Greg S. Goralogia

Formerly Greg S. Golembeski

Greg.Goralogia@oregonstate.edu

352 Richardson Hall
Oregon State University
Corvallis, OR 97331

858.882.7485

Education

2018	Ph.D.	Biology	University of Washington, Seattle, WA
2011	M.S.	Biology	University of California, San Diego, La Jolla, CA
2010	B.S.	Biology	University of California, San Diego, La Jolla, CA
2010	B.A.	History	University of California, San Diego, La Jolla, CA

Professional experience

2019–present:
Postdoctoral research asscociate, Laboratory of Steven Strauss, Ph.D, Oregon State University, Department of Forest Ecosystems and Society

- Developing methods and standardized components for self-excising and transgene-free gene editing technologies to be used in forest tree species
- Investigating the off-target effects of gene editing on forest trees through bioinformatic and genomic approaches
- Studying the expression patterns of genes involved in meristematic development and *in vitro* regeneration for use in novel biotechnology applications
- Development of tools and control mechanisms for *in planta* transformation systems geared towards dicot plants recalcitrant to transformation

2011–2018:
Doctoral student researcher, Laboratory of Takato Imaizumi, Ph.D, University of Washington , Department of Biology

- Studied the transcriptional regulation of florigen in Arabidopsis
- Determined the structural kinetics of a blue light photoreceptor critical for flowering in plants
- Investigated the time-dependent proteomics of key circadian components in plants

- Pubished 6 peer reviewed articles, primary author for 3 of them
- Trained and managed 13 undergraduate researchers
- Managed health, safety, and environmental regulations for the lab
- Maintained and repaired laboratory equipment and managed growth chambers
- Developed and optimized dozens of protocols and SOPs for lab personnel

2010–2011:
Master's student researcher, Laboratory of Martin Yanofsky, Ph.D, University of California, San Diego , Department of Biological Sciences

- Analyzed developmental expression patterns of transcription factors involved in early root cell identity in the Arabidopsis embryo. Studied the timing of expression of these genes in both the root and throughout flower and fruit development. Developed protocols for the tissue culture and regeneration of plants with "rootless" phenotypes for downstream analysis.

    - Assisted in growth chamber management and maintenance
    - Developed and maintained many independent transgenic plant lines
    - Co-authored a publication in *Science* as a part of this work

Publications

Greg S. Goralogia, Glenn T. Howe, Amy L. Klocko, Emily Heliwell, Michael Nagle, Cathleen Ma, Amanda Goddard, Anna Magnuson, Steven H. Strauss. Overexpression of *SHORT VEGETATIVE PHASE-LIKE (SVL)* in *Populus* delays flowering for reproductive containment. Manuscript in preparation

Krahmer, J. , **Goralogia, G.S.**, Kubota, A. , Zardilis, A. , Johnson, R. S., Song, Y. H., MacCoss, M. J., Le Bihan, T. , Halliday, K. J., Imaizumi, T. and Millar, A. J. (2019), Time-resolved interaction proteom-ics of the GIGANTEA protein under diurnal cycles in Arabidopsis. *FEBS Letters*, 593: 319-338. PMID: 30536871

Goralogia, G.S., Liu, T-K., Zhao, L., Panipinto, P.M., Groover, E.D., Bains, Y.S. and Imaizumi, T. (2017) CYCLING DOF FACTOR 1 represses transcription through the TOPLESS co-re-pressor to control photoperiodic flowering in Arabidopsis. *The Plant Journal*, 92, 244-262. PMID 28752516

Kubota, A., Ito, S., Shim, J.S., Johnson, R.S., Song, Y.H., Breton, G., **Goralogia, G.S**., Kwon, M.S., Laboy Cintrón, D., Koyama, T., Ohme-Takagi, M., Pruneda-Paz, J.L., Kay, S.A., MacCoss, M.J. and Imaizumi, T. (2017) TCP4-dependent induction of CONSTANS transcription requires GIGANTEA in photoperi-odic flowering in Arabidopsis. *PLoS Genetics*, 13, e1006856, PMID: 28628608

Golembeski GS, Imaizumi T. Photoperiodic regulation of florigen function in Arabidopsis thaliana. *The Arabidopsis Book*, 2015. PMID: 26157354

Crawford BC, Sewell J, **Golembeski G**, Roshan C, Long JA, Yanofsky MF. Genetic control of distal stem cell fate within root and embryonic meristems. *Science*; 2015 Feb 6;347(6222):655-9. PMID: 25612610

Golembeski GS, Kinmonth-Schultz HA, Song, YH, Imaizumi T. Photoperiodic flowering regulation in Arabidopsis thaliana. *Advances in Botanical Research*, 24 Jun 2014. PMID: 25684830

Kinmonth-Schultz HA, **Golembeski GS**, Imaizumi T. Circadian clock-regulated physiological outputs: Dynamic responses in nature. *Seminars in Cell and Developmental Biology* 2013. PMID: 23435352

Technical skills

Molecular Genetics: Extensive molecular cloning experience, site directed mutagenesis / chimeric gene construction, gene expression analysis (RNA extraction, RT-qPCR, library preparation for RNA-seq), DNA extraction, sequence analysis, chromatin immunoprecipitation (ChIP/ ChIP-qPCR, library preparation for ChIP-seq), library preparation for DNase I-seq, cell specific nuclei isolation (INTACT), luciferase expression for circadian analysis, yeast 1-hybrid and yeast 2-hybrid

Plant biology: Transgenic plant generation, CRISPR/Cas9 mutant generation in Arabidopsis and poplars, plant tissue culture and regeneration, physiological and phenotypic analysis, Expertise in flowering and meristematic development

Biochemistry: Protein extraction (from a variety of compartments / cell types, western blotting, protein co-immunoprecipitation, transient expression assays in tobacco, bimolecular florescence complementation (BiFC), IP-mass spectrometry (IP-MS)

Teaching experience

- Teaching assistant for 9 quarters over the course of Ph.D., 3 quarters over M.S. This included introductory molecular biology, genetics, plant physiology, and plant developmental genetics
- Co-developed and taught a synergistic second year laboratory class "civilizational biology", which leveraged topics of first year introductory classes into an applied format
- Received an average course instructor rating of 4.6/5 over the course of Ph.D
- Participated in the data acquisition for active learning research and methods in biology instruction, helped develop new modules and experiments for introductory biology coursework

Professional societies

Society for Developmental Biology (SDB) member 2013-present
American Society of Plant Biologists (ASPB) member 2014-present

Meetings and presentations

Plant Biology 2020, platform talk (Breeding/Biotech), July 2020 (Online)
CGRB Biocomputing user group (BUG) invited talk, June 2019
Biotechnology Risk Assessment Grant (BRAG) directors meeting, May 2019
Center for Genome Research and Biocumputing annual meeting, poster, March 2019
Society for developmental biology NW regional meeting, poster, Mar. 2017
Society for developmental biology NW regional meeting, platform talk, Mar. 2016
University of Washington department of biology annual retreat, poster, Sept. 2015
ASPB western regional meeting, Pullman, WA, poster, June 2015
UW biology graduate student symposium (GSS), talk, Apr. 2015
Society for developmental biology NW regional meeting, platform talk, Mar. 2015
American Society of Plant Biologists Annual Meeting, July 2014
Society for developmental biology NW regional meeting, poster, Mar. 2014 University of Washington department of biology annual retreat, poster, Sept. 2013

Awards

Schmidt family foundation grant 2020 (Dwarf,sterile trees through gene editing; $10,000)
Schmidt family foundation grant 2020 (Dwarf,sterile trees through gene editing; $10,000)
Best poster award western regional ASPB conference (2015)
Developmental Biology Training Grant (NIH), Spring 2013 (3 year term- $75,000 award) UW Department of Biology Plant Biology Fellowship Recipient: 2011 to 2012 ($25,000 award)