J147 VS CAD-31

A comparison study between two promising drugs for alzheimers disease

Introduction

In this analysis two studies for novel treatments for alzheimers disease(AD) where compared. The CAD-31 drug is a derivative of the J147 drug, these were experimented on so called SAMP8 mice. Samples were taken from the hippocampal region to be RNA-sequenced.

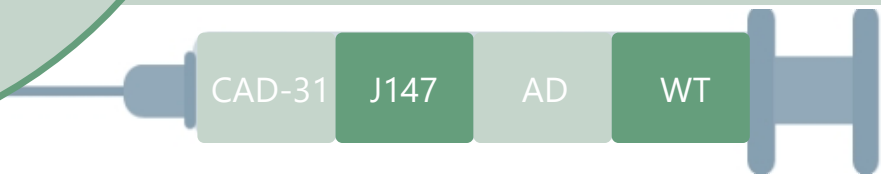
Materials and Methods

Organism: mus musculus: samp8 (induced AD)

Software: R; rstudio; edgeR; KEGG

Statistics: FDR, logfoldchange

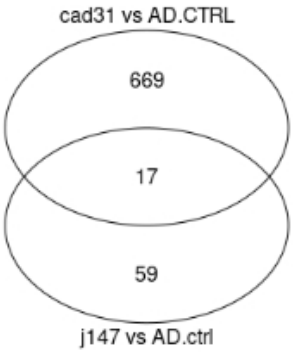
Samples:



Results

The J147 drug showed a lot less differently expressed genes in comparison to the CAD-31 drug. But they both show a different expression in mainly synaptic pathways, regulating the effect of AD.

AD Pathway	pSize	pNDE	pPERT
CAD-31	21	1	0.31
j147	2	1	0.228

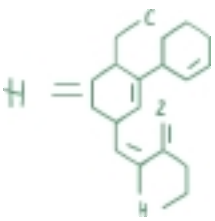


Conclusion

Its hard to draw conclusions from the study, but the CAD-31 drug seems to affect a lot more genes than its counterpart. Further experiments are needed to determine if these drugs are viable candidates to treat alzheimer disease. But so far they show promising results.

References

[geo, cad-31] https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE93678
[pubmed, cad-31] https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC5513091/
[geo, j147] https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE69244
[pubmed, j147] https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC4694064/



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