

# CURRICULUM VITAE

JONATHAN I GENT

## PERSONAL INFORMATION

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## EDUCATION

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2004-2009 Ph.D. Genetics, Stanford University (Initial training in Department of Biological Sciences, but transferred to Department of Genetics upon completion of first year).

2002-2004 B.S. *summa cum laude*, Biology (Cellular/Molecular emphasis), Chemistry minor, Humboldt State University.

1999-2002 A.A. Natural Science/Mathematics, College of the Redwoods.

## RESEARCH EXPERIENCE

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Fall '09 – present Postdoctoral research  
RNA-mediated regulation of intergenic chromatin in maize  
Advisor: R. Kelly Dawe  
University of Georgia

Winter '05 – Fall '10 Ph.D. dissertation research  
Roles for the *C. elegans* RNA-directed RNA polymerase RRF-3 in endogenous RNAi pathways  
Advisor: Andrew Fire  
Stanford University

Summers of '03 and '04 Summer research assistant  
Maize transposon mutagenesis; responses to UV light, maysin synthesis pathway  
Advisor: Virginia Walbot  
Stanford University

Fall '02 – Spring '04 Undergraduate research

Characterization of the *C. elegans* cytoskeletal factor SPE-35 in spermatogenesis  
Advisor: Jacob Varkey  
Humboldt State University

#### PEER-REVIEWED RESEARCH PUBLICATIONS

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- **Gent JI**, Ellis NA, Guo L, Harkess A, Yao Y, Zhang X, Dawe RK. CHH Islands: de novo DNA methylation in near-gene chromatin regulation in maize. Submitted.
- Eichten SR, Ellis NA, Makarevitch I, Yeh C-T, **Gent JI**, Guo L, McGinnis KM, Zhang X, Schnable PS, Vaughn MW, Dawe RK, Springer NM. Spreading of heterochromatin is limited to specific families of maize retrotransposons. Submitted.
- **Gent JI**, Dong Y, Jiang J, and Dawe RK. Strong epigenetic similarity between maize centromeric and pericentromeric regions at the level of small RNAs, DNA methylation and H3 chromatin modifications. *Nucl. Acids Res.* 2012. Feb;40(4):1550-6. Epub 2011 Nov 4.
- Blanchard D, Parameswaran P, Lopez-Molina J, **Gent J**, Saynuk JF, Fire A. On the nature of in vivo requirements for rde-4 in RNAi and developmental pathways in *C. elegans*. *RNA Biol.* 2011 May-Jun;8(3):458-67. Epub 2011 May 1.
- **Gent JI**, Schneider KL, Topp CN, Rodriguez C, Presting GG, Dawe RK. Distinct influences of tandem repeats and retrotransposons on CENH3 nucleosome positioning. *Epigenetics Chromatin.* 2011 Feb 25;4:3
- Lamm AT, Stadler MR, Zhang H, **Gent JI**, Fire AZ. Multimodal RNA-seq using single-strand, double-strand, and CircLigase-based capture yields a refined and extended description of the *C. elegans* transcriptome. *Genome Res.* 2011 Feb;21(2):265-75. Epub 2010 Dec 22.
- **Gent JI\***, Lamm A\*, Maniar JM, Parameswaran P, Tao L and Fire AZ. Distinct stages of siRNA synthesis in an endogenous RNAi pathway in *C. elegans* soma. *Mol Cell.* 2010 Mar 12;37(5):679-89. Epub 2010 Jan 28.
- **Gent JI**, Schvarzstein M, Villeneuve AM, Gu SG, Jantsch V, Fire AZ, and Baudrimont A. A *C. elegans* RNA-directed RNA polymerase in sperm development and endogenous RNAi. *Genetics.* 2009 Dec;183(4):1297-314. Epub 2009 Oct 5.

\*equal contributors

#### OTHER PUBLICATIONS

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- **Gent JI** and Dawe RK. RNA as a structural and regulatory component of the centromere. *Annu. Rev. Genet.* 2012 (in press).

#### CONFERENCE PRESENTATIONS

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- Intergenic RNA-mediated DNA methylation promoted by local cellular gene activity in maize. Regulatory & Non-Coding RNAs (Cold Spring Harbor Laboratory meeting). August 2012. Abstract selected for a talk.
- CHH islands: a role for de novo methylation in near-gene chromatin regulation. 54<sup>th</sup> Annual Maize Genetics Conference. March 2012. Abstract selected for a talk.

- Short Talk: A Small RNA Mediated, Paternal Contribution to *C. elegans* Embryogenesis? Epigenetics, Development and Human Disease (Keystone Symposia). January 2009. Abstract selected for a talk.
- Multi-Sample Expression Profiling: a Case Study in Biological Analysis Using Short Sequence Tags. Next Generation Sequencing Symposium (New Mexico Bioinformatics Symposium). March 2008. Invited speaker.

## SEMINAR PRESENTATIONS

- Small RNA in *C. elegans* Spermatogenesis and in Paternal Contributions to Embryogenesis. University of California, Santa Cruz RNA Club. April 2008.
- A Paternally-Derived Role for RNAi-Related Machinery in Embryonic Development. Humboldt State University Cellular/Molecular Biology Club. April 2006.

## AWARDS

2012	University of Georgia Postdoctoral Research Award
2012	Keystone Symposia Scholarship
2010	Ruth L. Kirschstein National Research Service Award
2009	Keystone Symposia Scholarship
2002	College of the Redwoods President's Award Scholarship
2002	Maude Teal Codini Trust Scholarship
2001	College of the Redwoods President's Award Scholarship

## TEACHING EXPERIENCE

Fall '11 and '12	Guest lecturer for Plant Genetics at the University of Georgia (PBIO 8100, a graduate-level course)
Fall '07 – Spring '09	Volunteer tutor at a junior highschool after-school program, Bayshore Christian Ministries ( <a href="http://www.bayshore.org">www.bayshore.org</a> ).
Fall '01	Leader of biweekly supplemental workshops for a College of the Redwoods chemistry course as part of the Alliance for Minority Participation.
Fall '00 – Spring '01	Leader of biweekly supplemental workshops for College of the Redwoods calculus courses as part of the Alliance for Minority Participation.

## ACADEMIC REFEREES

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