Ditto</i>
Bactrocera papayae				-	-	<i>Ditto</i>
Bactrocera philippinensis				-	-	<i>Ditto</i>
Bactrocera pyrifoliae				-	-	<i>Ditto</i>
Bactrocera tryoni				-	-	<i>Ditto</i>
Bactrocera tsuneonis				-	-	<i>Ditto</i>
Bactrocera zonata				-	-	<i>Ditto</i>
Bemisia tabaci				-	-	With regard to non-European populations
Cacoecimorpha pronubana				+*	+*	Known to occur in Switzerland
Cacyreus marshalli				n.r.	n.r.	

## Switzerland

Form B (i)

<b>Arthropods (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Calliptamus italicus</i>				n.r.	n.r.	May not represent a phytosanitary threat for Switzerland
<i>Carneocephala fulgida</i>	-	-				
<i>Carposina sasakii</i>	-	-				
<i>Cephalcia lariciphila</i>			+*	+*		Known to occur in Switzerland
<i>Ceratitis capitata</i>				n.r.	n.r.	
<i>Ceratitis cosyra</i>	-	-				Regulated among non-European Tephritidae
<i>Ceratitis quinaria</i>	-	-				<i>Ditto</i>
<i>Ceratitis rosa</i>	-	-				<i>Ditto</i>
<i>Choristoneura conflictana</i>						With regard to non-European populations
<i>Choristoneura fumiferana</i>	-	-				<i>Ditto</i>
<i>Choristoneura occidentalis</i>	-	-				<i>Ditto</i>
<i>Choristoneura rosaceana</i>	-	-				<i>Ditto</i>
<i>Chortoicetes terminifera</i>				n.r.	n.r.	
<i>Chrysophtharta bimaculata</i>				n.r.	n.r.	
<i>Circulifer tenellus</i>				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Conotrachelus nenuphar</i>	-	-				
<i>Dacus ciliatus</i>	-	-				
<i>Dacus cucurbitae</i>	-	-				
<i>Dacus tryoni</i>	-	-				

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Dacus tsuneonis</i>				-	-	
<i>Dacus zonatus</i>				-	-	
<i>Dendroctonus adjunctus</i>				-	-	Regulated among non-European Scolytidae
<i>Dendroctonus brevicomis</i>				-	-	<i>Ditto</i>
<i>Dendroctonus frontalis</i>				-	-	<i>Ditto</i>
<i>Dendroctonus micans</i>				+	+	Widespread and therefore not under official control
<i>Dendroctonus ponderosae</i>				-	-	Regulated among non-European Scolytidae
<i>Dendroctonus pseudotsugae</i>				-	-	<i>Ditto</i>
<i>Dendroctonus rufipennis</i>				-	-	<i>Ditto</i>
<i>Dendrolimus sibiricus</i>				-	-	
<i>Dendrolimus superans</i>				n.r.	n.r.	
<i>Diabrotica barberi</i>				-	-	
<i>Diabrotica speciosa</i>				n.r.	n.r.	
<i>Diabrotica undecimpunctata</i>				-	-	
<i>Diabrotica virgifera</i>				+	+	
<i>Diaphania perspectalis</i>				+	+	
<i>Diaphorina citri</i>				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Diocalandra frumenti</i>				n.r.	n.r.	
<i>Dociostaurus maroccanus</i>				n.r.	n.r.	Moroccan locust
<i>Draeculacephala minerva</i>				-	-	Vector of <i>Xylella fastidiosa</i>
<i>Drosophila suzukii</i>				n.r.	n.r.	

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Dryocoetes confusus				-	-	Synonym: <i>Dendroctonus abietis</i> Regulated among non-European Scolytidae
Dryocosmus kuriphilus				+	+	
Enaphalodes rufulus				n.r.	n.r.	
Eotetranychus lewisi				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
Epitrix cucumeris				n.r.	n.r.	
Epitrix similaris				n.r.	n.r.	
Epitrix subcrinita				n.r.	n.r.	
Epitrix tuberis				n.r.	n.r.	
Epochra canadensis				-	-	Synonym: <i>Euphranta canadensis</i> Regulated among non-European Tephritidae
Erschoviella musculana				n.r.	-	Regulated among non-European Tephritidae
Euphranta japonica				-	-	Synonym: <i>Rhacochlaena japonica</i> Regulated among non-European Tephritidae
Eutetranychus orientalis				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Frankliniella occidentalis</i>				+	+	Widespread and therefore not under official control
<i>Gilpinia hercyniae</i>				+*	+*	Known to occur in Switzerland
<i>Gnathotrichus sulcatus</i>				-	-	Regulated among non-European Scolytidae
<i>Gonipterus gibberus</i>				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
<i>Gonipterus scutellatus</i>				-*	n.r.	<i>Ditto</i>
<i>Graphocephala atropunctata</i>				-	-	
<i>Grapholita inopinata</i>				-	-	Synonym: <i>Cydia inopinata</i>
<i>Grapholita packardi</i>				-	-	Synonym: <i>Cydia packardi</i>
<i>Grapholita prunivora</i>				-	-	Synonym: <i>Cydia prunivora</i>
<i>Halyomorpha halys</i>				+	+	
<i>Helicoverpa armigera</i>				0	0	Synonym: <i>Heliothis armigera</i>
<i>Helicoverpa zea</i>				-	-	Synonym: <i>Heliothis zea</i>
<i>Hesperophanes campestris</i>				n.r.	n.r.	
<i>Heteronychus arator</i>				n.r.	n.r.	Coleoptera: Scarabaeidae; hosts: potato, maize

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Hishimonus phycitis				-*	n.r.	Synonym: Eutetix phycitis - candidate vector of Lime witches' broom Not relevant for Switzerland - host plants are either absent or not grown
Homalodisca coagulata				n.r.	n.r.	Hemiptera: Cicadellidae; possible vector of <i>Xylella fastidiosa</i>
Homalodisca vitripennis				n.r.	n.r.	<i>Ditto</i>
Ips amitinus				+*	+	Known to occur in Switzerland
Ips calligraphus				-	-	Regulated among non-European Scolytidae
Ips cembrae				+*	+*	Known to occur in Switzerland
Ips confusus				-	-	Regulated among non-European Scolytidae
Ips duplicatus				n.r.	n.r.	
Ips grandicollis				-	-	<i>Ditto</i>
Ips hauseri				n.r.	n.r.	
Ips lecontei				-	-	<i>Ditto</i>
Ips paraconfusus				-	-	<i>Ditto</i>
Ips pini				-	-	<i>Ditto</i>
Ips plastographus				-	-	<i>Ditto</i>

## Switzerland

Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Ips sexdentatus</i>				+	+	Widespread and therefore not under official control
<i>Ips subelongatus</i>				n.r.	n.r.	
<i>Ips typographus</i>				+	n.r.	<i>Ditto</i>
<i>Keiferia lycopersicella</i>				n.r.	n.r.	
<i>Lepidosaphes ussuriensis</i>				n.r.	n.r.	
<i>Leptinotarsa decemlineata</i>				+	+	<i>Ditto</i>
<i>Leptocybe invasa</i>				n.r.	n.r.	
<i>Leucinodes orbonalis</i>				n.r.	n.r.	
<i>Liriomyza bryoniae</i>				n.r.	n.r.	
<i>Liriomyza huidobrensis</i>				+	0	
<i>Liriomyza sativae</i>				-	-	
<i>Liriomyza trifolii</i>				0	0	
<i>Listronotus bonariensis</i>				-	-	
<i>Locusta migratoria</i>				-*	n.r.	Not relevant for Switzerland – not able to overwinter
<i>Locustana pardalina</i>				-*	n.r.	<i>Ditto</i>
<i>Lopholeucaspis japonica</i>				-*	n.r.	Not known to occur in Europe
<i>Lymantria mathura</i>				n.r.	n.r.	
<i>Maconellicoccus hirsutus</i>				n.r.	n.r.	<i>Ditto</i>
<i>Malacosoma americanum</i>				n.r.	n.r.	<i>Ditto</i>
<i>Malacosoma disstria</i>				n.r.	n.r.	<i>Ditto</i>
<i>Malacosoma paralella</i>				n.r.	n.r.	
<i>Margarodes prieskaensis</i>				-	-	
<i>Margarodes vitis</i>				-	-	

## Switzerland

Form B (i)

<b>Arthropods (continued)</b>	2006	2007	2008	2009	2010	Comments
<i>Margarodes vredendalensis</i>				-	-	
<i>Megaplatypus mutatus</i>				n.r.	n.r.	
<i>Melanotus communis</i>				n.r.	n.r.	<i>Ditto</i>
<i>Metamasius hemipterus</i>				n.r.	n.r.	
<i>Monochamus alternatus</i>				-	-	regulated among non-European <i>Monochamus</i> sp.
<i>Monochamus carolinensis</i>				-	-	<i>Ditto</i>
<i>Monochamus marmorator</i>				-	-	<i>Ditto</i>
<i>Monochamus mutator</i>				-	-	<i>Ditto</i>
<i>Monochamus nitens</i>				-	-	<i>Ditto</i>
<i>Monochamus notatus</i>				-	-	<i>Ditto</i>
<i>Monochamus obtusus</i>				-	-	<i>Ditto</i>
<i>Monochamus saltuarius</i>				-	-	<i>Ditto</i>
<i>Monochamus scutellatus</i>				-	-	<i>Ditto</i>
<i>Monochamus titillator</i>				-	-	<i>Ditto</i>
<i>Myndus crudus</i>				-	-	
<i>Naupactus leucoloma</i>				-	-	
<i>Neoaliturus haematoceps</i>				-*	n.r.	Synonym: <i>Circulifer haematoceps</i> Not known to occur in Europe Not regulated until 31.12.2010

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Nomadacris septemfasciata</i>				-*	n.r.	Synonym: <i>Patanga septemfasciata</i> Not relevant for Switzerland - host plants are either absent or not grown
<i>Numonia pyrivorella</i>				-	-	
<i>Nysius huttoni</i>				n.r.	n.r.	
<i>Oemona hirta</i>				n.r.	n.r.	
<i>Oligonychus perditus</i>				-	n.r.	
<i>Opogona sacchari</i>				-	-	
<i>Orgyia pseudotsugata</i>				n.r.	n.r.	
<i>Parasaissetia nigra</i>				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Pardalaspis cyanescens</i>				-	-	
<i>Pardalaspis quinaria</i>				-	-	
<i>Paysandisia archon</i>				-	1	Under eradication
<i>Phaedon brassicae</i>				n.r.	n.r.	
<i>Pheletes californicus</i>				n.r.	n.r.	Synonym: <i>Limonius californicus</i>
<i>Pissodes nemorensis</i>				-	-	regulated among non-European <i>Pissodes</i> spp.
<i>Pissodes strobi</i>				-	-	<i>Ditto</i>
<i>Pissodes terminalis</i>				-	-	<i>Ditto</i>
<i>Popillia japonica</i>				-	-	

## Switzerland

Form B (i)

<b>Arthropods (continued)</b>	2006	2007	2008	2009	2010	<b>Comments</b>
<i>Premnotrypes latithorax</i>				-	-	regulated among non-European <i>Premnotrypes</i> spp.
<i>Premnotrypes suturicallus</i>				-	-	<i>Ditto</i>
<i>Premnotrypes vorax</i>				-	-	<i>Ditto</i>
<i>Psacothea hilaris</i>				n.r.	n.r.	
<i>Pseudodopyophthorus minutissimus</i>				-	n.r.	
<i>Pseudodopyophthorus pruinosus</i>				-	n.r.	
<i>Pterandrus rosa</i>				-	-	Regulated among non-European Tephritidae
<i>Quadraspidiotus perniciosus</i>				+	+	Known to occur in Switzerland
<i>Raoiella indica</i>				n.r.	n.r.	Not known to occur in Switzerland
<i>Rhagoletis cingulata</i>				+*	+*	
<i>Rhagoletis completa</i>				+	+	
<i>Rhagoletis fausta</i>				-	-	Regulated among non-European Tephritidae
<i>Rhagoletis indifferens</i>				-*	-	<i>Ditto</i>
<i>Rhagoletis mendax</i>				-	-	<i>Ditto</i>
<i>Rhagoletis pomonella</i>				-	-	<i>Ditto</i>
<i>Rhagoletis ribicola</i>				-	-	<i>Ditto</i>
<i>Rhagoletis suavis</i>				-	-	<i>Ditto</i>
<i>Rhizoecus hibisci</i>				-	-	<i>Ditto</i>
<i>Rhynchophorus ferrugineus</i>				-	0	
<i>Rhynchophorus palmarum</i>				-	-	

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Saperda candida</i>				n.r.	n.r.	
<i>Scaphoideus luteolus</i>		-	-			
<i>Schistocerca gregaria</i>			-*	n.r.	n.r.	Not relevant for Switzerland – not able to overwinter
<i>Scirtothrips aurantii</i>			-*	n.r.	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
<i>Scirtothrips citri</i>			-*	n.r.	Ditto	
<i>Scirtothrips dorsalis</i>			-*	n.r.	Ditto	
<i>Scolytus morawitzi</i>			n.r.	n.r.		
<i>Sirex ermak</i>			n.r.	n.r.		
<i>Spodoptera eridania</i>			-	-		
<i>Spodoptera frugiperda</i>			-	-		
<i>Spodoptera littoralis</i>			-	-		
<i>Spodoptera litura</i>			-	-		
<i>Sternochetus mangiferae</i>			-*	n.r.	n.r.	Not relevant for Switzerland – host plants are either absent or not grown
<i>Strobilomyia viaria</i>			n.r.	n.r.		
<i>Tecia solanivora</i>			n.r.	n.r.		Synonym: <i>Scrobipalopsis solanivora</i>
<i>Tetranychus evansi</i>			n.r.	n.r.		
<i>Tetropium gracilicorne</i>			n.r.	n.r.		
<i>Thaumetopoea pityocampa</i>			+	+*	Pine Processionary Widespread and therefore not under official control	

Switzerland  
Form B (i)

<b>Arthropods (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Thrips palmi</i>			-	-		
<i>Toxoptera citricida</i>			-*	n.r.		
<i>Trioza erytreae</i>			-*	n.r.		Vector of citrus greening: <i>Liberibacter</i> spp.
						Not known to occur in Europe
						Not regulated until 31.12.2010
<i>Trirhithromyia cyanescens</i>			-	-		Regulated among non- European Tephritidae
<i>Trogoderma granarium</i>			+	+*		Widespread and therefore not under official control
<i>Tuta absoluta</i>			+	+		
<i>Unaspis citri</i>			-*	n.r.		Not known to occur in Europe
						Not regulated until 31.12.2010
<i>Viteus vitifoliae</i>			+	+		
<i>Xylosandrus crassiusculus</i>			n.r.	n.r.		
<i>Xylotrechus altaicus</i>			n.r.	n.r.		
<i>Xylotrechus namanganensis</i>			n.r.	n.r.		
<i>Xyphon fulgida</i>			n.d.	n.r.		Hemiptera: Cicadellidae; possible vector of <i>Xylella</i> <i>fastidiosa</i>

<b>Fungi</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Alternaria alternata</i>			-	-		Only non-European isolates are reportable

Switzerland  
Form B (i)

<b>Fungi (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Alternaria gaisen</i>				n.d.	+	
<i>Alternaria mali</i>				-	-	Considered to be a synonym for non-European isolates of <i>Alternaria alternata</i>
<i>Anisogramma anomala</i>				-	-	
<i>Apiosporina morbosa</i>				-	-	
<i>Ascocalyx abietina</i>				+	+*	Synonym: <i>Gremmeniella abietina</i> Widespread and therefore not under official control
<i>Atropellis pinicola</i>				-	n.r.	
<i>Atropellis piniphila</i>				-	n.r.	
<i>Botryosphaeria berengeriana</i>				-	-	<i>Botryosphaeria berengeriana</i> f. sp. <i>pyricola</i> is synonymous with <i>Guignardia piricola</i>
<i>Botryosphaeria laricina</i>				-	-	Synonym: <i>Guignardia laricina</i>
<i>Ceratocystis fagacearum</i>				-	-	
<i>Ceratocystis fimbriata</i>				+	+*	The reportable agent is <i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>
<i>Ceratocystis virescens</i>				-	-	
<i>Chalara fraxinea</i>				n.r.	n.r.	
<i>Chrysomyxa arctostaphyli</i>				-	-	
<i>Ciborinia camelliae</i>				+	0	

Switzerland  
Form B (i)

<b>Fungi (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Claviceps purpurea</i>				+	+*	Widespread and therefore not under official control
<i>Cochliobolus heterostrophus</i>				+	+*	<i>Ditto</i>
<i>Cochliobolus miyabeanus</i>				-*	-*	Not relevant for Switzerland - host plants are either absent or not grown
<i>Colletotrichum acutatum</i>				+	+*	Widespread and therefore not under official control No longer on the Swiss list of regulated organisms
<i>Colletotrichum coffeatum</i>				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
<i>Cronartium coleosporioides</i>	-			-	-	Regulated among non-European <i>Cronartium</i> spp.
<i>Cronartium comandrae</i>	-			-	-	<i>Ditto</i>
<i>Cronartium comptoniae</i>	-			-	-	<i>Ditto</i>
<i>Cronartium fusiforme</i>	-			-	-	<i>Ditto</i>
<i>Cronartium himalayense</i>	-			-	-	<i>Ditto</i>
<i>Cronartium kamtschaticum</i>	-			-	-	<i>Ditto</i>
<i>Cronartium quercuum</i>	-			-	-	<i>Ditto</i>
<i>Cryphonectria parasitica</i>	+			+	+	
<i>Diaporthe vaccinii</i>	-			-	-	
<i>Didymella ligulicola</i>	+			n.r.	n.r.	
<i>Elsinoe australis</i>	-*			n.r.	n.r.	

Switzerland  
Form B (i)

<b>Fungi (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Elsinoe fawcettii				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
Endocronartium harknessii				-	-	regulated among non-European Endocronartium spp.
Fusarium foetens				n.r.	n.r.	
Fusarium oxysporum				n.r.	-	The regulated agent is Fusarium oxysporum f. sp. albedinis
Gibberella circinata				-	0	
Glomerella gossypii				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
Grosmannia wageneri				n.r.	n.r.	Synonym: Ophiostoma wageneri
Guignardia citricarpa				-*	n.r.	Not known to occur in Europe Not regulated until 31.12.2010
Guignardia piricola				-	-	
Gymnosporangium asiaticum				-	-	Regulated among non-European Gymnosporangium spp.
Gymnosporangium clavipes				-	-	<i>Ditto</i>
Gymnosporangium globosum				-	-	<i>Ditto</i>
Gymnosporangium juniperi-virginianae				-	-	<i>Ditto</i>

Switzerland  
Form B (i)

<b>Fungi (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Gymnosporangium yamadae</i>				-	-	<i>Ditto</i>
<i>Hypoxyylon mammatum</i>				+	+*	Widespread and therefore not under official control
<i>Inonotus weiri</i>				-	-	
<i>Leptographium wageneri</i>				-	-	Synonym: <i>Ophiostoma wageneri</i> Not known to occur in Europe
<i>Magnaporthe grisea</i>				n.r.	n.r.	Fungus disease of rice and some other Poaceae (e.g. <i>Lolium multiflorum</i> )
<i>Magnaporthe oryzae</i>				-*	-*	Not relevant for Switzerland - host plants are either absent or not grown
<i>Melampsora euphorbiae</i>				n.r.	n.r.	
<i>Melampsora farlowii</i>				-	-	
<i>Melampsora medusae</i>				-	-	
<i>Microcyclus ulei</i>				-*	n.r.	Not relevant for Switzerland - host plants are either absent or not grown
<i>Monilinia fructicola</i>				+	+	
<i>Moniliophthora roreri</i>				-*	n.r.	<i>Ditto</i>
<i>Mycosphaerella dearnessii</i>				+	+	Synonym: <i>Scirrhia acicola</i>
<i>Mycosphaerella gibsonii</i>				-	-	Synonym: <i>Cercoseptoria pini-densiflorae</i>
<i>Mycosphaerella laricis-leptolepidis</i>				-	n.r.	

Switzerland  
Form B (i)

<b>Fungi (continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Mycosphaerella pini				+	+	Synonyms: <i>Scirrhia pini</i> / <i>Dothistroma pini</i>
Mycosphaerella populorum				-	-	
Phellinidium weiri				-	-	Synonyms: <i>Phellinus weiri</i> / <i>Inonotus weiri</i>
Phialophora cinerescens				+	0	
Phoma andigena				-	-	Synonym: <i>Phoma andina</i>
Phoma glycinicola				n.r.	n.r.	Synonym: <i>Dactuliochaeta glycines</i> Not known to occur in Europe
Phoma tracheiphila				-*	n.r.	
Phyllosticta solitaria				-	-	
Phymatotrichopsis omnivora				-	-	Considered to be a synonym for <i>Trechispora brinkmannii</i>
Pseudocercospora angolensis				-*	n.r.	Synonym: <i>Cercospora angolensis</i> Not known to occur in Europe Not regulated until 31.12.2010
Puccinia graminis				+	+	Widespread and therefore not under official control
Puccinia hemerocallidis				n.r.	n.r.	
Puccinia horiana				+	0	
Puccinia pittieriana				-	-	
Puccinia striiformis				+	+	<i>Ditto</i>
Puccinia triticina				+	+	<i>Ditto</i>

## Switzerland

Form B (i)

Fungi (continued)	2006	2007	2008	2009	2010	Comments
<i>Sclerotinia sclerotiorum</i>				+	+	<i>Ditto</i>
<i>Septoria lycopersici</i>				-	-	
<i>Sirococcus clavigignenti-juglandacearum</i>				n.r.	n.r.	
<i>Stegophora ulmea</i>				-	-	
<i>Stenocarpella macrospora</i>				n.r.	n.r.	
<i>Stenocarpella maydis</i>				n.r.	n.r.	
<i>Synchytrium endobioticum</i>				0	0	
<i>Thecaphora solani</i>				-	-	
<i>Tilletia indica</i>				-	-	
<i>Ustilago maydis</i>				+	+	
<i>Venturia nashicola</i>				-	-	
<i>Verticillium albo-atrum</i>				+	0	
<i>Verticillium dahliae</i>				+	0	
Plants (invasive)	2006	2007	2008	2009	2010	Comments
<i>Ailanthus altissima</i>	+	+	+	+	+	Impact: Environment, (health), Infrastructure <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=9500">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=9500</a>
<i>Akebia quinata</i>	+	+	+	+	+	No current impact In southern Switzerland only <a href="http://www.crsf.ch/?page=espce_carteraster&amp;no_isfs=90010">http://www.crsf.ch/?page=espce_carteraster&amp;no_isfs=90010</a>
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Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Alternanthera philoxeroides</i>				n.d.	-	
<i>Ambrosia artemisiifolia</i>	+	+	+	+	+	Impact: Health Regulated in SR 916.20 and in SR 814.911
<i>Amorpha fruticosa</i>	+	+	+	+	+	Impact: Environment Mainly in southern Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=29500">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=29500</a>
<i>Araujia sericifera</i>				n.d.	-	
<i>Arceuthobium abietinum</i>				-	-	regulated among non-European <i>Arceuthobium</i> spp.
<i>Arceuthobium americanum</i>				-	-	<i>Ditto</i>
<i>Arceuthobium campylopodium</i>				-	-	<i>Ditto</i>
<i>Arceuthobium divaricatum</i>				-	-	<i>Ditto</i>
<i>Arceuthobium douglasii</i>				-	-	<i>Ditto</i>
<i>Arceuthobium laricis</i>				-	-	<i>Ditto</i>
<i>Arceuthobium minutissimum</i>				-	-	<i>Ditto</i>
<i>Arceuthobium occidentale</i>				-	-	<i>Ditto</i>
<i>Arceuthobium pusillum</i>				-	-	<i>Ditto</i>
<i>Arceuthobium tsugense</i>				-	-	<i>Ditto</i>
<i>Arceuthobium vaginatum</i>				-	-	<i>Ditto</i>

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Artemisia verlotiorum</i>	+	+	+	+	+	Impact: (Health), agriculture, environment Crossreaction with <i>A. artemisiifolia</i> <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=47900">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=47900</a>
<i>Asclepias syriaca</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=48800">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=48800</a>
<i>Bassia scoparia</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=58900">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=58900</a>
<i>Buddleja davidii</i>	+	+	+	+	+	Impact: Environment, forestry <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=67700">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=67700</a>
<i>Bunias orientalis</i>	+	+	+	+	+	Impact: Agriculture, environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=68300">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=68300</a>
<i>Cornus sericea</i>	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=11980">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=11980</a>

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Crassula helmsii</i>				n.d.	-	None reported in Switzerland Impact: Environment Regulated in SR 814.911
<i>Cyperus esculentus</i>	+	+	+	+	+	Impact: Agriculture <a href="http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=129660">http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=129660</a>
<i>Delairea odorata</i>				n.d.	-	
<i>Eichhornia crassipes</i>				n.d.	-	
<i>Elodea canadensis</i>	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=146200">http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=146200</a>
<i>Elodea nuttallii</i>	+	+	+	+	+	Impact: Environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=146400">http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=146400</a>
<i>Erigeron annuus</i>	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=153800">http://www.crsf.ch/?page=info_karteraster&amp;no_isfs=153800</a>
<i>Eriochloa villosa</i>				n.d.	-	
<i>Fallopia baldschuanica</i>				n.d.	-	

Switzerland  
Form B (i)

Plants (invasive - continued)	2006	2007	2008	2009	2010	Comments
<i>Glyceria striata</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=191900">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=191900</a>
<i>Gymnocoronis spilanthoides</i>				n.d.	n.d.	
<i>Hakea sericea</i>				n.d.	-	
<i>Helianthus tuberosus</i>	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=196100">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=196100</a>
<i>Heracleum mantegazzianum</i>	+	+	+	+	+	Impact: Health, agriculture, environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=198300">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=198300</a>
<i>Heracleum persicum</i>				n.d.	-	
<i>Heracleum sosnowskyi</i>				n.d.	-	
<i>Humulus japonicus</i>				n.d.	-	Casual cases
<i>Hydrilla verticillata</i>				n.d.	-	
<i>Hydrocotyle ranunculoides</i>				n.d.	-	Regulated in SR 814.911
<i>Hygrophila polysperma</i>				-	-	

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Impatiens balfourii</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=213500">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=213500</a>
<i>Impatiens glandulifera</i>	+	+	+	+	+	Impact: Environment, infrastructure, forestry Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=213600">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=213600</a>
<i>Lonicera henryi</i>	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=243750">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=243750</a>
<i>Lonicera japonica</i>	+	+	+	+	+	Impact: Environment, forestry <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=243800">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=243800</a>
<i>Ludwigia grandiflora</i>	+	+	+	-	-	Eradicated Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900160">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900160</a>

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Lupinus polyphyllus</i>	+	+	+	+	+	Impact: Health, agriculture, environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=245800">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=245800</a>
<i>Lysichiton americanus</i>	+	+	+	-	-	Eradicated <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900161">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900161</a>
<i>Mahonia aquifolium</i>	+	+	+	+	+	Impact: environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=252300">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=252300</a>
<i>Microstegium vimineum</i>				n.d.	-	
<i>Myriophyllum heterophyllum</i>	+	+	+	+	+	
<i>Parthenocissus inserta</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=293100">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=293100</a>
<i>Paulownia tomentosa</i>	+	+	+	+	+	Impact: infrastructure <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=293550">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=293550</a>
<i>Pennisetum setaceum</i>			n.d.		-	

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Phytolacca americana</i>	+	+	+	+	+	No current impact in Switzerland Mainly in southern Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=302600">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=302600</a>
<i>Phytolacca esculenta</i>	+	+	+	+	+	No current impact in Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=302700">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=302700</a>
<i>Pistia stratiotes</i>				n.d.	-	Casual
<i>Polygonum cuspidatum</i>	+	+	+	+	+	Synonym: <i>Reynoutria japonica</i> Impact: Agriculture, environment, infrastructure Regulated SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=343200">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=343200</a>
<i>Polygonum perfoliatum</i>				n.d.	-	

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Polygonum polystachyum	+	+	+	+	+	Impact: Environment, infrastructure Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=315700">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=315700</a>
Pueraria lobata	+	+	+	+	+	Impact: Environment, forestry In southern Switzerland only <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=331160">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=331160</a>
Prunus laurocerasus	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=329400">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=329400</a>
Prunus serotina	+	+	+	+	+	Impact: Environment, forestry <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=330200">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=330200</a>
Reynoutria sachalinensis	+	+	+	+	+	Impact: Agriculture, environment, infrastructure Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=343250">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=343250</a>

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Rhus typhina	+	+	+	+	+	Impact: Health, environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=345600">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=345600</a>
Robinia pseudoacacia	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=346500">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=346500</a>
Rubus armeniacus	+	+	+	+	+	Impact: Environment, forestry <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900065">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=900065</a>
Salvina molesta				n.d.		-
Sedum spurium	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=385600">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=385600</a>
Senecio inaequidens	+	+	+	+	+	Impact: Health, agriculture, environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=389000">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=389000</a>

Switzerland  
Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
<i>Senecio rupestris</i>	+	+	+	+	+	Impact: Health, environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=390000">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=390000</a>
<i>Sesbania punicea</i>				n.d.	-	
<i>Solanum elaeagnifolium</i>				n.d.	-	
<i>Solidago canadensis</i>	+	+	+	+	+	Impact: environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=401000">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=401000</a>
<i>Solidago gigantea</i>	+	+	+	+	+	Impact: Environment Regulated in SR 814.911 <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=401100">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=401100</a>
<i>Solidago nemoralis</i>					-	Regulated in SR 814.911
<i>Stipa neesiana</i>				n.d.	-	
<i>Stipa tenuissima</i>				n.d.	-	
<i>Stipa trichotoma</i>				n.d.	-	

## Switzerland

Form B (i)

<b>Plants (invasive - continued)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Comments</b>
Trachycarpus fortunei	+	+	+	+	+	Impact: Forestry, environment Mainly in southern Switzerland <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=422450">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=422450</a>
Verbesina encelioides				n.d.	-	
Viburnum rhytidophyllum	+	+	+	+	+	Impact: Environment <a href="http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=444450">http://www.crsf.ch/?page=artinfo_karteraster&amp;no_isfs=444450</a>
<b>Unknown agents</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	
Citrus blight disease				n.r.	n.r.	
Citrus vein enation				n.r.	n.r.	

+ present

- absent

n.a. data not yet available

n.d. not determined

n.r. none reported

\* provisional or estimated data

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

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

## 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	<a href="http://www.springer.com/birkhauser">http://www.springer.com/birkhauser</a>
EMH Schweizerischer Ärzteverlag AG, Muttenz	<a href="http://www.emh.ch/">http://www.emh.ch/</a>
S. Karger AG, Basel	<a href="http://www.karger.com/">http://www.karger.com/</a>
WHO Press, Genève	<a href="http://apps.who.int/bookorders">http://apps.who.int/bookorders</a>

## Active promotion of contacts

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

Name of conference	Chemical and Biological Medical Treatment Symposia (CBMTS IX)
Arranging organization	Spiez Laboratory, in cooperation with Applied Science Analysis, Inc.
Date	7-11 May 2012 (tentative)
Place	Spiez, Switzerland
Main subjects	CBMTS IX is in early planning phase. Like CBMTS VIII, it will bring together professionals most concerned with the scientific and technical aspects of problems associated with the CBRN threat. This includes actions associated with CBR agent, agrichemical, agrochemical and industrial poisonings and terrorism as they relate to WMD. These problems include medical treatment (prophylaxis, pre-treatment and therapy), medical countermeasures, emergency management required for accidents and incidents, and operational issues across the response spectrum. Contributions of papers and posters from each research and operational area will be solicited. The CBMTS IX will continue its original efforts of many years on the topic of chemical and biological terrorism and anti-terrorism matters. Dual use items, emerging threats, and non-proliferation matters will be considered as well.
Participation	The conference will be open to industry, government and academic professionals with an interest in the chemical, biological, and radiological threat whether the threat is from war, terrorist actions or accidents and incidents, natural or man-made; medical, public health and medical research professionals including primary care physicians, practitioners and veterinarians; local, regional and national laboratory representatives; first responders and HAZMAT specialists including emergency, crisis management and mitigation, and civil defense personnel; industry scientists and engineers; and specialists in computer risk modeling and planning, training and local community interface. Participation will be based primarily on abstract acceptance and/or geographical representation. All participants will be expected to submit a paper. After abstract acceptance by CBMTS International Science Review Committee, a notification will be sent that Registration would be accepted.
Point of contact	<a href="http://www.asanltr.com/cbmts">http://www.asanltr.com/cbmts</a>

2. *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*

The Swiss National Science Foundation (SNSF) is strongly committed to facilitating and promoting international engagement for the Swiss research community and provides a number of funding opportunities for this purpose. Funding programs, notably, encourage the collaboration of Swiss researchers in a number of specific geographical regions. Others are open worldwide.

At the European and international level, SNSF is also an active participant in initiatives or organizations seeking to increase international engagement in science and to improve framework conditions for research.

In Switzerland, SNSF collaborates closely with the State Secretariat for Education and Research (SER) on initiatives of European or worldwide interest. It also works closely with the Swiss Agency for Development and Cooperation (SDC).

The SNSF provides a number of funding opportunities for collaborations within Europe as well as worldwide:

SCOPES (Eastern Europe)	Program for research collaboration with Eastern European Countries and the New Independent States of the former Soviet Union
Research Partnerships (Developing Countries)	Program for research collaborations with developing countries
International Short Visits	Program offering funding for researchers in Switzerland to go abroad or researchers from elsewhere to come to Switzerland
International Exploratory Workshops	Program allowing researchers working in Switzerland to organize workshops with partners from abroad
Bi- and multilateral agreements	Agreements to facilitate mobility within Europe ("Money Follows Researcher") and joint research projects between Swiss groups and scientists from a selected number of countries ("Lead Agency" or "Money follows Cooperation Line")
Eurocores	Programs coordinated by the European Science Foundation (ESF) supporting multi-partner projects on specific topics (instrument of ESF)
Research Networking Programs	European networking activities for nationally funded projects (instrument of ESF)

ERA-NET

Programmes launched in co-operation with other funding organisations on specific, pre-defined topics (instrument of FP7)

For further information on each topic and additional funding opportunities please visit:  
<http://www.snf.ch/E/international>

## 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>

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	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 <sup>1</sup>	Yes <sup>2</sup>	Yes	Yes
b) Exports of micro-organisms* and toxins	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes	Yes
c) Imports of micro-organisms* and toxins	Yes <sup>5</sup>	Yes <sup>6</sup>	Yes	Yes

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

<sup>1</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> Federal Act on War Material (*RS 514.51 Loi fédérale du 13 décembre 1996 sur le matériel de guerre*)  
<http://www.admin.ch/ch/f/rs/5/514.51.fr.pdf>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2,4,6</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> Ordinance on the Transportation of Hazardous Goods by Railway and Aerial Railway (*RS 742.401.6 Ordonnance du DETEC du 3 décembre 1996 relative au transport des marchandises dangereuses par chemin de fer et par installation à cables*)

<http://www.admin.ch/ch/f/rs/7/742.401.6.fr.pdf>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2,6</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2,6</sup> 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>

<sup>1</sup> 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>

<sup>2,4,6</sup> 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>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> Ordinance on the Contained Use of Organisms (*Ordonnance du 25 août 1999 sur l'utilisation des organismes en milieu confiné*)

<http://www.admin.ch/ch/f/rs/8/814.912.fr.pdf>

<sup>2</sup> 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>

<sup>1</sup> 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>

<sup>2</sup> Ordinance on Foods and Commodities (*RS 817.02 Ordinance du 23 novembre 2005 sur les denrées alimentaires et les objets usuels*)

<http://www.admin.ch/ch/f/rs/8/817.02.fr.pdf>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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>

<sup>1,3,5</sup> 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>

<sup>2</sup> 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>

<sup>4,6</sup> 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/818.125.1.fr.pdf>

<sup>6</sup> 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/818.125.11.fr.pdf>

<sup>6</sup> 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/818.125.12.fr.pdf>

<sup>2</sup> 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/818.141.1.fr.pdf>

<sup>2</sup> 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/818.141.11.fr.pdf>

<sup>4,6</sup> 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/818.61.fr.pdf>

<sup>2</sup> 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/822.114.fr.pdf>

<sup>2</sup> 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/832.321.fr.pdf>

<sup>1,3,5</sup> 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>

<sup>2</sup> Ordinance on the Coordination of Inspections on Agricultural Farms (*RS 910.15 Ordonnance du 14 novembre 2007 sur la coordination des inspections dans les exploitations agricoles*)

<http://www.admin.ch/ch/f/rs/9/910.15.fr.pdf>

<sup>2</sup> 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>

<sup>2</sup> Ordinance on the Release of Phytopharmaceutical Products (*RS 916.161 Ordonnance du 18 mai 2005 sur la mise en circulation des produits phytosanitaires*)

<http://www.admin.ch/ch/f/rs/9/916.161.fr.pdf>

<sup>2,6</sup> Ordinance on Plant Protection (*RS 916.20 Ordonnance du 28 février 2001 sur la protection des végétaux*)

<http://www.admin.ch/ch/f/rs/9/916.20.fr.pdf>

<sup>2</sup> Ordinance on the Quality of Milk (*RS 916.351.021.1 Ordonnance du 23 novembre 2005 sur la qualité du lait*)

<http://www.admin.ch/ch/f/rs/9/916.351.0.fr.pdf>

<sup>1,3,5</sup> 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>

<sup>2,4,6</sup> 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>

<sup>2</sup> Ordinance on the Definition of Regions that Bear an Increased Risk for the Introduction of Avian Influenza (*RS 916.403.11 Ordonnance de l'OVF (2/07) du 28 septembre 2007 fixant la liste des régions où le risque d'introduction de la peste aviaire est élevé*)

<http://www.admin.ch/ch/f/rs/9/916.403.11.fr.pdf>

<sup>2</sup> Ordinance on the Disposal of Animal Side Products (*RS 916.441.22 Ordonnance du 23 juin 2004 concernant l'élimination des sous-produits animaux*)

<http://www.admin.ch/ch/f/rs/9/916.441.22.fr.pdf>

<sup>2,4,6</sup> 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>

<sup>4,6</sup> 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>

<sup>4,6</sup> 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>

<sup>1,3,5</sup> 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>

<sup>2,4,6</sup> 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>

<sup>2,4,6</sup> 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>

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  
Talibans*)

<http://www.admin.ch/ch/f/rs/9/946.203.fr.pdf>

<sup>1,3</sup> 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>

<sup>2,4</sup> 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>

<sup>2</sup> 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>

<sup>2</sup> 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 unofficial 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

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 9 to 19] as well as past CBM declarations.

## Declaration of vaccine production facilities

Name of company / facility **Crucell Switzerland AG**

Location of production facility Rehhagstrasse 79 / Oberriedstrasse 68  
CH-3018 Bern / 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	<input type="checkbox"/>	<input checked="" type="checkbox"/> 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	<input type="checkbox"/>	<input checked="" type="checkbox"/> 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. Measles	Moraten	<input type="checkbox"/>	<input checked="" type="checkbox"/> CH, CO, KE, WHO*
4. Measles, Rubella	MoRu-Viraten	<input type="checkbox"/>	<input checked="" type="checkbox"/> AR, CA, CH, CL, CO, PE, WHO*
5. Meningitis C	<i>Production for Pfizer</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Licensed by Pfizer
6. Tuberculosis	-	<input checked="" type="checkbox"/> II    KE, ZA	<input type="checkbox"/>
7. Typhoid fever	Vivotif	<input type="checkbox"/>	<input checked="" type="checkbox"/> 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
8. Yellow fever	Falvimun	<input type="checkbox"/>	<input checked="" type="checkbox"/> CH: <i>registration in process</i>

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

\* World Health Organization

## Declaration of vaccine production facilities

Name of company / facility      **Cytos Biotechnology AG**

Location of production facility      Wagistrasse 25  
CH-8952 Schlieren

Geographical location      N 47° 23' 57.72", E 8° 27' 34.81"

Disease(s) targeted	Name of vaccine	Trial phase	Licensed
1. Diabetes mellitus	CYT013_IL1bQb	<input checked="" type="checkbox"/> II    CH, DE	<input type="checkbox"/>

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	<input checked="" type="checkbox"/> I      CH	<input type="checkbox"/>
2. HIV	<i>Production for Mymetics SA</i>	<input checked="" type="checkbox"/> I      CH	<input type="checkbox"/>

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