



# PROTOCOL for GMI Proficiency Test, 2015

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HISTORY OF CHANGES; version 2

Reference for *S. enterica* ST00025 corrected to STA00025

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## 1 OVERVIEW AND OBJECTIVES

The proficiency test, 2015, consists of three general parts:

- 1a. DNA extraction, purification, library-preparation, and whole-genome-sequencing from **live cultures**
- 1b. Whole-genome-sequencing of **pre-prepared DNA**
2. Phylogenetic/clustering analysis of three **fastq datasets**

The main **objective** of this proficiency test is to quantify differences among laboratories in order to facilitate the development of reliable laboratory results of consistently good quality within the area of DNA preparation, sequencing, and analysis (e.g. phylogeny). This ensures that the discrepancies and differences among laboratories are known and will contribute to the standardization of whole genome sequencing and data analysis, with the aim to produce comparable data for the GMI initiative. A further objective is to assess and improve the uploaded data to databases such as NCBI, EBI and DDBJ.



The GMI proficiency test 2015 is supported by COMPARE, which has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 643476. In addition, the GMI PT 2015 is supported by the GenomeTrakr Network and Microbiologics®.

## 2 INTRODUCTION

GMI is a global, visionary taskforce of scientists and other stakeholders who share an aim of applying novel genomic technologies and informatics tools to improve global patient diagnostics, surveillance and research, by developing needs- and end-user-based data exchange and analysis tools for characterization of all microbial organisms and microbial communities.

The GMI working group 4 (WG4) steered by the US FDA, Microbiologics, and Technical University of Denmark has prepared this proficiency test (PT). The PT consists of three parts, each of which are optional, and include assessing (1a) the laboratory's DNA preparation and sequencing procedures, (1b) the laboratory's sequencing output, and (2) the laboratory's procedure to identify variant sites within whole genome sequence data and cluster and distinguish samples based on those variants.

The proficiency test focuses on *Salmonella enterica*, *Escherichia coli* strain and *Staphylococcus aureus*, and allows for sign-up for each species separately. Note that item 1a and item 1b are parallel; i.e. when signing up for 1a for one species, the participation in 1b is connected.

The three items consist of

- 1a) DNA extraction, purification, library-preparation, and whole-genome-sequencing of six bacterial cultures: two *Salmonella enterica* strains, two *Escherichia coli* strain and two *Staphylococcus aureus* strains. Participants will be requested to upload reads to an ftp-site and **optionally** also identify the Multi Locus Sequence Type (MLST) of the strains as well as the resistance genes present in the strains if that is something that is routinely done within the laboratory.
- 1b) Whole-genome-sequencing of pre-prepared DNA delivered by GMI Working Group 4 of the same six bacterial strains mentioned in clause 1a.
- 2) Variant detection and phylogenetic/clustering analysis of three datasets each including fastq data from circa 20 genomes of *S. enterica*, *E. coli* and *S. aureus*. Note: If performing a reference based approach for variant detection, the reference applied for the analysis must be the species specific references indicated below (see 3.4.2).



Institutes/organizations which signed up to participate will receive the PT-material (bacterial strains, DNA and/or the login for download of datasets) according to the registered sign-up information.

### 3 OUTLINE OF THE GMI PT

#### 3.1 Shipping, receipt and storage of bacterial strains

In August 2015, around 100 laboratories located worldwide will receive a parcel containing the two *Salmonella enterica* strains, two *E. coli* strains and two *S. aureus* strains together with corresponding purified DNA (according to the registered sign-up information). All bacterial strains and DNA are shipped as UN3373, Biological substance category B. Those who signed up for item 2 (phylogenetic analysis) will receive information and login for downloading the three datasets.

**Please confirm receipt of the parcel through the confirmation form enclosed in the shipment.**

The bacterial strains are shipped lyophilised as KwikStik's (see below for additional info on handling). On arrival, the KwikStik's must be refrigerated until handling in the laboratory.

The bacterial DNA is shipped as dried samples using a DNA stabilizing agent (DNAstable® Plus, Biomatrix). On arrival, either rehydrate your sample and store the liquid samples at room temperature in closed tubes, to prevent evaporation. Or store the dried samples in either

- (a) a dry storage cabinet at room temperature (15-25°C or 59-77°F) or
- (b) a heat-sealed, moisture-barrier bag along with a silica gel desiccant pack.

#### 3.2 Using FTP to transfer files

For download of fastq files for item 2 and for upload of results, an ftp-server is used. The proficiency test organizer will provide each participant with username and login for this purpose. The ftp-site which will be used for this purpose is [cgebase.cbs.dtu.dk](http://cgebase.cbs.dtu.dk). For information on how to transfer files, please see Appendix 1.

#### 3.3 Supplied test material

##### 3.3.1 Item 1a; Bacterial cultures

The procedure for reconstitution of the bacterial cultures should follow the manufacturer's procedures as presented in the instructional video or the written instructions on their website (see <http://microbiologics.com/s.nl/sc.7/category.98564/.f> or <http://microbiologics.com/Support-Center/KWIK-STIK-trade>).

MSDS for KwikStik are found here: <http://microbiologics.com/Support-Center/Lyophilized-Microorganism-Preparations>.



The bacterial cultures supplied have been sequenced multiple times and the genomes have been closed. Therefore, the PT-organizers encourage participants to maintain these bacterial strains in their strain collection and apply them as part of future internal quality control.

### **3.3.2 Item 1b; DNA**

The supplied DNA has been stabilized by DNA Stable<sup>®</sup>plus (<http://www.biomatrica.com/media/dnastable%20Plus/3004-0112.pdf>). Each vial contains a minimum of 2 ug DNA. Before use, the samples should be re-suspended in 60-100 µl water or aqueous buffer and mixed by gentle pipetting or vortexing for 10 min (according to above mentioned protocol). Rehydrated samples can be stored at room temperature and used directly in downstream application.

### **3.3.3 Item 2; Fastq data set**

Three datasets, one for each of *S. enterica*, *E. coli* and *S. aureus*, will be available for download from the ftp-site 'cgebase.cbs.dtu.dk'. Login to the ftp-site will be provided directly to each participant. Each dataset will consist of the original fastq files (i.e., whole genome sequence data) from circa 20 samples for phylogenetic cluster analysis based on a tool of the laboratory's own choice; SNP-calling, gene-by-gene, etc.

## **3.4 Procedure and analysis of test material**

### **3.4.1 Item 1a and 1b; Bacterial cultures and DNA**

Subculture the bacterial strains on a relevant growth medium of the laboratory's own choice and incubate. Following incubation and assessment of purity of the bacterial cultures, perform DNA extraction and whole-genome-sequencing according to the laboratory's standard procedure.

For the purified PT-DNA received, perform whole-genome-sequencing according to the laboratory's standard procedure.

For both bacterial cultures and DNA (items 1a and 1b), register relevant information related to the methods applied via [https://www.surveymonkey.com/r/PT\\_2015\\_bacterial\\_cultures\\_and\\_DNA](https://www.surveymonkey.com/r/PT_2015_bacterial_cultures_and_DNA) (also see Appendix 2). Appendix 2 also describes the requested results when analyzing the sequences as regards the detected antimicrobial resistance genes and as regards the Multi Locus Sequence Type of the bacterial strain.

### **3.4.2 Item 2; Fastq data set**

The three fastq datasets should be downloaded from the ftp-site. They are organized into three different .zip archives appropriately labeled with the taxon they represent. Within each archive



the participant will find the paired-end reads. The objective associated with this dataset is to assess the variability of laboratories in the clusters identified through the analysis of next-generation sequencing data. As such, the participant should employ their preferred method for constructing a matrix (e.g., gene, SNP, presence/absence, etc.) and for clustering samples (e.g., distance-, maximum-likelihood-, Bayesian-based).

If performing a reference based approach for variant detection, the reference applied for the analysis must be: STA00025 (*S. enterica*), EC002143 (*E. coli*) and SAH596 (*S. aureus*).

#### 4 DISCUSSION FORUM

A web-based discussion forum is available for participants in the GMI PT 2015, allowing for individual sign-up and discussion with other PT-participants in relation to issues relating to the analysis for the present PT. Appendix 4 presents detailed information on the PT discussion forum.

#### 5 REPORTING OF RESULTS AND EVALUATION

For all items (1a, 1b and 2), the results should be captured and entered into the Internet-based survey ([https://www.surveymonkey.com/r/PT\\_2015\\_bacterial\\_cultures\\_and\\_DNA](https://www.surveymonkey.com/r/PT_2015_bacterial_cultures_and_DNA) and [https://www.surveymonkey.com/r/PT\\_2015\\_FASTQ\\_dataset](https://www.surveymonkey.com/r/PT_2015_FASTQ_dataset)). See also Appendix 2 and 3.

##### 5.1 Procedure and analysis of test material

###### 5.1.1 Item 1a and 1b; Bacterial cultures and DNA

Results for item 1a and 1b must be submitted as a batch-upload. The web-interface of the batch upload interface (<https://cge.cbs.dtu.dk/services/ringtrials/>) provides a possibility to upload several isolates in a single submission. The interface is divided into five steps, and a progress bar presents the overview of the submitted files.

Step 1; Download the Excel Metadata template to your computer.

Step 2; Fill in the required fields with all the relevant information (metadata) about the isolates, the associated WGS file names, sequencing platform and sequencing type used to generate the data, etc. The second tab of the spreadsheet has extended description of the required metadata. Note that **sample name** should be the **same as label-name of the sample**, e.g. **GMI15-003-BACT** or **GMI15-003-DNA**.

Step 3; When the spreadsheet is properly filled out, upload the file to the web-interface by clicking on the button "Upload Metadata File" and selecting the file from the file browser.

After this, the spreadsheet will be validated to check if the metadata has the correct format.



A valid spreadsheet will be validated showing the message 'Excel template uploaded correctly'.

If the spreadsheet contains invalid metadata, an error message will appear at the top of the uploader (above step 1) displaying the number of errors found. To expand the error messages, click on the "plus" (+) sign to the right of the messages. To fix the errors, correct the errors in the original spreadsheet and upload the updated spreadsheet.

Step 4; Go via the batch upload interface to upload the individual WGS files that were previously included as metadata in the spreadsheet. An additional validation step will check if the provided files can be found in the spreadsheet.

Step 5; Click on the Submit button to upload the files. The progress will be displayed in the Upload Progress bar. It is important to keep the window opened until the upload is completed. After that, the web-interface will automatically submit the job to the server.

If the job is submitted correctly, you will get an on-screen confirmation message. Additionally, you will be suggested to type in your e-mail to have the results sent to your inbox after the job is finished.

Via the Internet-based survey

([https://www.surveymonkey.com/r/PT\\_2015\\_bacterial\\_cultures\\_and\\_DNA](https://www.surveymonkey.com/r/PT_2015_bacterial_cultures_and_DNA); see also Appendix 2), answers should be submitted to the questions related to the analysed bacterial cultures and DNA.

### 5.1.2 Item 2; Fastq data set

Specifically, up to two types of files should be submitted:

For each dataset:

1. The DNA sequence matrix used for clustering should be in fasta format and have that as the file extension
  - The matrix should only contain those samples provided through the ftp site
  - Syntax for the names of samples in the matrix should be *only* the prefix preceding the first underscore in the file name. For example, **STA00025\_1.fastq** should be named **STA00025** in the matrix. Note all capital letters.
  - The file should be named as follows **LabID\_Taxon.fasta** (e.g., **LAB1\_ST.FASTA**, **LAB1\_EC.FASTA**, or **LAB1\_SA.FASTA**).
2. The clusters themselves in newick format with the .tre as the file extension
  - The tree should only contain those samples provided through the ftp site
  - Syntax for the names of samples in the matrix should be *only* the prefix preceding the first underscore in the file name. For example, **STA00025\_1.fastq** should be named **STA00025** in the matrix. Note all capital letters.
  - The file should be named as follows **LabID\_Taxon.tre** (e.g., **LAB1\_ST.TRE**, **LAB1\_EC.TRE**, or **LAB1\_SA.TRE**).



Via the Internet-based survey ([https://www.surveymonkey.com/r/PT\\_2015\\_FASTQ\\_dataset](https://www.surveymonkey.com/r/PT_2015_FASTQ_dataset); see also Appendix 3), answers should be submitted to the questions related to the Fastq data set section.

## 5.2 Evaluation of results

For both bacterial cultures and DNA (items 1a and 1b), the submitted sequence data (fastq-files) will be evaluated according to the following specific quality markers: e.g. read length (bp), N50 (bp), total number of contigs and total length of sequence (bp) including percentage of reference genome covered. In addition, the PT-organizers will assemble the submitted reads and compare these assemblies 1) towards the relevant closed genome to assess the sequence error rate and coverage of the scaffold and 2) between the obtained sequences in items 1a and 1b.

Assessment of the submitted results from the analysis of the fastq datasets (item 2) is based on two criteria: 1) the concordance among laboratories in their answers to the questions in the SurveyMonkey (Appendix 3) and 2) the concordance between participants' in the information content contained in the matrix and the relationships among samples from the clustering analyses (i.e., the topology).

For the evaluation of the results, no official GMI quality threshold is currently available and therefore no acceptance limit has been defined for this proficiency test.

## 5.3 Deadline for submission of results

Results must be submitted electronically **no later than October 9<sup>th</sup> 2015**. Immediately after this date, the survey will be closed and results submitted to the Internet-based survey, via the batch-upload and to the ftp-site will be evaluated. Delayed submission of results will not be accepted.

## 5.4 Analysis and publication of results

Individual results will be anonymized, and only the PT-organizers will have access to your laboratory's results. Each participating laboratory will receive an individual summary of the obtained performance. An overall report summarizing the results will be published and subsequently in a peer-reviewed publication. Authors and co-authors of the publications will be those who have contributed to the preparation and execution of the proficiency test. Due to the anonymity of results, the individual participating laboratories will not be acknowledged in the publications.

We are looking forward to receiving your results.

**If you have any questions or concerns, please do not hesitate to contact us:**



**Issues related to the dry-lab fastq datasets, please contact:**

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**In relation to other issues, e.g. organizational issues, please contact the EQAS Coordinator:**

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## **PROTOCOL for GMI Proficiency Test, 2015 - APPENDICES**

Appendix 1: Using FTP to transfer files

Appendix 2: Overview of Internet-based survey - bacterial cultures and DNA

Appendix 3: Overview of Internet-based survey - FASTQ dataset

Appendix 4: GMI Proficiency Test Forum guide



## Appendix 1

### Using FTP to transfer files

FTP is an acronym for File Transfer Protocol and is used to transfer files between computers on a network. To access the folder for upload or download of files, do as described below.

Obtain access to upload or download files by using the relevant login provided by the proficiency test organizer.

#### Using a Windows-computer:

Open the Documents folder, and type 'ftp://cgebase.cbs.dtu.dk/' in the Address bar. Enter you username and password, click "Log on".

#### Using a Mac-computer:

FileZilla FTP client:

- Download and install FileZilla (<https://filezilla-project.org/>)
- Host:cgebase.cbs.dtu.dk
- Type username and password
- Connect

Or

Finder Mac application:

- In the Finder, choose Go > "Connect to Server," and wait for the pop-up window to show up.
- Specify server address <ftp://cgebase.cbs.dtu.dk> and click "Connect"
- In the new pop-up window enter you username and password, click "Connect"

# GMI Proficiency Testing 2015 - bacterial cultures and DNA

## Introduction

This survey seeks to capture info on participants' sequence procedures and specifications in relation to the bacterial cultures and DNA tested as part of the GMI Proficiency Test (PT) 2015.

The survey consists of six sections, collecting information on

1. User Information and Sample Storage
2. Bacterial Culture; DNA Isolation, Handling and Processing
3. Received DNA; Handling and Processing
4. Sequencing
5. Analysis of sequences; MLST and antimicrobial resistance genes
6. Submitted datafiles

If you have any questions or feedback for the submission of data via this survey, please contact the PT Coordinator, Susanne Karlsmosse Pedersen (suska@food.dtu.dk), at the Technical University of Denmark.

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

GMI is a global, visionary taskforce of scientists and other stakeholders who share an aim of applying novel genomic technologies and informatics tools to improve global patient diagnostics, surveillance and research, by developing needs- and end-user-based data exchange and analysis tools for characterization of all microbial organisms and microbial communities.

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In addition, the GMI PT 2015 is supported by the GenomeTrakr Network and Microbiologics®.

### \*1. Institute name / Organization name

### \*2. Department name

### \*3. Name of person responsible for the handling of the PT-material

### \*4. Dates in relation to the handling of the PT-material (date for upload of sequence data)

	DD	MM	YYYY
Date PT-material received	<input type="text"/>	/ <input type="text"/>	/ <input type="text"/>
Date processing the bacterial cultures started	<input type="text"/>	/ <input type="text"/>	/ <input type="text"/>
Date processing the bacterial cultures completed	<input type="text"/>	/ <input type="text"/>	/ <input type="text"/>
Date processing the DNA started	<input type="text"/>	/ <input type="text"/>	/ <input type="text"/>
Date processing the DNA completed (upload of sequence data)	<input type="text"/>	/ <input type="text"/>	/ <input type="text"/>

**\*5. Storage conditions of the bacterial cultures in the time between reception and processing:**

**(please select one answer)**

- 80°C
- 20°C
- 4°C
- Room temperature
- No storage time
- We did not receive bacterial cultures for this PT
- Other

If other, please define

**\*6. Storage conditions of the DNA in the time between reception and processing:**

**(please select one answer)**

- 80°C
- 20°C
- 4°C
- Room temperature
- No storage time
- Other

If other, please define

## BACTERIAL CULTURES received

### \*7. How were the bacterial cultures cultivated [as a decimal separator, please use full stop (.):

7.1 - Type of agar media/liquid broth:

7.2 - Incubation time (hours):

7.3 - Incubation temperature (°C):

### \*8. For the Gram-negative bacterial cultures; DNA extraction procedure (enter 'NA' if not relevant):

8.1 - If manual extraction; kit used, full name:

8.2 - If manual extraction; catalogue number of kit:

8.3 - If manual extraction, modifications to kit protocol:

8.4 - If automatic extraction; robot used:

8.5 - If automatic extraction; specific protocol:

8.6 - If automatic extraction; modifications to protocol:

### \*9. For the Gram-positive bacterial cultures; DNA extraction procedure (enter 'NA' if not relevant):

9.1 - If manual extraction; kit used, full name:

9.2 - If manual extraction; catalogue number of kit:

9.3 - If manual extraction, modifications to kit protocol:

9.4 - If automatic extraction; robot used:

9.5 - If automatic extraction; specific protocol:

9.6 - If automatic extraction; modifications to protocol:

### 10. For bacterial cultures, DNA concentration (ng/μl) prior to library preparation was measured on (please select one answer)

- Qubit
- Nanodrop
- DNA concentration not measured
- Other

If other, please specify:

# GMI Proficiency Testing 2015 - bacterial cultures and DNA

## \*11. Measure of DNA concentration (ng/µl) [as a decimal separator, please use full stop (.)]

11.1 GMI15-001-BACT (Salmonella)	<input type="text"/>
11.2 GMI15-002-BACT (Salmonella)	<input type="text"/>
11.3 GMI15-003-BACT (E. coli)	<input type="text"/>
11.4 GMI15-004-BACT (E. coli)	<input type="text"/>
11.5 GMI15-005-BACT (S. aureus)	<input type="text"/>
11.6 GMI15-006-BACT (S. aureus)	<input type="text"/>

## 12. Total DNA amount (microgram) [as a decimal separator, please use full stop (.)]

12.1 GMI15-001-BACT (Salmonella)	<input type="text"/>
12.2 GMI15-002-BACT (Salmonella)	<input type="text"/>
12.3 GMI15-003-BACT (E. coli)	<input type="text"/>
12.4 GMI15-004-BACT (E. coli)	<input type="text"/>
12.5 GMI15-005-BACT (S. aureus)	<input type="text"/>
12.6 GMI15-006-BACT (S. aureus)	<input type="text"/>

## 13. For bacterial cultures, DNA quality (e.g. RIN, 260/280 ratio and/or 260/230 ratio) prior to library preparation was measured on (please select one answer)

- Bioanalyser
- Nanodrop
- DNA quality not measured
- Other

If other, please specify:

## 14. Measure of DNA quality (e.g. RIN or 260/280 ratio) [as a decimal separator, please use full stop (.)]

14.1 GMI15-001-BACT (Salmonella)	<input type="text"/>
14.2 GMI15-002-BACT (Salmonella)	<input type="text"/>
14.3 GMI15-003-BACT (E. coli)	<input type="text"/>
14.4 GMI15-004-BACT (E. coli)	<input type="text"/>
14.5 GMI15-005-BACT (S. aureus)	<input type="text"/>
14.6 GMI15-006-BACT (S. aureus)	<input type="text"/>

## GMI Proficiency Testing 2015 - bacterial cultures and DNA

**15. If relevant; measure of DNA quality (260/230 ratio) [as a decimal separator, please use full stop (.)]**

15.1 GMI15-001-BACT (Salmonella)

15.2 GMI15-002-BACT (Salmonella)

15.3 GMI15-003-BACT (E. coli)

15.4 GMI15-004-BACT (E. coli)

15.5 GMI15-005-BACT (S. aureus)

15.6 GMI15-006-BACT (S. aureus)

## DNA received

**16. For the DNA received, DNA concentration (ng/μl) prior to library preparation was measured on (please select one answer)**

- Qubit
- Nanodrop
- DNA concentration not measured
- Other

If other, please specify:

**17. Measure of DNA concentration (ng/μl) [as a decimal separator, please use full stop (.)]**

- |                                 |                      |
|---------------------------------|----------------------|
| 17.1 GMI15-001-DNA (Salmonella) | <input type="text"/> |
| 17.2 GMI15-002-DNA (Salmonella) | <input type="text"/> |
| 17.3 GMI15-003-DNA (E. coli)    | <input type="text"/> |
| 17.4 GMI15-004-DNA (E. coli)    | <input type="text"/> |
| 17.5 GMI15-005-DNA (S. aureus)  | <input type="text"/> |
| 17.6 GMI15-006-DNA (S. aureus)  | <input type="text"/> |

**18. Total DNA amount (microgram) [as a decimal separator, please use full stop (.)]**

- |                                 |                      |
|---------------------------------|----------------------|
| 18.1 GMI15-001-DNA (Salmonella) | <input type="text"/> |
| 18.2 GMI15-002-DNA (Salmonella) | <input type="text"/> |
| 18.3 GMI15-003-DNA (E. coli)    | <input type="text"/> |
| 18.4 GMI15-004-DNA (E. coli)    | <input type="text"/> |
| 18.5 GMI15-005-DNA (S. aureus)  | <input type="text"/> |
| 18.6 GMI15-006-DNA (S. aureus)  | <input type="text"/> |

**19. For the DNA received, DNA quality (e.g. RIN, 260/280 ratio and/or 260/230 ratio) prior to library preparation was measured on (please select one answer)**

- Bioanalyser
- Nanodrop
- DNA quality not measured
- Other

If other, please specify:



# GMI Proficiency Testing 2015 - bacterial cultures and DNA

## 20. Measure of DNA quality (e.g. RIN or 260/280 ratio) [as a decimal separator, please use full stop (.)]

- 20.1 GMI15-001-DNA (Salmonella)
- 20.2 GMI15-002-DNA (Salmonella)
- 20.3 GMI15-003-DNA (E. coli)
- 20.4 GMI15-004-DNA (E. coli)
- 20.5 GMI15-005-DNA (S. aureus)
- 20.6 GMI15-006-DNA (S. aureus)

## 21. If relevant; measure of DNA quality (260/230 ratio) [as a decimal separator, please use full stop (.)]

- 21.1 GMI15-001-DNA (Salmonella)
- 21.2 GMI15-002-DNA (Salmonella)
- 21.3 GMI15-003-DNA (E. coli)
- 21.4 GMI15-004-DNA (E. coli)
- 21.5 GMI15-005-DNA (S. aureus)
- 21.6 GMI15-006-DNA (S. aureus)

## SEQUENCING

**22. What protocol was used to prepare the sample library for sequencing? For commercial kits please provide the full kit name, item number, and lot number if possible. For noncommercial kits please provide a citation for the protocol, or submit a summary of the protocol. Please note any deviations from the kit or cited protocol**

For commercial kits; full kit name:

For commercial kits; catalogue number:

For commercial kits; lot number:

For noncommercial kits; citation for the protocol:

For noncommercial kits; summary of the protocol:

Deviations from the kit or cited protocol

**\*23. Please indicate the sequencing platform you used in the proficiency test (please select one answer)**

- Ion Torrent PGM
- Ion Torrent Proton
- Genome Sequencer Junior System (454)
- Genome Sequencer FLX System (454)
- Genome Sequencer FLX+ System (454)
- PacBio RS
- PacBio RS II
- HiScanSQ
- HiSeq 1000
- HiSeq 1500
- HiSeq 2000
- HiSeq 2500
- Genome Analyzer Iix
- MiSeq
- MiSeq Dx
- MiSeq FGx
- ABI SOLiD
- other

If other, please specify

## 24. Sequencing details #1

(please select one answer)

- Single-end
- Paired-end
- Not relevant

## 25. Sequencing details #2:

For the sequencing, the read length (bp) was set to be (expected read length)

## \*26. Reads trimmed before upload

(please select one answer)

- Yes
- No

If trimmed, which tool was applied (in the text box below, please insert name and URL/link (if possible))

**27. For the analysis of the sequences from the bacterial cultures and the corresponding DNA in the proficiency test, assembly is not required.**

**If, however, you were to assemble your sequences, which assembly tool would you apply? in the text box below, please insert name and URL (e.g. Velvet, <https://www.ebi.ac.uk/~zerbino/velvet/>, open access)**

Assembly tool:

## ANALYSIS of sequences

**28. If any, which method was used to characterize or differentiate isolates (please select all that apply)?**

- MLST
- Allele-based
- Gene-by-gene-based
- SNP-based
- None

Other (please specify)

**29. If you determined the MLST-type of the sequenced DNA, how was the analysis performed (please select one answer)?**

- MLST-analysis was performed on raw reads
- MLST-analysis was performed on contigs
- MLST-analysis was not performed

**30. If you determined antimicrobial resistance (AMR) genes present in the sequenced DNA, how was the analysis performed (please select one answer)?**

- Analysis for AMR-genes was performed on raw reads
- Analysis for AMR-genes was performed on contigs
- Analysis for AMR-genes was not performed

**31. For the DNA from the received bacterial culture, if MLST-analysis was performed based on the sequence analysis, which MLST-type does the isolate belong to?**

31.1 GMI15-001-BACT (Salmonella)

31.2 GMI15-002-BACT (Salmonella)

31.3 GMI15-003-BACT (E. coli)

31.4 GMI15-004-BACT (E. coli)

31.5 GMI15-005-BACT (S. aureus)

31.6 GMI15-006-BACT (S. aureus)

# GMI Proficiency Testing 2015 - bacterial cultures and DNA

## 32. For the DNA from the received bacterial culture, if MLST-analysis was performed based on the sequence analysis, which alleles characterize the isolate?

- 32.1 GMI15-001-BACT (Salmonella)
- 32.2 GMI15-002-BACT (Salmonella)
- 32.3 GMI15-003-BACT (E. coli)
- 32.4 GMI15-004-BACT (E. coli)
- 32.5 GMI15-005-BACT (S. aureus)
- 32.6 GMI15-006-BACT (S. aureus)

## 33. For the DNA from the received bacterial culture, if analysis for antimicrobial resistance genes was performed based on the sequence analysis, which antimicrobial resistance genes does the isolate harbour (please list the genes according to the following order of antimicrobial classes: Aminocyclitols, aminoglycosides, $\beta$ -lactams, fluoroquinolones, glycopeptides, lincosamides, macrolides, oxazolidones, phenicols, pleuromutilins, polypeptide antibiotics, quinolones, streptogramins, sulfonamides, tetracyclines, trimethoprim, other)?

- 33.1 GMI15-001-BACT (Salmonella)
- 33.2 GMI15-002-BACT (Salmonella)
- 33.3 GMI15-003-BACT (E. coli)
- 33.4 GMI15-004-BACT (E. coli)
- 33.5 GMI15-005-BACT (S. aureus)
- 33.6 GMI15-006-BACT (S. aureus)

## 34. For the received DNA, if MLST-analysis was performed based on the sequence analysis, which MLST-type does the isolate belong to?

- 34.1 GMI15-001-DNA (Salmonella)
- 34.2 GMI15-002-DNA (Salmonella)
- 34.3 GMI15-003-DNA (E. coli)
- 34.4 GMI15-004-DNA (E. coli)
- 34.5 GMI15-005-DNA (S. aureus)
- 34.6 GMI15-006-DNA (S. aureus)

## 35. For the received DNA, if MLST-analysis was performed based on the sequence analysis, which alleles characterize the isolate?

- 35.1 GMI15-001-BACT (Salmonella)
- 35.2 GMI15-002-BACT (Salmonella)
- 35.3 GMI15-003-BACT (E. coli)
- 35.4 GMI15-004-BACT (E. coli)
- 35.5 GMI15-005-BACT (S. aureus)
- 35.6 GMI15-006-BACT (S. aureus)

## GMI Proficiency Testing 2015 - bacterial cultures and DNA

**36. For the received DNA, if analysis for antimicrobial resistance genes was performed based on the sequence analysis, which antimicrobial resistance genes does the isolate harbour (please list the genes according to the following order of antimicrobial classes: Aminocyclitols, aminoglycosides,  $\beta$ -lactams, fluoroquinolones, glycopeptides, lincosamides, macrolides, oxazolidones, phenicols, pleuromutilins, polypeptide antibiotics, quinolones, streptogramins, sulfonamides, tetracyclines, trimethoprim, other)?**

36.1 GMI15-001-DNA (Salmonella)

36.2 GMI15-002-DNA (Salmonella)

36.3 GMI15-003-DNA (E. coli)

36.4 GMI15-004-DNA (E. coli)

36.5 GMI15-005-DNA (S. aureus)

36.6 GMI15-006-DNA (S. aureus)

**37. For the detection of the Multi Locus Sequence Type, which tool did you apply? in the text box below, please insert name and URL (e.g. MLST 1.7 (MultiLocus Sequence Typing), <http://cge.cbs.dtu.dk/services/MLST/>, open access)**

Tool for detection of  
MLST:

**38. For the detection of the resistance genes harboured in the sequences, which tool did you apply? in the text box below, please insert name and URL (e.g. ResFinder, <http://cge.cbs.dtu.dk/services/ResFinder/>, open access)**

Tool for detection of  
resistance genes:

## SUBMITTED datafiles

**\* 39. The obtained non-assembled sequence data have been uploaded for bacterial cultures and DNA following the description of batch-upload in the PT-protocol, for**

	Yes	No
Salmonella	<input type="radio"/>	<input type="radio"/>
E. coli	<input type="radio"/>	<input type="radio"/>
S. aureus	<input type="radio"/>	<input type="radio"/>

Comments:

**Info:**

For both bacterial cultures and DNA, the submitted sequence data (fastq-files) will be evaluated according to the following specific quality markers, e.g. read length (bp), N50 (bp), total number of contigs and total length of sequence (bp) including percentage of reference genome covered. In addition, the PT-organizers will assemble the submitted reads and compare these assemblies 1) towards the relevant closed genome to assess the sequence error rate and coverage of the scaffold and 2) between the obtained sequences for both the bacterial cultures and DNA.

# GMI Proficiency Testing 2015 - FASTQ dataset

## Introduction

This survey seeks to capture info in relation to the fastq data set component of the GMI Proficiency test (PT) 2015.

If you have any questions or feedback for the submission of data via this survey, please contact the PT Coordinator, Susanne Karlsmose Pedersen (suska@food.dtu.dk), at the Technical University of Denmark.

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

GMI is a global, visionary taskforce of scientists and other stakeholders who share an aim of applying novel genomic technologies and informatics tools to improve global patient diagnostics, surveillance and research, by developing needs- and end-user-based data exchange and analysis tools for characterization of all microbial organisms and microbial communities.

The GMI proficiency test 2015 is supported by COMPARE, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 643476. In addition, the GMI PT 2015 is supported by the GenomeTrakr Network and Microbiologics®.

### \*1. Institute name / Organization name

### \*2. Department name

### \*3. Name(s) of person(s) responsible for the analysis

## FASTQ data set

### 4. Were reads quality filtered before conducting the analysis?

(please select one answer)

Yes

No

### 5. If reads were quality filtered, please provide the name of the program

### 6. For variant detection, which of the following did you use:

(please select one answer)

A reference based approach

De novo assemblies

A combination of both



## GMI Proficiency Testing 2015 - FASTQ dataset

**\*7. If you perform de novo assemblies, which tool did you apply (please insert name and URL; e.g. Velvet, <https://www.ebi.ac.uk/~zerbino/velvet/>)?**

**(Enter 'NA' if you do not do de novo assemblies)**

**\*8. If you use a reference-based approach, which tools do you use for mapping and variant detection (please insert name and URL; e.g. Bowtie2, <http://bowtie-bio.sourceforge.net/bowtie2/index.shtml>; VarScan, <http://varscan.sourceforge.net>)?**

**(Enter 'NA' if you do not use a reference-based approach)**

**\*9. What kind of methodology for phylogeny construction did you apply?**

- SNPs
- Methodology other than SNPs

If methodology other than SNPs (please specify):

If applying SNPs, go to question 10,

If not applying SNPs, go to question 13

**10. Which quality criteria did you use for SNP calling? (e.g. % of mapped reads and minimum coverage to define variant).**

8.1 - S. Typhimurium

8.2 - E. coli

8.3 - S. aureus

**11. Which criteria did you use for SNPs filtering:**

9.1 - Filter SNPs with excess coverage (i.e. repetitive regions):

9.2 - Did you filter SNPs occurring in a cluster (a.k.a. pruning) (indicate 'yes' or 'no'):

9.3 - Which definition of the cluster did you use (i.e.  $\geq 3$  SNPs in 1000 base pairs (bp)):

9.4 - Other, please specify:

**12. Which program did you use to build your tree (e.g., MEGA, MrBayes, PAUP\*, GARLI, RAxML, etc)?**

**13. Which algorithm did you use to build your tree (e.g., Neighbor-joining, UPGMA, Bayesian, maximum-likelihood, etc)?**

Please upload to the ftp-site your DNA sequence matrix as a fasta alignment file (see description in the PT-protocol)

**14. If you do assemblies, do you calculate the number of contigs (please select one answer)**

- Yes
- No
- We don't perform assemblies

**15. If you do assemblies, do you filter out contigs below a certain size (please select one answer)**

- Yes
- No
- We don't perform assemblies

If yes, indicate minimum size

**16. If you do assemblies, do you calculate N50 (please select one answer)**

- Yes
- No
- We don't perform assemblies

**17. If you perform assemblies, do you calculate the size of the chromosome (please select one answer)**

- Yes
- No
- We don't perform assemblies

**18. Do you calculate coverage as a quality metric? (please select one answer)**

- Yes
- No

**\*19. Did you check for contamination and/or verify the species? If so, which tool did you apply?**

**In the text box below, please insert name and URL (e.g. KmerFinder 1.2, <http://cge.cbs.dtu.dk/services/KmerFinder>)**

**(Enter 'NA' if you do not check for contamination and/or verify the species)**

# GMI Proficiency Testing 2015 - FASTQ dataset

## 20. If you did check, could you verify the species?

- We did not attempt to verify species
- Yes, for all *S. Typhimurium*
- Yes, for all *E. coli*
- Yes, for all *S. aureus*
- No, for some *S. Typhimurium*
- No, for some *E. coli*
- No, for some *S. aureus*

If no, please indicate why

## 21. Can you call a Multi Locus Sequence Type (MLST) (please select one answer)

- Yes, we do this using a BLAST (or BLAST-like) approach based on assemblies
- Yes, we do this through a mapping based approach (e.g. SRST)
- No
- We are not interested in MLST

Comments

## SUBMITTED datafiles

Please carefully follow the instructions regarding the naming of submitted files and the samples that should be included in them! Thank you.

### \*22. The following files have been submitted to the ftp-site:

	S. Typhimurium dataset	E. coli dataset	S. aureus dataset
A fasta formatted DNA sequence matrix that was used for clustering (e.g., a fasta file extension)	<input type="text"/>	<input type="text"/>	<input type="text"/>
A newick formatted file with the clusters themselves (.tre file extension) (the format can be obtained through the R package APE or using FigTree's "Export Trees" option)	<input type="text"/>	<input type="text"/>	<input type="text"/>

Comments:

The number and identity of samples in each uploaded file should match exactly those that were included in the original data (i.e., 20, 21, 24 sequences of *S. Typhimurium*, *E. coli* and *S. aureus*, respectively). Within each file the samples should be named as the prefix within the original fastq file and the file should be named ParticipantID\_TaxonGroup.appropriateFileExtension (e.g., LAB1\_Ecoli.fasta). See the instructions for additional information on the samples to be included and the naming of them.

# GMI Proficiency Test

## Forum guide

**Global Microbial Identifier**



## Content

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The purpose of the *GMI Proficiency Test* forum is to facilitate the exchange of information and experiences among GMI PT participants.

## Sign up to forum platform

*GMI Proficiency Test* forum is hosted by the *Instituto de Salud Carlos III* (Spanish National Health Institute Carlos III). The first step is to register and create an account, which is described below.

Go to the GMI PT forum web page (<https://foros.isciii.es/viewforum.php?f=7>) and press the **Register** button.

The screenshot shows the top navigation bar of the forum, including the logo of the Instituto de Salud Carlos III and the text "GOBIERNO DE ESPAÑA MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD". Below the navigation bar, there is a search bar and a "Register" button. The main content area displays a message: "The board requires you to be registered and logged in to view this forum." Below this message, there are input fields for "Username:" and "Password:", a "Login" button, and checkboxes for "Remember me" and "Hide my online status this session". There is also a link for "I forgot my password". At the bottom of the page, there is a "Board index" link and a footer with "Contact us", "Delete all board cookies", and "All times are UTC".

Read carefully forum terms and press *I agree to these terms* to accept agreement.

The screenshot shows the registration terms page of the forum. The top navigation bar is identical to the previous screenshot. The main content area is titled "- Registration" and contains the following text: "By accessing "" (hereinafter "we", "us", "our", "", "http://foros.isciii.es"), you agree to be legally bound by the following terms. If you do not agree to be legally bound by all of the following terms then please do not access and/or use "". We may change these at any time and we'll do our utmost in informing you, though it would be prudent to review this regularly yourself as your continued usage of "" after changes mean you agree to be legally bound by these terms as they are updated and/or amended." Below this text, there is a paragraph about the forum being powered by phpBB and another paragraph about the user's agreement to post appropriate content. At the bottom of the page, there are two buttons: "I agree to these terms" and "I do not agree to these terms". The footer is also identical to the previous screenshot.

Enter your username (with a length between 3 and 20 characters), email address and set up a password (must be between 8 and 15 characters long, must contain letters in mixed case and numbers). Additionally you could change your time zone. Enter confirmation code and press **Submit**.

The screenshot shows the registration page of the Instituto de Salud Carlos III. At the top, there is a header with the Spanish government logo, the text 'GOBIERNO DE ESPAÑA' and 'MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD', the institute's logo 'ISC', and the name 'Instituto de Salud Carlos III'. A search bar is located on the right. Below the header, there are navigation links for 'Quick links' and 'FAQ', and a 'Login' button. The main content area is titled '- Registration' and contains several input fields: 'Username' (with a note: 'Length must be between 3 characters and 20 characters'), 'Email address', 'Password' (with a note: 'Password must be between 8 characters and 15 characters long, must contain letters in mixed case and must contain numbers'), and 'Confirm password'. There are also dropdown menus for 'Language' (set to 'British English') and 'My timezone' (set to 'UTC+02:00 - 13 Apr 2015, 12:23' and 'Africa/Blantyre'). Below the registration form is a 'CONFIRMATION OF REGISTRATION' section. It states: 'To prevent automated registrations the board requires you to enter a confirmation code. The code is displayed in the image you should see below. If you are visually impaired or cannot otherwise read this code please contact the Board Administrator.' The confirmation code is shown in a distorted image of the letters '77BFFM1Z'. There is an input field for the code and a 'Refresh confirmation code' button. At the bottom of the form are 'Reset' and 'Submit' buttons. The footer contains a 'Board index' link, 'Contact us', 'Delete all board cookies', and 'All times are UTC'.

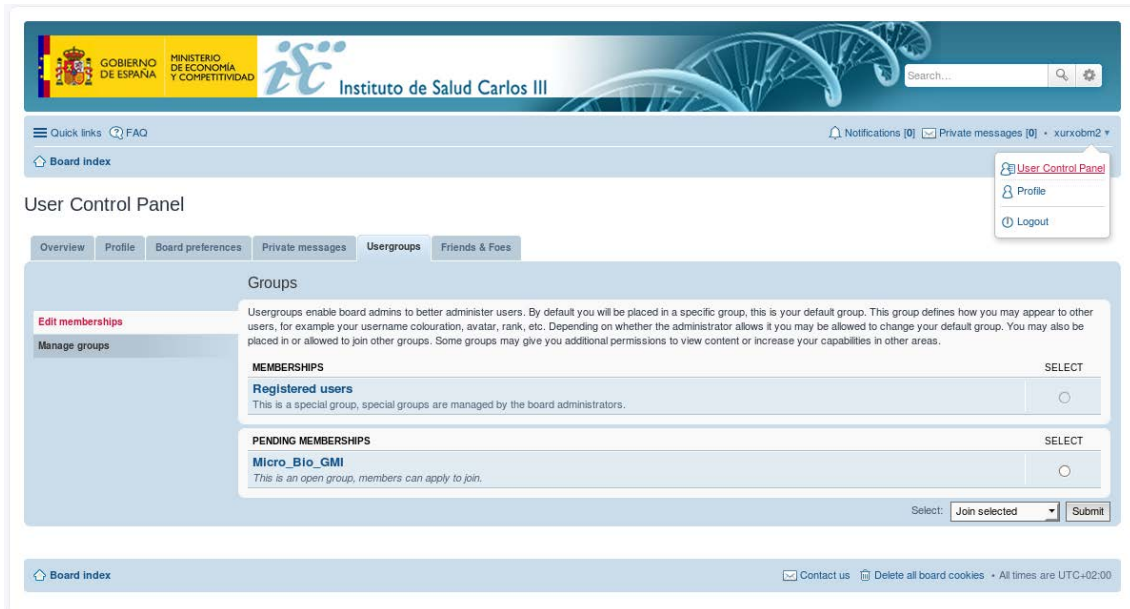
A welcome email will be sent to your email address. Click on **Return to the index page** and log in using your selected username and password.

The screenshot shows the confirmation page of the Instituto de Salud Carlos III. At the top, there is a header with the Spanish government logo, the text 'GOBIERNO DE ESPAÑA' and 'MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD', the institute's logo 'ISC', and the name 'Instituto de Salud Carlos III'. A search bar is located on the right. Below the header, there are navigation links for 'Quick links' and 'FAQ', and buttons for 'Register' and 'Login'. The main content area is titled 'Information' and contains the text: 'Thank you for registering, your account has been created. You may now login with your username and password.' Below this text is a link that says 'Return to the index page'. The footer contains a 'Board index' link, 'Contact us', 'Delete all board cookies', and 'All times are UTC'.

## Request to join GMI PT forum group

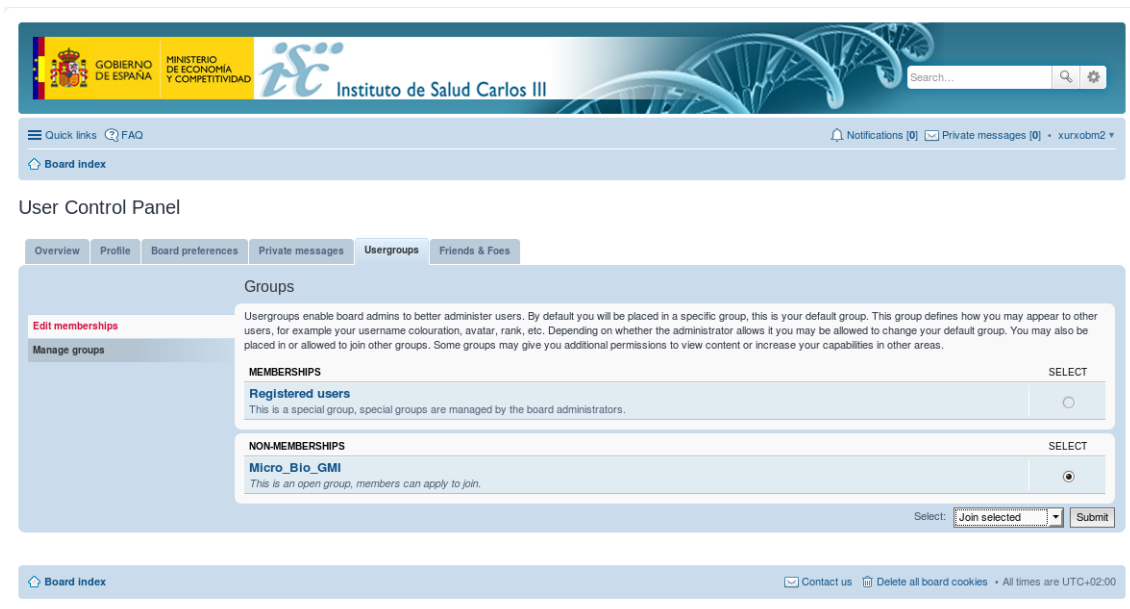
Joining as a member of GMI PT forum requires to be accepted by *Micro\_Bio\_GMI* group. Membership is restricted to *GMI Proficiency Test* participants. This section details the procedure to request that you be added to that group.

Click on a link located at the upper right corner of the screen that is labeled with your username. Click on **User Control Panel** and select **Usergroups** tab.



The screenshot shows the 'User Control Panel' interface. At the top, there is a header with the logo of the 'GOBIERNO DE ESPAÑA' and 'MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD', and the 'Instituto de Salud Carlos III' logo. Below the header, there are navigation links for 'Quick links' and 'FAQ', and a search bar. The main content area is titled 'User Control Panel' and has several tabs: 'Overview', 'Profile', 'Board preferences', 'Private messages', 'Usergroups', and 'Friends & Foes'. The 'Usergroups' tab is active. Underneath, there is a 'Groups' section with a description: 'Usergroups enable board admins to better administer users. By default you will be placed in a specific group, this is your default group. This group defines how you may appear to other users, for example your username colouration, avatar, rank, etc. Depending on whether the administrator allows it you may be allowed to change your default group. You may also be placed in or allowed to join other groups. Some groups may give you additional permissions to view content or increase your capabilities in other areas.' There are two sections: 'MEMBERSHIPS' and 'PENDING MEMBERSHIPS'. Under 'MEMBERSHIPS', there is a 'Registered users' group with a radio button. Under 'PENDING MEMBERSHIPS', there is a 'Micro\_Bio\_GMI' group with a radio button. At the bottom right, there is a 'Select:' dropdown menu with 'Join selected' selected and a 'Submit' button.

Click on **Micro\_Bio\_GMI** radio button. Select **Join selected** in **Select** dropdown list and press **Submit** button.



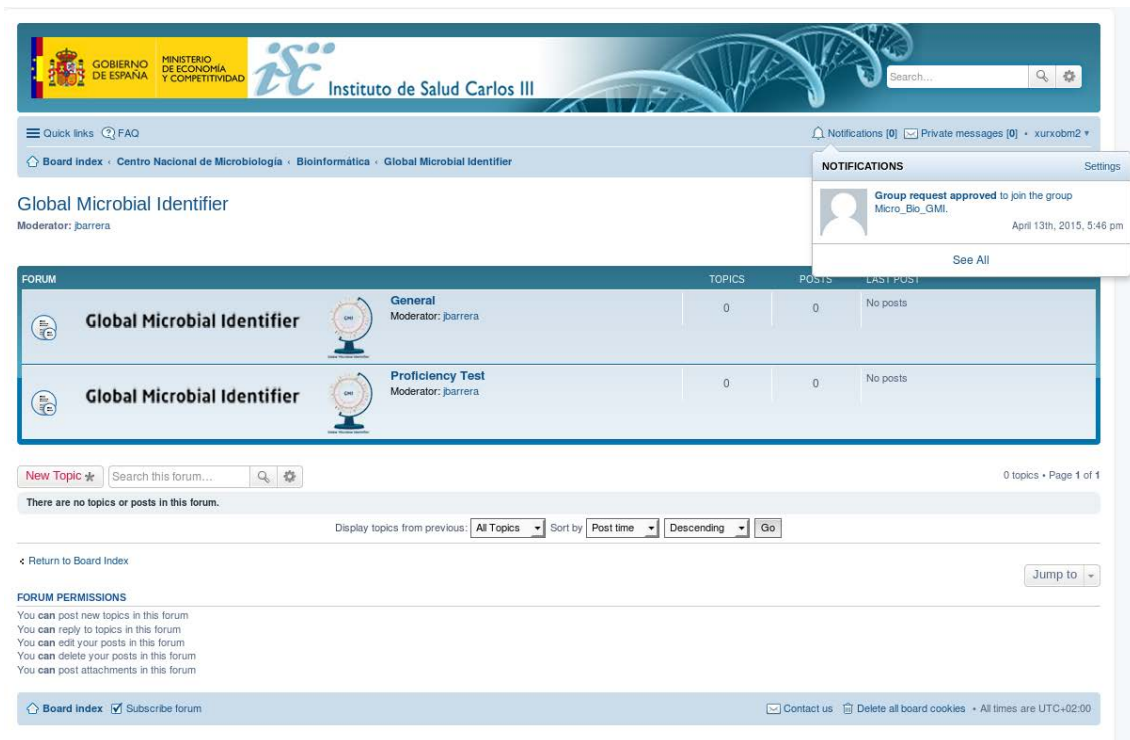
This screenshot is identical to the one above, showing the 'User Control Panel' interface. The 'Micro\_Bio\_GMI' radio button under 'PENDING MEMBERSHIPS' is now selected. The 'Submit' button at the bottom right is highlighted with a red border, indicating it should be clicked.



Confirm request to GMI PT forum group.



Your request must be approved by GMI PT forum moderator. It should take not more than a few days. You will see a notification in the upper right corner of the screen when your request is approved.



## Introduce yourself to other GMI PT participants

The first time you log into the forum after gaining admission to the *Micro\_Bio\_GMI* group were accepted you should introduce yourself. This is not mandatory but is recommended to facilitate communication among all GMI PT participants.

Click on **General** category link (if you do not see *Global Microbial Identifier* forum categories, see Troubleshooting, page 12).

Global Microbial Identifier  
Moderator: jarrera

FORUM		TOPICS	POSTS	LAST POST
Global Microbial Identifier	General Moderator: jarrera	0	0	No posts
Global Microbial Identifier	Proficiency Test Moderator: jarrera	0	0	No posts

New Topic \* Search this forum... 0 topics • Page 1 of 1

There are no topics or posts in this forum.

Display topics from previous: All Topics Sort by Post time Descending Go

Return to Board Index

Jump to

FORUM PERMISSIONS

- You can post new topics in this forum
- You can reply to topics in this forum
- You can edit your posts in this forum
- You can delete your posts in this forum
- You can post attachments in this forum

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Click on **Introductions** category link.

GOBIERNO DE ESPAÑA MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD Instituto de Salud Carlos III

Quick links | FAQ | Notifications (0) | Private messages (0) | xurxobn2

Board index | Centro Nacional de Microbiología | Bioinformática | Global Microbial Identifier | General

### General

Moderator: [parrera](#)

Mark subforums read

FORUM	TOPICS	POSTS	LAST POST
<b>Introductions</b> Introduce yourself, your lab and your research interests, etc... Moderator: <a href="#">parrera</a>	0	0	No posts
<b>ftp site for upload / download</b> Issues about ftp site for downloading data and uploading results Moderator: <a href="#">parrera</a>	0	0	No posts
<b>Collection of seq. parametres (survey Monkey)</b> Issues about survey Moderator: <a href="#">parrera</a>	0	0	No posts
<b>Discussions / Conclusions</b> General discussions and conclusions about methods, protocols, etc... Moderator: <a href="#">parrera</a>	0	0	No posts

New Topic | Search this forum... | 0 topics • Page 1 of 1

There are no topics or posts in this forum.

Display topics from previous: All Topics | Sort by Post time | Descending | Go

Return to Board Index | Jump to

#### FORUM PERMISSIONS

You can post new topics in this forum  
 You can reply to topics in this forum  
 You can edit your posts in this forum  
 You can delete your posts in this forum  
 You can post attachments in this forum

Board index |  Subscribe forum | Contact us | Delete all board cookies | All times are UTC+02:00

Write a post introducing yourself and your lab and press **Submit** to publish it.

GOBIERNO DE ESPAÑA MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD Instituto de Salud Carlos III

Quick links | FAQ | Notifications (0) | Private messages (0) | xurxobn2

Board index | Centro Nacional de Microbiología | Bioinformática | Global Microbial Identifier | General | Introductions

### Introductions

POST A NEW TOPIC

Subject:

**B** | **I** | **G** | Quote | Code | List | List\* | P | **img** | **URL** | Normal | Font colour

Hello everyone,

My name is Jorge de la Barrera. I work on [\[CNM\]](#) [\[National Center for Microbiology\]](#) [Bioinformatics Unit](#) of [ISCIII](#) [\[Spanish National Health Institute Carlos III\]](#). This is a core service unit that provides bioinformatic analysis to all agencies belonging to [ISCIII](#). I am focused on bioinformatics for microbiology for CNM researchers and reference labs.

Cheers,

Jorge de la Barrera

Save draft | Preview | Submit

Options | Attachments

Disable BBCode  
 Do not automatically parse URLs  
 Notify me when a reply is posted

Board index | Contact us | Delete all board cookies | All times are UTC+02:00

Once post is published it can be read by all GMI PT participants within **Introductions** forum category.

GOBIERNO DE ESPAÑA  
MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD

Instituto de Salud Carlos III

[Quick links](#) [FAQ](#)

Notifications (0) Private messages (0) usuario1

[Board index](#) [Centro Nacional de Microbiología](#) [Bioinformática](#) [Global Microbial Identifier](#) [General](#) [Introductions](#)

## Hello to everyone

Moderator: [jarrera](#)

[Post Reply](#)

1 post Page 1 of 1

**Hello to everyone**

by [usuario1](#) - 14 Apr 2015, 11:22

Hello everyone,

My name is Jorge de la Barrera. I work on *CNM (National Center for Microbiology) Bioinformatics Unit of ISCIII (Spanish National Health Institute Carlos III)*. This is a core service unit that provides bioinformatic analysis to all agencies belonging to ISCIII. I am focused on bioinformatics for microbiology for CNM researchers and reference labs.

Cheers

Jorge de la Barrera

[usuario1](#)

Posts: 2

Joined: 11 Mar 2015, 15:55

[Post Reply](#)

1 post Page 1 of 1

[Return to "Introductions"](#)

[Jump to](#)

[Board index](#)

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## Post a message on GMI PT forum

GMI PT forum is organized in categories to improve readability. When you want to write a message you should choose the right forum category to post on. This section details GMI PT forum categories.

Forum categories are organized in two branches: *General* and *Proficiency Test*. No messages can be posted at the main level.

FORUM		TOPICS	POSTS	LAST POST
 <b>Global Microbial Identifier</b> 	<b>General</b> Moderator: jbarrera	1	1	<b>Hello to everyone</b> by xurxobm2  April 14th, 2015, 11:47 am
 <b>Global Microbial Identifier</b> 	<b>Proficiency Test</b> Moderator: jbarrera	0	0	No posts

Introduction posts, issues about ftp site or survey and discussions/conclusions must be posted in the suitable category under *General* branch.

### General

Moderator: jbarrera

[Mark subforums read](#)

FORUM		TOPICS	POSTS	LAST POST
 <b>Introductions</b> Introduce yourself, your lab and your research interests, etc... Moderator: jbarrera		0	0	No posts
 <b>ftp site for upload / download</b> Issues about ftp site for downloading data and uploading results Moderator: jbarrera		0	0	No posts
 <b>Collection of seq. parametres (survey Monkey)</b> Issues about survey Moderator: jbarrera		0	0	No posts
 <b>Discussions / Conclusions</b> General discussions and conclusions about methods, protocols, etc... Moderator: jbarrera		0	0	No posts

*Proficiency Test* branch encompass categories related to the PT itself.

### Proficiency Test

Moderator: jbarrera

[Mark subforums read](#)



FORUM		TOPICS	POSTS	LAST POST
 <b>DNA extraction / Purification / Libray Preparation / WGS</b> Assesses the laboratory's DNA preparation and sequencing procedures Moderator: jbarrera		0	0	No posts
 <b>Bioinformatics</b> Moderator: jbarrera		0	0	No posts

Wet lab and whole genome sequencing issues must be posted in the suitable category under *DNA extraction / Purification / Library Preparation / WGS* category.

DNA extraction / Purification / Library Preparation / WGS

Moderator: [jbarrera](#)

[Mark subforums read](#)



FORUM	TOPICS	POSTS	LAST POST
 <b>Bacterial, cultures</b> Moderator: <a href="#">jbarrera</a>	0	0	No posts
 <b>Virus</b> Moderator: <a href="#">jbarrera</a>	0	0	No posts

Dry lab issues must be posted in the suitable category under *Bioinformatics*.

Bioinformatics

Moderator: [jbarrera](#)

[Mark subforums read](#)

FORUM	TOPICS	POSTS	LAST POST
 <b>Bacterial, Data sets</b> Moderator: <a href="#">jbarrera</a>	0	0	No posts
 <b>Virus</b> Moderator: <a href="#">jbarrera</a>	0	0	No posts

## Troubleshooting

### *Problem: You are not authorized to read this forum*



The screenshot shows the header of the Instituto de Salud Carlos III forum. It includes the logo of the Spanish Government and the Ministry of Economy and Competitiveness, the ISCI logo, and the text 'Instituto de Salud Carlos III'. A search bar is visible on the right. Below the header, there is a navigation bar with 'Quick links' and 'FAQ'. A notification bar shows 'Notifications [0]', 'Private messages [0]', and the user 'xurxobm2'. A 'Board index' link is present. The main content area displays the message: 'You are not authorised to read this forum.' At the bottom, there is another 'Board index' link and footer information: 'Contact us', 'Delete all board cookies', and 'All times are UTC+02:00'.

This message is shown if you have not registered.

Solution: Register as user following steps described in this guide.

### *Problem: Global Microbial Identifier forum categories are not shown*



The screenshot shows the forum page for the 'CENTRO NACIONAL DE MICROBIOLOGÍA'. It features the same header as the previous screenshot. Below the navigation bar, it shows the current date and time: 'It is currently April 13th, 2015, 6:11 pm' and 'Last visit was: April 13th, 2015, 5:33 pm'. A 'Mark forums read' link is also present. The main content area displays a table with the following data:

CENTRO NACIONAL DE MICROBIOLOGÍA	TOPICS	POSTS	LAST POST
 <b>Bioinformática</b>	0	0	No posts

Below the table, there is a 'STATISTICS' section showing: 'Total posts 1 • Total topics 0 • Total members 9 • Our newest member xurxobm2'. At the bottom, there is another 'Board index' link and footer information: 'Contact us', 'Delete all board cookies', and 'All times are UTC+02:00'.

GMT PT forum is hosted by corporate forum site of *Instituto de Salud Carlos III*. Therefore, GMI PT forum is not the root forum. To access directly to GMI PT forum you should browse through *Bioinformática* -> *Global Microbial Identifier* or use URL <https://foros.iscii.es/viewforum.php?f=7>