

# REPORT ON THE STATUS OF LABORATORY NETWORKS FOR HIGH THREAT PATHOGENS IN SOUTH-EASTERN EUROPEAN COUNTRIES

Sofia, Bulgaria  
23–24 November 2017



Address requests about publications of the WHO Regional Office for Europe to:

Publications  
WHO Regional Office for Europe  
Marmorvej 51  
DK - 2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (<http://www.euro.who.int/pubrequest>).

**© World Health Organization 2018**

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

## Contents

Executive summary .....	1
Background .....	2
Objectives of the meeting.....	3
Activities of international laboratory networks.....	4
High threat pathogens relevant to countries of south eastern Europe .....	6
Gaps identified and proposals for improvement.....	7
Conclusions and next steps.....	13
References .....	15
Annex 1: List of participants .....	16
Annex 2: Agenda of the meeting .....	23

## Executive summary

As part of the WHO health emergencies programmes' support to countries to prepare for and respond to emergencies involving high threat pathogens (HTPs), and implemented through the WHO Regional Office for Europe Better Labs for Better Health initiative, a meeting was held for countries of south eastern Europe to identify gaps in laboratory capacities and make proposals for solutions. Participants included 27 experts in viral and bacterial HTP diagnostics from 11 countries<sup>1</sup>, including seven countries of the South-eastern European Health Network<sup>2</sup> (SEEHN) (<http://www.euro.who.int/en/about-us/south-eastern-europe-health-network-seehn>), together with representatives of international laboratory networks (EMERGE, EVD-LabNet and MediLabSecure) and CORDS (Connecting Organizations for Regional Disease Surveillance). The meeting was organized in collaboration with the Southeast European Center for Surveillance and Control of Infectious Diseases (SECID).

This first meeting of SEE countries on laboratory preparedness for HTP demonstrated many examples of collaboration among countries and with international laboratory networks, and confirmed that there was a strong willingness to continue and strengthen these collaborative efforts with the support of WHO.

Based on presentations provided by country representatives, as well as discussions during break-out sessions on their diagnostic capabilities, a number of gaps and needs were identified – the main ones being insufficient resources, insufficient training, lack of access to standardized assays and reference materials, and insufficient expedited shipment of samples to international reference laboratories.

Proposed solutions included advocacy to raise awareness among decision-makers, development of national and possibly regional strategies, revision of national regulations on shipments of infectious substances, provision of training and external quality assessment (EQA) programs, and the establishment of networks for laboratory response to HTPs that would include all the countries that participated in the meeting.

The meeting also identified the following HTP as the highest priority for the improvement of laboratory capacities: orthoanta virus, West Nile virus, Crimean Congo haemorrhagic fever virus, tick-borne encephalitis virus, Francisella tularensis, Brucella, Anthrax, Leptospira and Coxiella burnetti.

As a next step, countries will complete a questionnaire in order to collect detailed information that will form the basis for recommendations and for action plans tailored to country-specific needs.

---

<sup>1</sup> Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Montenegro, Republic of Moldova, Serbia, Slovenia, the former Yugoslav Republic of Macedonia and Turkey.

<sup>2</sup> Countries in the South-eastern Europe Health Network (SEEHN) are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Israel, Montenegro, Republic of Moldova, Romania, Serbia and the former Yugoslav Republic of Macedonia.



## Background

Under the new WHO Health Emergencies program (WHE), the area of Infectious Hazards Management (IHM) provides technical support to countries and communities to prevent and control outbreaks caused by high threat pathogens, including Ebola viruses, influenza A and B viruses, Crimean Congo haemorrhagic fever virus (CCHF), Zika virus, Rift Valley fever virus and cholera. This support includes strengthening national and international laboratory networks for HTPs, prepositioning reagents, deploying technical field assistance, helping strengthen national response capacity, and supporting preparedness plans

([http://apps.who.int/gb/ebwha/pdf\\_files/WHA70/A70\\_7-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_7-en.pdf)).

At the WHO Regional Office for Europe, this work is conducted as part of the Better Labs for Better Health initiative that focuses on strengthening country core laboratory capacities required under the International Health Regulations (2005) (IHR).

Both WHO and the European Union (EU) support laboratory networks for managing (HTPs) in the WHO European Region.

WHO-supported networks for emerging HTPs include:

- The Especially Dangerous Pathogens Laboratory Network (EDPLN)
- The WHO-coordinated networks for influenza – the Global Influenza Surveillance and Response System (GISRS)
- The European Tuberculosis Laboratory Initiative (ELI)
- The European Measles and Rubella Laboratory Network
- The Polio Laboratory Network

See [www.euro.who.int/labs](http://www.euro.who.int/labs).

EU-supported networks for emerging HTPs include:

- EVD-LabNet, a European expert laboratory network for emerging viral diseases(<https://www.evd-labnet.eu/>)
- EMERGE, a network for efficient response to highly dangerous and emerging pathogens at EU level <https://www.emerge.rki.eu/>
- MediLabSecure, a One Health Network for the Prevention of Vector-borne Diseases Around the Mediterranean and Black Sea Regions (<http://www.medilabsecure.com/>)

WHO-coordinated networks include all Member States of the WHO European Region, while EU-supported networks include some non-EU/EEA countries of south eastern and eastern Europe.

The Better labs for Better Health initiative has shown that public health laboratory networks in a number of these countries are functioning poorly ([http://www.euro.who.int/\\_data/assets/pdf\\_file/0020/318260/Better-Labs-Better-Health-initiative-activity-report.pdf](http://www.euro.who.int/_data/assets/pdf_file/0020/318260/Better-Labs-Better-Health-initiative-activity-report.pdf)), and lack of inclusion of these countries in international laboratory networks for HTP is therefore a key gap.

For these reasons, a workshop was organized in collaboration with SECID for countries of south eastern Europe to discuss the situation regarding capacities and capabilities for laboratory preparedness and response to HTPs, and to identify gaps and needs.

The list of participants and the agenda can be found in annexes 1 and 2 respectively.

## Objectives of the meeting

- Discuss activities of existing international laboratory networks in the area of HTPs;
- Discuss priority HTPs relevant to the participating countries;
- Identify gaps and needs in laboratory capacities and capabilities to prepare for and respond to priority HTPs in countries of south eastern Europe;
- Identify actions that could be taken to improve the situation.

## Activities of international laboratory networks

WHO-coordinated laboratory networks for HTPs include the WHO Regional Office for Europe's regional influenza laboratory network, which is part of the WHO GISRS and is comprised of national influenza centres (NICs) in 50 countries of the Region. 43 countries have NICs formally recognized by WHO. Among the participating countries, only in Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia are NICs yet to obtain WHO-recognition. In addition, WHO's EDPLN is a global network which contributes to preparedness and outbreak response as well as rapid development of diagnostic assays for emerging and infectious pathogens.

Three international networks for HTPs that are supported by the EU were represented at the meeting.

**EMERGE** is comprised of some 40 diagnostic laboratories in EU countries focused on risk group 3 bacteria and risk group 4 viruses (Ref. 4 and 5). EMERGE aims to provide a common, coordinated and effective response to infectious disease outbreaks at EU level and abroad. Member institutions were formally nominated by their countries and institutions from the following SEE countries are partners within the network: Croatia, Slovenia, Greece, Bulgaria, Hungary and Romania. The hub of this network is located at the Robert Koch Institut, Berlin, Germany for bacteria, and the Istituto Nazionale per le Malattie Infettive "Lazzaro Spallanzani", Rome, Italy for viruses (Ref. 6). The current project funding period ends in May 2018.

**EVD-LabNet** includes the following countries or areas of SEE: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Hungary, Serbia, Slovenia, the former Yugoslav Republic of Macedonia, Turkey (Ref. 7). Montenegro, Republic of Moldova and Kosovo (in accordance with United Nations Security Council Resolution 1244 [1999]) were not part of the network at the time of the meeting but have been members since December 2017. A prerequisite for identification, surveillance, assessment and communication of current and emerging infectious disease threats to Public Health, is the availability of reliable capability and sufficient capacity of diagnostic and reference laboratory services. To facilitate this, the European Centre for Disease Prevention and Control (ECDC) has contracted the Erasmus Medical Centre to establish and operate an expert laboratory network for networking, external quality assessments and training of laboratory personnel involved in these activities. EVD-LabNet creates and maintains a (pro)active and flexible network of European expert laboratories that are involved in patient diagnostics, and that support public health activities in liaison with research activities of (re)emerging viral diseases. The network focuses on virus families and genera that are rare, imported and (re)emerging in EU/EEA countries. EVD-LabNet members agreed a Memorandum of Understanding (MOU) describing the conditions for EVD membership.

The **MediLabSecure** project aims to increase the health security in the Mediterranean Area and South-East Europe Black Sea Region through:

- Capacity building
- Enhancing and strengthening the preparedness to common health threats and bio-safety risks at national and regional levels by the creation of a network of laboratories
- Strengthening the cooperation already previously established by EpiSouth (R and 8).

The MediLabSecure network includes the following SEE countries or areas: Albania, Bosnia and Herzegovina, Montenegro, Republic of Moldova, the former Yugoslav Republic of Macedonia, Serbia, Turkey and Kosovo (in accordance with United Nations Security Council Resolution 1244 [1999]). It focuses on emerging vector borne viral diseases (arboviruses) and also covers medical entomology and public health issues. The hub of the network is located at the Pasteur Institute in Paris and is funded by the European Commission until summer 2018. Besides veterinary and human virology networks, MediLabSecure includes sub-networks for entomology and for public health reinforcement.

The different EU-supported networks include different countries of south eastern Europe and provide a number of benefits including information exchange, training workshops, participation in EQAs, etc. However, at the time of the workshop, none of them included all of the countries that participated in the workshop, as shown in Table 1.

**Table 1: Participation in EU-supported laboratory networks by SEE countries represented at the meeting**

Country or area	EVD-LabNet	EMERGE	MediLab-Secure
Albania	+		+
Bosnia and Herzegovina	+		+
Bulgaria	+	+	
Croatia			
Greece	+	+	
Hungary	+	+	
Montenegro	+*		+
Republic of Moldova	**		+
Romania	+	+	
Serbia	+		+
Slovenia	+	+	
The former Yugoslav Republic of Macedonia	+		+
Turkey	+		+
Kosovo (in accordance with United Nations Security Council Resolution 1244 [1999])	+*		+
	10/14	5/14	8/14

\*Member as of December 2017.

\*\* Pending as of February 2018.



## High threat pathogens relevant to countries of south eastern Europe

In order to tailor its support to Member States in the area of preparedness and response to HTPs, the WHO's WHE programme focuses on those pathogens that pose a high public health risk because of their epidemic potential and because there are no, or insufficient, interventions. This includes the pathogens of global significance mentioned in Annex 2 of the IHR (2005) (<http://apps.who.int/iris/bitstream/10665/246107/1/9789241580496-eng.pdf>), as well as pathogens prioritized by the WHO Research and Development Blueprint (Ref. 1). This list includes infectious pathogens such as Lassa Fever, Ebola, CCHF and MERS that pose a public health risk because of their epidemic potential and for which there are no, or insufficient, countermeasures and which are not covered in other WHO programs. There may be additional priority pathogens relevant to the WHO European Region, some of which are notifiable at the EU level (Ref. 2). These include vaccine preventable, sexually transmitted, food- and water-borne, air-borne and vector-borne diseases.

During the meeting, participants were asked to identify those HTPs for which they considered support was needed in the area of laboratory preparedness and response in their country.

Participants considered priority HTPs to be those that would pose the highest risk to the population (particularly highly transmissible pathogens that cause severe disease and death) and that these pathogens could be endemic, emerging or imported. Handling of patients and samples affected by such pathogens could require high levels of biosafety and biosecurity, as well as appropriate infection prevention and control practices by attending health personnel.

Participants considered the pathogens listed in Table 2 to have the highest priority regarding the need to improve laboratory capacities and capabilities.

**Table 2: HTPs in SEE countries requiring improvements in laboratory capacities**

Viruses:	Bacteria:
CCHF	Francisella tularensis
Hanta	Brucella
West Nile	Anthrax
Tick-borne Encephalitis	Leptospira
	Coxiella

## Gaps identified and proposals for improvement

To obtain an overview of the current situation regarding diagnostic capacities for HTPs, the participating country representatives gave brief presentations on the current situation of HTP diagnostics, existing collaborations and the needs and gaps for improvement. Although not all countries provided a complete overview of their diagnostic situation, it was noticeable that there was some heterogeneity between the different countries: while some laboratories provide a wide spectrum of HTP diagnostics, others provide only very few PCR (detection) assays for some HTPs. This aligns with the previous findings in a multi-country workshop conducted by the European Centre for Disease Prevention and Control (ECDC) in June 2017 (Ref. 3).

Some of the SEE countries also presented weaknesses and gaps regarding laboratory preparedness for high threat pathogens, and all participants provided input to this discussion during break-out sessions. Table 3 provides an overview of both some of the common gaps and proposed solutions discussed during the workshop. Recommendations from the above-mentioned multi-country workshop conducted by ECDC are cross-referenced in the table.

**Table 3: Gaps in laboratory diagnostics for HTPs and possible solutions.**

Gap/issue	Proposed Solutions		Potential impact	Corresponding recommendation from ECDC workshop Ref. 3
	Country	SEE region		
HTPs that are rare and/or imported are not prioritized by the country resulting in insufficient resources for preparedness	Develop a strategic plan for HTPs that is endorsed by the government.	Collect and share strategic plans from SEE countries or beyond as examples of best practice. Develop advocacy materials and conduct fund-raising activities.	Government more likely to provide adequate resources.	1, 3
Countries lack a list of priority HTPs.	Each country should maintain an up-to-date list of priority HTPs.	Develop a risk classification for HTPs in the SEE region.	National public health authorities better informed of HTP risks for the population.	

<p>Insufficient exchange of information on HTPs <i>within</i> countries.</p>	<p>Ensure relevant institutions in countries have access to communication channels to interact with the IHR national focal point (NFP).</p>	<p>Ensure timely regional communication of IHR NFP and laboratory representatives that can include all countries or a group of countries according to the event related to HTP and prepare rapid cross border preparedness and response plans to HTPs.</p>	<p>Enhanced multisectoral collaboration related to HTPs.</p> <p>Rapid cross border preparedness and response plans and teams to priority HTPs are developed and identified.</p>	
<p>Insufficient exchange of information on HTPs <i>among</i> countries.</p>	<p>Ensure that IHR NFPs are using the WHO Event Information Site to exchange information and contact and exchange information with NFPs from other countries.</p>	<p>Continue to organize meetings to identify barriers and opportunities for IHR NFPs and laboratory experts to exchange information e.g. through SECID.</p> <p>Prepare a regional strategy on improving notification and risk communication within strengthening IHR capacities.</p>	<p>Enhanced intercountry collaboration on IHR issues.</p>	<p>3, 10</p>

<p>Outdated regulations for international transport of samples.</p>	<p>Revision of national regulations for handling and shipment of samples containing HTPs, taking into account national and international biosafety regulations.</p>	<p>Identify best-practice examples from countries where regulations allow rapid shipment and exchange of clinical samples and reference strains.</p> <p>Develop a regional document with best practice examples for rapid shipment and exchange of clinical samples and reference strains.</p>	<p>Early detection of outbreaks caused by HTPs.</p>	<p>9</p>
<p>International institutional agreements for cross-border sharing of samples that comply with existing international frameworks (IHR, Nagoya protocol, Pandemic Influenza Preparedness Framework).</p>	<p>Countries identify international reference laboratories for HTPs and develop agreements as part of preparedness activities.</p>	<p>Consider identifying laboratories in SEE countries that would have a regional role and develop terms of reference.</p>	<p>Early confirmation of outbreaks caused by HTPs.</p>	<p>8, 9</p>

Lack of staff trained in laboratory diagnostics for HTPs.	Provide training and workshops on diagnostic tests for HTP, including integrated training on biorisk management.	Conduct intercountry workshops where appropriate  Preparation of a list of priority intercountry workshops.	Increased capacity of staff to detect HTPs under safe conditions.	8
Lack of reagents and consumables for HTPs.	Prepositioning of reagents and consumables at national level.	Establish a repository of diagnostic material and kits required for laboratory diagnostic of HTPs in one country of the SEE region according to the pathogen.  Discuss joint procurement strategies for laboratory reagents, linking where possible to existing joint procurement strategies in the SEE region.	Reduce the time to detect HTPs in an outbreak situation.	
Lack of standardization of methods within and between countries.	Ensure every country with testing capacity has access to reference strains and materials as well as EQA for priority HTPs.	Collectively identify priority HTPs for which reference materials and EQA are not currently available.	Diagnostic assays for HTP performed by SEE countries validated according to international criteria.	8

Lack of laboratory maintenance and equipment servicing.	Allocate funds for equipment servicing and maintenance.	Identify qualified agencies that could provide maintenance and equipment servicing at a reasonable price for the region.	Equipment is more reliable and regularly maintained.	
Lack of Laboratory Information Management System (LIMS).	Equip and train laboratories in the use of LIMS.	Look for funding and make a tender for an LIMS provider for the region.  Identify best practices and strategies for LIMS in countries of the region.	Enhance the quality of information exchange within and between laboratories.	

## Conclusions and next steps

The first meeting of the SEE countries on laboratory preparedness for HTPs showed that there is a great willingness to collaborate among countries and together with international laboratory networks and other partners. Participants also agreed that there were significant gaps and needs for improvement in preparedness regarding HTPs in this region. Public health structures including laboratories do not always receive the resources necessary to be able provide appropriate, timely and efficient public health measures in case of an emergency. This is partly due to financial constraints and insufficient awareness among decision-makers. Consequently, raising awareness and development of national and possible regional strategies was mentioned as a priority. Careful planning, allocation of resources and training for laboratories will be crucial to improving the management of response activities and to guide the development of medical interventions. As no country alone can handle the increasing demand on diagnostics of endemic and emerging HTPs, closer collaboration between the diagnostic laboratories within and among countries in the SEE region is needed.

Participants were also in favour of establishing an SEE-regional laboratory network for HTPs adapted to their needs and targeting the regional gaps more precisely. To avoid duplication, such a network should build on and work with existing international networks for the management of public health events related to HTPs. The establishment of a network will require significant resources from countries, WHO and partners should be based on an in-depth analysis of the situation in countries specifically related to laboratory capacities for HTPs. It was therefore agreed that, after the workshop, countries would complete a pathogen-based fact sheet, the analysis of which would form the basis for recommendations and an action plan for their implementation.

Nearly all participants mentioned the need for further workshops, training and EQAs to improve preparedness and response for managing HTP events. Previous experience shows that it is advisable to couple training activities with both EQA and the provision of standard control materials in order to enable the laboratories to set up and establish the specific assays.

The gaps identified during this workshop are similar to those identified during the ECDC workshop for EU enlargement countries held in June 2017 (Ref. 3). The report from the ECDC workshop also identified the need for a comprehensive strategy for a microbiology laboratory system in Albania, Bosnia and Herzegovina, Montenegro, Serbia, The Former Yugoslav Republic of Macedonia, Turkey and Kosovo (in accordance with United Nations Security Council Resolution 1244 [1999]). The conclusions of both multi-country workshops include the need for high level political attention and recognition, building partnerships and collaborations, and improved specimen transportation. The need for training is also corroborated by the ECDC report "Training needs assessment for EU/EEA countries", which identified needs for training for disease surveillance, outbreak investigation and population-based research (Ref. 11).



The proposed next steps to be conducted by WHO Regional Office for Europe in collaboration with partners are to:

1. Distribute a questionnaire for HTP laboratory preparedness to the participating countries and collect and analyse the responses. The questionnaire will complement existing data collection mechanisms to avoid countries having to provide data that is already available.
2. Conduct a second workshop to discuss the results of the questionnaire and to develop both recommendations and an action plan.

## References

1. WHO List of Blueprint priority diseases:  
<http://www.who.int/blueprint/priority-diseases/en/>
2. Diseases and special health issues under EU surveillance:  
<https://ecdc.europa.eu/en/infectious-diseases-public-health/surveillance-and-disease-data/diseases-and-special-health-issues>
3. ECDC “Multi-country workshop for EU enlargement countries on microbiology laboratory systems supporting PH.” 20-21, June 2017, Ohrid the former Yugoslav Rep. of Macedonia.  
<https://ecdc.europa.eu/en/news-events/ecdc-enlabcap-consultation-meeting-eu-enlargement-countries>
4. EMERGE [http://www.emerge.rki.eu/Emerge/EN/Home/Homepage\\_node.html](http://www.emerge.rki.eu/Emerge/EN/Home/Homepage_node.html)
5. WHO biosafety manual 2004 third edition  
[http://www.who.int/csr/resources/publications/biosafety/WHO\\_CDS\\_CSR\\_LYO\\_2004\\_11/en/](http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/)
6. INMI: <http://www.inmi.it/index.htm>
7. EVD: <https://www.evd-labnet.eu>
8. MediLabSecure: [http://www.medilabsecure.com/project\\_context.html](http://www.medilabsecure.com/project_context.html)
9. SECID: <https://www.secids.com/Our%20History>
10. CORDS: <https://www.cordsnetwork.org/about-cords/>
11. ECDC TECHNICAL REPORT. Training needs assessment for EU/EEA Countries. Assessment methodology and 2015 survey; Stockholm, October 2017, ISBN 978-92-9498-093-9, doi 10.2900/59061; Catalogue number TQ-06-17-109-EN-N

## Annex 1: List of participants

### Albania

Majlinda Kota Dhimolea  
Reference Virology Laboratory  
Control of Infectious Diseases Department  
Institute of Public Health  
Aleksander Moisiu, street 80  
Tirana

Tel.: +355 4773662;  
+355 672053010  
Email: mdhimolea@live.com

Silva Tafaj  
Microbiology Department  
National TB Reference Laboratory,  
University Hospital "Shefqet Ndroqi"  
Tirana

Tel.: +355 692938774  
Home: +355 42319025  
Email: stafaj@hotmail.com

Iris Hasibra (Hatibi)  
National Reference Virology Laboratory  
Control of Communicable Diseases Department  
National Institute of Public Health "Hulo Hajderi"  
Rr:Aleksander Moisiu Nr.80  
Tirana

Mobile: +355 683989939  
Email: i.hatibi@gmail.com

### Bosnia and Herzegovina

Danica Lazić  
Clinical hospital Brčko District

Email: dalazic@gmail.com

Maja Ostojić  
Clinical hospital Mostar

Email: maja\_mirna@yahoo.com

Višnja Mrđen  
University Clinical Center of Republic of Srpska

Email: visnja.mrdjen@kc-bl.com

## **Bulgaria**

Iva Christova  
Deputy Director  
National Center of Infectious and Parasitic Diseases  
Head, National Reference Vector-borne infections  
laboratory  
Blvd. Yanko Sakazov 26  
Sofia 1504

Tel.: +3592 8465042  
Email: iva\_christova@yahoo.com

Radosveta Filipova  
State Expert  
Ministry of Health  
39, Alexander Stamboliyski Blvd.  
Sofia 1000

Email: rfilipova@mh.government.bg

Roumyana Nenova  
Head of High Pathogens Laboratory  
National Center of Infectious and Parasitic Diseases  
Sofia

Vladimir Tolchkov  
National Center of Infectious and Parasitic Diseases  
National Referent Laboratory for Biohazard Level III  
Infections  
Stoletov 44A Blvd.  
Sofia

Tel.: +359 28319125  
Email: tolchkov@gmail.com

## **Croatia**

Vladimir Drazenovic  
Head  
National WHO Center  
Croatian National Institute of Public Health  
St. Rockefeller 12  
10 000 Zagreb

Tel.: +385 14863264  
Email: vladimir.drazenovic@hzjz.hr

Andrea Babić-Erceg  
Microbiology Service  
CNPHI  
Rockefellerova 7

Tel.: +38514863260

## **Greece**

Anna Papa  
Head of the Department of Microbiology  
Medical School  
Aristotle University of Thessaloniki  
54124, Thessaloniki

Tel.: +30 2310 999020;  
+30 2310 999006  
Email: annap@med.auth.gr

## **Kosovo (in accordance with Security Council resolution 1244 (1999))**

Riza Bytyci  
Biologist/ Department of Microbiology IPH  
10000 Prishtine

Tel.: +38649323575  
Email: riza\_bytyqi@hotmail.com  
riki.biomedicine@gmail.com

Donjeta Hajdari  
Microbiologist  
Department of Biology  
Institute of Institute of Public Health  
St. Nena Tereze  
10 000, Pristina

Email: donjetapllana@hotmail.com

## **The former Yugoslav Republic of Macedonia**

Golubinka Bosevska  
Head of the Laboratory for Virology and Molecular  
Diagnostics  
Institute of Public Health  
50 Divizija No 6  
1000 Skopje

Tel.: +389 23125044 ext.112  
Email: golubinka@yahoo.com;  
golubinkavm@gmail.com

Dugagjin Osmani  
Microbiologist  
Institute of Public Health  
50 Divizija No 6  
1000 Skopje

Email: dugagjin.osmani@gmail.com

## **Montenegro**

Željka Zekovic  
Microbiologist and Parasitologist  
Institute of Public Health  
Podgorica

Email: zeljka.zekovic@ijzcg.me

Dr. Zoran Vratnica  
Microbiologist  
Institute of Public Health  
Podgorica

Email: zoran.vratnica@ijzcg.me

## **Republic of Moldova**

Irina Malanco  
Bacteriologist  
Reference Laboratory in Microbiology  
Chisinau

Email: irina.malanco@cnspl.md

## **Serbia**

Jelena Protic  
Specialist in Microbiology and Parazitology  
Head  
National Reference Laboratory for ARBO Viruses  
and Hemorrhagic Fever  
Institute of Virology  
Vaccines and Sera "Torlak"  
Vojvode Stepe 458  
Belgrade

Tel.: +381 113976674 ext 201

Mobile: +381 64 8466 340

Email: jprotic@torlak.rs

Olga Popović  
Molecular biologist  
Institute of Virology  
Vaccines and Sera "Torlak"  
Vojvode Stepe 458  
11221 Belgrade

Tel.: +381 113953700 lok. 206

Mobile: +381 648466495

Email: opopovic@torlak.rs

## **Slovenia**

Miša Korva  
University of Ljubljana  
Faculty of Medicine  
Institute of Microbiology and Immunology  
Zaloška 4  
SI - 1000 Ljubljana

Tel.: +386 15437432  
Email: misa.korva@mf.uni-lj.si

Verica Mioč  
National Laboratory for Health, Environment and Food  
Ljubljana

Email: verica.mioc@nlzoh.si

## **Turkey**

Gulay Korukluoglu  
Microbiologist  
Director of Virology Department  
Public Health Institutions of Turkey  
Adnan Saygun Cad.No:55/ F Blok  
06100 Sıhhiye  
Ankara

Tel.: +3125655340  
Email: gucank@gmail.com

Selcuk Kilic  
Head  
Microbiology Department  
Public Health Institutions of Turkey  
Adnan Saygun Cad.No:55/ F Blok  
06100 Sıhhiye  
Ankara

Email: mdskilic2003@yahoo.com

## **Consultants**

Matthias Niedrig  
WHO Consultant, High Threat Pathogens

Email: niedrigm@gmx.de

## **European Centre for Disease Prevention and Control**

Katrin Leitmeyer  
Microbiology Coordination Section  
European Centre for Disease Prevention and Control (ECDC)

Email:  
Katrin.Leitmeyer@ecdc.europa.eu

## World Health Organization

### Headquarters

Dhamari Naidoo  
Technical Office, Experts Networks and Interventions

Email: [naidood@who.int](mailto:naidood@who.int)

### Country Office Bulgaria

Dr. Skender Sylva  
WHO Representative  
WHO Country Office Bulgaria

Email: [skenders@who.int](mailto:skenders@who.int)

### Regional Office for Europe

Joanna Zwetyenga  
Technical Officer, High Threat Pathogens

Tel.: +45 45337131

Email: [jzwetyenga@who.int](mailto:jzwetyenga@who.int)

Maria Amante  
Intern, High Threat Pathogens

Tel.: +1 3234558970

Email: [amantemaria@gwu.edu](mailto:amantemaria@gwu.edu)

### CORDS

Julius Lutwama  
Virologist, Uganda Virus Research Institute  
Chair EAIDSNet

Email: [jjlutwama03@yahoo.com](mailto:jjlutwama03@yahoo.com)

Emma Orefuwa  
CORDS Programme Manager (Consultant)

Tel.: No.: +44 7823321868

Email:

[emma.orefuwa@CORDSnetwork.org](mailto:emma.orefuwa@CORDSnetwork.org)

### EMERGE

Barbara Bartolini  
Laboratory of Virology  
National Institute for Infectious Diseases "L. Spallanzani"  
Via Portuense 292  
00149 Rome  
Italy

Tel.: +39 0655170668

Email: [barbara.bartolini@inmi.it](mailto:barbara.bartolini@inmi.it)



Eleonora Lalle  
Laboratory of Virology  
National Institute for Infectious Diseases "L Spallanzani"  
Via Portuense 292  
00149 Rome  
Italy

Tel.: +39 0655170665  
Email: [eleonora.lalle@inmi.it](mailto:eleonora.lalle@inmi.it)

#### **EVD-LabNet**

Chantal Reusken  
Ass. Professor, Public Health Virology; Emerging infectious  
disease preparedness and response, Department of  
Virology, Erasmus MC.  
Rotterdam  
Netherlands

Email: [c.reusken@erasmusmc.nl](mailto:c.reusken@erasmusmc.nl)

#### **MEDILAB Security**

Victoir Kathleen  
Medilabsecure Network  
Institute Pasteur International Network

Email: [kathleen.victoir@pasteur.fr](mailto:kathleen.victoir@pasteur.fr)

#### **SECID**

Silvia Bino  
Associate Professor of Infectious Diseases  
Head, Control of Infectious Diseases Department  
Institute of Public Health  
Aleksander Moisiu Str., Nr. 80  
Tirana  
Albania

Ledia Agolli  
Executive Director, SECID  
Aleksander Moisiu Str, Nr.80  
Tirana  
Albania

Mobile. + 355 682069698  
Email: [ledia.agolli@gmail.com](mailto:ledia.agolli@gmail.com)

Jonilda Sulo  
Technical Officer, SECID  
Aleksander Moisiu Str, Nr.80  
Tirana  
Albania

Mobile. + 355 692109870  
Email: [jonildasulo@gmail.com](mailto:jonildasulo@gmail.com)

## Annex 2: Agenda of the meeting

### Programme

Thursday, 23 November 2017

08:30–09:00	Registration
09:00–9:30	Opening – Overview of the tasks and objectives of the meeting Ministry of Health Head of Office: Dr. Skender Syla Joanna Zwetyenga, WHO EURO Silvia Bino, SECID
9:30–9:50	Introductory presentations <ul style="list-style-type: none"><li>• Context of the meeting: Joanna Zwetyenga</li><li>• Public Health considerations on the importance of high threat pathogens: Matthias Niedrig</li></ul>
9:50–10:30	Presentation of countries` representatives (participants) <i>(Chair: Silvia Bino)</i> Albania Bosnia and Herzegovina Bulgaria Croatia
10:30–11:00	Coffee break - Group Photo
11:00–12:00	Presentation of the countries` representatives ( <i>participants</i> ) <i>(Chair: Silvia Bino)</i> The former Yugoslav Republic of Macedonia Republic of Moldova Montenegro Serbia Greece Turkey Kosovo (in accordance with United Nations Security Council Resolution 1244 [1999])
12:00–13:00	Define priority list of high threat pathogens (group work) <i>(Chair: Joanna Zwetyenga)</i>
13:00 –14:00	Lunch Break

- 14:00 – 15:00 Identify gaps, needs and challenges for the diagnostic capacities and capabilities of HTPs and the quality assurance in the countries (group work) (Chair: Matthias Niedrig)
- 15:00 – 16:00 Identify actions that could be taken to improve the situation (group work) (Chair: Matthias Niedrig)
- Coffee break is served on the table*
- 16:00 – 17:00 Define regulations for exchange of cross border information, materials and provide cross border support between laboratories (group work) (Chair: Joanna Zwetyenga)
- 17:00 – 17:40 Presentation of the group work (Chair: Matthias Niedrig)
- 17:45 Closure of Day 1 meeting (Chair: Matthias Niedrig)
- 19:00 *Dinner together*

**Friday, 24 November 2017**

- 9:00 – 9:30 Wrap – up of day 1 (Chair: Joanna Zwetyenga)
- 9:30 – 9:45 Mapping of the laboratory capacity in EU and beyond: EULapCap and pilot EnLabCap project – Katrin Leitmeyer (ECDC)
- 9:45 – 10:00 Introduction of different networks  
EVD LabNet  
MediLabSecure  
EMERGE  
CORDS
- 10:00 – 11:00 How different networks and initiatives can be supportive to SEE countries activities and initiatives (group work) (Chair: Matthias Niedrig)
- 11:00 – 11:30 *Coffee break*
- 11:30 – 12:30 Plan for future activities to fill the gaps and face the challenges (group work) (Chair: Matthias Niedrig)

12:30 – 13:30	<i>Lunch break</i>
13:30 – 14:30	Plan for future meetings and trainings (group work) <i>(Chair: Joanna Zwetyenga)</i>
14:30 – 15:15	A regional plan for laboratory preparedness for high threats pathogens <i>(Chair: Silvia Bino)</i> <i>Coffee break is served on the table</i>
15:15 – 15:45	Wrap of the meeting and conclusions <i>(Chair: Joanna Zwetyenga)</i>
15:45 – 16:00	Miscellaneous
16:00	End of the meeting

## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

### Member States

Albania  
Andorra  
Armenia  
Austria  
Azerbaijan  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Croatia  
Cyprus  
Czechia  
Denmark  
Estonia  
Finland  
France  
Georgia  
Germany  
Greece  
Hungary  
Iceland  
Ireland  
Israel  
Italy  
Kazakhstan  
Kyrgyzstan  
Latvia  
Lithuania  
Luxembourg  
Malta  
Monaco  
Montenegro  
Netherlands  
Norway  
Poland  
Portugal  
Republic of Moldova  
Romania  
Russian Federation  
San Marino  
Serbia  
Slovakia  
Slovenia  
Spain  
Sweden  
Switzerland  
Tajikistan  
The former Yugoslav  
Republic of Macedonia  
Turkey  
Turkmenistan  
Ukraine  
United Kingdom  
Uzbekistan

### World Health Organization Regional Office for Europe

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark

Tel: +45 45 33 70 00 Fax: +45 45 33 70 01

Email: [eucontact@who.int](mailto:eucontact@who.int)

Website: [www.euro.who.int](http://www.euro.who.int)