Peaks and valleys of prolactin during parental care

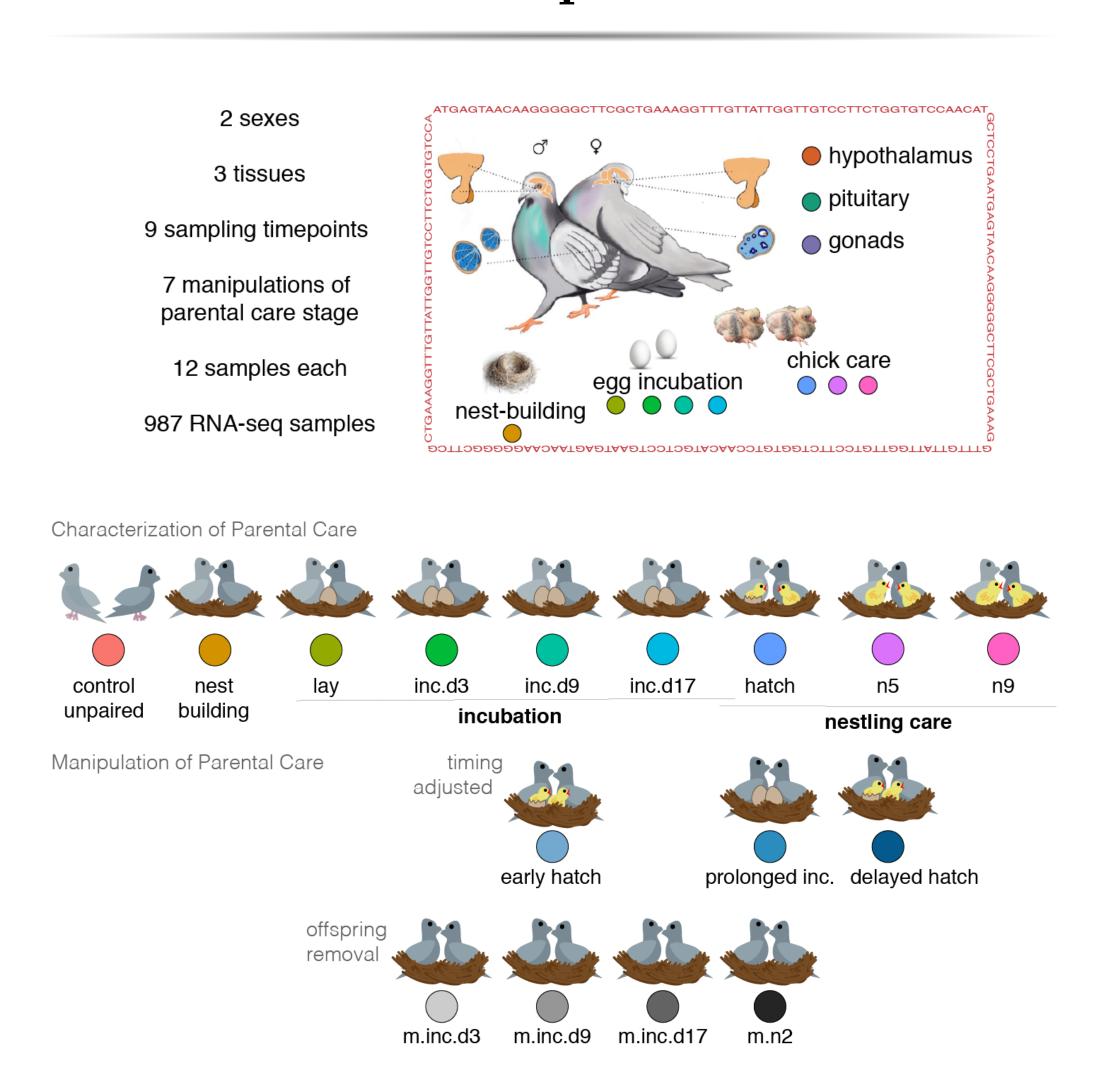
Rayna M. Harris (@raynamharris)*1, Suzanne H. Austin*2, Victoria Ferrar¹, April Booth¹, Rechelle Viernes¹, Jesse Krause¹, Andrew Lang³, Matthew MacManes³, Rebecca M. Calisi (@BeccaCalisi)¹

*co-first authors, 1. University of California, Davis, 2. Oregon State University, 3. University of New Hampshire

Research background

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Using a bi-parental pigeon to explore how systems change over the course of parental care



For more information visit

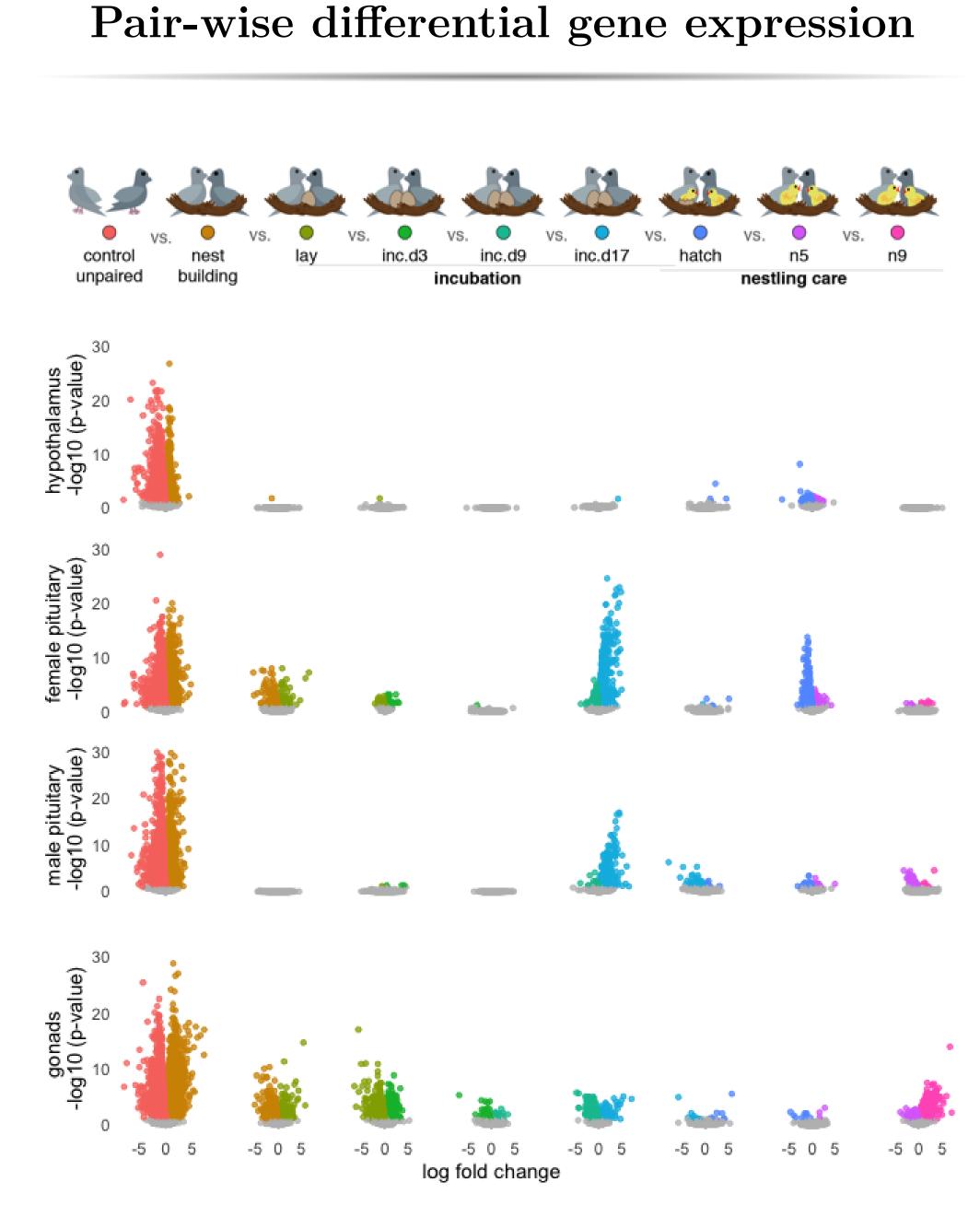
http://calisilab.ucdavis.edu/. All the data
and analyses are available on GitHub at
https://github.com/macmanes-lab/
DoveParentsRNAseq.







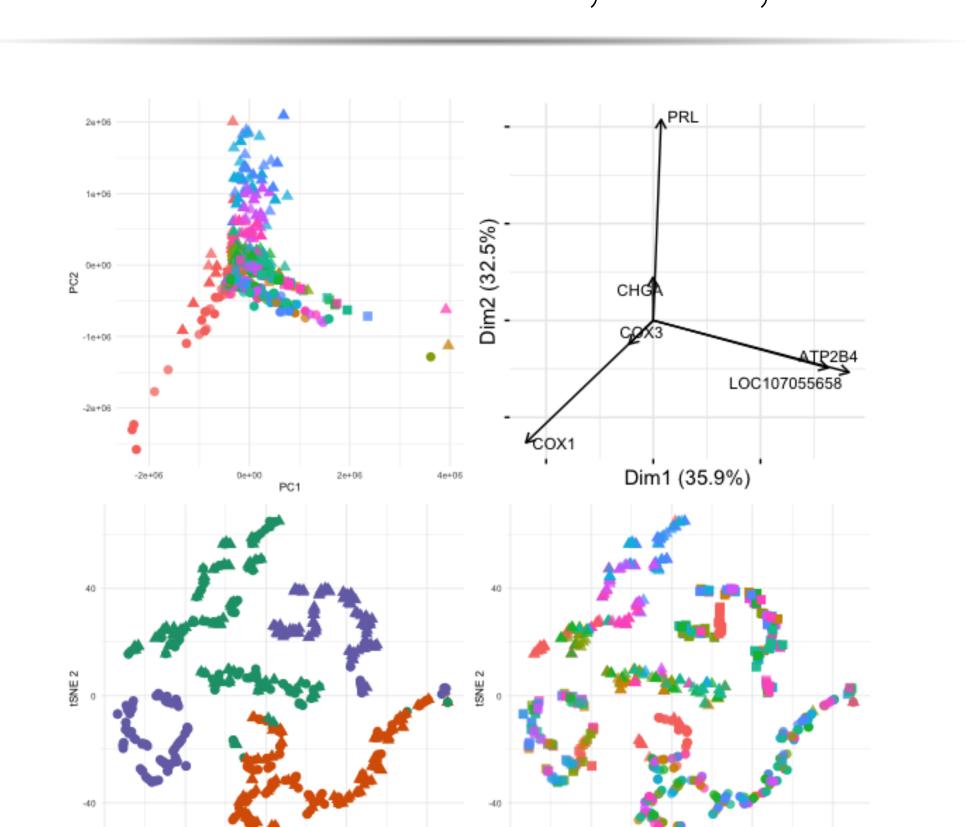
Characterization of parental care gene expression



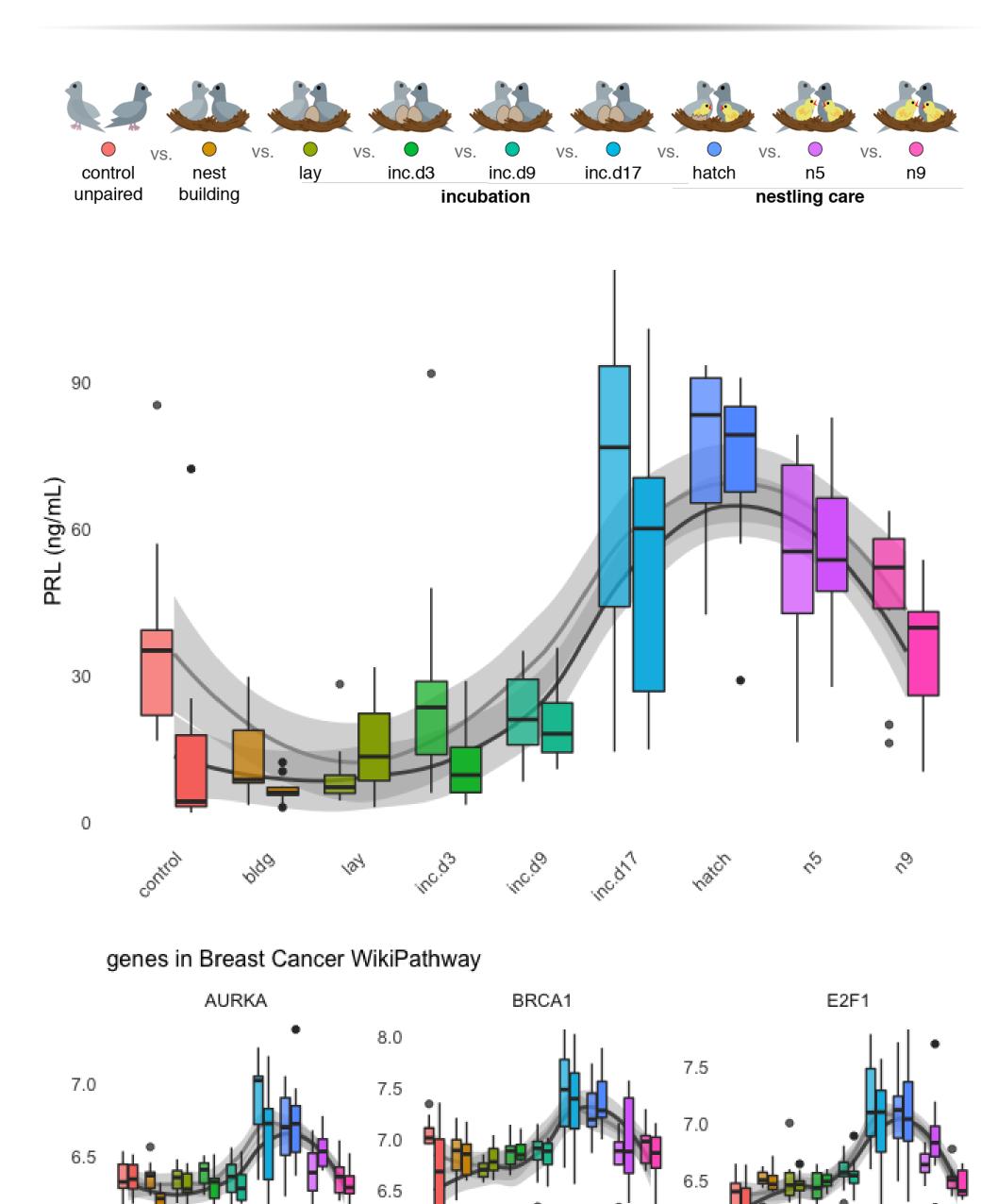
Noticable large changes in gene expression include:

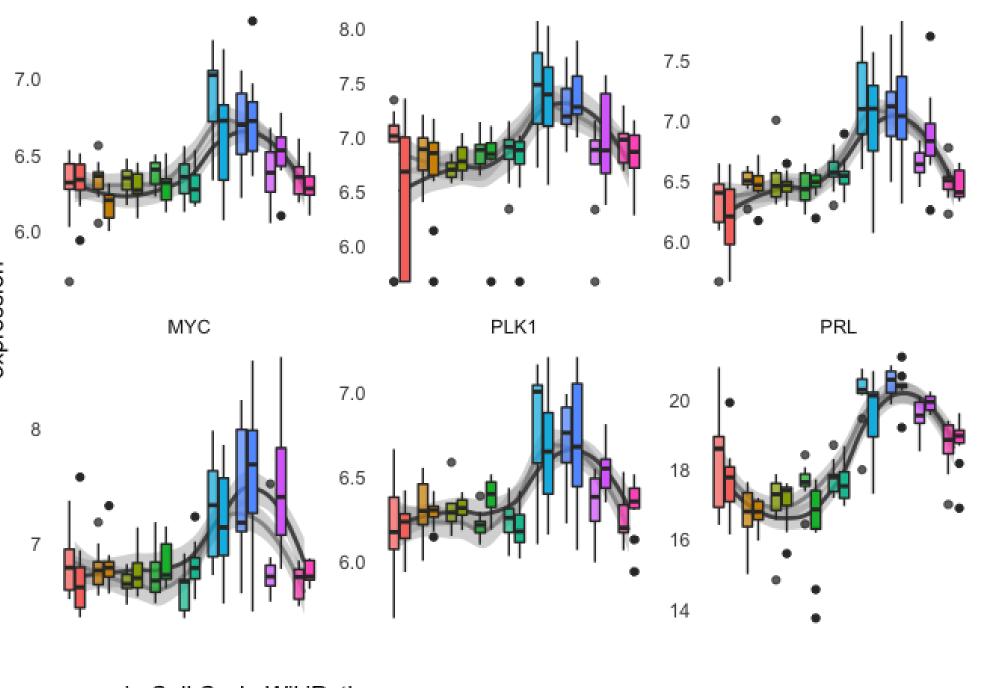
- control to nest-building transition alters expression of 1000s of genes
- incubation day 9 to 17 transition alters expression of 1000s of genes

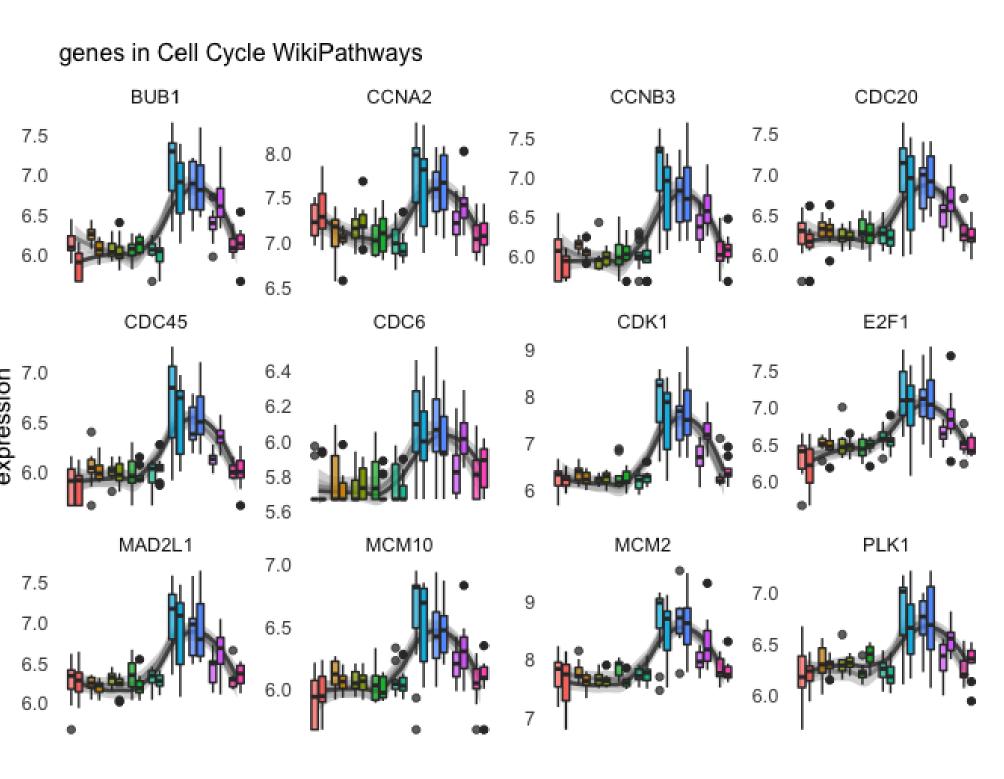
Variance due to treament, tissue, and sex



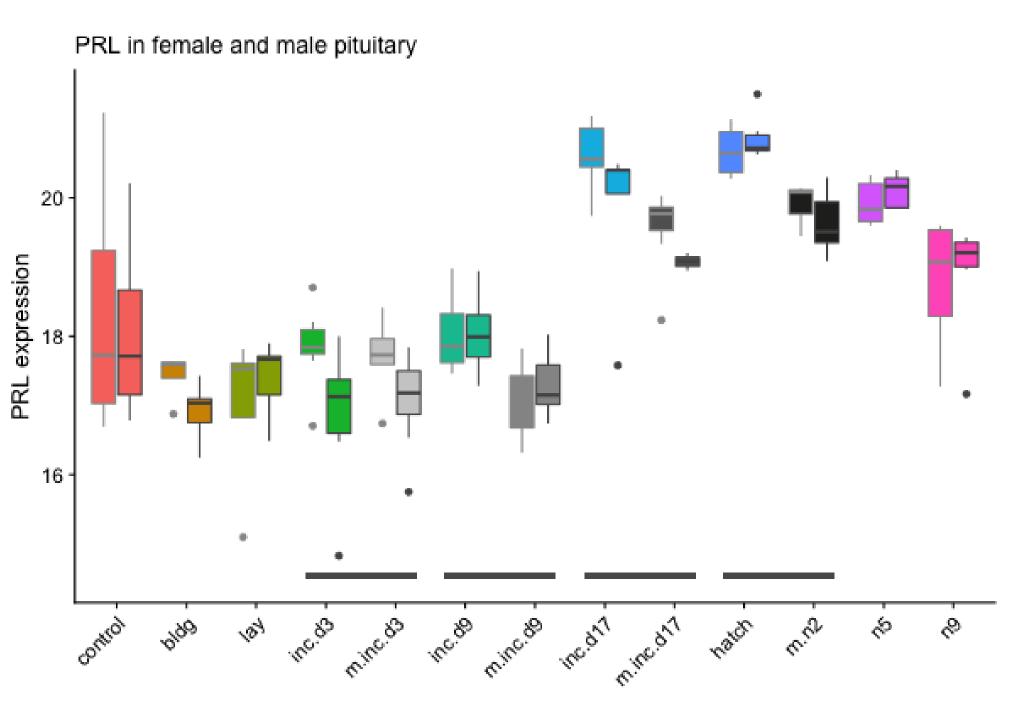
Prolactin explains a lot

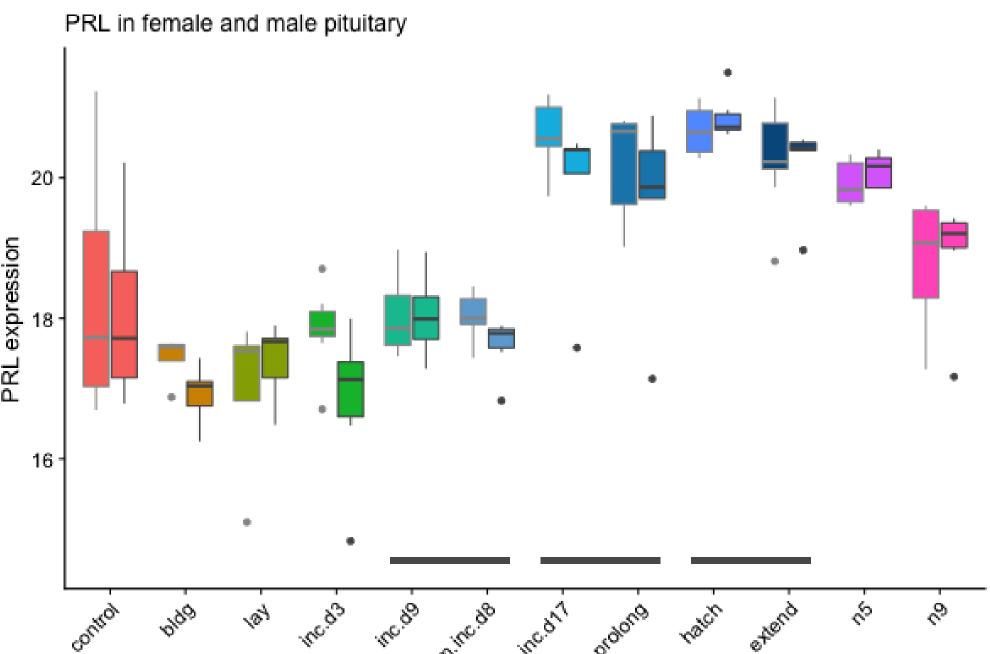






Manipulation





Next steps

- Create an open source R package.
- Share tutorials for how to use the function.

Acknowledgements

We are grateful to members of laboratories supervised by RMC, MM, C. Titus Brown, John Wingfield, Tom Hahn, and Marilyn Ramenofsky for comments and discussion. We thank over 20 undergraduate researchers who helped care for our bird colony. This work is funded by the National Science Foundation, IOS 1455957, to RMC and MM.

Made with \(\mathbb{E}\)TEXfor the 2019 meeting of the Society for Behavioral Neuroendocrinology.