UCSC Genomebrowser

04/10/2022
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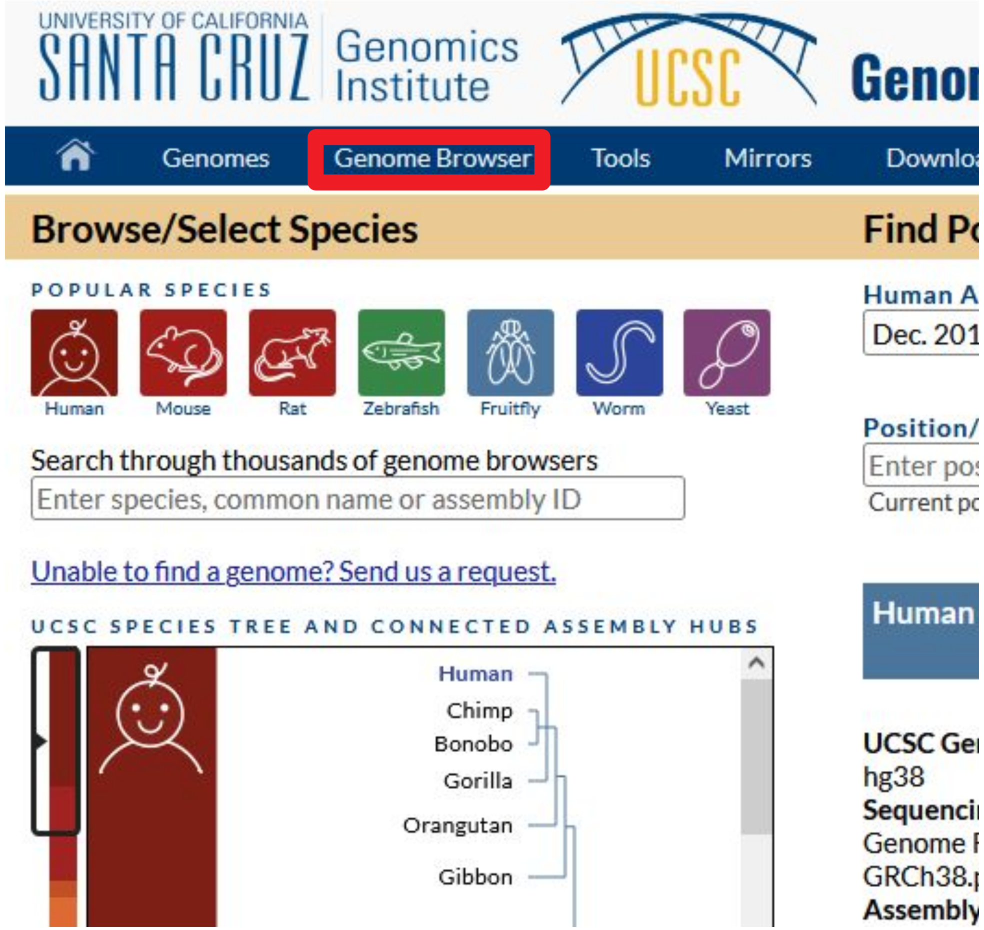
WHAT IS IT?

- A graphical interface used to display biological information.
- Enables us to visualize entire genomes
- Compare our own samples against a genome through “trackhubs”
- **https://genome-euro.ucsc.edu/**



Search through thousands of genome browsers

Enter species, common name or assembly ID

Unable to find a genome? Send us a request.

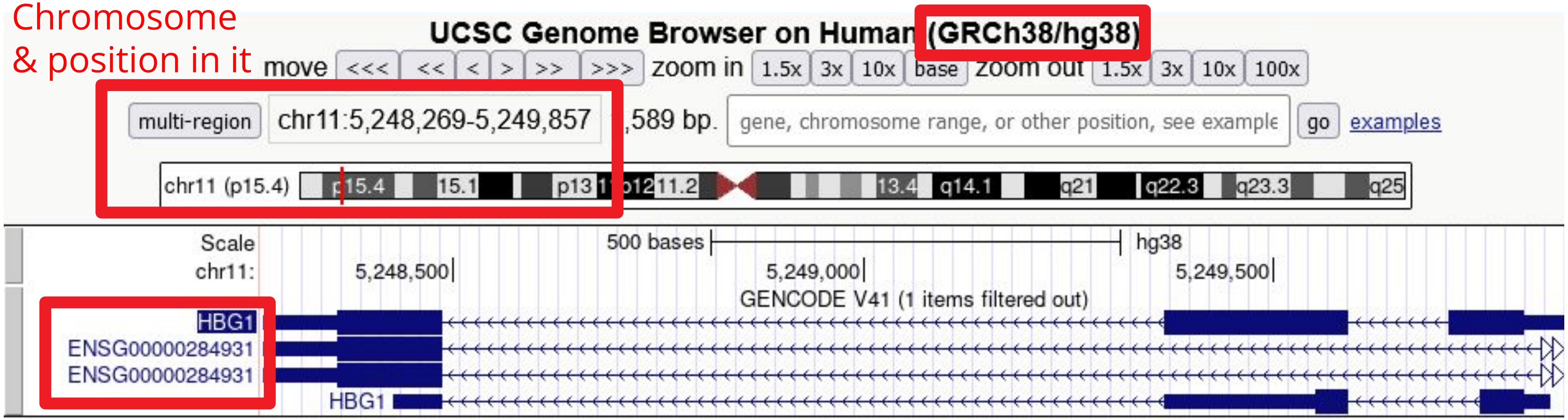
UCSC Ge
hg38
Sequenci
Genome R
GRCh38.p
Assembly

THE BROWSER

- **https://genome-euro.ucsc.edu/**

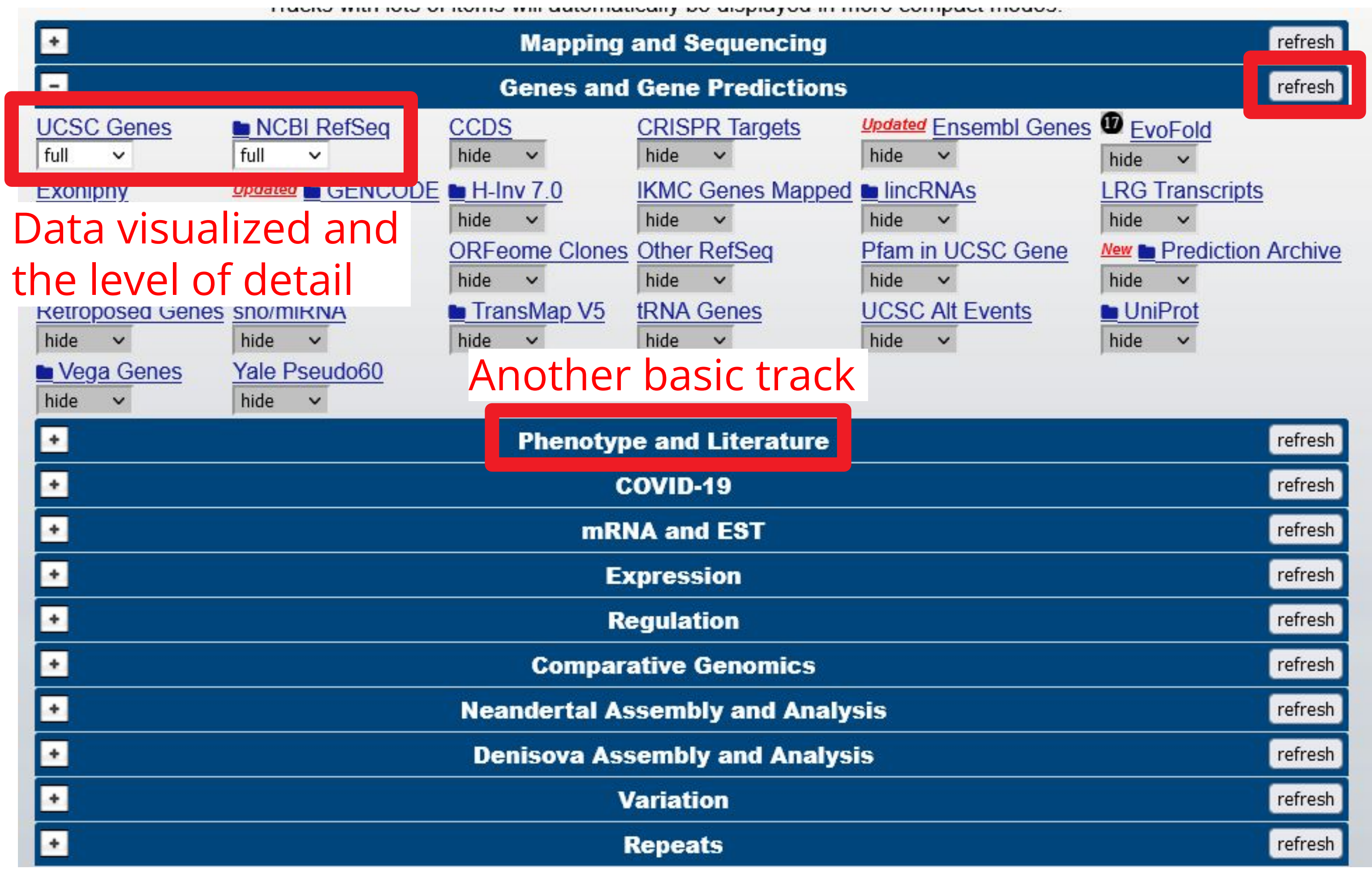
Aligned to hg38

Chromosome
& position in it



Visualized hemoglobin 1

THE BROWSER



UCSC Genes: full
NCBI RefSeq: full
CCDS: hide
CRISPR Targets: hide
Ensembl Genes: hide
EvoFold: hide
Exoniphy
GENCODE
H-Inv 7.0: hide
IKMC Genes Mapped: hide
lincRNAs: hide
LRG Transcripts: hide
ORFeome Clones: hide
Other RefSeq: hide
Pfam in UCSC Gene: hide
Prediction Archive: hide
Retroposed Genes: hide
sno/miRNA: hide
TransMap V5: hide
tRNA Genes: hide
UCSC Alt Events: hide
UniProt: hide
Vega Genes: hide
Yale Pseudo60: hide

Any changes need to be refreshed

Data visualized and the level of detail

Another basic track

DISPLAYING CUSTOM DATA

- UCSC requires genomic data in the bigwig format
  - Can be loaded by clicking on “my data” -> “custom tracks”

- To save time, it also accepts trackhubs
  - Which is basically a collection of bigwigs

- Previously mention pipeline seq2science creates trackhubs

- Find the current trackhub at:

  https://mbdata.science.ru.nl/ghe_2022/day2/trackhub/RNA-seq_trackhub.hub.txt

DISPLAYING CUSTOM DATA

Click here to connect a custom hub

Enter hub URLs below to connect hubs. Hubs connected this way are users by default.

If you wish to share your hub you can create a session link. First, connect the hub and configure the tracks image as desired, t publications and shared freely. You, as the author, also have the power to update the session contents freely. Alternatively, you hubs, and custom tracks.

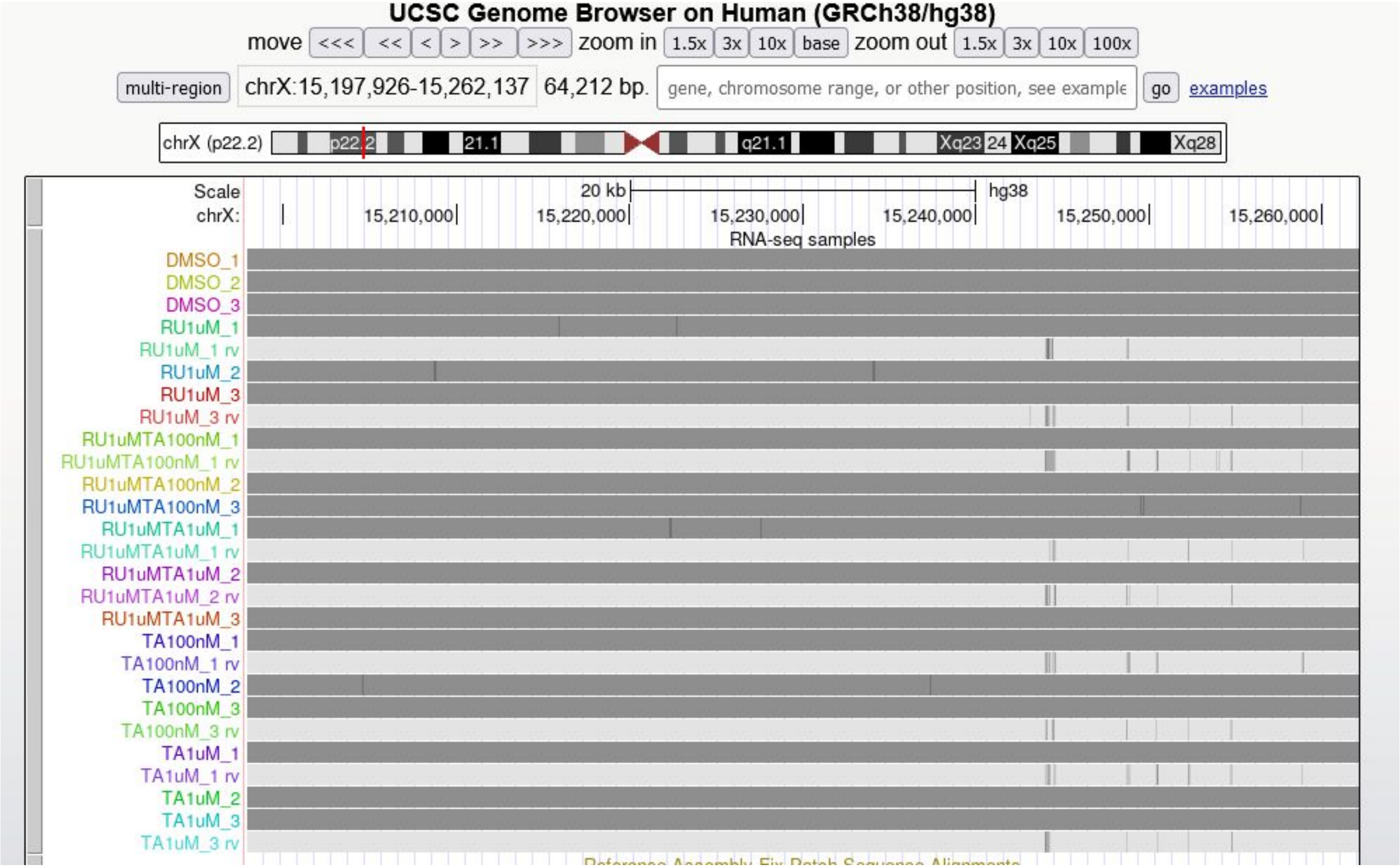
Contact us if you wish to submit a hub to the list of public hubs.

URL: https://mbdata.science.ru.nl/ghe_2022/day2/trackhub/RNA-seq_trackh

Insert the url and click “add hub”

- Enter its URL into the input box above and click 'Add Hub'.
- Alternatively, you can go to the 'Public Hubs' tab on this page and connect one of the hubs that were submitted to us.
- Another way to connect to hubs is via a direct connection link copied using the copy icon, shown on this page, when a hub is connected.
- You can also connect to hub by following a short link to a saved session, created though the menu 'My Data > My Sessions', if the Genome Browser had connected hubs when the session was saved.

DISPLAYING CUSTOM DATA



chrX:15,197,926-15,262,137 64,212 bp.