

Name: Joseph Rodriguez, Ph.D.

Education:

2001 S.B. (Biology), Massachusetts Institute of Technology  
2005 M.S. (Bioinformatics), Boston University  
2012 Ph.D. (Molecular and Cell Biology), Brandeis University

Brief Chronology of Employment:

1998-1999 Undergraduate Research, Department of Biology, Massachusetts Institute of Technology  
2001-2004 Genome Closure Data Analyst, Broad Institute, Massachusetts Institute of Technology  
2004 Computational Biology Summer Intern, Randstad at BiogenIdec  
2004 Research Assistant, Boston University  
2005 Computational Biology Summer Intern, Randstad at BiogenIdec  
2005-2007 Bioinformatics Analyst, Whitehead Institute  
2007-2012 Graduate Student, Department of Biology, Brandeis University  
2012-2018 Cancer Research Training Award Postdoctoral Fellow, Laboratory of Receptor Biology and Gene Expression National Cancer Institute, National Institutes of Health  
2018-present Tenure-Track Investigator, Epigenetics & Stem Cell Biology Laboratory, National Institute of Environmental Health Sciences

Honors and Other Special Scientific Recognition

Integrative Graduate Education and Research Traineeship Program 2009-2011  
NCI-CCT Diversity Career Development Program trainee 2016  
NIH Fellow's Award for Research Excellence (FARE) 2017

Teaching Assistant

Genetics and Molecular Biology  
General Biology Laboratory  
Molecular Biology (Graduate Level)

Research Interests:

Transcription, and RNA processing dysregulation in cancer

Abstracts:

1. Rodriguez J, Khodor YL, Tang CH, Menet JS, Vodala S, Rosbash M Cotranscriptional pre-mRNA splicing and editing in Drosophila and mouse, Cold Spring Harbor Eukaryotic mRNA Processing 2011
2. Rodriguez J, Chow CC, Larson DR Regulation of estrogen-responsive genes in single human cells ASCB Annual Meeting 2016

## Talks:

1. Rodriguez J, Vodala S, Rosbash M Transcriptome deep sequencing and the circadian regulation of alternative splicing in *Drosophila*, Cold Spring Harbor Eukaryotic mRNA Processing 2009
2. Rodriguez J, Vodala S, Rosbash M Transcriptome deep sequencing and the circadian regulation of alternative splicing in *Drosophila melanogaster*, Society for Biological Rhythms 2010
3. Rodriguez J, Palangat M, Larson DR Regulation of estrogen-responsive genes in single cells, Transcription Imaging Consortium Meeting 2015
4. Rodriguez J, Chow CC, Larson DR Regulation of estrogen-responsive genes in single human cells ASCB Annual Meeting 2016
5. Rodriguez J, Day C, Chow CC, Larson DR Regulation of estrogen-responsive genes in single cells Center of Excellence in Chromosome Biology Postdoctoral Fellow Workshop 2017
6. Rodriguez J, Day C, Chow CC, Larson DR Regulation of estrogen-responsive genes in single cells Intrinsic dynamics of an endogenous human gene reveal the basis of expression heterogeneity CCR RNA Workshop 2017

## **BIBLIOGRAPHY**

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2. International Human Genome Sequencing Consortium. DNA sequence and analysis of human chromosome 8. *Nature*. 2006 Jan 19;
3. Blitzblau HG, Bell GW, Rodriguez J, Bell SP, Hochwagen A. Mapping of meiotic single-stranded DNA reveals double-stranded-break hotspots near centromeres and telomeres. *Current Biology*. 2007 Dec 4
4. Kadener S\*, Rodriguez J\*, Abruzzi KC, Khodor YL, Sugino K, Marr MT 2nd, Nelson S, Rosbash M. Genome-wide identification of targets of the drosha-pasha/DGCR8 complex. *RNA*. 2009 Apr;15(4):537-45. Epub 2009 Feb 17 \*These authors contributed equally.
5. Menet JS, Abruzzi KC, Desrochers J, Rodriguez J, Rosbash M. Dynamic PER repression mechanisms in the *Drosophila* circadian clock: from on-DNA to off-DNA. *Genes and Development*. 2010 Feb 15
6. Kula-Eversole E, Nagoshi E, Shang Y, Rodriguez J, Allada R, Rosbash M. Surprising gene expression patterns within and between PDF-containing circadian neurons in *Drosophila*. *Proceedings of the National Academy of Science U S A*. 2010 Jul 27
7. van der Linden AM, Beverly M, Kadener S, Rodriguez J, Wasserman S, Rosbash M, Sengupta P. Genome-wide analysis of light and temperature-entrained circadian transcripts in *Caenorhabditis elegans*. *PLoS Biology*. 2010 Oct 12
8. Khodor YL, Rodriguez J, Abruzzi KC, Tang CA, Marr MT, Rosbash M Nascent-Seq Indicates Widespread Cotranscriptional pre-mRNA Splicing in *Drosophila* *Genes and Development*. 2011 Dec 1
9. Abruzzi KC, Rodriguez J, Menet J, Desrochers J, Zadina A, Luo W, Tkachev S and Rosbash M *Drosophila* CLOCK Target Gene Characterization: Implications for Circadian Tissue-Specific Gene

Expression Genes and Development. 2011 Nov 15

10. Rodriguez J, Menet JS, Rosbash M. Nascent-seq indicates widespread cotranscriptional RNA editing in *Drosophila*. *Molecular Cell*. 2012 Jul 13;47(1):27-37. Epub 2012 May 31.

11. Vodala S, Pescatore S, Rodriguez J, Buescher M, Chen YW, Weng R, Cohen SM, Rosbash M. The Oscillating miRNA 959-964 Cluster Impacts *Drosophila* Feeding Time and Other Circadian Outputs. *Cell Metabolism*. 2012 Nov 7;16(5):601-12. Epub 2012 Nov 1.

12. Menet JS, Rodriguez J, Abruzzi KC, Rosbash M. Nascent-Seq reveals novel features of mouse circadian transcriptional regulation. *elife*. 2012; Epub 2012 Nov 13.

13. Luo W, Li Y, Tang CH, Abruzzi KC, Rodriguez J, Pescatore S, Rosbash M. CLOCK deubiquitylation by USP8 inhibits CLK/CYC transcription in *Drosophila*. *Genes and Development*. 2012 Nov 15;26(22):2536-49.

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15. Lenstra TL, Rodriguez J, Chen H, Larson DR Transcription Dynamics in Living Cells Annual Reviews in Biophysics\_ 2016 Apr 27

16. Kozlov A, Jaumouillé E, Machado P, Abruzzi KC, Rodriguez J, Sugino K, Hardin P and Nagoshi E A screen of UNF targets identifies a novel regulator of *Drosophila* circadian rhythms *Journal of Neuroscience*. 2017 Jul 12

17. Ren G, Jin W, Cui K, Rodriguez J, Hu G, Zhang Z, Larson DR, Zhao K CTCF-Mediated Enhancer-Promoter Interaction Is a Critical Regulator of Cell-to-Cell Variation of Gene Expression *Molecular Cell* 2017 Sep 21

18. Tsai P, Dell'Orso S, Rodriguez J, Vivanco KO, Ko K, Jiang K, Juan AH, Sarshad AA, Tran M, Wang D, Wang AH, Anastasakis D, Ralston E, Ried T, Hafner M, Larson DR, and Sartorelli V A Muscle Super-Enhancer-RNA Mediates Cohesin Recruitment and Regulates Transcription in Trans *Molecular Cell* 2018 Jul 5

19. Rodriguez J, Ren G, Day C, Zhao K, Chow CC, Larson DR Intrinsic dynamics of an endogenous human gene reveal the basis of expression heterogeneity *in revision* 2018