

## Edward J. Grow, PhD

Assistant professor, Green Center for Reproductive Biology

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### Academic History:

- 2021-present: Assistant Professor, Green Center for Reproductive Biology UTSW
- 2015-2021: Postdoctoral Fellow, Huntsman Cancer Institute  
Salt Lake City, Utah. Advisor: Bradley Cairns  
Ruth Kirschstein F32 (NICHD) postdoctoral fellow  
Lalor Reproductive Sciences postdoctoral fellow
- 2016: Frontiers in Reproduction, Marine Biological Laboratory  
Woods Hole, Massachusetts
- 2008-2015: PhD, Stanford University, Department of Genetics. Palo Alto, California.  
NSF Graduate Research Program. Advisor: Joanna Wysocka.
- 2003-2008: BS Biology (summa cum laude), BA Music (summa cum laude)  
University of Missouri-Columbia
- 2003-2008: Undergraduate Researcher. University of Missouri-Columbia  
Advisor: Karen Cone

### Publications:

14. **EJ Grow**, BD Weaver, CM Smith, J Guo, P Stein, SC Shadle, et al. **p53 convergently activates Dux/DUX4 in embryonic stem cells and in facioscapulohumeral muscular dystrophy cell models.** *Nature genetics* 53 (8), 1207-1220.
13. Y Guo, KR Gert, S Lebedeva, ME Potok, CL Wike, **EJ Grow**, et al. **Maternally-inherited anti-sense piRNAs antagonize transposon expression in teleost embryos.** *bioRxiv*, 2021.
12. E Ruggeri, S Lira-Albarrán, **EJ Grow**, et al. **Sex-specific epigenetic profile of inner cell mass of mice conceived in vivo or by IVF** (*Molecular human reproduction*) 26 (11), 866-878. 2020.
11. Jingtao Guo, Xichen Nie, Maria Giebler, Hana Mlcochova, Yueqi Wang, **Edward J.Grow**, DonorConnect, Robin Kim, Melissa Tharmalingam, Gabriele Matilionyte, Cecilia Lindskog, Douglas T.Carrell, Rod T.Mitchell, AnneGoriely, James M.Hotaling, Bradley R.Cairns. **The Dynamic Transcriptional Cell Atlas of Testis Development during Human Puberty.** (*Cell Stem Cell* 2020).
10. Elena Ruggeri, Saúl Lira-Albarrán, **Edward J Grow**, Xiaowei Liu, Royce Harner, Emin Maltepe, Miguel Ramalho-Santos, Annemarie Donjacour, Paolo Rinaudo. **Sex-specific**

**epigenetic profile of inner cell mass of mice conceived in vivo or by IVF.** (Molecular Human Reproduction, 2020).

9. Andrés Gambini, Paula Stein, Virginia Savy, **Edward J. Grow**, Brian N. Papas, Yingpei Zhang, Anna C. Kenan, Elizabeth Padilla-Banks, Bradley R. Cairns, Carmen J. Williams.

**Developmentally Programmed Tankyrase Activity Upregulates  $\beta$ -Catenin and Licenses Progression of Embryonic Genome Activation.** (Developmental Cell, 2020).

8. Nian Liu, Cameron H. Lee, Tomek Swigut, **Edward J. Grow**, Bo Gu, Michael C. Bassik & Joanna Wysocka. **Selective silencing of euchromatic L1s revealed by genome-wide screens for L1 regulators.** (*Nature*, 2018).

7. Jingtao Guo, **Edward J. Grow**, Hana Mlcochova, Geoffrey J. Maher, Cecilia Lindskog, Xichen Nie, Yixuan Guo, Yodai Takei, Jina Yun, Long Cai, Robin Kim, Douglas T. Carrell, Anne Goriely, James M. Hotaling & Bradley R. Cairns. **The adult human testis transcriptional cell atlas.** (*Cell Research*, 2018).

6. Jingtao Guo, **Edward J. Grow**, Chongil Yi, Patrick J. Murphy, Candice L. Wike, James M. Hotaling, Douglas T. Carrell, Bradley R. Cairns. **Transcription, Signaling and Metabolic Transitions During Human Spermatogonial Stem Cell Differentiation.** (*Cell Stem Cell*, 2017).

5. Peter G. Hendrickson, Jessie A. Doráis, **Edward J. Grow**, Jennifer L. Whiddon, Jong-Won Lim, Candice L. Wike, Christian Pflueger, David A. Nix, Benjamin R. Emery, Aaron L. Wilcox, C. Matthew Peterson, Stephen J. Tapscott, Douglas T. Carrell, and Bradley R. Cairns. Conserved roles for murine DUX and human DUX4 in activating cleavage stage genes and MERVL/HERVL retrotransposons. (*Nature Genetics*, 2017).

4. **Edward J. Grow.** **A fine LINE-1 in mouse embryonic chromatin regulation.** (*Nature Genetics*, 2017).

3. Durruthy-Durruthy J, Sebastiano V, Cepeda D, Cui J, Wossidlo M, **Grow EJ**, Quinn J, Weirather J, Torrez LB, Wong W, Wysocka J, Fai Au K, Reijo-Pera RA. **A novel primate-specific noncoding RNA acts competitively to modulate transitions in stem cell fate.** (*Nature Genetics*, 2016).

2. **Grow EJ**, Flynn RA, Chavez SL, Bayless N, Wossidlo M, Wesche D, Martin L, Ware C, Blish K, Chang HY, Reijo-Pera RA, Wysocka J. **Intrinsic retroviral reactivation in human preimplantation development and pluripotent cells.** (*Nature*, 2015).

1. **Grow EJ**, Wysocka J. **Flipping MLL1's switch one proline at a time.** (*Cell*, 2010).

Link to Google Scholar profile:

<https://scholar.google.com/citations?user=zhWTy0EAAA&hl=en&oi=ao>

## Positions and Honors

### Fellowships:

2018-2021 Ruth L. Kirschstein F32 Postdoctoral Fellowship (Utah)  
2016-2017 Laylor Reproductive Foundation Postdoctoral Fellowship (Utah)  
2010-2013 NSF Graduate Research Fellowship Program (GRFP), Stanford  
2008-2010 Stanford Genetics Training Program, Stanford  
2007-2008 Life Science Research Undergraduate Fellow (University of Missouri)

#### **Honors/Talks:**

2019 Invited Talk: Single-cell symposium: RQR (Research Quebecois Reproduction)  
2015 Invited Research Talk, FASEB Transposon meeting, Palm Beach, Florida  
2014 1st prize, Research Talk, Stanford CSB retreat  
2013 2nd prize, Research Talk, Stanford CSB retreat  
2012 Phi-Beta Kappa, member

#### **Grants:**

2019-2024 USDA/NICHD Dual-purpose R01 (1R01HD095833-01A1):  
wrote/submitted/revised on my Bovine EGA project (collaboration with Utah State)  
2017 USDA Seed Grant (Bovine EGA, cloning, collaboration with Utah State)

#### **TEACHING EXPERIENCE**

2019 Frontiers in Reproduction TA (bioinformatics analysis class)  
2018 Guest Lecturer (Genomics) Cancer 360 course, University of Utah  
2016-2019 Rotation student mentor (3 graduate students), University of Utah  
2012,2014 Rotation Student Mentor (2 graduate students), Stanford University  
2010 Genetics Teaching Assistant (Graduate Genetics 201), Stanford University  
2006-2007 Undergrad Genetics Teaching Assistant (3 semesters), University of Missouri  
2006-2007 Tutor (Genetics/Cell Biology), Learning Center, University of Missouri  
2006-2007 Summer Student Mentor (2 undergraduates) University of Missouri

#### **PROFESSIONAL MEMBERSHIPS:**

2018-present Society for the Study of Reproduction (SSR)  
2016-present Society of Developmental Biology (SDB)

#### **Leadership, Outreach experience, Service:**

2016-2019 Co-founder, Huntsman Cancer Institute Postdoc Alliance, University of Utah  
2008-2014 Guest lecturer entomology/taxonomy, Stanford SPLASH program  
2006-2007 (Outreach to 1<sup>st</sup> generation college students)  
2006-2007 Learning Center tutor, University of Missouri (1<sup>st</sup> generation college students)

#### **Peer Review:**

Peer-review for *Nature*, *Nature Genetics*, *Nature Communications*