Peaks and valleys of prolactin during parental care

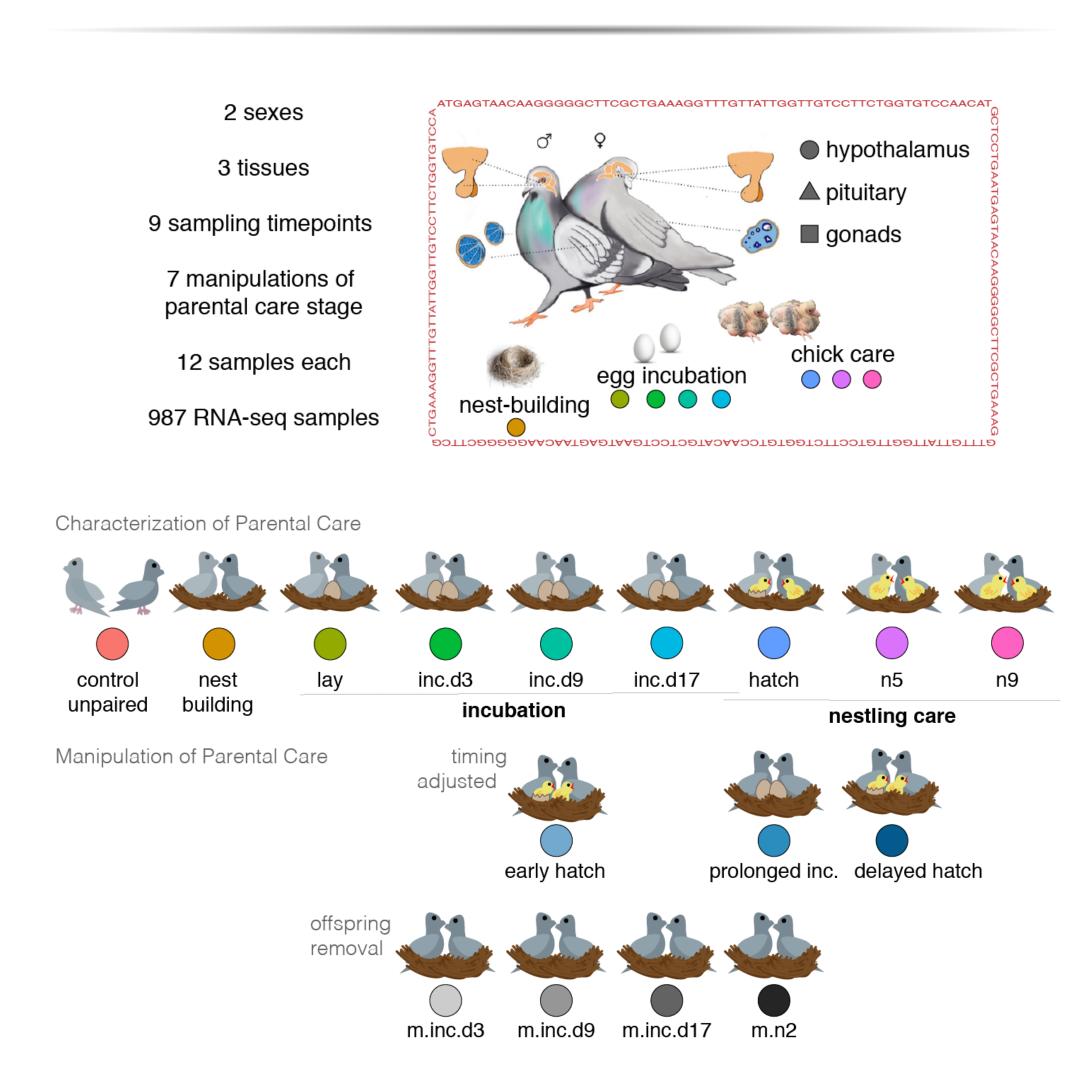
Rayna M. Harris (@raynamharris)*1, Suzanne H. Austin*2, Victoria Ferrar¹, April Booth¹, Rechelle Viernes¹, Jesse Krause¹, Andrew Lang³, Matthew MacManes³, Rebecca M. Calisi (@BeccaCalisi)¹

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

Research background

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ut iaculis dui. Vestibulum sollicitudin, metus ultricies porta tincidunt, sapien lorem aliquet lacus, et rhoncus diam nibh eu nisl. Pellentesque leo quam, commodo id volutpat non, commodo pharetra odio. Nullam ultricies fermentum diam et imperdiet. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ut iaculis dui. Vestibulum sollicitudin, metus ultricies porta tincidunt, sapien lorem aliquet lacus, et rhoncus diam nibh eu nisl.

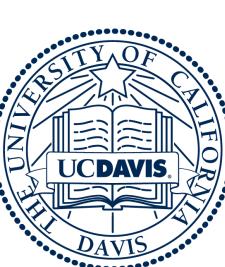
Using a bi-parental pigeon to explore how systems change over the course of parental care



For more information visit

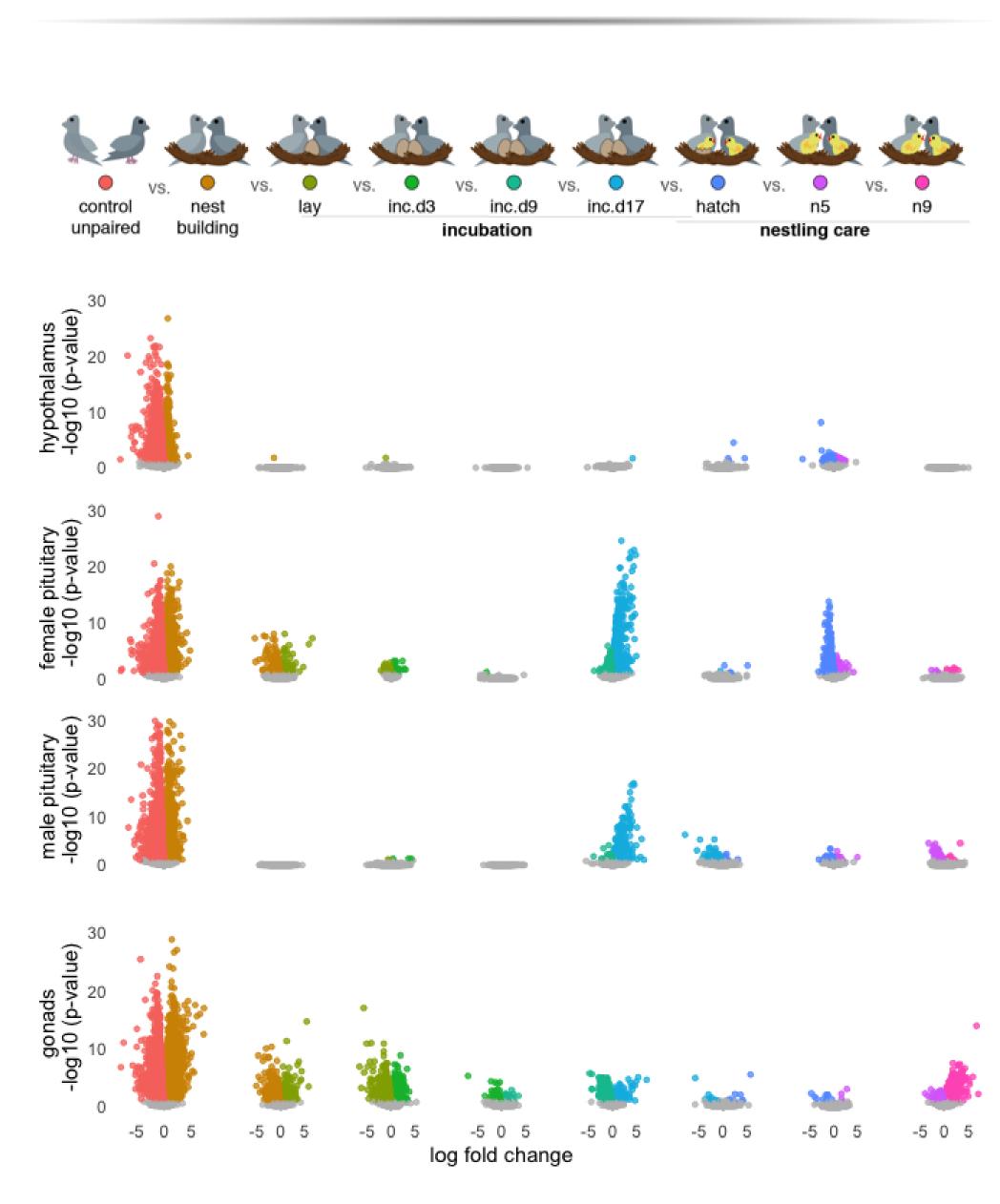
http://calisilab.ucdavis.edu/. All the data
and analyses are available on GitHub at
https://github.com/macmanes-lab/
DoveParentsRNAseq.







Characterization of parental care gene expression

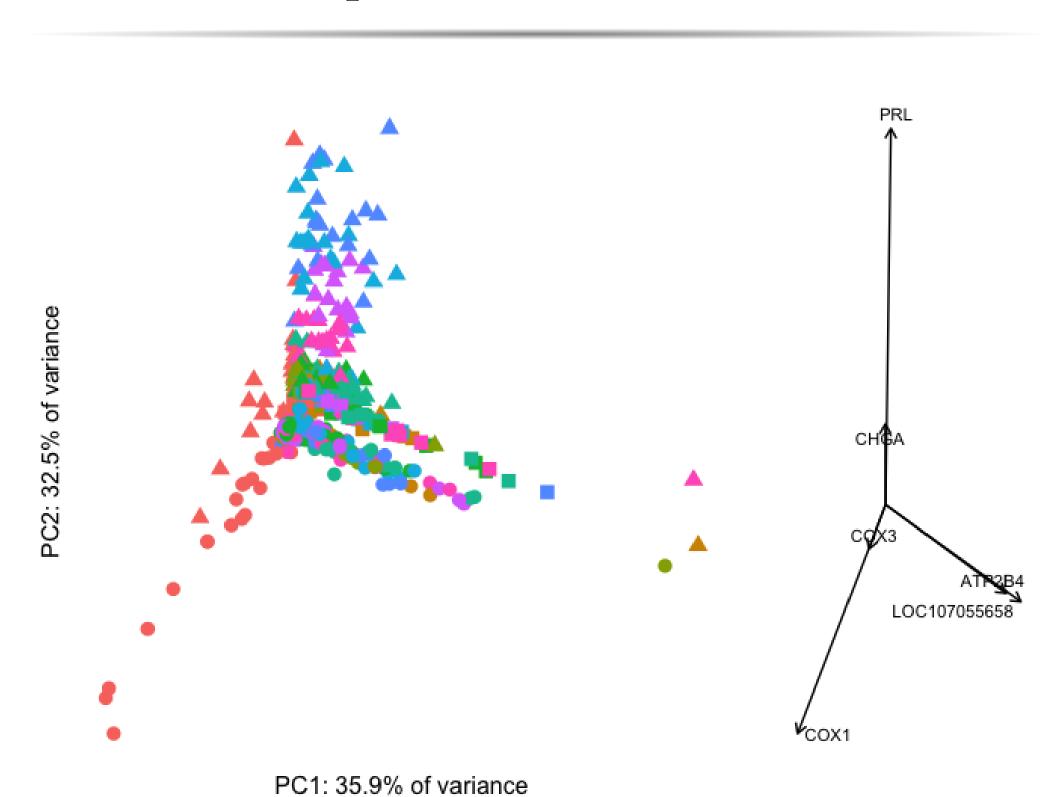


Pair-wise differential gene expression

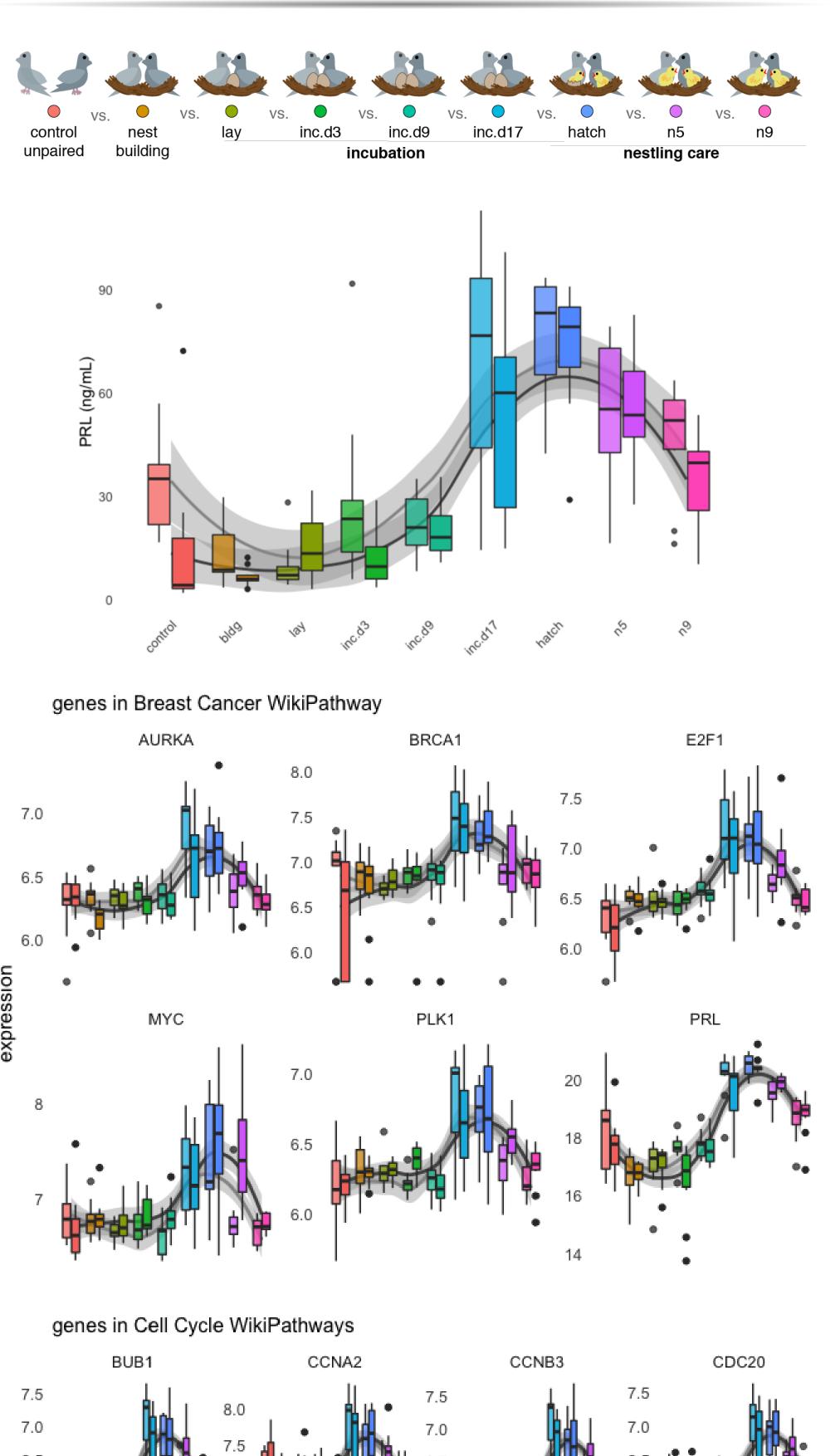
Noticable large changes in gene expression include:

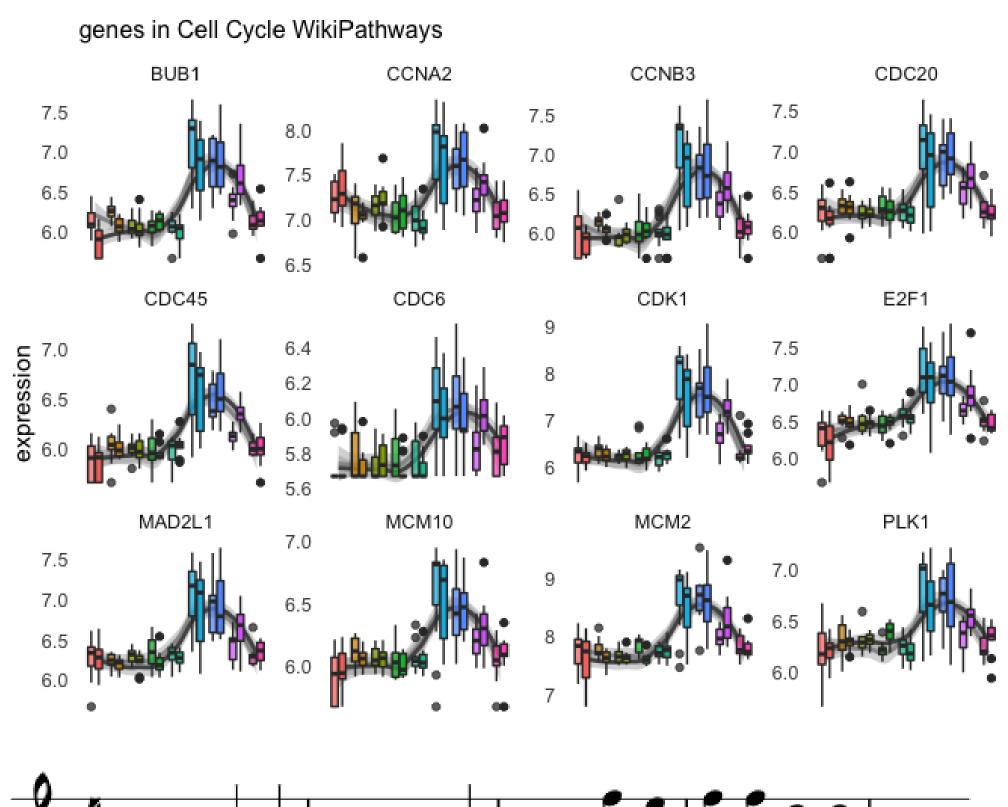
- control to nest-building transition alters expression of 1000s of genes
- incubation day 9 to 17 transition alters expression of 1000s of genes

Prolactin explains much of the variation

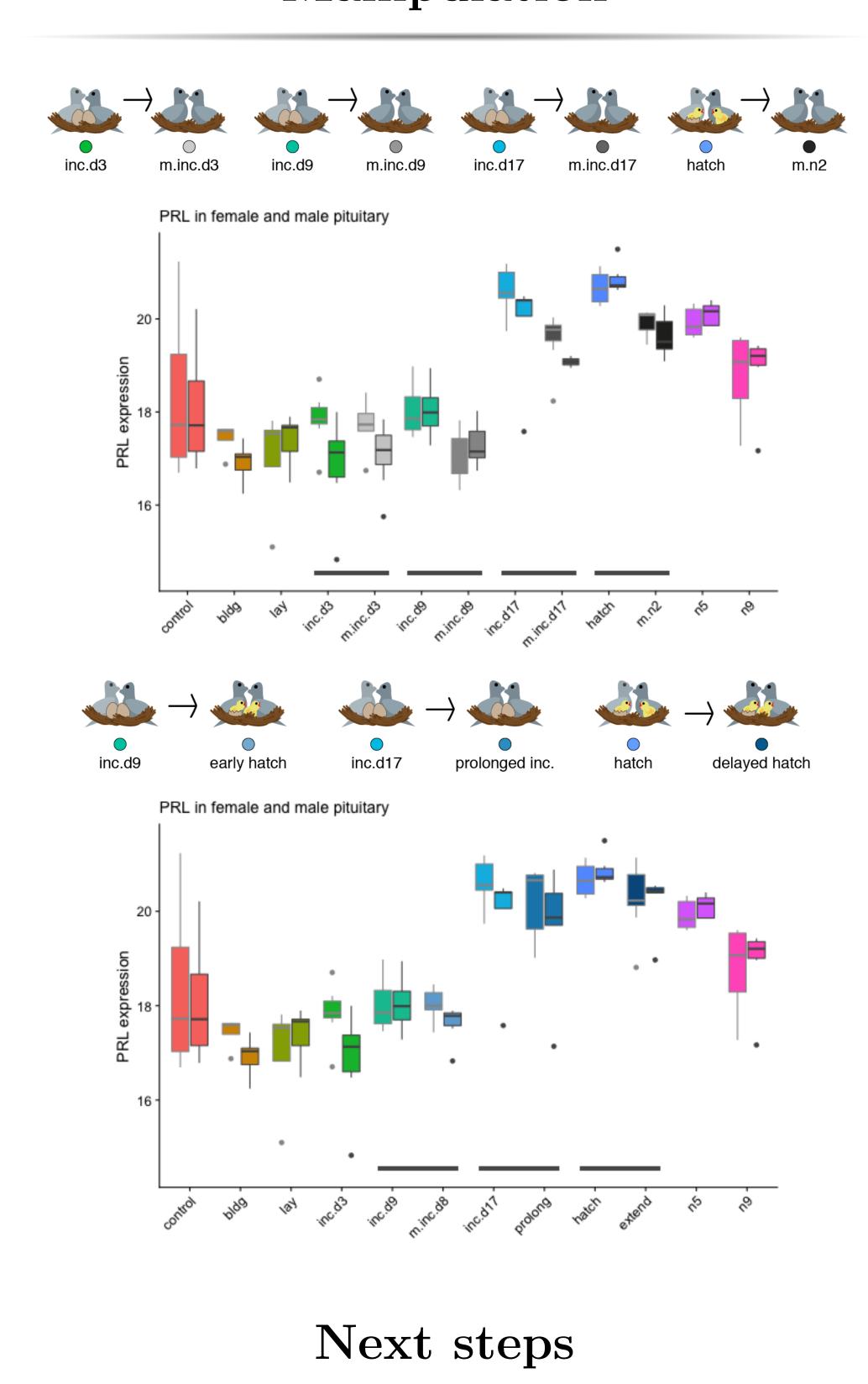


Genes vary in concert with prolactin





Manipulation



- 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 2020 meeting of the Society for Integrative and Comparative Biology.