

Ensembl Browser Workshop

29th March 2023

helpdesk@ensembl.org

Welcome to the 'Living Document' for this Ensembl Browser Workshop. Everyone who is registered for the course has access to edit this document. Please feel free to use this document to ask questions to the Ensembl team throughout the workshop. If you wish to ask questions privately, please do not hesitate to contact the [Ensembl HelpDesk](#).

The 'Living Document' is a great way of capturing the knowledge exchanged during the course and saving it for future use by yourselves and those who can't attend this course. Remember - you don't have to contribute, but any additions will be welcomed!

The course learning outcomes are:

- Navigate Ensembl and Ensembl Genomes using the web browser platform.
- Access main data types in Ensembl: genomes, genes, genetic variation and comparative genomics.
- View genomic regions and manipulate the view to add features.
- Explore information about genes and their sequences.
- Analyse genomic variants and associated phenotypes and your own variation data using the VEP.
- View homologous genes and genomic regions.
- Export gene data in bulk using BioMart.

Course Overview

Schedule

Wednesday, 29th March 2023, 09:00-17:00 (GMT)

- Introduction to Ensembl
- Region in detail
- Genes and transcripts
- Variation and the Variant Effect Predictor (VEP)
- Comparative genomics
- BioMart

Trainers

[Louisse Paola Mirabueno](#)

Demo, exercises and slides available to download

https://training.ensembl.org/events/2023/2023-03-29-UniNigeria_browser

Feedback survey

<https://forms.gle/pSeVaT4cEkzGfWDs6>

We would really appreciate it if you could share your thoughts with us regarding these sessions. We are interested in your opinions, how you feel the experience has benefited you and how it could be improved. If you could find a few minutes to complete a short survey at the end of the last session it would really help us in improving the training we can deliver.

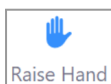
Workshop recording

(URL to be added)

The golden rules for efficient online training

We suggest everyone follows these few simple rules for the course to run as smoothly as possible:

- Mute all your microphones to reduce the background noise - only unmute when asking a question
- If you have questions during the course, either:
 - Unmute yourself and ask question out loud
 - Type your question in this shared reference document. Avoid typing in the Zoom chat as it is difficult to keep track there
- When you are ready to move on from a practical/exercises please click the Raise



Hand button so that the tutor knows you are ready and can proceed with the course. Please remember there are more exercises than we have time for. You are not expected to complete all of them, but rather pick and choose the ones most relevant to your work and you are welcome to finish them in your own time.

Resources:

www.ensembl.org - Ensembl genome browser (chordates)

grch37.ensembl.org - Ensembl archive for browsing data associated with the human GRCh37 genome assembly

www.ensemblgenomes.org - Ensembl Genomes genome browser (non-chordates)

www.ebi.ac.uk - EMBL-EBI website

www.ebi.ac.uk/services - EMBL-EBI databases and tools

[Train Online](#) - EMBL-EBI e-learning for our databases and tools

Questions

If you have any questions/problems that you would like to share and are applicable to the whole class please write them below. A tutor will answer your question.

Write your question after the last one you can see in this document and write your name.

1. <Name><Do you have data on endophytic fungi from plants?>
<Louisse><This is a very good question! We have over 1,5000 assemblies available and many include endophytic fungi. If you are interested in a particular one, you can search for it in the [species list](#). If you are looking for a list of all endophytic fungi available in Ensembl, this is a little more tricky. You can try and find a list of endophytes like [this one](#) and try to search for each species in Ensembl Fungi. I hope that this helps!>
2. <Name><Question>
<Tutor><Answer>
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Other resources

This section of the Living Document provides additional resources that might be useful to you in developing skills and knowledge in the course topic area.

Train online

EMBL-EBI provides an e-learning platform called [Train online](#). Train online provides free courses on Europe's most widely used data resources, created by experts at EMBL-EBI and collaborating institutes. You do not need to have any previous experience of bioinformatics to benefit from this training. We want to help you to become a confident user of our data resources; we are not trying to train you to become a bioinformatician.

Tutorials of interest might include:

- [Ensembl: Quick Tour](#)
- [Ensembl: Browsing Genomes](#)
- [Ensembl Genomes \(non-chordates\): Quick Tour](#)
- [Ensembl REST API](#)

Webinar series

The EMBL-EBI training team also runs regular [webinar series](#) featuring the EBI resources. See the [Training pages](#) for more information. You can also catch up on any webinars that you might have missed in [Train online](#) or on [Youtube](#).