Introduction

THE PURPOSE OF THIS SURVEY is to capture an overview of the collected samples.

Note: An asterisk (*) indicates a question that requires an answer.

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Background
No single approach exists for adequately monitoring large populations and their environments for the emergence of novel pathogens. Recent developments in high-throughput sequencing offer the ability to rapidly identify nucleic acids from various organisms in clinical and environmental samples. Sewage systems are recognized as an important source of human pathogens, especially in crowded settings with poor infrastructure.

Purpose
A point-prevalence metagenomic analysis will be applied to sewage samples collected globally from the main sewage system of major cities prior to treatment plants inlet. The project will serve as proof-of-concept for applying metagenomic approaches, which could initiate a global surveillance of human infectious diseases including antimicrobial resistance from sewage collected in major cities around the world to detect, control, prevent and predict human infectious diseases.

Procedure
From each location, one representative sewage samples of 1 L is collected from the main sewage flow from the city's main sewage pipelines prior to waste water treatment plant inlets or from the main outlet to rivers or similar. Samples can be obtained following the first filtering step, but it is important that there has been no processing of the sewage.
It is preferred to collect concentrated flow proportion sampling over 24 hours, however, should this not be possible due to lack of equipment, three crude point samples should be collected in a short time interval, i.e. at least 5 minutes between each individual sample, to ensure as much randomness as possible. Store the containers at -80°C (preferred) and prepare shipping the samples to the DTU Food in Denmark (see Appendix 2 in the protocol).
Specific description is found in the protocol sent by email from the organizer prior to sampling.

General Information

The following is general information relating to the contact person for the International Sewage Surveillance.

* 1. Please complete the following general information

Contact Name:	
Institute name:	
Address 1:	
City/Town:	
ZIP/Postal Code:	
Country:	
Email Address:	
Phone Number:	

* 2. GEOGRAPHY - In/near which city were the samples taken?

* 3. GEOGRAPHY - Please specify the name of the geographical regions or municipalities your sample covers

* 4. GEOGRAPHY - What is the name of the sampling site (if sample is taken at a waste water treatment plant, please include the name and code of the treatment plant)?

5. GEOGRAPHY - At which GPS position is the sampling site? (preferably in the format of latitude/longitude (e.g. 55.787058, 12.519933))

latitude	
longitude	
Comment	

6. GEOGRAPHY - How would you characterize the sampling site?
(please select one response)

◯ The sampling site is a waste water treatment plant

◯ The sampling site is an open sewer line (man-made)

◯ The sampling site is a river (naturally made)

◯ The sampling site is a stream (naturally made)

◯ The sampling site is a stagnant pool (naturally made)

Other (please specify)

[   ]

7. GEOGRAPHY - If possible, please upload a digital image of the sampling site

Allowable file types are .pdf, .doc, .docx, .png, .jpg, .jpeg, .gif (file size limit is 16MB)

Choose File   **Choose File**   No file chosen

8. GEOGRAPHY - Is farming, slaughterhouses, industry or hospital(s) included in the area covered by the sewage sample

	Yes	No	Information not available
Farming	◯	◯	◯
Slaughterhouse(s)	◯	◯	◯
Industry	◯	◯	◯
Hospital(s)	◯	◯	◯

Please add any comments

[   ]

9. GEOGRAPHY - What is the approximate size of the area that is drained by the sampled sewage system (square km)?

square km: [   ]

Comment   [   ]

* 10. DEMOGRAPHY - Approximately how many people live in the area drained by the sampled sewage system?

◯ 100-1,000

◯ 1,000-10,000

◯ 10,000-100,000

◯ 100,000-1,000,000

◯ 1,000,000-10,000,000

◯ >10,000,000

* 11. DEMOGRAPHY - Which level of sanitation is most common in the area covered by the sewage sample (please rank from 1 to 5 below, if relevant, select more than one)

☐ 5 - fully developed sanitation system

☐ 4

☐ 3

☐ 2

☐ 1 - lack of sanitation/slum

For the sample, please indicate the following details

* 12. Indicate assigned sample name:

[   ]

* 13. Please indicate sampling date and time (if sample is taken in a stream, indicate date and time in the first row. If sample is taken as three sub-samples, indicate date and times for each of the sub-samples (see further description in the protocol))

Sampling date and time

Date   Time   AM/PM
[DD/MM/YYYY]   [hh] [mm] [-]

Sampling date and time

Date   Time   AM/PM
[DD/MM/YYYY]   [hh] [mm] [-]

Sampling date and time

Date   Time   AM/PM
[DD/MM/YYYY]   [hh] [mm] [-]

14. How would you characterize the flow of sewage at the sample site? (Please indicate 1, 2, 3, 4 or 5, following the graduation where 'rapid flow of sewage' is '5' and 'stagnant pool' is '1')

◯ 5 - At the sampling site there is a rapid flow of sewage

◯ 4 -

◯ 3 -

◯ 2 -

◯ 1 - The sample is from a stagnant pool

15. How would you characterize the viscosity of the sample? (Please indicate 1, 2, 3, 4 or 5, following the graduation where 'like water' is '5' and 'solid' is '1')

◯ 5 - like water

◯ 4 -

◯ 3 -

◯ 2 -

◯ 1 - solid

16. How would you characterize the color of the sample

◯ Blackish

◯ Brownish

◯ Close to transparent/water-like

◯ Other color

If other color (please specify):

[   ]

17. If possible, please indicate temperature of sample at sampling (degrees Celsius or Fahrenheit)

If degrees Celsius (C): [   ]

If degrees Fahrenheit (F): [   ]

* 18. Please indicate transportation time from sample site to storage (minutes)

[   ]

* 19. Please indicate pH of the sample at sampling

[   ]

* 20. Please indicate transportation temperature from sample site to storage (degrees Celsius or Fahrenheit)

If degrees Celsius (C): [   ]

If degrees Fahrenheit (F): [   ]

* 21. Please indicate storage temperature until shipping (degrees Celsius of Fahrenheit)

If degrees Celsius: [   ]

If degrees Fahrenheit: [   ]

ADDITIONAL INFORMATION

22. ADDITIONAL INFORMATION - At sampling, what is the season at the sampling site

○ Spring

○ Summer

○ Autumn

○ Winter

Comment

[   ]

23. ADDITIONAL INFORMATION - At sampling, what is the season at the sampling site (wet/dry)

○ Wet season

○ Dry season

Comment

[   ]

24. Please indicate the shipping date for the collected sample

Shipping date

Date

[DD/MM/YYYY]

25. Please insert any additional comments

[   ]