

Presentations of the future

Rayna M. Harris

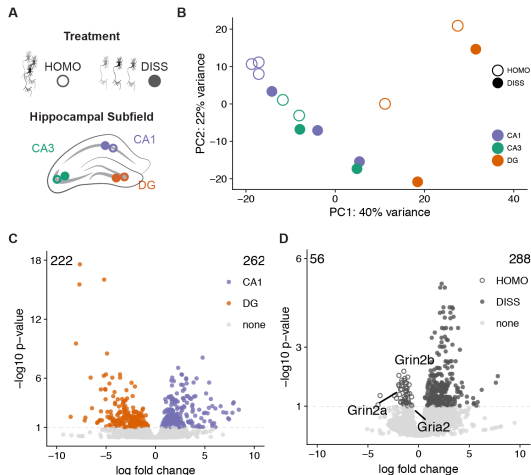
<https://github.com/raynamharris/DissociationTest>

20 April 2018

First Slide

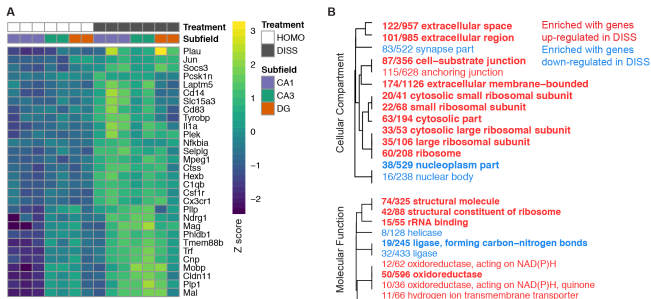
- ▶ figures from ongoing research
- ▶ past ideas
- ▶ past projects
- ▶ more ideas

Cellular dissociation has minors effect on hippocampal gene expression



► https://github.com/raynamharris/DissociationTest/blob/master/scripts/01_DissociationTest.Rmd &

Top 20ish differentially expressed genes



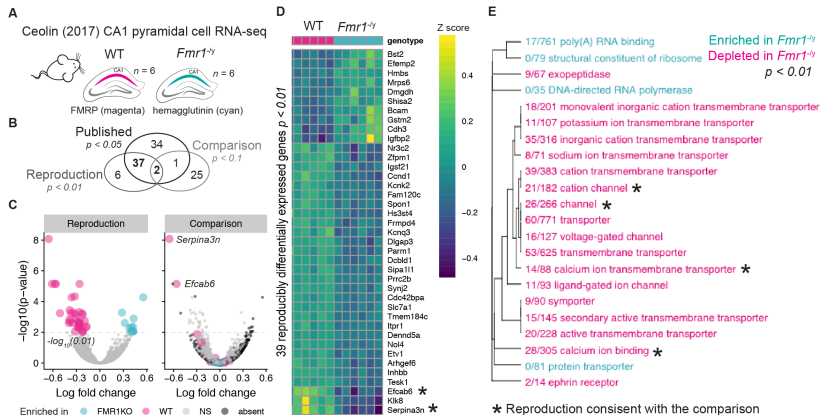
- ▶ https://github.com/raynamharris/DissociationTest/blob/master/scripts/04_heatmaps.Rmd
- ▶ https://github.com/raynamharris/DissociationTest/tree/master/scripts/05_GO_MWU/05_GO_MWU.Rmd

Searchable supplementary file

```
suptable <- read.csv("../results/SuppTable1.csv")  
tail(suptable, 10)
```

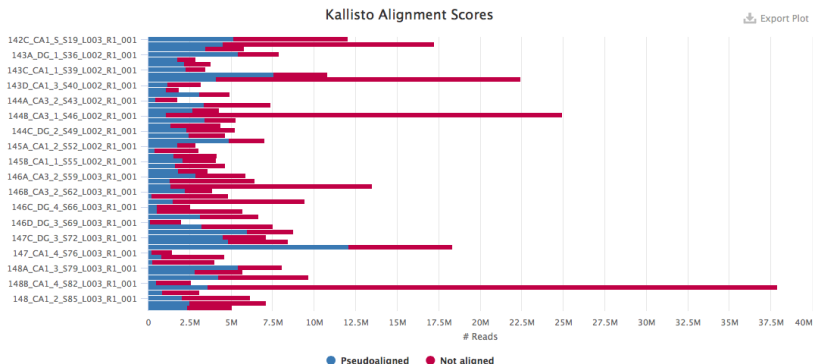
##	gene	lfc	padj	upregulated.in
## 335	Rpsa	1.10	0.0959	DISS
## 336	Slc25a10	2.90	0.0959	DISS
## 337	Spry1	2.20	0.0959	DISS
## 338	Tango2	1.80	0.0959	DISS
## 339	Ubqln1	-1.10	0.0974	HOMO
## 340	Gadd45b	1.50	0.0984	DISS
## 341	Gsk3b	-0.90	0.0984	HOMO
## 342	Atrx	-1.10	0.0992	HOMO
## 343	Itpr3	3.10	0.0992	DISS
## 344	Gria2	-0.84	0.0997	HOMO

Reproducing and comparing published studies



https://github.com/raynamharris/FMR1CA1rnaseq/blob/master/scripts/05_Ceolin.md

Kallisto + MultiQC

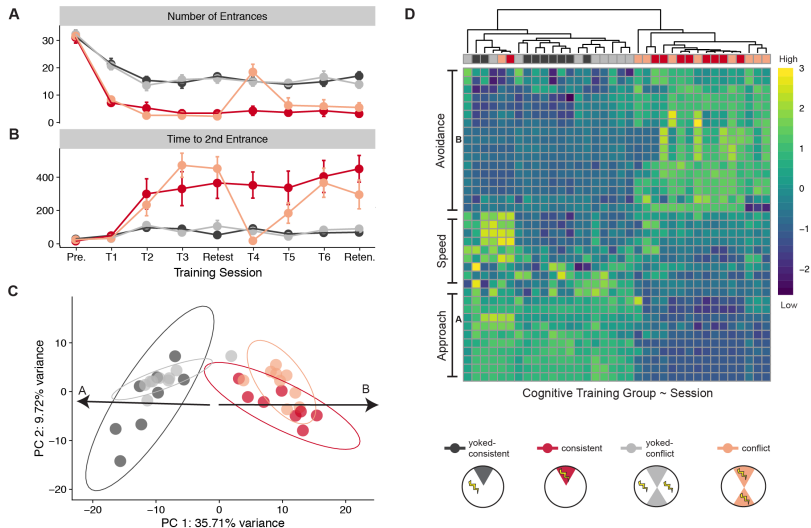


1. https://github.com/raynamharris/IntegrativeProjectWT2015/blob/master/UNIXworkflow/04_kallisto.md

Repeated workflows from different time and space

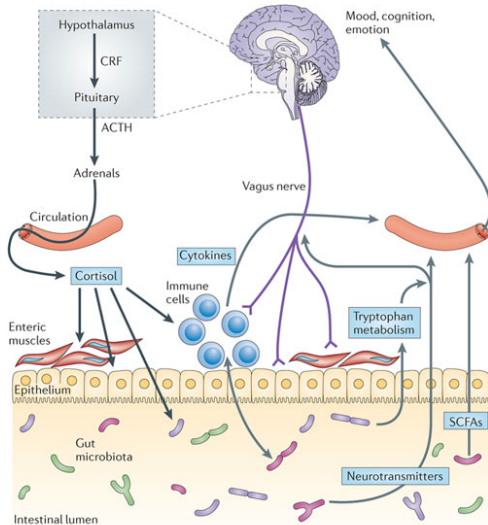
1. <https://github.com/raynamharris/IntegrativeProjectWT2015/>
2. <https://github.com/raynamharris/DissociationTest/>
3. <https://github.com/raynamharris/FMR1CA1rnaseq/>

Neuroscientists versus data scientists



<https://github.com/raynamharris/IntegrativeProjectWT2015>

Gut brain interactions



Hackathons

Working away at Latin American @swcarpentry + @datacarpentry
lesson translation doathon #opencon #opencon2017
<https://twitter.com/cloudaus/status/930046313940516867>

Las invitamos este sábado 13 a 20h a @rlyehlab a traducir lo poco
que queda a @swcarpentry para estar completo en español!
<https://twitter.com/rlyehlab/status/966814087337431040>

Future Workshops

Want to Know More?

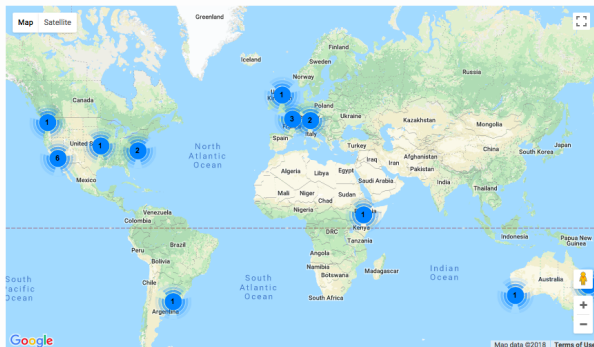
See our [FAQ](#).

Want to Run a Workshop?

See our [operations guide](#).

Want to Host a Workshop?

Please [fill in this form](#).



Future Workshops

1

¹<https://software-carpentry.org/workshops/>

Most recent citations:

Brawand D, Wagner CE, Li YI, Malinsky M, Keller I, Fan S, Simakov O, Ng AY, Lim ZW, Bezault E, et al. [The genomic substrate for adaptive radiation in African cichlid fish](#). Nature. 2014 Sep 18;513(7518):375-381. doi: 10.1038/nature13726. Epub 2014 Sep 3. PubMed PMID: 25186727; PubMed Central PMCID: PMC4353498.

Fischer EK, Harris RM, Hofmann HA, Hoke KL. [Predator exposure alters stress physiology in guppies across timescales](#). Horm Behav. 2014 Feb;65(2):165-72. doi: 10.1016/j.yhbeh.2013.12.010. Epub 2013 Dec 23. PubMed PMID: 24370688.

Harris RM, Dijkstra PD, Hofmann HA. [Complex structural and regulatory evolution of the pro-opiomelanocortin gene family](#). Gen Comp Endocrinol. 2014 Jan 1;195:107-15. doi: 10.1016/j.ygcen.2013.10.007. Epub 2013 Nov 1. PubMed PMID: 24188887.

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Recent Activity

Time	Database	Type	Term
19-Apr-2018	PMC	record	Feather Development Genes and Assoc...
19-Apr-2018	PubMed	record	CIRCLE-seq: a highly sensitive in v...
19-Apr-2018	PubMed	record	Circular RNA expression profiles an...
18-Apr-2018	PubMed	record	Role for rapid dendritic protein sy...
18-Apr-2018	PubMed	record	Fragile X mental retardation protei...
18-Apr-2018	PubMed	record	Gene expression during memory forma...
18-Apr-2018	PubMed	record	Identification of hippocampus-relat...
18-Apr-2018	PMC	record	Hipposeq: a comprehensive RNA-seq d...
18-Apr-2018	PMC	record	An anatomically comprehensive atlas...

Long term access to data and outputs

Outline

Highlights

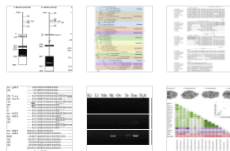
Abstract

Keywords

1. Introduction
 2. Materials and methods
 3. Results
 4. Discussion
 5. Conclusion
- Acknowledgments
- Appendix A. Supplementary data
- References

Show full outline 

Figures (6)



Extras (1)

 Supplementary Tables 1–4



General and Comparative Endocrinology

Volume 195, 1 January 2014, Pages 107–115



Complex structural and regulatory evolution of the pro-opiomelanocortin gene family

Rayna M. Harris ^{a, b}, Peter D. Dijkstra ^a, Hans A. Hofmann ^{a, b, c, d, e} 

 **Show more**

<https://doi.org/10.1016/j.ygcen.2013.10.007>

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Highlights

- *pomc alpha* duplicated independently numerous times in teleost evolution.
- Cichlid fishes express three *pomc* genes: *pomc alpha 1*, *alpha 2*, and *beta*.
- Cichlid and damselfish *pomc beta* genes encode a novel melanocortin, ϵ -MSH.
- Paralogous *pomc* promoters have unique transcription factor binding site profiles.

https:

[//doi.org/10.1016/j.ygcen.2013.10.007](https://doi.org/10.1016/j.ygcen.2013.10.007) <https://www.sciencedirect.com/science/article/pii/S001664801300419X?via%3Dihub>