Programme

Ensembl Browser Workshop

Great Zimbabwe University
Monday, 3rd November 2025

Welcome to the *Knowledge Document* for this Ensembl Train the Trainer 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 *Knowledge 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:

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

Course overview

Agenda

Monday, 3rd November 2025 (times shown in CAT)	
09:30 – 11:00	Introduction to Ensembl
11:00 – 11:30	Break
11:30 – 13:00	Exploring genomic regions
12:00 – 13:00	Genes and transcripts
13:00 – 14:30	Lunch break
14:30 – 15:30	Genes and transcripts
15:30 – 16:00	BioMart
16:00 – 16:30	Break
16:30 – 17:30	BioMart
17:30 – 18:00	Feedback and wrap-up

Trainer

Louisse Paola Mirabueno

Demo, exercises and slides available to download

https://training.ensembl.org/events/2025/2025-11-03-GZU_browser

Feedback survey

https://forms.gle/ujvYnocniWM6zs8c7

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.

Q&A

Q&A

If you have any questions and/or problems that you would like to share and apply to the whole class please add them below.

Write your **question** after the last one you can see in this document (you can add any screenshots if you think it might help. We will **answer** your question underneath.

1. **Q:** Can you provide us with a list of grants that we can apply for?

   A: Here are a few organisations you can apply for:

   - Wellcome Trust: https://wellcome.org/research-funding
   - Research grants from the European Commission:
     - https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/fellowships-and-individual-research-grants_en
     - https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls_en
   - Often, professional societies provide grants that you can apply for all-year round. You can find a list of societies here and here. Note that this is not an extensive list, and there are many more professional societies and associations.
   - List of international open funding opportunities: https://www.universitiesuk.ac.uk/universities-uk-international/explore-uuki/international-research-collaboration/global-research-and-innovation-funding

2. **Q:** Can you provide us with some introductory courses in command-line/bash scripting?

   A: Sandbox.bio has a great collection of interactive tutorials (i.e. you have a live terminal where you can write your code in and see the output straight away without having to install anything). Their Terminal Basics tutorial gives you a good overview of the basic commands that you will need in command-line/UNIX/bash scripting. For more advanced scripting, have a look at the Command Line Bootcamp by the Wurm Lab.

3. **Q: Can you give us links to courses that are free that align with biotechnology that offer certificates that are internationall**

A:

4. Q:

   A:

5. Q:

   A:

6. Q:

   A:

7. Q:

   A:

8. Q:

   A:

9. Q:

   A:

10. Q:

    A:

11. Q:

    A:

12. Q:

    A:

13. Q:

    A:

14. Q:

    A:

15. **Q:**

A:

Additional resources

Resources

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

Ensembl sites

There are several Ensembl sites (largely divided into divisions). Depending on your species of interest, you may want to visit one of the following:

- Ensembl (vertebrate species)
- Ensembl Genomes (non-vertebrate species)
- Portals:
    - Ensembl GRCh37
    - Ensembl COVID-19
- Ensembl Beta (new Ensembl website)
- Ensembl Projects (list of collaborations that Ensembl is involved in)

Ensembl training

For more in-depth Ensembl training, you can find links to online tutorials, walk-throughs and exercises below:

- Ensembl: Browser Webinar Series
- Ensembl: Browsing Genomes
- Ensembl Genomes (non-chordates): Quick Tour
- Visualising your own data in Ensembl
- Ensembl REST API
- Webinar: Introducing the New Ensembl Genome Browser
- Ensembl Training (walk-throughs and exercises)

EMBL-EBI training

- EMBL's European Bioinformatics Institute (EMBL-EBI)
- EMBL-EBI databases and tools
- The EMBL-EBI Training portal provides courses related to genomics and bioinformatics, including free on-demand online training, data resource tutorials and recorded webinars (available on the training portal or YouTube).