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CURRICULUM VITAE

SHAWN MICHAEL BURGESS
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PERSONAL INFORMATION

Business Address

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EDUCATION

1984-1988	B.A. Biology/Psychology Wesleyan University, Middletown, CT
1988-1990	Research Assistant, The Children's Hospital Harvard Medical School, Boston, MA Supervisor: Dr. Stuart Orkin
1990-1995	Ph.D. Biochemistry, Cell, and Molecular Biology Program Johns Hopkins University School of Medicine, Baltimore, MD Advisor: Dr. Robert Jensen

POSTGRADUATE TRAINING

1995-2001	Postdoctoral Fellow, Center for Cancer Research Massachusetts Institute of Technology, Cambridge, MA Advisor: Dr. Nancy Hopkins

HONORS AND AWARDS

1995	Paul Ehrlich Award for Excellence in Clinical Research
1997	Amgen Postdoctoral Fellowship (MIT)
2013	NHGRI Mentorship Award

ACADEMIC APPOINTMENTS

2001-present	Head, Developmental Genomics Section National Human Genome Research Institute, NIH, Bethesda MD
2003-present	Adjunct Faculty, Neuroscience and Cognitive Science Program, University of Maryland, College Park, MD

EDITORIAL DUTIES

2004-2007	Editorial Board, *Genome Research*
2006	Editor, *Methods* Special Issue: "Zebrafish as a Model for Development"
2012	Editor, Methods Special Issue: "Genomic approaches in Zebrafish Research"
2016-present	Editorial Board, *Signal Transduction and Targeted Therapy*
2018	Editor, *Methods* Special Issue: Imaging and Gene Editing in Zebrafish
2019-present	Section Editor, *Genes*

COMMITTEES

NHGRI:

2002-2007	Non-Tenure-Track Promotion Committee
2004-2006	Genomics Core Advisory Committee
2004-2006	Scientific Review Committee
2006-present	Animal Care and Use Committee
2021-present	Animal Care and Use Committee (Chair)
2005-present	Zebrafish Core Advisory Committee (Chair)

Trans-NIH:

2001-present	Zebrafish Users Group (zebrafish facility construction)
2006	NIH Intramural Roadmap Committee (advisory group for new intramural research initiatives)
2014-2017	NIH Assembly of Scientists
2014-2021	Tenure-Track mentoring committee for Dr. Katie Kindt, NIDCD

Outside Committees:

2010-present	Scientific Advisory Board, European Zebrafish Resource Center
2012-present	Scientific Advisory Committee, Zebrafish Information Network (ZFIN.org)
2013-present	Board member of the Zebrafish Disease Models Society
2015-present	Scientific Advisory Board, Institute for Basic Sciences (Korea)
2016-present	Scientific Advisory Board, Zebrafish International Resource Center (ZIRC)
2017-present	Scientific Advisory Board, Alliance of Genome Resources (AGR)
2017	Genome Editing Technical Working Group, OSTP
2017-2021	Board of Directors, International Zebrafish Society (IZFS)
2015-2021	Board of Directors, Zebrafish Disease Models Society (ZDMS)

NIH STUDY SECTIONS AND GRANT REVIEW

2002-2014	Special Emphasis Panel (annual): Zebrafish Tools for Genetics and Genomics
2001-present	Ad-hoc reviewer for NIA, NINDS, NCRR, NCI, NHGRI, Netherlands Organization for Scientific Research, US-Israel Bi-national Science Foundation, Genome Canada

PREVIOUS TRAINEES

Dr. Xiaolin Wu	Senior Scientist, Laboratory of Molecular Technology, NCI/SAIC-Frederick
Ms. Amanda Hardison	Associate Director, Clinical Studies at Gentris Corporation
Dr. Seth Zonies	Senior Technology Analyst, Johns Hopkins Technology Ventures
Ms. Teresa Yannucci	Teacher, Virginia Public School System
Dr. Jizhou Yan	Professor, Shanghai Ocean University
Dr. Kyle Dolan	Head of Science and Innovation, British Consulate-General
Ms. Jessica Ivey	Genetic Counselor, Atlanta GA
Dr. Zengfeng Wang	Senior Research Fellow, National Cancer Institute
Mr. Nam Pho	Associate Director Informatics, NYU Langone Medical Center
Dr. Martine Behra	Professor, University of Puerto Rico Medical School
Dr. Jin Liang	Postdoctoral Fellow, Cornell University
Dr. Heather Whitehurst	Homemaker
Ms. Sunny Huang	University of Iowa, MD/PhD program
Ms. Jennifer Idol	Research Associate, Jackson Laboratory (CT)
Dr. Matthew LaFave	Bioinformatics Scientist, Synthetic Genomics
Mr. Kyle Pettie	Stanford University, Biology Graduate Program
Dr. Viviana Gallardo	Postdoctoral fellow, Universitat de Madrid
Mr. Jacob Fohtung	The Consortium for Affordable Medical Technologies, Uganda
Dr. Gaurav Varshney	Assistant Professor, Oklahoma Medical Research Foundation
Ms. Claire Slevin	University of Virginia Medical School
Dr. Jason Sinclair	Senior Scientist, MirOmics
Mr. David Hoying	Case Western Medical School
Ms. Alex Berger	University of Maryland Medical School

PATENT APPLICATIONS

US Patent Application, Serial No. 09/534,889 "Retroviral Vectors and Methods for Production and Uses Thereof"

PRESENTATIONS

Insertional mutagenesis and the genetics of ear and hindbrain development in the zebrafish, **Molecular Genetics of Development Conference**, Airlie, VA, May 2002 (invited speaker)

The role of Pou2 (Oct4) in zebrafish hindbrain development, **Sars Centre**, Bergen, Norway, Mar. 2003 (invited speaker)

Microarray comparison study of Oct4 expression in fish and mammal systems, **International Zebrafish Genetics and Development Meeting**, Madison, WI, Jul. 2003 (selected speaker)

Watch where you land: Different global genomic preferences for MLV and HIV-1 proviral integration, **American Society of Gene Therapy 2003 Annual Meeting**, Washington, DC, May 2003 (invited speaker)

Generating a zebrafish insertional mutation "library," **3rd European Zebrafish Genetics and Development Meeting**, Paris, France, Jun. 2003 (selected speaker)

Different global genomic preferences for MLV and HIV-1 proviral integration, **NIH Recombinant DNA and Gene Transfer Advisory Committee**, Bethesda, MD, Sept. 2003 (special lecture)

Genetics and genomics of ear development, **NIDDK Mammalian Developmental Biology Section**, Bethesda, MD, Nov. 2003 (invited speaker)

Different global genomic preferences for MLV and HIV-1 proviral integration, **Stem Cell Clonality and Genotoxicity Retreat**, San Diego, CA, Dec. 2003 (invited speaker)

Genetic and genomic approaches to vertebrate development, **University of California-Irvine**, Irvine, CA, Dec. 2003 (invited speaker)

Microarray comparison study of Oct4 expression in fish and mammal systems, **Keystone Meeting on Stem Cell Biology**, Keystone, CO, Jan. 2004 (selected speaker)

Genetics and genomics of ear development, **NCI Laboratory of Pathology**, Bethesda, MD, Feb 2004 (invited speaker)

Genetics and genomics of ear development, **NCI Experimental Transplantation and Immunology Branch**, Bethesda, MD, Apr. 2004 (invited speaker)

The role of Foxl1 in ear development and chromatin structure, **The MDIBL Stem Cell Symposium**, Mt. Desert Island, ME, Aug. 2004 (invited speaker)

Microarray comparison study of Oct4 expression in fish and mammal systems, **Symposium on Stem Cell Repair and Regeneration**, London, UK, Sept. 2004 (invited speaker)

The use of zebrafish in studying stem cell biology, **Peking University,** Beijing, China, Nov. 2004 (invited speaker)

Foxl1 modulates ear development and can stably remodel chromatin, **International Workshop on Fish Genetics and Development,** Wuhan University, Wuhan, China, Nov. 2004 (invited speaker)

Reverse Genetics in zebrafish, **Transgenesis in Zebrafish and Medaka Short Course**, Santiago, Chile, Jan. 2005 (classroom lecturer and seminar speaker)

Genomic approaches to understanding stem cells and early development, **Johns Hopkins University School of Medicine**, Baltimore, MD, March 2005 (invited speaker)

Microarray comparison study of Oct4 expression in fish and mammal systems, **International Society for Stem Cell Biology Annual Meeting**, San Francisco, CA, June 2005 (selected speaker)

Reverse Genetics in Zebrafish, **Zebrafish/Medaka Investigator's Workshop**, Mt. Desert Island, ME, Sept. 2005 (selected speaker)

Reverse Genetics in Zebrafish, **EMBO Course on Zebrafish Genetics and Genomics**, Bergen, Norway, Aug. 2005 (instructor and lecturer)

Genomic approaches to understanding retroviral integration, **St. Louis University**, St. Louis, MO, Oct. 2005 (invited speaker)

Genomic approaches to understanding stem cells and early development, **Yale University**, New Haven, CT, Oct. 2005 (invited speaker)

Genetic and genomic approaches in zebrafish to study hearing and development, **Post-baccalaureate IRTA Lecture Series, NIH**, Bethesda, MD, Dec. 2006 (invited speaker)

Genetic and genomic approaches in zebrafish to study hearing and development, **NIH Director's Seminar Series, NIH**, Bethesda, MD, Jan. 2007 (nominated and selected speaker)

Transcriptional profiling with high-throughput sequencing, **Second Strategic Conference of Zebrafish Investigators**, Monterey, CA, Jun. 2007 (invited speaker and workshop organizer)

A comprehensive zebrafish gene-knockout library, **Disease Models: Translational Models for Disease**, Philadelphia, PA, Jun. 2007 (invited speaker)

Chromatin remodeling and development, **Workshop on Deciphering the Regulatory Genome: Development, Evolution and Disease**, Seville, Spain, Oct. 2007 (invited speaker)

Regeneration in the zebrafish ear, **Genetic Analysis: Model Organisms to Human Biology2**, San Diego, CA, Jan. 2008 (selected speaker)

Regeneration in the zebrafish ear, **University of California-Los Angeles**, Los Angeles, CA, Jan. 2008 (invited speaker)

Genetics and genomics approaches to studying regeneration, **Stanford University School of Medicine**, Palo Alto, CA, May 2008 (invited speaker)

Applications of high-throughput sequencing technologies to zebrafish research, **International Zebrafish Genetics and Development Meeting**, Madison, WI, July 2008 (invited speaker and workshop organizer)

Genetics and genomics approaches to studying regeneration, **University of Maryland School of Medicine**, Baltimore, MD, Sept. 2008 (invited speaker)

The zebrafish gene Phoenix *is involved in stem cell division and nuclear envelope stability in the lateral line during hair cell regeneration*, **Chilean Society of Cell Biology XXI Annual Meeting**, Pucon, Chile, Oct. 2008 (invited speaker)

Role of stat3 in hair cell regeneration, **Third Strategic Conference of Zebrafish Investigators,** Asilomar CA, Jan. 2009 (selected speaker)

Role of stat3 in hair cell regeneration, **International Zebrafish Genetics and Development Meeting**, Rome, Italy July 2009 (selected speaker)

Role of stat3 in hair cell regeneration, **Mechanisms of Organ Regeneration in Model Systems**, Baeza, Spain, Oct. 2009 (speaker and organizer)

Genetic and genomic approaches to study regeneration, **Australian Zebrafish Annual Meeting**, Sydney, Australia, Feb 2010 (Keynote speaker)

Update on retroviral mutagenesis efforts, **Zebrafish Knockout Project: Community Meeting**, Washington, DC, Mar. 2010 (speaker and organizer)

Role of stat3 and socs3a in hair cell regeneration, **Molecular and Cellular Basis of Regeneration and Tissue Repair EMBO conference Series**, Sesimbra, Portugal, Sep. 2010 (selected speaker)

Tbx5 and tbx15 act in a feedback loop during lateral line migration, **Fourth Strategic Conference of Zebrafish Investigators,** Asilomar, CA, Feb. 2011 (selected speaker)

Role of stat3 and socs3a in hair cell regeneration, **Tissue Repair and Regeneration Gordon Research Conference, New London**, NH, Jun. 2011 (selected speaker)

Functional genomics of zebrafish, **The ZNN Conference and PhD Course**, Bergen, Norway, Oct. 2011 (invited speaker)

Genetic and genomic approaches to study hearing regeneration, **University of Puerto Rico Medical School**, San Jose, PR, Oct. 2011 (invited speaker)

Chemical genomics in zebrafish, **Karlsruhe Institute of Technology**, Karlsruhe, Germany, Nov. 2011 (invited speaker)

Genetic and genomic approaches to study hearing regeneration, **Mayo Clinic**, Rochester, MN, March 2012 (invited speaker)

Using Next Generation sequencing for large scale mapping of retroviral integration sites, **2nd Next Generation Sequencing Conference**, Boston, MA, May 2012 (invited speaker)

Mapping insertional elements, Workshop, **10th International Conference on Zebrafish Genetics and Genomics** (workshop co-chair), Madison, Wisconsin, June 2012

Genetic and genomic approaches to study hearing regeneration, **Temple University**, Philadelphia,

PA, Sep. 2012 (invited speaker)

Using Next Generation sequencing for large scale mapping of retroviral integration sites, **NGS Asia Conference**, Singapore, Oct. 2012 (invited speaker)

Genetic and genomic approaches to study hearing regeneration, **Temasek Institute**, Singapore, Oct. 2012 (invited speaker)

Genetic and genomic approaches to study hearing regeneration, **University of Minnesota**, Minneapolis, MN, Jan. 2013 (invited speaker)

*Phenotype-driven compound screening for anti-metastatic drugs***, NIH Workshop: From Tank to Bedside: Zebrafish and Translational Research,** Bethesda, MD, Oct. 2013

Utilizing MLV integration for Functional Genomics, **Workshop: Zebrafish Genetics, Transgenesis, and Systems Biology**, Janelia Farm, Ashburn, VA, Oct. 2013

MLV integration targets strong enhancers and promoters, **Keystone Symposium: Mobile Genetic Elements and Genome Evolution**, Santa Fe, NM, Mar. 2014 (selected speaker)

Tanks to Bedside: High throughput approaches in zebrafish to model human disease, **Laboratory of Cellular and Developmental Biology, NIDDK**, Bethesda, MD Mar. 2014 (invited speaker)

*Phenotype-driven compound screening for anti-metastatic drugs***, Collaborative Workshop on Aquatic Models and 21st Century Toxicology**, North Carolina State University, Raleigh, NC, May 2014 (invited speaker)

The role of glycosylation in neural regeneration, **Glycoday**, National Institutes of Health, Bethesda, MD, May 2014

Tanks to Bedside: High throughput approaches in zebrafish to model human disease, **University of Texas Health Sciences Center-Houston**, Houston, TX, May 2014 (invited speaker)

High-throughput mutagenesis in zebrafish using CRISPR/Cas9 to model human diseases, **7th Annual Zebrafish Disease Models Conference**, Madison WI, Jul. 2014 (invited speaker)

High-throughput mutagenesis in zebrafish using CRISPR/Cas9 to model human diseases, **CSHA meeting on Genetics, Genomics and Phenomics of Fish**, Cold Spring Harbor-Asia, Suzhou, China, Oct. 2014 (invited speaker)

Modeling human diseases in zebrafish, **China Pharmaceutical University**, Nanjing, China, Oct. 2014 (invited speaker)

Functional genomics approaches to hearing regeneration, **National Institute of Genetics**, Mishima, Japan, Oct. 2014 (invited speaker)

High-throughput mutagenesis in zebrafish using CRISPR/Cas9 to model human diseases, **Symposium on genome editing in aquatic models**, International Institute for Advanced Studies, Kyoto, Japan, Oct. 2014 (invited speaker)

Genome editing, **Shanghai Ocean University**, Shanghai, China, Jan. 2015 (guest lecturer)

Drug screening, **Shanghai Ocean University**, Shanghai, China, Jan. 2015 (guest lecturer)

Functional genomics approaches to hearing regeneration, **Shanghai Ocean University**, Shanghai, China, Jan. 2015 (invited speaker)

Functional genomics approaches to hearing regeneration and protection, **Hearing Regeneration in Science 2015**, Mayo Clinic, Rochester, MN, Jan. 2015 (invited speaker)

Functional genomics approaches to hearing regeneration and protection, **University of Wyoming**, Laramie, WY, May 2015 (invited speaker)

Functional genomics approaches to hearing regeneration and protection, **National Institute of Deafness and Other Communication Disorders**, Bethesda, MD, 2015 (invited speaker)

Controlling genetics in fish using genome editing, **9th European Zebrafish Meeting**, Oslo, Norway, Jun. 2015 (plenary speaker)

High-throughput mutagenesis in zebrafish to validate human disease genes: Lessons learned collaborating with the Undiagnosed Diseases Program, **2nd Zebrafish for Personalized/Precision Medicine Conference,** Toronto, Canada, Oct. 2015 (invited speaker)

Functional genomics approaches to hearing regeneration and protection, **39th Annual Association For Research In Otolaryngology Midwinter Meeting**, San Diego, CA, Feb. 2016 (selected speaker)

Functional genomics approaches to hearing regeneration and protection, **Decibel Therapeutics**, Boston, MA, Jun. 2016 (invited speaker)

The role of heat shock proteins in hearing regeneration, **75th Annual Meeting of the Society of Developmental Biology. Satellite Symposium on Regeneration**, Boston, MA, Aug. 2016 (invited speaker)

Practical aspects of CRISPR/Cas9 gene targeting in zebrafish, **CSHL Genome Engineering: The CRISPR-Cas Revolution**, Cold Spring Harbor Laboratories, Aug. 2016 (invited speaker)

High-throughput mutagenesis in zebrafish to validate human disease genes: Lessons learned collaborating with the Undiagnosed Diseases Program, **Zebrafish Disease Models Society 9th Annual Meeting**, Singapore, Oct. 2016 (selected speaker)

Practical aspects of CRISPR/Cas9 gene targeting in zebrafish, **XVI Latin American Genetics Congress, Gene Editing Workshop**, Montevideo, Uruguay, Oct. 2016 (invited speaker)

Functional genomics approaches to hearing regeneration and protection, **XVI Latin American Genetics Congress**, Montevideo, Uruguay, Oct. 2016 (keynote speaker)

Functional genomics approaches to hearing regeneration and protection, **University of Virginia**, Charlottesville VA, Feb. 2017 (invited speaker)

Gene editing and modern genetics in zebrafish to understand human biology and disease, **The 20th US-Japan Cellular and Gene Therapy Conference**, U.S. Food & Drug Administration, Silver Spring, MD, Feb. 2017 (invited speaker)

Validating and modeling rare human diseases in zebrafish using CRISPR/Cas9, **Rare Disease Day at NIH**, Bethesda, MD, Mar. 2017 (invited speaker)

High efficiency targeting in the zebrafish genome, **Genome Engineering in Zebrafish Workshop**, Frankfurt, Germany, Jun. 2017 (invited speaker)

De novo Assembly of Goldfish Genome Using 10X Genomics Chromium and PacBio Sequencing, **10th European Zebrafish Meeting**, Budapest Hungary, Jul. 2017 (selected speaker)

Functional genomics approaches to hearing regeneration and protection, **University of Maryland**, College Park, MD, Jan. 2018 (invited speaker)

De novo Assembly of Goldfish and Zebrafish Genomes Using 10X Genomics Chromium and PacBio Sequencing, **3rd European Zebrafish Principal Investigators Meeting**, Trento Italy, Mar. 2018 (selected speaker)

De novo assembly of the goldfish genome and multi-species genome comparison tools for understanding gene regulation and evolution, **9th Aquatic models of Human Disease Conference**, Woods Hole**,** MA, Sep. 2018 (selected speaker)

The Warburg effect in zebrafish fin regeneration, **14th International Zebrafish Conference,** Suzhou China, Jun. 2019

Tanks to bedside: examples of disease modeling in zebrafish, **Rare Genetic Disease: Models and Mechanisms** (Webinar hosted by *The Scientist*) Nov. 2019

The genetic program of hearing regeneration, 16th International Zebrafish conference (Virtual), Jun. 2021

The Warburg effect in zebrafish fin regeneration, **14th Zebrafish Disease Models Meeting**, Durham NC, Oct. 2021

Functional genomics approaches to hearing regeneration, **Howard University**, Washington DC, Dec. 2021 (invited speaker)

MEETING ORGANIZER

Zebrafish Knockout Project: Organization and Strategy Meeting, Hinxton, UK, Mar. 2009 (*organized with D. Stemple*)

Mechanisms of Organ Regeneration in Model Systems, Baeza, Spain, Oct. 2009 (*organized with K. Poss and H. Lopez-Schier*)

Zebrafish Knockout Project: Community Meeting, Washington, DC, Mar. 2010 (*organized with D. Stemple*)

Mid-Atlantic Region Zebrafish Meeting, Bethesda, MD, May 2011

14th International Zebrafish Conference, Suzhou China, Jun. 2019

9th Strategic Conference of Fish Investigators, Taipei Taiwan, Feb. 2020 (Cancelled)

PEER-REVIEWED PUBLICATIONS

https://scholar.google.com/citations?hl=en&user=cj6SiXEAAAAJ

1. Zon LI, Tsai SF, **Burgess S**, Matsudaira P, Bruns GA, and Orkin SH (1990). The major human erythroid DNA-binding protein (GF-1): primary sequence and localization of the gene to the X chromosome. Proc Natl Acad Sci USA 87: 668-72.

2. Zon LI, Mather C, **Burgess S**, Bolce ME, Harland RM, and Orkin SH (1991). Expression of GATA-binding proteins during embryonic development in Xenopus laevis. Proc Natl Acad Sci USA 88: 10642-6.

3. **Burgess SM**, Delannoy M, and Jensen RE (1994). MMM1 encodes a mitochondrial outer membrane protein essential for establishing and maintaining the structure of yeast mitochondria. J Cell Biol 126: 1375-91.

4. Sakai N, **Burgess SM**, and Hopkins N (1997). Delayed in vitro fertilization of zebrafish eggs in Hank's saline containing bovine serum albumin. Mol Mar Biol Biotechnol 6: 84-7.

5. Becker TS, **Burgess SM**, Amsterdam A, Allende M, and Hopkins N (1998). Not really finished is crucial for development of the zebrafish outer retina and encodes a transcription factor highly homologous to human nuclear respiratory factor and avian initiation binding repressor. Development 125: 4369-78.

6. Amsterdam A, **Burgess SM**, Golling G, Chen W, Sun Z, Townsend K, Farrington S, Haldi M, and Hopkins N (1999). Insertional mutagenesis in zebrafish. Genes Dev 13: 2713-24.

7. Chen W, **Burgess S**, and Hopkins N (2001). Analysis of the zebrafish smoothened mutant reveals conserved and divergent functions of hedgehog activity. Development 128: 2385-96.

8. **Burgess S**, Reim G, Hopkins N, and Brand M (2002). The zebrafish spiel-ohne-grenzen (*spg*) gene encodes the POU domain protein Pou2 and is essential for formation of the midbrain, hindbrain and for pre-gastrula morphogenesis. Development 129: 905-16.

9. Chen W, **Burgess SM**, Golling G, Amsterdam A, and Hopkins N (2002). High-throughput selection of retrovirus producer cell lines leads to markedly improved efficiency of germ line-transmissible insertions in zebrafish. J Virol 76: 2192-98.

10. Golling G, Amsterdam A, Sun Z, Antonelli M, Maldonado E, Chen W, **Burgess SM**, Haldi M, Artzt K, Farrington S, Lin SY, Nissen RM, and Hopkins N (2002). Insertional mutagenesis in zebrafish rapidly identifies genes essential for early vertebrate development. Nat Genet 31: 135-40.

11. Nissen R, Yan J, Amsterdam A, Hopkins N, and **Burgess SM** (2003). Zebrafish foxi one modulates cellular responses to fgf signaling required for the integrity of ear and jaw patterning. Development 130: 2543-54.

12. Wu X, Li Y, Crise B, and **Burgess SM** (2003). Transcription start regions in the human genome are favored targets for MLV integration. Science 300: 1749-51.

13. Kurita K, **Burgess SM**, and Sakai N (2004). Transgenic zebrafish produced by retroviral infection of in vitro cultured sperm. Proc Natl Acad Sci USA 101: 1263-7.

14. Youngman MJ, Hobbs AE, **Burgess SM**, Srinivasan M, and Jensen RE (2004). Mmm2p, a mitochondrial outer membrane protein required for yeast mitochondrial shape and maintenance of mtDNA nucleoids. J Cell Biol 164: 677-88.

15. Ng D, Thakker N, Corcoran CM, Donnai D, Perveen R, Schneider A, Hadley D, Tifft C, Zhang L, Wilkie AOM, van der Smagt JJ, Gorlin RJ, **Burgess SM**, Bardwell VJ, Black GCM, and Biesecker LG (2004). Oculofaciocardiodental and Lenz microphthalmia syndromes result from distinct classes of mutations in BCOR. Nat Genet 36: 411-6.

16. Nakai H, Wu X, Fuess S, Storm T, Munroe D, Montini E, **Burgess SM**, Grompe M, and Kay MA (2005). A large-scale molecular characterization of adeno-associated virus vector integration in mouse liver. J Virol 79: 1749-51.

17. Wu X, Li Y, Crise B, **Burgess SM**, and Munroe D (2005). Weak palindromic consensus sequence is a common feature found at integration target sites of many retroviruses. J Virol 79: 5211-4.

18. Yant SR, Wu X, Huang Y, Garrison B, **Burgess SM**, and Kay MA (2005). High-resolution genome-wide mapping of transposons integration in mammals. Mol Cell Biol 25: 2085-94.

19. Hardison AL, Lichten L, Banerjee-Basu S, Becker TS, and **Burgess SM** (2005). The zebrafish gene claudinj is essential for normal ear function and important for the formation of the otoliths. Mech Dev 122: 949-58.

20. Wu X, Luke BT, and **Burgess SM** (2006). Redefining the common insertion site. Virology 344: 292-5.

21. Yan J, Xu L, Crawford G, Wang Z, and **Burgess SM** (2006). The forkhead transcription factor Foxl1 remains bound to condensed mitotic chromosomes and stably remodels chromatin structure. Mol Cell Biol 26: 155-68.

22. Amhed ZM, Goodyear R, Riazuddin S, Lagziel A, Legan PK, Behra M, **Burgess SM**, Lilley KS, Wilcox ER, Riazuddin S, Griffith AJ, Frolenkov GI, Belyantseva IA, Richardson GP, and Friedman TB (2006). The Tip link antigen, a protein associated with the transduction complex of sensory hair cells, is protocadherin-15. J Neurosci 26: 7022-34.

23. Antonellis A, Lee-Lin S, Wasterlain A, Leo P, Quezado M, Myung K, **Burgess S**, Fischbeck KH, and Green ED (2006). Functional analyses of glycyl-tRNA synthetase mutations suggest a key role for tRNA-charging enzymes in peripheral axons. J Neurosci 26: 10397-406.

24. Wang D, Jao LE, Zheng N, Dolan K, Ivey J, Zonies S, Wu X, Wu K, Yang H, Meng Q, Zhu Z, Zhang B, Lin S*, **Burgess SM*** (2007). Efficient genome-wide mutagenesis of zebrafish genes by retroviral insertions. Proc Natl Acad Sci USA 104: 12428-33.

25. Wang T, Zeng J, Lowe CB, Yang M, **Burgess SM**, Brachmann RK, Haussler D (2007). Species-specific endogenous retroviruses shape the transcriptional network of the human tumor suppressor protein p53. Proc Natl Acad Sci USA 104: 18613-8. PMC2141825

26. Zeng J, Yan J, Wang T, Mosbrook-Davis D, Dolan KT, Christensen R, Stormo GD, Haussler D, Lathrop RH, Brachmann RK, **Burgess SM** (2008). Genome wide screens in yeast to identify potential binding sites and target genes of DNA-binding proteins. Nucleic Acids Res 36: e8. PMC2248728

27. Bergeron SA, Milla LA, Villegas R, Meng-Chieh S, **Burgess SM**, Allende ML, Karlstrom RO, Palma V. (2008) Expression profiling identifies novel Hh/Gli-regulated genes in developing zebrafish embryos. Genomics 91:165-77. PMC2683590

28. Behra M, Bradsher J, Sougrat R, **Burgess SM** (2009). Phoenix is required for hair cell stability and efficient regeneration in the lateral line. PLoS Genet 5: e1000455. PMC2662414

29. Gomez GA, Veldman MB, Zhao Y, **Burgess SM**, Lin S (2009). Discovery and characterization of novel vascular and hematopoietic genes downstream of etsrp in zebrafish. PLoS One 4: e4998. PMC2654924

30. Liang J, **Burgess SM** (2009) Gross and fine dissection of inner ear sensory epithelia in adult zebrafish (Danio Rerio). J Vis Exp 27: pii:1211 doi:10.3791/1211. PMC2794296

31. Gallardo VE, Liang J Behra M, Elkahloun A, Villablanca EJ, Russo V, Allende ML, **Burgess SM** (2010). Molecular dissection of the migrating posterior lateral line primordium during early development in zebrafish. BMC Dev Biol 10:120. PMC3016277

32. Lee MS, Bonner JR, Bernard DJ, Sanchez EL, Sause ET, Prentice RR, **Burgess SM**, Brody LC (2012). Disruption of the folate pathway in zebrafish causes developmental defects. BMC Dev Biol 12:12 PMC3410756

33. Behra MB, Gallardo VE, Elkahloun A, Xu L, Idol J, Sheehy JI, Zonies S, Shaw KM, Weinstein BM, **Burgess SM** (2012). Transcriptional signature of supporting cells in the lateral line using the SCM1:EGFP transgenic zebrafish line. BMC Dev Biol 12:6 PMC3305402

34. Milla LA, Cortes CR, Hodar C, Onate MG, Cambiazo V, **Burgess SM**, Palma V (2012). Yeast-based assay identifies novel Shh/Gli target genes in vertebrate development. BMC Dev Biol 12:16 PMC3285088

35. Lee MS, Bonner JR, Bernard DJ, Sanchez EL, Sause ET, Prentice RR, **Burgess SM**, Brody LC (2012). Disruption of the folate pathway in zebrafish causes developmental defects. BMC Dev Biol 12:12 PMC3410756

36. Liang J, Wang D, Renaud G, Wolfsberg TG, Wilson AF, **Burgess SM** (2012). The stat3/socs3 pathway is a key regulator of hair cell regeneration in zebrafish. J Neurosci 32:10662-73 PMC3427933

37. **Burgess SM** (2012). The changing conditions of zebrafish mutants. Proc Natl Acad Sci USA 109:15082-3

38. Varshney GK, Huang H, Zhang S, Gildea DE, Yang Z, Wolfsberg TG, Lin S, **Burgess SM** (2013). The Zebrafish Insertion Collection (ZInC): a web based, searchable collection of zebrafish mutations generated by DNA insertion. Nucleic Acids Res 41 (database issue): D861-4 PMC3531054

39. Chen L, Stuart L, Ohsumi TK, **Burgess S**, Varshney GK, Dastur A, Borowsky M, Benes C, Lacy-Hulbert A, Schmidt EV (2013). Transposon activation mutagenesis as a screening tool for identifying resistance to cancer therapeutics. BMC Cancer 13:93 PMC3598783

40. Varshney GK, Lu J, Gildea D, Huang H, Pei W, Yang Z, Huang SC, Schoenfeld DS, Pho N, Casero D, Hirase T, Mosbrook-Davis DM, Zhang S, Jao LE, Zhang B, Woods IG, Zimmerman S, Schier AF, Wolfsberg T, Pellegrini M, **Burgess SM***, Lin S* (2013). A large-scale zebrafish gene knockout resource for the genome-wide study of gene function. Genome Res 23:727-35 PMC3613589

41. Rothschild SC, Lahvic J, Francescatto L, McLeod JJ, **Burgess SM**, Tombes RM (2013). CaMK-II activation is essential for zebrafish inner ear development and acts through Delta-Notch signaling. Dev Biol 381:179-88

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