Diary – Variant to Gene Mapping analysis (since 20/10/2023)

**20/10/2023**

Updates scripts for GTEx colocalisation. Worked on the 004\_concat\_results.R

Created a .xlsx file in the src/report/Variant\_to\_Gene\_Tables.xlsx; for tables on V2G analysis. Put a table with colocalisation data: locus, tissue, N\_gene\_sign/N\_gene\_tot

I still have to modify files for eQTLGen colocalisation; still to obtain GTExV8 files for Colon\_Transverse and Colon\_Sigmoid

Did colocalisation for ‘Stomach’ and ‘Small\_Intestine\_Terminal\_Ileum’ **\***

**23/10/2023**

We have OK for using U-BIOPRED eQTL data with genotyped data.

We have OK for using UBC Lung eQTL data.

There was an error in the script to run colocalisation with GTExV8. So I had to run colocalisation again for ‘Stomach’ and ‘Small\_Intestine\_Terminal\_Ileum’ **\***

After discussion with team, I do colocalisation only if the eQTL data for the tissue-gene-credset region contains significant association, aka pvalue <= 5x10-6. 🡪 Updated 003\_run\_coloc\_susie\_GTEx.R to integrate this step.

Update scripts with some quality checks as well on the number of genes analysed, analysed by colo, analysed by coloc.susie

**24/10/2023**

Add additional checks in the colocalisation with GTExV8.

Removed the additional checks line form the Var\_to\_Gene\_pipeline.sh and some from 003\_run\_coloc\_susie\_GTExV8.R

Submit coloc for GTExV8 ‘Lung’, ‘Small Intestine Terminal Ileum’, ‘Stomach’, ‘Esophagus Muscularis’.

**30/10/2023**

Re-read the report as it is up today, and updated it a little.

Put a new check to find if all the genes for each tissue have been analysed.

Run colocalisation for 'Esophagus\_Gastroesophageal\_Junction', ‘Artery\_Tibial’, ‘Artery\_Coronary’

STILL NEED TO RUN COLOCALISATION FOR ‘ARTERY\_AORTA’

STILL NEED TO CREATE eQTL FILES FOR COLON\_TRANSVERSE AND COLON\_SIGMOID.

NEED TO CODE 004\_concat\_coloc\_results.R FOR COLOC.SUSIE RESULTS