Gene E. Ananiev, Ph.D.

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Research Experience

Department of Medicine, Carbone Cancer Centre, UW Madison 2012-present
Manager HTS, Small Molecule Screening and Synthesis Facility

- Supervision of daily operation of the core facility
- Design and implementation of high throughput screens and cell based assays

Department of Genetics, Waisman centre, UW Madison 2008- 2012
Postdoctoral fellow
Advisor Prof. Qiang Chang

- Derived and characterized multiple human iPSC lines from Rett syndrome patient fibroblasts
- Drug discovery using iPSC derived neurons

Departments of Chemistry and Genetics, UW Madison 2002- 2007
PhD, Graduate Student
Advisor Prof. David C. Schwartz

- Developed an automated high throughput system for using optical mapping to assay genomic DNA methylation in the human genome
- Used optical mapping to analyse structural variation in multiple human embryonic stem cell genomes

University of Massachusetts Medical School 2001-2002
Major Qualifying Project Student
Advisor Prof. Jeanne B. Lawrence

- Used fluorescent *in situ* hybridization (FISH) to study *Xist* RNA mediated chromosome inactivation using mouse embryonic stem cells as a model

Internships

Pioneer Hi-Bred International 1999
Tropix Inc. 1998
University of Minnesota Dept. of Agronomy 1997

Education

Ph.D. Cellular and Molecular Biology, University of Wisconsin - Madison 2008
Thesis: Structural and epigenetic analysis of the human genome

B.S. Biology, Worcester Polytechnic Institute, Massachusetts 2002

Grants and Awards

Stem Cell Research Training Grant Postdoctoral fellow, NIH T32 grant, 2008 - 2010
NHGRI grant for Genomic Sciences Training Program (GSTP) Pre doctoral fellow, 2004 - 2007
Burnham Summer Scholarship, University of Minnesota, Dept. Of Agronomy 1997

Patents

Schwartz DC, Ananiev GE; "Whole genome methylation profiles *via* single molecule analysis." PTC 20060275806 2006

Publications

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Goel SA, Guo LW, Wang B, Guo S, Roenneburg D, Ananiev GE, Hoffmann FM, Kent KC. "High-throughput screening identifies idarubicin as a preferential inhibitor of smooth muscle versus endothelial cell proliferation"
PLoS One. 2014 Feb 24;9(2):e89349. doi: 10.1371/journal.pone.0089349. 2014

Williams EC, Zhong X, Mohamed A, Li R, Liu Y, Dong Q, Ananiev GE, Mok JC, Lin BR, Lu J, Chiao C, Cherney R, Li H, Zhang SC, Chang Q.
"Mutant astrocytes differentiated from Rett syndrome patients-specific iPSCs have adverse effects on wild-type neurons."
Hum Mol Genet. Jun 1;23(11):2968-80 2014

Wang T, Wu H, Li Y, Szulwach KE, Lin L, Li X, Chen IP, Goldlust IS, Chamberlain SJ, Dodd A, Gong H, Ananiev G, Han JW, Yoon YS, Rudd MK, Yu M, Song CX, He C, Chang Q, Warren ST, Jin P. "Subtelomeric hotspots of aberrant 5-hydroxymethylcytosine-mediated epigenetic modifications during reprogramming to pluripotency",
Nature Cell Biology Jun;15(6):700-11 2013

Ananiev GE et al., "Isogenic Pairs of Wild Type and Mutant iPS Cells from Rett Syndrome Patients as In Vitro Disease Model",
PLoS ONE 6(9): e25255. doi:10.1371/journal.pone.0025255 2011

Ananiev GE et al., "Detection of DNA methylation using single molecules", BMC Molecular Biology Jul 30; 9:68, 2008

Herschleb J, Ananiev GE, Schwartz DC, "Pulsed-Field Gel Electrophoresis", Nature Protocols **2**(3): 677-684, 2007