

Ensembl Genome Browser Workshop

Ensembl Genome Browser Workshop

Universidad Central
Monday, 10th March 2025

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:

- 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.
- Analyse genomic variants and associated phenotypes and your own variation data using the Variant Effect Predictor (VEP).
- View homologous genes and genomic regions.
- Export gene data in bulk using BioMart.

Course Overview

Agenda

Monday, 10th March 2025 (times shown in GMT ⁻⁵)	
09:00 – 10:00	Introduction to Ensembl
10:00 – 10:30	Region in detail view
10:30 – 10:50	Break
10:50 – 12:00	Genes and transcripts
12:00 – 13:00	Genetic variation
13:00 – 14:00	Lunch break
14:00 – 14:45	The Ensembl Variant Effect Predictor (VEP)
14:45 – 15:30	Comparative genomics
15:30 – 15:50	Break
15:50 – 16:50	BioMart
16:50 – 17:00	Feedback and wrap-up

Trainer

[Louisse Paola Mirabueno \(lpmirabueno@ebi.ac.uk\)](mailto:lpmirabueno@ebi.ac.uk)

Demo, exercises and slides available to download

https://training.ensembl.org/events/2025/2025-03-10-UniCentral_browser

Feedback survey

<https://forms.gle/KvBhAguFXuq1M8Qa7>

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.

Questions

If you have any questions/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:** How can I access virus genomes?

A: Ensembl only has the SARS-CoV-2 genome, but if you go to the European Nucleotide Archive (ENA), you can find more viral genomes and protein annotations there: <https://www.ebi.ac.uk/genomes/virus.html> and <https://www.ebi.ac.uk/ena/browser/text-search?query=virus>. There was also a past online course titled 'Bioinformatics approaches to viruses' if you would like to explore other bioinformatics resources for the study of viral genomes. You can access the materials and recordings for free via at <https://www.ebi.ac.uk/training/materials/bioinformatics-approaches-to-viruses-materials/>.

2. **Q:**

A:

3. **Q:**

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:

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.

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