Antimicrobial susceptibility testing data submission

A) Submission Procedure:

[1] Account registration:

Data providers should already have an EBI/ENA account and have submitted the read data they want to link with MICs (see tutorial on "Submitting read data").

[2] Data upload:

Create a directory called "antibiogram" on your computer and place the files containing your susceptibility data inside it.

Connect to the EBI/ENA website (http://www.ebi.ac.uk/ena). Go to the "Submit & Update" tab, then click on "Submit to ENA". Enter your account information to connect (Webin-NNNN and password).

Go to the "New submission" tab and click on "Launch uploader". You will then access the Webin Java web start EBI uploader. Enter your Webin identifier ("username") and Webin password, then connect. Browse to the "Upload Directory" containing your files ("antibiogram"). Select the files you want to upload. Tick the boxes "Overwrite" and "Upload Tree" to copy the directory and the files. Click on "Upload" to start the transfer.

If you want to use a different method or are having trouble with the Java web start application, you can use FTP (file transfer protocol) or Aspera to upload the files. Note that if you use an FTP client such as FileZilla you will have to create manually a directory called "antibiogram" on the EBI Remote site, in which you will then transfer the susceptibility testing data files.

More information and help on the file transfer can be found at this address:
https://www.ebi.ac.uk/ena/submit/uploading-data-files

[3] Data upload confirmation:

Please email to datasub@ebi.ac.uk and let us know about your upload.
Please provide "COMPARE: Antibiogram" in your email subject. And in the body of your email please provide the name of the submitted files.

B) Antimicrobial susceptibility data format

The accepted format of the file is a tab-delimitated file. If you use Excel please save your file as 'Tab Delimited Text' and then submit the saved file.

Please note that all fields should exactly match the template in order to be recognized by the validation script. Please be sure to avoid any typos, additional blank spaces, upper and lower cases differences or other characters. To indicate decimals you should use a dot ["."] and not a comma [","].
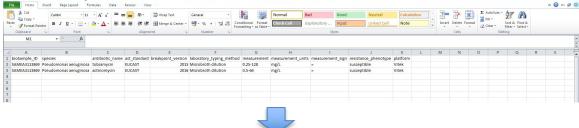
The following are the fields and some explanations. Please see the "antibiogram_example.txt" file (provided) if you want an example of the correct template.

An example of the header is:
bioSample_ID   species   antibiotic_name   ast_standard   breakpoint_version laboratory_typing_method measurement measurement_units measurement_sign resistance_phenotype platform

Please note that the **Species** shall be unique in the submission file and each file should only represent experiments against one species. If you have tested multiple species, please provide one file per species.

1) Prepare an excel file as follows: open the file "antibiogram_template.txt; copy the contents of the file into a blank excel sheet. Complete the form with your own data.

2) Save the excel file as tab-delimited text. The final file should look like this:

The explanations of the columns are as follows:

1. **BioSample_ID** (Mandatory)
BioSample ID needs to be provided (SAM accession, e.g. SAMEA3113869). BioSample IDs are attributed to submitted samples, so please submit first your raw fastq files (See the "Submitting data reads" protocol for more information).

2. **Species** (Mandatory)

3. **Antibiotic_name** (Mandatory)

4. **AST_standard** (Mandatory)
Accepted Antimicrobial Susceptibility Testing (AST) standards are: CLSI, EUCAST, CA-SFM, BSAC, DIN, SIR and WRG

5. **Breakpoint_version** (Mandatory)
Please state the version of AST standard protocol used for your isolates (Free-text).

6. **Laboratory_typing_method** (Mandatory)
Please indicate here the used antibiotic susceptibility method for your isolates. Choose from the following methods:
- Dilution methods:
Broth dilution
microbroth dilution
Agar dilution
- Diffusion methods:
Disc-diffusion
Neo-sensitabs
Etest

7. **Measurement**
Can be a fixed number or a range
Ranges for dilution : 0.01 to 2048
Ranges for Diffusion: 6 to 99

8. **Measurement_units** (Mandatory)
For dilutions methods: mg/L
For diffusion methods: mm

9. **Measurement_sign** (Mandatory)
>, <, =, <=, >=

10. **Resistance_phenotype** (Mandatory)
intermediate, susceptible, resistant, non-susceptible, not-defined

11. **Platform** (optional)
free-text