

H. Joseph Yost, Ph.D.

CURRICULUM VITAE

(updated May 2017)

I. PERSONAL DATA

Position: Vice Chairman for Basic Science Research, Department of Pediatrics
Richard L. Stimson Presidential Endowed Chair in Medicine
Professor, Department of Neurobiology & Anatomy

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II. EDUCATION

1977-1980 B.S. *cum laude*, Biology and Honors Program (emphasis on History and Philosophy), Creighton University, Omaha, NE
1981 Undergraduate Research Program, Argonne National Laboratories, IL
1981-1987 Ph.D., Committee on Genetics, The University of Chicago, Chicago, IL
Thesis Advisor: Susan L. Lindquist Thesis title: The effects of heat shock and heat shock proteins on RNA processing (in *D. melanogaster* and *S. cerevisiae*)
1988-1991 Postdoctoral Fellow, Dept. of Molecular and Cell Biology, University of California, Berkeley, CA (National Institutes of Health Postdoctoral Research Fellow; American Cancer Society Senior Postdoctoral Fellow)
Postdoctoral Advisor: John C. Gerhart
2002 Administration for Physician Executives Certificate, U. Utah School of Business

III. HONORS

2017 Henry Gray Scientific Achievement Award, “American Association of Anatomists highest scientific honor recognizes unique and meritorious contributions to and achievements in anatomical sciences by a distinguished AAA member.”

FAAA: Fellow, American Association of Anatomists (elected 2017)

Richard L. Stimson Presidential Endowed Chair in the School of Medicine (2015-present).

“Heart of Gold” Award, American Heart Association (2013) “for continued dedication to lifesaving research in the fight against heart disease.”

Established Investigator American Heart Association (1996 - 2001)

McKnight Land-Grant Professor, University of Minnesota (1994-1996)

IV. PROFESSIONAL EXPERIENCE

A1. CURRENT ACADEMIC LEADERSHIP POSITIONS

Vice Chairman for Basic Science Research, Department of Pediatrics (11/13 – current)

Pediatrics is one of the largest departments at the University of Utah, with over 300 faculty encompassing a broad range of research activities. Our Research Enterprise mission is to build research, training and outreach programs that are relevant to children's health. We foster a team approach to research development, implementation, and management. Our infrastructure provides faculty mentoring and career development, grant writing workshops, grant proposal preparation, grants budgeting and reporting, human subjects IRBs and animal welfare IACUC protocol development, clinical trials and network expertise, data development and analysis, and biostatistical support. This fiscal year we were awarded over \$57 Million in NIH grants and have climbed two places in the BRIMR ranking, moving toward the goal of building one of the top ten Pediatrics research departments in the country. In addition, we are enhancing the pipeline for the next generation of biomedical scientists with unique education outreach programs at all levels, including a Mentored Program in Pediatric Research for medical students, a Native American Summer Research Internship program for undergraduates, an Academic Associates program for undergraduates, and BioEyes outreach programs for 4th-12th grade students in local schools with underrepresented populations.

Director, Cardiovascular Development Research Center (9/09 – current).

This Center brings together a collaborative group of pediatric cardiologists and surgeons, zebrafish developmental biologists, cardiac physiologists, stem cell biologists, and experts in proteomics, chromatin structure, genome-wide gene network profiling, bioengineering and bioinformatics at the University of Utah. Building this center, and bringing together researchers from a discovery, translational and clinical sciences, positioned the University of Utah to be one of only two institutions nationwide to be awarded all three consortia (Cardiovascular Development Consortium, Pediatric Cardiac Genomics Consortium, Pediatric Heart Network) in the NIH "Bench-to-Bassinet" initiative.

Director, Developmental Biology Training Program (5/11 - current).

This NICHD T32 training program builds on the strengths of the developmental biology community at the University of Utah, providing fellowships for seven predoctoral and two postdoctoral fellows per year, selected from several departments and diverse backgrounds. The program provides trainees an outstanding environment and unique opportunities for career development.

Assistant Director, University of Utah Molecular Medicine Program (11/11- current).

U2M2 is the key multidepartmental and interdisciplinary engine for the clinical departments. U2M2 investigators lead research programs that advance translational science by catalyzing the development, testing, and implementation of new diagnostics and therapeutics for a variety of human diseases and conditions. U2M2 core faculty lead the Research Education Core of the CTSA, the MD-PhD program, the Summer Medical Research program, the HHMI Med to Grad PhD track, the NIH Heart Failure Clinical Research Network, the T-32 in Cardiovascular Research, the T-32 in Metabolism, and the T-32 in Developmental Biology.

A2. PREVIOUS ACADEMIC LEADERSHIP POSITIONS

Director, Center for Children, Huntsman Cancer Institute (7/01 - 6/07).

We invigorated research programs in childhood cancers, and increased public outreach, education and awareness of children's cancer research and treatment. We built bridges with clinical and basic science departments that have interests in children's cancers, successfully recruited and mentored physician-scientist faculty with expertise in sarcoma, T-cell development and leukemia. Our fund-raising efforts generated over \$4 MM donations targeted for children's cancer research.

Program Leader, NCI Pediatric Cancers Program (7/01 - 6/05) Cancer Center Support Grant, Huntsman Cancer Institute

Program Co-Leader, NCI Cell Response Program (7/05 - 11/06) Cancer Center Support Grant, Huntsman Cancer Institute

A3. TENURE-TRACK ACADEMIC APPOINTMENTS

- 7/91 - 6/97 Assistant Professor, Cell Biology and Neuroanatomy, U. Minnesota, Minneapolis,
- 1/94 - 7/97 Member, Institute of Human Genetics, University of Minnesota
- 7/94 - 6/96 McKnight Land Grant Professor, University of Minnesota
- 7/97 - 8/97 Associate Professor (tenured), Cell Biology and Neuroanatomy, University of Minnesota, Minneapolis, MN
- 7/96 - 6/01 American Heart Association Established Investigator
- 8/97 - 6/01 Associate Professor (tenured), Oncological Sciences, University of Utah
- 8/97 - 6/07 Investigator, Huntsman Cancer Institute, University of Utah
- 8/97 - 7/02 Adjunct Associate Professor, Pediatrics, University of Utah
- 7/01 - 6/07 Professor (tenured), Oncological Sciences, University of Utah
- 7/02 - current Adjunct Professor, Pediatrics, University of Utah
- 7/07 - current Professor (tenured), Neurobiology & Anatomy, University of Utah

B. PART-TIME ACADEMIC POSITIONS

- 1997 External Examiner, Ph.D. Dissertation Committee (N. Nascone), Department of Cell Biology, Harvard Medical School
- 1998 External Examiner, Ph.D. Dissertation Committee (M. Levin), Department of Genetics, Harvard Medical School
- 1999 Visiting Lecturer, Department of Cell Biology and Anatomy, University of North Carolina at Chapel Hill, NC
- 2008 External Examiner, Ph.D. Dissertation (Milena Bastos Furtado), Developmental Biology Program, University of New South Wales, Australia
- 2011 External Examiner, Ph.D. Dissertation Committee, Department of Genetics, Yale University, New Haven, CT
- 2016 External Examiner, Ph.D. Dissertation Committee, Department of Genetics, Yale University, New Haven, CT

C. EDITORIAL EXPERIENCE

2002 - current Associate Editor, *Developmental Dynamics* (manage 30-60 papers/yr)
2008 – 2016 Developmental Biology Faculty, *Faculty of 1000*
1997 - current Editorial Board member, *Developmental Biology*
2008 Guest Editor, *Seminars in Cell and Developmental Biology*,
1998 Guest Editor, *Developmental Genetics*

D. JOURNAL REFEREE

<i>ACS Chemical Biology</i>	<i>Journal of Experimental Zoology</i>
<i>Anatomical Record</i>	<i>Journal of Clinical Investigation</i>
<i>American Journal of Human Genetics</i>	<i>Matrix Biology</i>
<i>American Journal of Medical Genetics</i>	<i>Mechanisms of Development</i>
<i>American Journal of Physiology (Heart and Circulatory Physiology)</i>	<i>Molecular Biology of the Cell</i>
<i>Biology Open</i>	<i>Molecular Cell</i>
<i>BMC Developmental Biology</i>	<i>Molecular Medicine Today</i>
<i>Cell</i>	<i>Nature</i>
<i>Current Biology</i>	<i>Nature Communications</i>
<i>Circulation</i>	<i>Cell Biology</i>
<i>Circulation Research</i>	<i>Nature Genetics</i>
<i>Development</i>	<i>Nature Reviews</i>
<i>Development, Genes and Evolution</i>	<i>PLOS One</i>
<i>Developmental Biology</i>	<i>PLOS Biology</i>
<i>Developmental Cell</i>	<i>PLOS Genetics</i>
<i>Developmental Dynamics</i>	<i>Proceedings of the National Academy of Sciences</i>
<i>Developmental Genetics</i>	<i>Roux's Archives of Developmental Biology</i>
<i>Disease Models and Mechanisms</i>	<i>Science</i>
<i>Genes and Development</i>	<i>Teratology</i>
<i>Genetics</i>	<i>Trends in Cell Biology</i>
<i>Human Genetics</i>	<i>Trends in Genetics</i>
<i>Journal of Cell Biology</i>	<i>Trends in Microbiology</i>

V. RESEARCH FUNDING

A1. CURRENT RESEARCH AWARDS AND GRANTS

“Genome-wide Analysis of Cardiac Development in Zebrafish” 2UM1HL098160

Cardiovascular Development Consortium (NHLBI Bench-to-Bassinet)

PI: Yost (9/30/2009 – 8/31/2015; Direct Costs \$5,499,408; 9/01/2015 – 8/31/2020, \$2,500,000).

This grant established a multidisciplinary Zebrafish Cardiovascular Development Research Center, with a collaborative group of zebrafish developmental biologists, cardiac physiologists, and experts in chromatin structure, genome-wide gene network profiling, bioengineering and bioinformatics at the University of Utah, as part of the national Cardiovascular Development Consortium (CvDC) within the Bench-to-Bassinet Consortium

“CvDC Utah Genomic Data Sharing Hub” 54901523 subcontract under U01HL098160
PI: Yost (6/1/2011-12/31/2017, with option to renew; annual DC \$180,581). This subcontract establishes a bioinformatics core, computer server hardware, web-based bioinformatics software, and development of novel multi-organism genomics analysis programs at the University of Utah for use by the national consortium.

“Bridging the Gap between Genomics and Clinical Outcomes in CHD” 1UM1HL128711 Pediatric Cardiac Genomics Consortium (NHLBI Bench-to-Bassinet)
MPI: M. Tristani-Firouzi, M. Yandell, H.J. Yost (9/01/2015 – 8/31/2020, DC \$1,375,000) This multidisciplinary program leverages novel bioinformatics tools for analysis of human genome sequences, patient phenotypes and pedigrees to discover the genetic basis for differential clinical outcomes in Congenital Heart Disease.

“Integrating Genomic and Clinical Approaches to Sudden Death in the Young (SDY)” U01HL131698
MPI: M. Tristani-Firouzi, M. Yandell, CoI: H.J. Yost (04/01/2016-03/31/2020)
This Utah SDC Center uses innovative concepts and collaborative methodologies to define the genomic basis for autopsy-negative sudden death in SDY; functionally characterize candidate disease-causing variants in zebrafish; and facilitate evaluation of relatives of SDY victims.

“Developmental Biology Training Program” 5T32HD007491
PI: Yost (9/29/1995 – 04/30/2022; annual DC \$253,526). This Program has a 22-year track record of training exceptional predoctoral and postdoctoral scientists in the field of Developmental Biology. The Program consists of individualized research training for seven predoctoral and two postdoctoral fellows annually, under the guidance of 41 faculty members from six Ph.D. degree-granting departments. Trainees take a Scientific Ethics course and learn scientific critical thinking and communication skills by participating in a Journal Club and presenting a seminar in the Developmental Biology Discussion Group, giving a research-based talk at an Annual Training Program Retreat, and hosting outside seminar speakers.

A2. RESEARCH AWARDS AND GRANTS COMPLETED

“BioEyes Utah” Society for Developmental Biology
PI: Yost; CO-PI: Judith Neugebauer (04/15/2016 – 04/14/2017; annual DC \$5000). BioEYES is an outreach program with a mission to energize and inspire under-represented groups into pursuing Science, Technology, Engineering, and Math (STEM) fields, by bringing zebrafish into the classroom, and taught >3000 students in 14 schools in Salt Lake City School District.

“Program Project Grant: Positional Identity in the Zebrafish Embryo”
National Institute of Health, 1 P01 HD048886
Period: 03/15/07 – 03/14/13, Direct Costs for Yost PI Project II: \$791,343
Project II: “Patterning and Morphogenesis of Kupffer’s Vesicle by Transcriptional Networks” Director: H. Joseph Yost (10% effort)
Principal Investigator: David Grunwald

“CvDC Pilot Project”

National Institutes of Health, 54902185 subcontract under U01 HL098188
Period: 01/01/2016-02/28/2017; Direct Costs: \$156,847
Principal Investigator: H. Joseph Yost

“Genetic Regulation of Left-Right Organ Asymmetry” (Zebrafish)

National Institutes of Health, R01 HL66292
Period: 07/01/01 – 06/30/05, Direct Costs: \$800,000
Renewal: 07/01/05-06/30/11, Direct Costs: \$1,000,000
Principal Investigator: H. Joseph Yost (15% effort)

“CvDC Zebrafish Model Organism Core”

National Institutes of Health, 54901587 subcontract under U01HL098160
Period: 6/1/2010-11/28/2015; Direct Costs: \$1,200,000
Principal Investigator: M. Tristani-Firouzi, Co-PI H. Joseph Yost (5% effort)

“Cardiovascular Development Consortium National Steering Committee Chairman”

NERI Subcontract 54901621 under U01 HL098188
Period: 6/1/2011 - 5/30/2012, Direct Costs: \$6790
Principal Investigator: H. Joseph Yost (5% effort)

“Molecular Roles of Syndecans in Development”

National Institute of Health, R01 HL075472
Period: 01/01/04 – 12/31/09, Direct Costs: \$1,250,000
Principal Investigator: H. Joseph Yost

“APC and Retinoids in Zebrafish Enterocyte Development”

National Institute of Health/National Cancer Institute 1 R01 CA116468
Period: 07/01/05 – 6/30/10, Direct Costs: \$225,000
Principal Investigator: David Jones
Collaborating Co-Investigator: H. Joseph Yost (5% effort)

“Molecular Pathway of Cardiac Left-Right Development” (Xenopus)

National Institute of Health, R02 HL 57840-08
Period: 04/01/97 – 03/31/01, Direct Costs: \$569,137
Renewed: 07/01/01 – 06/31/08, Direct Costs: \$1,000,000
Principal Investigator: H. Joseph Yost

“Gene Targeting in Zebrafish”

National Institute of Health, R21 HD052078
Period: 04/01/06 - 3/31/08, Direct Costs \$275,000
Principal Investigator: H. Joseph Yost

“Zebrafish Research Core Facility”

National Institutes of Health, G20 RR14285-01
Period: 05/15/01 – 05/14/06, Direct Costs: \$547, 196
Co-Directors: David J. Grunwald and H. Joseph Yost

“Zebrafish Mutation Screen Facility”

University of Utah Incentive Seed Grant
Period: 7/01/03-6/30/05, Direct Costs: \$51,240
Principal Investigator: H. Joseph Yost

“Cancer Center Support Grant”

National Institute of Health/National Cancer Institute P30 CA42014
7/01/01- 6/30/05 Program Leader: Pediatric Cancers Program (10% effort)
7/01/05-11/03/06 Program Co-Leader: Cell Response Program (5% effort *pro-bono*)
Principal Investigator: consecutively Steve Prescott, Randy Burt, Mary Beckerle

“Molecular Determinants of Pediatric Heart Disease” (SCOR)

National Institutes of Health, P01 HL61006-02
Period: 01/01/99 – 12/31/03, Direct Costs (for Yost project): \$750,000
Project Director: H. Joseph Yost (20% effort)
Principal Investigator: Arnold Strauss, then Dan Kelly, Washington University, St. Louis

“Roles of Syndecans in Cardiac Left-Right Development”

National Institute of Health, R01 HL 61465-01 (returned to participate in above SCOR)
Period: 01/01/99 – 12/31/03, Direct Costs: \$800,801
Principal Investigator: H. Joseph Yost

“Established Investigator Award”,

American Heart Association, 96002420
Period: 07/01/96 – 06/30/01, Direct Costs: \$298,750
Principal Investigator: H. Joseph Yost (40% effort)

“Regulation of Vertebrate Development by Maternal mRNA”

National Institutes of Health, R29 GM489200
Period: 08/01/92 – 09/30/98, Direct Costs: \$350,000
Principal Investigator: H. Joseph Yost

“Left-Right Cardiac Development: Genetic Analysis of Novel Laterality Mutations in Zebrafish”

American Heart Association Minnesota Affiliate
Period: 07/01/96 – 06/30/98, Direct Costs: \$96,000
Principal Investigator: H. Joseph Yost

“Molecular Roles of HSPGs in Cardiac Left-Right Development”

American Heart Association National, 94013920
Period: 07/01/94 – 6/30/97, Direct Costs: \$120,000
Principal Investigator: H. Joseph Yost

“Biological Left-Right Asymmetry”

McKnight Land-Grant Professorship
Period: 07/01/94 – 06/30/96, Direct Costs: \$61,500

Principal Investigator: H. Joseph Yost

“Regulation of Cardiac Asymmetry by Peptide Growth Factors”

American Heart Association Minnesota Affiliate
Period: 07/01/92 - 06/30/94, Direct Costs: \$45,900
Principal Investigator: H. Joseph Yost

“Control of Early Vertebrate Development by Localized Maternal mRNA”

American Cancer Society Institutional Research Grant, 0685-5656
Period: 01/01/92 – 12/31/92, Direct Costs: \$8,000

“AHA Senior Postdoctoral Research Fellowship”

American Heart Association, California Affiliate
Period: 04/01/1991 – 07/31/1991 (completed upon move to faculty position)
Principal Investigator: H. Joseph Yost

“ACS Senior Postdoctoral Research Fellowship”

American Cancer Society
Period: 1991 (returned upon award of AHA fellowship)
Principal Investigator: H. Joseph Yost

“National Institutes of Health Postdoctoral Fellowship”

National Institutes of Health
Period: 04/01/1988 – 03/31/1991
Principal Investigator: H. Joseph Yost

B. FELLOWSHIPS AND AWARDS TO POSTDOCS IN YOST LAB

“CvDC Collaborative Postdoctoral Fellow”

American Heart Association, 12POST12030301
Awarded to: Bushra Gorski
Period: 07/01/2016 - 06/30/2016, Total Costs: \$134,820

“Cardiac Neural Crest Cells”

National Institutes of Health, 5T32HL007576-30 (Cardiovascular Training Grant)
Awarded to: Sarah Abdul-Wajid, Ph.D.
Period: 10/06/2015- 10/05/2018, Direct Costs: \$110,240

“Functions of Heparan Sulfate Proteoglycans in Axon guidance and Degeneration”

NIH NINDS K99/R00 NS083714
Awarded to: Fabienne Poulain, Ph.D.
Period: 07/01/2013 - 06/30/2018, Total Costs: \$984,646

“Elucidating the Gene Regulatory Network in the Embryonic Atrio-ventricular Canal”

NIH NHLBI F32HL115881
Awarded to: Jonathon Hill
Period: 09/01/2013 - 08/31/2016, Total Costs: ~\$156,570

“Genome-wide analysis of subpopulation of cardiomyocytes to infer gene regulatory networks in chamber identity”

American Heart Association, 12POST12030301

Awarded to: Bushra Gorski

Period: 07/01/2012 - 06/30/2014, Total Costs: \$140,000

“Novel technology for analysis of cardiac & BMP-specific gene expression profiling”

National Institutes of Health, 1F32HL114181

Awarded to: Todd Townsend

Period: 05/01/2012 - 04/30/2015, Total Costs: ~\$171,000

“Establishing Left-Right Asymmetry in Vertebrates”

National Institutes of Health, 1K08HD062638

Awarded to: Cam Arrington

Period: 02/01/2010 - 01/31/2015, Total Costs: \$685,800

“A Transcriptional Pathway Regulating Ventricular Morphogenesis”

American Heart Association Western Affiliate

Awarded to: Luca Brunelli

Period: 07/01/09 - 06/30/11, Total Costs: \$140,000

“Syndecan and FGFs in Cardiovascular Development”

National Institutes of Health, 5T32HL007576 (Cardiovascular Training Grant)

Awarded to: Annita Peterson, Ph.D.

Period: 07/01/2009- 06/30/2011, Direct Costs: \$82,000

“A novel 3-OST/FGF signaling pathway in cardiac left-right development”

American Heart Association Postdoctoral Fellowship 09POST2260423

Awarded to: Todd Townsend, Ph.D.

Period: 07/01/2009- 06/30/2011, Direct Costs: \$81,000

“Molecular Role of Syndecan-2 in Cardiac Left-Right Development”

American Academy of Pediatrics Section on Cardiology Research Fellowship (only one awarded nationally each year)

Awarded to: Cammon B. Arrington, M.D., Ph.D.

Period: 07/01/2007- 06/30/2009, Direct Costs: \$135,000

“Role of Dorsal Forerunner Cells in Left/Right Patterning”

National Institutes of Health, 1 F32 HL076055-01

Awarded to: Jeffrey Amack, PhD

Period: 01/22/2004-01/21/2007, \$139,200

“Function and Molecular Regulation of Cardiac Neural Crest in Zebrafish”

American Heart Association Postdoctoral Fellowship, 0120025Y

Awarded to: Mariko Sato, M.D.

Period: 07/01/2001- 06/30/2004, Direct Costs: \$135,000

Trainee on “Multidisciplinary Cancer Research Training Program”

National Institutes of Health, 5T32CA093247

Awarded to: John Parant, PhD.

Period: 01/01/04-06/31/06

“2004 Susan Cooper Jones Memorial Research Award”

Annual award given by Huntsman Cancer Foundation to outstanding postdoctoral fellow

Awarded to: Ken Kramer, Ph.D.

“Molecular Roles of Xlefty in Pancreas Development”

National Institutes of Health Postdoctoral Fellowship, 1 F32 DK59713

Awarded to: William Branford, Ph.D.

Period: 07/01/01- 06/30/04, Direct Costs: \$131,328

“Molecular Roles of Syndecans in Early Heart Development”

National Institutes of Health Postdoctoral Fellowship, 1 F32 HL10382

Awarded to: Ken Kramer, Ph.D.

Period: 07/01/00- 06/30/2003, Direct Costs: \$119,796

“Patterning of Left-Right Asymmetry in Xenopus Heart”

American Heart Association Western States Affiliate Postdoctoral Fellowship

Awarded to: Ann Ramsdell, Ph.D.

Period: 07/01/98 – 06/30/00, Direct Costs: \$64,600

“Molecular Mechanisms of Cardiac Development”

Sixtieth American Academy of Pediatrics Section on Cardiology Research Fellowship
(only one awarded nationally each year)

Awarded to: J.L. Lohr, M.D.

Period: 07/01/96 – 06/30/97, Direct Costs: \$30,000

“Mechanisms of Maternal Dorsal mRNA Localization”

National Institutes of Health Postdoctoral Fellowship, 1 F32 HL10382-01

Awarded to: J.L. Boore, Ph.D.

Period: 10/01/92 – 03/31/96, Direct Costs: \$72,000

G. FELLOWSHIPS AND AWARDS TO STUDENTS IN YOST LAB

“Defining the role of fgf8 in the left-right pathway and lateral plate mesoderm development”

American Heart Association Western States Affiliate Predoctoral Fellowship

Awarded to: Judith Neugebauer

Period: 07/01/05 – 06/30/07, Direct Costs: \$43,000

Trainee on “Developmental Biology Training Grant”

Awarded to: Kristel Raelson (Graduate Fellowship)

Period: 11/01/04-10/31/05, Direct Costs: \$44,000

“The Role of Ubiquitin Conjugation Enzyme In Left-Right Development”

American Heart Association Western States Affiliate Predoctoral Fellowship
Awarded to: Xinghao Wang (Graduate Fellowship, returned upon moving to Kansas)
Period: 07/01/01 – 06/30/03, Direct Costs: \$43,000

“The Role of Dorsal Forerunner Cells in Embryonic Patterning of the Left-Right Axis”

American Heart Association Western States Affiliate Predoctoral Fellowship
Awarded to: Molly Wagner Nyholm (Graduate Fellowship, returned upon graduation)
Period: 07/01/00 – 06/30/02, Direct Costs: \$43,000

“AHA Undergraduate Summer Research Fellowship”

American Heart Association Western States Affiliate Undergraduate Fellowship
Awarded to: Colby Fernelius
Period: Summer 2001

“HCI Summer Undergraduate Research Fellowship”

Huntsman Cancer Institute Undergraduate Research Fellowship
Awarded to: Erin Prewitt
Agency: Huntsman Cancer Foundation
Period: Summer 2001

“AHA Undergraduate Summer Research Fellowship”

American Heart Association Western States Affiliate Undergraduate Fellowship
Awarded to: Victoria Alimov
Period: Summer 2000

“HCI Summer Undergraduate Research Fellowship”

Huntsman Cancer Institute Undergraduate Research Fellowship
Awarded to: Patrick Sullivan
Period: Summer 2000

“Doctoral Dissertation Fellowship”

Maria Danos (Ph.D. Student in Yost Laboratory)
Agency: University of Minnesota Graduate School
Period: 07/01/96 – 06/30/97

“1996 Bacaner Research Award in the Basic Medical Sciences”

Awarded to: Kathleen Schroeder (Ph.D. Student in Yost Laboratory)
Agency: Minnesota Medical Foundation

“Howard Hughes Medical Institute Predoctoral Fellowship”

Awarded to: Amy Teel (Ph.D. Student in Yost Laboratory)
Agency: Howard Hughes Medical Institute
Period: 10/01/92 – 06/30/96

VI. UNIVERSITY ADMINISTRATIVE EXPERIENCE AND ACTIVITIES

SERVICE AT UNIVERSITY OF UTAH (Current)

- 1997 – current Graduate Faculty member, Combined Program in Molecular Biology
- 2000 – current Member, M.D./Ph.D. Program Steering & Admissions Committee
- 2001 – current Internal Advisory Board, Children’s Health Research Center (CHRCDA)
- 2001 – current CZAR (Centralized Zebrafish Animal Research) Scientific Advisory Board
- 2008 – current Member, School of Medicine Core Facilities Committee
- 2009 – current Member, BioInformatics & Genomics Steering Committee
- 2009 – current Member, Executive Committee, T32 in Cardiovascular Research
- 2011 – current Director, NICHD Developmental Biology Training Program
- 2012 – current Member, Benning Society Seminar Committee
- 2013 – current Member, School of Medicine Research Advisory Committee
- 2014 – current Member, Heritage 1K Scientific Advisory Board
- 2015 – current Member, Utah Genome Project Scientific Advisory Board
- 2015 – current Member, Advisory Committee, Women’s Reproductive Health Research (Ob-Gyn K12)
- 2015 – current Member, selection committee, Burton Pilot Project, College of Nursing
- 2015 – current Member, Advisory Committee, Building Interdisciplinary Research Careers in Women's Health (Ob-Gyn K12)
- 2015 – current Member, Heart Center Concept Committee
- 2015 – current Member, Center for Clinical & Translational Science (CCTS) selection
- 2016 – current Member, Model Organisms Advisory Committee (MOAB)
- 2016 – current Member, Utah Integrative Science Committee
- 2017 – current V Foundation Pediatric Cancer Translational Award selection committee
- (current) Multiple junior faculty advisory committees

SERVICE AT UNIVERSITY OF UTAH (Completed)

- 1998 – 2003 Organizer, Faculty Chalk Talk Seminar Series, Dept. Oncological Science
- 1999 – 2003 Member, Health Sciences Research Cores Advisory Committee
- 2000 – 2002 Organizer, Research in Progress Seminar Series, Dept. Oncological Science
- 2000 – 2001 Director of Graduate Curriculum, Dept. Oncological Science
- 2000 – 2001 Member, Graduate Curriculum Committee, Program in Molecular Biology
- 2000 – 2001 Member, equipment redistribution committee, Huntsman Cancer Institute
- 2000 – 2003 Senator, University of Utah Academic Senate
- 2001 – 2007 Director, Center for Children, Huntsman Cancer Institute
- 2001 – 2003 Chairman, Retention, Promotion, Tenure Committee, Dept. Oncological Sciences
- 2001 – 2012 Review Panel, Primary Children’s Research Foundation
- 2001 – 2005 Program Leader, Pediatric Cancers, NCI Cancer Center Support Grant
- 2004 Review Panel, U. Utah Funding Incentive Seed Grant Program
- 2005 – 2006 Program Co-Leader, Cell Response Program, NCI Cancer Center Support Grant
- 2002 – 2008 Member, NIH Genetics Training Grant Steering Committee
- 2002 – 2006 Member, School of Medicine Retention, Promotion and Tenure Committee
- 2004 – 2006 Chairman, School of Medicine Retention, Promotion and Tenure Committee
- 2003 – 2006 Member, HCI Informatics Steering Committee

- 2004 – 2006 Member (Dept Rep), Molecular Biology Graduate Program Steering Committee
- 2005 – 2007 Chairman, HCI Seminar Committee
- 2005 – 2006 Member, Search Committee for Chair, Department of Pharmaceutics and Pharmaceutical Chemistry and George S. and Dolores Doré Eccles Presidential Endowed Chair in Pharmaceutics and Pharmaceutical Chemistry, U. Utah (successful recruit of Dr. David Grainger)
- 2006 Chairman, Departmental RPT committee (promotion of Susan Mango)
- 2009 – 2010 Member, USTAR search committee
- 2012 – 2013 Chairman, University Research Integrity Investigation Committee
- 2015 Chairman, School of Medicine Researcher Development & Investment Task Force

SERVICE AT UNIVERSITY OF MINNESOTA (1991 – 1997)

- 1991 – 1994 Departmental Seminar Committee
- 1991 – 1997 Graduate Faculty, MCDB&G Program (fusion of previous Cell & Developmental Biology Program and Genetics Program)
- 1991 – 1994 Medical School Admissions interviewer
- 1992 – 1997 All-University Radiation Protection Advisory Committee
- 1992 Research Mentor, High School Minority Research Apprentice Program
- 1992 – 1993 Search Committee, "Martin Lenz Harrison Chair in Developmental Biology" (successful recruits of Dr. Christopher Wylie and Dr. Janet Heasman)
- 1993 – 1997 Graduate Faculty, NIH Medical Scientist Training Program
- 1993 - 1995 Graduate Admissions Committee, Cell & Developmental Biology and Genetics
- 1993 – 1994 Faculty Search and Recruiting Committee, Developmental Biology Assistant Professorships (resulting hires: Dr. David Zarkower and Dr. Vivian Bardwell)
- 1994 – 1997 Co-organizer, Center for Developmental Biology Research Meetings
- 1994 – 1997 Executive Committee, Center for Developmental Biology
- 1994 – 1996 University of Minnesota Pew Roundtable
- 1994 – 1997 Written Prelim Exam Grader, MCDB&G Graduate Program
- 1995 – 1997 Graduate Faculty, NIH Dental-Scientist Program
- 1995 Basic Science Research Space Task Force (to assign space in new building)
- 1995 – 1997 Executive Committee, U. M. Child Health Research Center
- 1995 – 1996 Chairman, Graduate Admissions Committee, Molecular, Cell, Developmental Biology & Genetics Graduate Program
- 1996 – 1997 Institute of Human Genetics Executive Committee
- 1996 – 1997 Medical School Dean's Research and Scholarship Advisory Committee

VII. PROFESSIONAL COMMUNITY ACTIVITIES

A. NATIONAL ADVISORY BOARDS AND POLICY PANEL LEADERSHIP

- 1999 Co-Chairman (ad hoc), National Peer Review Committee, American Heart Association
- 2000 -2002 Chairman, American Heart Association Western Affiliate Peer Review Panel
- 2000 -2004 American Heart Association Western Affiliate Research Policy Committee
- 2001 -2002 NIH Task Force on Pediatric Cardiovascular Disease

2001-2011	Member, Weinstein Cardiovascular Development Steering Committee
2002 -2005	Board of Directors, Society for Developmental Biology (nationally elected)
2005 -2008	Board of Directors, Society for Developmental Biology (nationally re-elected)
2004-2009	External Advisory Board, Nevada Idea Network for Biomedical Research Excellence
2008	Co-Chairman, National Peer Review Committee, American Heart Association
2009	Chairman, NIH Special Emphasis Panel “Tools for Zebrafish Research”
2009	Chairman, NIH Special Emphasis Panel “Zebrafish Genetic Screens”
2009-2010	Chairman, American Heart Association National Peer Review Committee
2011-2012	Chairman, NHLBI Cardiovascular Development (CvDC) Steering Committee
2012-2015	National Public Affairs Committee, American Association of Anatomists
2012-2013	Chairman (interim), NIH Cardiovascular Development and Disease (CDD) Panel
2014-2016	Science Policy Committee, Federation of American Societies for Experimental Biology (FASEB)
2014-2015	Chairman, National Public Affairs Committee, American Association of Anatomists
2014-current	Coalition for Pediatric Medical Research (national organization of pediatric hospitals)
2015-current	National Scientific Advisory Committee, American Association of Anatomists
2017-current	Public Affairs Committee, Society for Developmental Biology

B. NATIONAL SCIENTIFIC PEER REVIEW COMMITTEE MEMBERSHIP

1995	NIH National Institute of Heart, Lung and Blood RFA Panel
1995-1997	American Heart Association, Minnesota Affiliate Peer Review Committee
1996-2000	American Heart Association, National Peer Review Committee
1996-2000	National Science Foundation, Developmental Biology Peer Review Panel
1998	National Institutes of Health, Cell Biology and Physiology -1 Study Section
1999-2002	American Heart Association, Western Regional Affiliate Peer Review Panel
2000	NIH National Institute of Heart, Lung and Blood PPG review panel
2000	NIH National Institute of Child Health and Human Development PPG Panel
2001-2012	Primary Children's Medical Foundation Research Review Panel
2001-2005	National Science Foundation, Developmental Biology Peer Review Panel
2002	National Institutes of Health, ad hoc R01 panel
2003-2007	Charter Member, National Institutes of Health DEV-1 Peer Review Panel
2004	Review Panel, U. Utah Funding Incentive Seed Grant Program
2004	NIH RFA HL-04-008 "Molecular mechanisms underlying Diamond-Blackfan Anemia and other congenital bone marrow syndromes"
2004	NIH Special Emphasis (P01) Panel
2004	NIH Hematology Special Emphasis Panel (Chairman)
2005	NIH Cardiovascular Differentiation and Development Study Section, ad hoc
2009	NIH Special Emphasis Panel “Tools for Zebrafish Research” (Chairman)
2009	NIH Special Emphasis Panel “Zebrafish Genetic Screens” (Chairman)
2009	NIH SBIR Peer Review Panel

2009 NIH CMBK Cellular and Molecular Biology of the Kidney Study Section
 2009 NIH ZRG1 BDA-A Center for Scientific Review Special Emphasis Panel 10
 2009 NIH ZRG1 CVRS-B RFA-OD-09-003: Challenge Grants Panel 19
 2009-2012 Pennsylvania Department of Health Review Panel
 2010 NIH Special Emphasis Panel ZHD1 (Chairman)
 2008-2010 American Heart Association Peer Review Panel (Chairman)
 2011 NIH Editorial Review ZRG1 CVRS-B (02) M
 2011 NSF Animal Developmental Mechanisms Review Panel
 2011 NIH Special Emphasis Panel ZRG1 CB-Z (02) M
 2012-2016 NIH CDD Cardiovascular Differentiation and Development Review Panel
 2015 Terry Fox Research Institute Program Project Review & Site Visit
 2016 Department of Defense (DoD) Peer Reviewed Medical Research Program (PRMRP) Focused Program Award (FPA) committee.

C. NATIONAL AND INTERNATIONAL, AD HOC EXTERNAL REVIEWER

1995-98, 2003-4, 06 March of Dimes Foundation
 1995-1999 Israel Science Foundation, Israel Academy of Sciences and Humanities
 1995 Natural Sciences and Engineering Research Council of Canada
 1995 Medical Research Council of Canada
 1996, 2001,06,12,14 National Science Foundation, Developmental Biology
 1999,2000,02,04,06,15 Wellcome Trust Fund, United Kingdom
 1999-00, 2005 Medical Research Council, United Kingdom
 2000 National Science Foundation, Developmental Neuroscience
 2003 Eli & Edythe L. Broad Foundation, Inflammatory Bowel Disease Grants
 2003 W.M. Keck Foundation
 2005 Vanderbilt University Intramural Discovery Grant Program
 2005 Israeli-German Cooperation Program in Cancer Research
 2005, 06, 09, 10 Human Frontier Science Program
 2007 An Bord Taighde Sláinte, Ireland
 2010 VolkswagenStiftung, Germany
 2011 Netherlands Organisation for Scientific Research (NWO)
 2012 Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology)
 2014 CardioVasculair Onderzoek Nederland (Netherlands)
 2015 Oak Ridge Associated Universities Cancer Research Program
 2016 Foundation for Polish Science
 2016, 2017 Cell and Developmental Biology, Agence Nationale de la Recherche (ANR; France)

D. SYMPOSIUM ORGANIZER, NATIONAL OR INTERNATIONAL

1. 2013 Organizer, Society for Developmental Biology, SW Regional, Salt Lake City
2. 2012 Organizer, NHLBI Cardiovascular Development Consortium symposium, Chicago IL
3. 2012 Co-organizer, NHLBI Bench-to-Bassinet symposium, Philadelphia, PA
4. 2003 Co-organizer, Conference on “Stem Cells Therapies: From Test Tube to Current Clinical Trials” Huntsman Cancer Institute, Salt Lake City, UT

5. 2002 Organizer, 12th Weinstein Cardiovascular Development Conference, Salt Lake City
6. 1997 Co-organizer, Cold Spring Harbor Banbury Center, International Workshop on Handedness, Cold Spring Harbor Laboratory, NY
7. 1994 Chairman, Organizing Committee, 3rd Annual Symposium on Developmental Biology, Minneapolis, MN
8. 1993 Member, Organizing Committee, 2nd Annual Symposium on Developmental Biology, Minneapolis, MN
9. 1992 Member, Organizing Committee, 1st Annual Symposium on Developmental Biology, Minneapolis, MN

E. SYMPOSIUM SESSION CHAIRMAN, NATIONAL OR INTERNATIONAL

1. 5/01/15 22nd Weinstein Cardiovascular Development Conference, Boston, MA
2. 2/16/13 “Genetic Disease Models” Southwest Regional Meeting, Society for Developmental Biology, Salt Lake City, UT
3. 1/19/13 “New Therapeutic Approaches for Myocardial Recovery” Utah Cardiac Recovery Symposium (UCARS), Salt Lake City, UT
4. 12/05/12 “Developmental Models of Disease” Personalized Medicine: Research and Care in Oncology and Beyond. Huntsman Cancer Institute, Salt Lake City, UT
5. 7/09/12 “Developmental Biology” Session, Proteoglycans Gordon Research Conference, Andover, NH
6. 5/06/11 “Cardiac Cell Signaling” Session, Weinstein Cardiovascular Development Conference, Cincinnati, OH
7. 3/17/09 Eunice Kennedy Shriver National Institute of Child Health and Human Development 6th Postdoctoral Fellow Workshop, Maritime Institute, Linthicum Heights, MD
8. 7/27/08 “Morphogenesis” Symposium, 67th Annual Meeting, Society for Developmental Biology, Philadelphia, PA
9. 6/27/08 “Emerging Gene Knockout Technology” Workshop, 8th International Meeting on Zebrafish Development & Genetics, Madison, WI
10. 5/16/08 “Signaling Pathways in Cardiogenesis” Weinstein Cardiovascular Development Conference, Houston, TX
11. 9/03/05 15th International Society of Developmental Biologists Congress, Sydney, Australia
12. 04/11/05 CDB Symposium “Origin and Development of the Vertebrate Traits” Kobe, Japan
13. 3/11/04 Keystone Symposia “Cardiac Development and Congenital Heart Disease” Keystone, CO
14. 2/6/04 “Translocations in Sarcoma, Molecular to Clinical Implications” Huntsman Cancer Institute, Salt Lake City, UT
15. 9/21/03 3rd International Conference on Proteoglycans "Pathobiology of Proteoglycans" Parma, Italy
16. 9/12/03 West Coast Zebrafish Conference, Salt Lake City, UT
17. 12/01/02 6th International Symposium on Congenital Heart Disease, Tokyo, Japan
18. 6/4/01 Juan March Foundation International Symposium, Madrid, Spain.
19. 6/9/00 10th Weinstein Cardiovascular Development Conference, St. Louis, MO
20. 5/29/98 8th Weinstein Cardiovascular Development Conference, Nashville, TN

21. 12/15/97 "Left-right asymmetry: From Molecules to Clinic" Session, American Society for Cell Biology, Washington, DC
22. 11/8/97 "Positional Information in the Developing Heart," American Heart Association 70th Scientific Symposium, Orlando, FL
23. 6/8/96 6th Weinstein Cardiovascular Development Conference, Philadelphia, PA
24. 10/10/95 4th Annual University of Minnesota Symposium in Developmental Biology, St. Paul, MN
25. 3/28/92 Cell Biology, 6th National Conference on Undergraduate Research, Minneapolis, MN

VIII. MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science
 American Association of Anatomists
 American Society for Cell Biology
 American Society for Matrix Biology
 Society for Developmental Biology
 Society for Glycobiology

IX. TEACHING RESPONSIBILITIES

A. COURSES TAUGHT

2016 - 2017 (University of Utah)

SOM Year 2 Phase 2 Facilitator: Circulation, Respiration and Regulation (7 sessions)
 HGEN 6481 Cell Biology - Signal Transduction (1 lecture)
 OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)
 Pediatrics Grant Writing Workshop, intensive three day retreat twice per year, to mentor grant writing by approximately twelve junior faculty from several departments

2015 - 2016 (University of Utah)

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects, clinical diagnosis, human genetics and developmental biology.
 SOM Year 2 Phase 2 Facilitator: Circulation, Respiration and Regulation (6 sessions)
 HGEN 6481 Cell Biology II - Signal Transduction (1 lecture)
 OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)
 Pediatrics Grant Writing Workshop, intensive three day retreat twice per year, to mentor grant writing by approximately twelve junior faculty from several departments

2014 - 2015 (University of Utah)

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects, clinical diagnosis, human genetics and developmental biology.
 SOM Year 2 Phase 2 Facilitator: Circulation, Respiration and Regulation (11 sessions)
 HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)
 OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

Pediatrics Grant Writing Workshop, intensive three day retreat twice per year, to mentor grant writing by approximately twelve junior faculty from several departments

2013 - 2014 (University of Utah)

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects, clinical diagnosis, human genetics and developmental biology.

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2012 - 2013 (University of Utah)

SOM Year 2 Phase 2 Facilitator: Circulation, Respiration and Regulation. "This 11-week unit runs from October to mid-December. This unit is designed to help students develop the clinical medicine skills and medical science knowledge to be able to propose rational differential diagnoses and diagnostic and treatment strategies for clinical problems affecting the circulatory, respiratory, and renal organ systems."

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects, clinical diagnosis, human genetics and developmental biology.

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2011 - 2012 (University of Utah)

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2010 - 2011 (University of Utah)

SOM Year 3 Pediatrics Clinical Clerkship, 3 lectures on congenital heart defects

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2009 - 2010 (University of Utah)

Anat7740 Cell polarity and axis formation (journal and grant writing course)

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2008 - 2009 (University of Utah)

Human Embryology, 1st year Medical School, Cardiovascular Development (two lectures)

Anat7740 Cell polarity and axis formation (journal and grant writing course)

HGEN 6481 Cell Biology II - Signal Transduction (2 lectures)

OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2007 - 2008 (University of Utah)

Human Embryology, 1st year Medical School, Cardiovascular Development (two lectures)
MB6480 Cell Biology Graduate course (2 lectures)
OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (2 lectures, one discussion session)

2006 - 2007 (University of Utah)

Human Embryology, 1st year Medical School, Cardiovascular Development (two lectures)
K-30 course on Animal Models, one lecture

2005 - 2006 (University of Utah)

Cell Biology (MB6480), Course co-director and lecturer (four lectures)
Pediatrics Grand Rounds "Stem Cells: Current Scientific Perspective"
Molecular Biology Faculty Research Seminar
K-30 course on Animal Models, one lecture

2004 - 2005 (University of Utah)

Cell Biology I (MB6480), two lectures
K-30 course on Animal Models, one lecture
Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

2003 - 2004 (University of Utah)

Cell Biology I (MB6480), two lectures
Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

2002 - 2003 (University of Utah)

Course co-Director, Stem Cell Journal Club (First year elective)
Animal models in Medical Research
Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

2001 - 2002 (University of Utah)

Course Co-Director, lectures and discussions, Advanced Developmental Genetics (OncSci 6300)
Lecture, Undergraduate Biology 2870
Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

2000 - 2001 (University of Utah)

Course Director, lectures and discussions, Wnts in Cancer and Development (OncSci 6700)
Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

1999 - 2000 (University of Utah)

Course Co-Director, lectures and discussions, Advanced Developmental Genetics (OncSci 6300)
Lecture, Undergraduate Developmental Biology (UNC, Chapel Hill)

Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

1998 - 1999 (University of Utah)

Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

1997 –1998 (University of Utah)

Faculty participant, Developmental Biology Journal Club
Molecular Biology Faculty Research Seminar

1996 – 1997 (University of Minnesota)

Course Director, Molecular and Cellular Basis of Development (CBN 8215)
Lectures and Lab Instruction, Human Histology (CBN 5203)
Organizer, Developmental Biology Journal Club

1995 - 1996 (McKnight Sabbatical release from teaching)

Lectures and Lab Instruction, Itasca MCDB&G Graduate Course
Organizer, Developmental Biology Journal Club

1994 – 1995 (University of Minnesota)

Course Director, Molecular and Cellular Basis of Development (CBN 8215)
Lectures, Biochemistry, Molecular and Cell Biology (CBN 5204)
Lab Instruction, Human Histology (CBN 5203)
Lecture & Discussion, Developmental Neurobiology (CBN 8210)
Lectures and Lab Instruction, Itasca MCDB&G Graduate Course
Organizer, Developmental Biology Journal Club
Lecture, Undergraduate Biology Colloquium (BIO 1950)

1993 – 1994 (University of Minnesota)

Course Director, Molecular and Cellular Basis of Development (CBN 8215)
Lectures, Biochemistry, Molecular and Cell Biology (CBN 5204)
Lab Instruction, Human Histology (CBN 5203)
Lecture & Discussion, Developmental Neurobiology (CBN 8210)
Lectures and Lab Instruction, Itasca MCDB&G Graduate Course
Lecture, Cell Cycle Control (GCB 8060)
Lecture, Cell and Developmental Biology Graduate Program (GCB 8920)
Organizer, Developmental Biology Journal Club

1992 – 1993 (University of Minnesota)

Course Director, Molecular and Cellular Basis of Development (CBN 8215)
Lectures and Recitations, Biochemistry, Molecular and Cell Biology (CBN 5204)
Lectures and Lab Instruction, Itasca MCDB&G Graduate Course
Lecture and Discussion, Developmental Neurobiology (CBN 8210)
Lecture, Neuroscience Symposium for Neurology Residents
Lecture, Cell and Developmental Biology Graduate Program (GCB 8920)
Lecture, MD/Ph.D. Program

Lecture, Genetics Graduate Program
Organizer, Developmental Biology Journal Club

1991 – 1992 (University of Minnesota)

Lectures, Biochemistry, Molecular and Cell Biology (CBN 5204)
Lectures and Lab Instruction, Itasca MCDB&G Graduate Course
Lecture, Cell Cycle Control (GCB 8060)
Lecture, Developmental Biology (GCB 5061)
Lecture, Neuroscience Graduate Program
Organizer, Developmental Biology Journal Club

B. STUDENT RESEARCH SUPERVISED

Graduate Student Thesis Research in Yost Lab

Kathleen Elizabeth Schroeder (B.S., Univ. Wisconsin, Oshkosh)
Thesis Title: "Translational regulation of maternal mRNAs along the dorsal-ventral axis in early *Xenopus* development" 3/92 - 6/96.
Ph.D. awarded June 1996. Subsequently, MBA awarded at Duke University, 1998.
Current Employment: Drug Discovery and Market Analyst, Covance Inc.

Amy Lea Teel (B.S., Univ. Washington, Seattle)
Thesis Title: "Characterization of Syndecans, a family of heparan sulfate proteoglycans, in early *Xenopus* development" 7/93 - 6/96.
Ph.D. awarded June 1996.
Current Employment: Research Associate Professor, Dept. of Civil and Environmental Engineering, Washington State Univ., Pullman, WA.

Maria Christina Danos Breitenfeldt (B.S., Yale University)
Thesis Title: "Regulation of Cardiac Left-Right Asymmetry in *Xenopus laevis*" 7/93 – 5/97.
Ph.D. awarded May 1997.
Current Employment: Research Director, R&D Systems, Minneapolis, MN

Brian Allen Hyatt (B.S., Bethel College)
Thesis Title: "Molecular induction of the left-right axis" 7/95 – 11/98.
Ph.D. awarded November 1998
Subsequent Employment: Postdoctoral Fellow, University of Cincinnati
Current Employment: Professor, Bethel University, St. Paul, MN

Molly Kristine Wagner Nyholm (B.A., Luther College)
M.S. awarded May 2000 (Ph.D. University of Wisconsin 2011)
Current Employment: Senior Cell Biology Production Scientist, Promega Inc, Madison, WI

Kristel Raelson (B.S. Purdue University, Indiana, 2002)
M.S. awarded 2005, Molecular Biology Program
Current Employment: Genetic Counselor

Patricia Sacayon (B.S. U.C. Santa Cruz, 1998)
M.S. awarded October 2006, Molecular Biology Program
Current Position: Associate Scientist, Cholestech, San Francisco, CA

Adam Cadwallader (B.S. Duquesne University, PA, 1999)
Thesis Title: The Heparan Sulfate O-Sulfation Pathway in Embryonic Development
Ph.D. Awarded June 2007
Current Employment: Postdoctoral Fellow, University of Colorado, Boulder

Xinghao Wang (B.S. XheJiang University, P.R. China, 1993; M.S. University of Kansas 2003)
Thesis Title: Roles of Vg1 in Zebrafish Left-Right Development
Ph.D. Awarded August 2008; obtained JD from University of Minnesota Law School
Current Employment: Patent Attorney at Hamre, Schumann, Muller & Larson

Judith Neugebauer (B.S. U.C. Davis, 2002)
Thesis Title: FGF Signaling Regulates Multiple Steps in Left-Right Development
Ph.D. Awarded May 2009
Current Employment: Postdoctoral Fellow, University of Utah

Stephen George (B.A. University of Pennsylvania, 2001; M.S. University of Montana, 2003)
M.D. / Ph.D. Awarded June 2009
Current Employment: Internal Medicine Residency, U Texas Southwestern Medical Center

Erin Cadwalader (B.S. University of Wisconsin, 2003)
Ph.D. Awarded December 2010
Current Employment: Phoebe S. Leboy Public Policy Fellow 2012-2013, Association for Women in Science, Washington DC

Shiela Samson (B.S. University of the Philippines, 2002)
Ph.D. Awarded May 2010
Current Employment: Postdoctoral Fellow, National Institute for Medical Research, London

Bhawika Sharma Lamichhane (B.S. Biochemistry, Idaho State University 2012)
Joined lab 6/2012

Graduate Student Rotation Research in Yost Lab

Kathleen Gibbons (Genetics rotation student), Spring 1992
Maria Danos (Genetics rotation student), Fall 1992
Julie Eschenlauer (Genetics rotation student), Winter 1993
Denise Robb (CDB rotation student), Spring 1993
Doug Bornemann (CDB rotation student), Spring 1993
Amy Teel (CDB rotation student), Summer 1993
Catherine Benson (Genetics rotation student), Fall 1993
Mike Zuck (M.D./Ph.D. rotation student), Winter 1994
Catherine Benson (Genetics rotation student), Spring 1994
Brian Hyatt (MCDBG rotation student), Summer 1994
Caroline Spike (MCDBG rotation student), Fall 1994

Gaunghui Chen (MCDBG rotation student), Winter 1995
Karl Clark (MCDBG rotation student), Fall 1995
Molly Wagner (Molecular Biology rotation student) Spring 1998
Chris Ricker (Molecular Biology rotation student) Fall 1999
Xhinghao Wang (Molecular Biology rotation student) Fall 1999
Bree Hill (Molecular Biology rotation student) Spring 1999
Andrew Pittman (Neuroscience rotation student) Fall 1999
Mark Smith (Molecular Biology rotation student) Spring 2000
Geoff Whitehead (Molecular Biology rotation student) Spring 2000
Lincoln Nadauld (MD/PhD Program rotation student) Summer 2000
Scott Witt (MD/PhD Program rotation student) Summer 2000
Mark Palfreyman (Molecular Biology rotation student) Summer 2000
Patricia Sacayon (Molecular Biology rotation student) Spring 2001
Hillary Crandell (MD/PhD Program rotation student) Summer 2001
Candice Kendell (Medical Student rotation) Summer 2001
Lei Wang (Molecular Biology rotation student) Winter 2003
Kristel Raelson (Molecular Biology rotation student) Spring 2003
Judith Neugebauer (Molecular Biology rotation student) Fall 2003
Josie Johnson (Molecular Biology rotation student) Fall 2003
Rui Wang (Molecular Biology rotation student) Fall 2003
Erin Cadwalader (Molecular Biology rotation student) Fall 2003
Jinjin Cai (Molecular Biology rotation student) Spring 2004
Timothy Dahlem (Molecular Biology rotation student) Spring 2004
Kelli Turner (Molecular Biology rotation student) Spring 2004
Hideaki Tomita (Molecular Biology rotation student) Spring 2004
Anna Verdina (Medical Student) Summer 2004
Stephen George (M.D./Ph.D. Program) Summer 2004
Maria Elias (Molecular Biology rotation student) Winter 2004
Megan Senchuck (Molecular Biology rotation student) Winter 2004
Wang Xu (Molecular Biology rotation student) Fall 2005
Matthew Terry (Molecular Biology rotation student) Spring 2008
Daria Drobysheva (Molecular Biology rotation student) Spring 2010
Sean Merrill (Molecular Biology rotation student) Fall 2010
Erin Young (Molecular Biology rotation student) Fall 2010
Satish Ghimire (Molecular Biology) Fall 2013
Bhawika Sharma Lamichhane (Molecular Biology) Spring 2014
Ben Jussila (Molecular Biology) Fall 2014
Thomas Carter (Molecular Biology) Spring 2015

Graduate Student Ph.D. Thesis Committees

Wenhao Xu (CDB), thesis defense, 9/4/92
Brian McAdams (Neurobiology), thesis proposal exam, 7/9/92; thesis defense, 11/96
David Wade (Neurobiology), thesis proposal exam, 8/5/92
Maura McGrail (Genetics), thesis proposal exam, 3/4/93; thesis defense, 9/19/96
Scott Fahrenkrug (Genetics), thesis proposal exam, 5/10/93; thesis defense, 10/10/96
Mindy Mosley (CDB), thesis proposal exam, 5/11/93
Mark Pirner (MD/Ph.D.), thesis proposal exam, 10/20/93, thesis defense 6/95

Kathleen Schroeder (MCDBG), thesis proposal exam, 6/14/94; thesis defense, 6/4/96
 Christopher Kaufman (MCDBG), thesis proposal exam, 6/27/94, 12/14/94
 Luann Klemme (MD/Ph.D.), thesis proposal exam, 12/1/94; thesis defense, 5/20/96
 Amy Teel (MCDB&G), thesis proposal exam, 4/26/95; thesis defense, 5/29/96
 Maria Danos (MCDB&G), thesis proposal exam, 6/9/95
 Brian Hyatt (MCDB&G), thesis proposal exam, 11/13/96; thesis defense, 11/98
 Denise Robb (MCDB&G), thesis proposal exam, 10/20/95
 Carla Finis (MCDB&G), thesis defense, 6/96
 Michael Zuck (MD/Ph.D.), thesis proposal exam, 10/96
 Chatchai Chinpaisal (Pharmacology), thesis proposal exam, 11/96
 Lisa M. Goering (Molecular Biology Program), thesis 2/7/03
 Xhinghai Li (Molecular Biology Program) thesis defense 10/12/01
 Jill Howard (Molecular Biology Program) thesis defense 5/04/00
 Clay Underwood (Molecular Biology Program) thesis defense 9/23/02
 Mike Portereiko (Molecular Biology Program) thesis defense 6/02/03
 Sarah Lange (Molecular Biology Program) M.S. Spring 2003
 Caroline McKeown (Molecular Biology Program), thesis defense 5/6/04
 Jennifer Rasmussen (Molecular Biology Program)
 Terry Van Ray (Neurobiology), thesis defense 7/8/03
 Dan Richardson (MB Program), thesis defense 10/13/03
 Lincoln Nadauld (Jones Lab, M.D./Ph.D. Program), thesis defense 7/18/05
 Dustin Updike (MB Program), thesis defense 12/13/05
 Amy Prunuske (MB Program), thesis defense 1/27/06
 Chris Sans (Molecular Biology), thesis defense 7/12/06
 Lily Francis (Human Genetics) M.S. 6/06
 Dawne Shelton (Jones Lab, MB Program), thesis defense 1/2007
 Joshua Wythe (Grunwald Lab, MB Program), thesis defense 10/19/07
 Kunal Rai (MB Program), thesis defense 7/18/06
 Clint Jones (Pharmaceutics and Pharmaceutical Chemistry), thesis defense 8/2012
 Magdalena Potok (Cairns Lab, MB Program), thesis defense 11/22/2013
 Priya Choudhry (Trede Lab, MB Program), thesis defense 8/2011
 Andres Romero-Carvajal (Piotrowski Lab, MB Program), thesis defense 6/2015
 Kevin Breen (Vetter Lab, MD/PhD), thesis defense 5/2015
 Ranajeet Singh Saund (Saijoh Lab, MB Program), thesis defense 12/2012
 Marina Venero Galanternik (Piotrowski Lab, MB Program), thesis defense 5/8/2015
 Mengyao Tan (Cairns Lab, MB Program), thesis defense 10/11/16
 Uchenna Emechebe (Moon Lab, MB Program), thesis defense 11/2013
 Matt Velinder (Jones Lab, MB Program)
 Tiffanie Dahl (Wolfgang Baehr Lab, Neuroscience Program), thesis proposal 3/31/16

Graduate Student Preliminary Examination Committees

1995

Doug Bornemann (MCDB&G)

1996

Brian Hyatt (MCDB&G)

Juan Abrahante-Llorens (MCDB&G)

1998

Mike Portereiko (Molecular Biol. Program)

Lisa Goering (MB Program)

Anna Paulson (MB Program)

Baird Ruch (MB Program)

1999

Dave Hutcheson (MB Program)
 Matt Smith (MB Program)
 Sarah Lange (MB. Program)
 Terry Van Raay (Neuroscience Program)
 Eric Hempel (MB Program)

2000

Yuanyuan Wu (MB. Program)
 Miles Pufall (MB Program)

2001

Chris Sans (MB Program)
 Mary Nelson (MB Program)
 Xinghai Li (MB Program)

2002

Chris Pickett (MB Program)
 Dustin Updike (MB Program)
 Adam Cadwallader (MB Program)
 Bargavi Thygarajan (MB Program)
 April Sullivan (MB Program)

2003

Michelle Wallander
 Hsiao-Fen Han
 Dan Richardson
 Sean Green

2004

Chris Peterson
 Dawne Shelton

2005

Karyn Sheaffer
 Jin Jin Cai

2006

Kin-Hoe Chow
 Jingyu Huang
 Natalie Dutrow

2009

Maria Elias
 Stephen George
 Sheila Sampson
 Leah Owen
 Chuck Meeker
 Marc Elgort
 Ranajeet Saund
 Ramya Viswanathan

2010

Marina Venero Galanternik
 Lisa Benko

2011

Yuanyuan Xie

2012

Blake Wilde

2013

Rajalekshmy Shyam

Undergraduate or High School Student Research Projects in Yost Lab

Sally Hed (GCB 5590 Honors Research) Winter 1992
 Murisiku Raifu (Minority High School Student Research Apprenticeship) Summer 1992
 Catherine Park (U. Minnesota Undergraduate Thesis) 1994 – 1997
 Nghi Lu (University of Utah ACCESS Program) Spring 1998
 Carley Maak (Stanford University Undergraduate) Summer 1998
 Michael Rich (Harvard Undergraduate, HCI Undergraduate Fellowship) Summer 1999
 Russell Ray (U. Utah Undergraduate, Rhodes Scholar) Summer 1999
 Carley Maak (Stanford University Undergraduate) Summer 1999
 Victoria Alimov (University of Utah, AHA Undergraduate Fellowship) Summer 2000
 Patrick Sullivan (University of Utah, HCI Undergraduate Fellowship) Summer 2000
 Chris Lee (University of Pennsylvania Undergraduate) Summer 2000
 Colby Fernelius (University of Utah, AHA Undergraduate Fellowship) Summer 2001
 Erin Prewitt (University of Utah, HCI fellowship) Summer and Fall 2001
 Rebecca Burton (New York University, AHA Undergraduate Fellowship) Summer 2002, 03
 Lane Brian McMahan (University of Utah, HCI Undergraduate Fellowship) Summer 2003-04
 Anmy Tran (University of Utah, ACCESS Student) 2002-04
 Anoush Emrazian (University of Utah, ACCESS Student) 2003-present
 Brant Nikolaus (University of Utah, AHA Undergraduate Fellowship) Summer 2005

David Muhlestein (Brigham Young University, AHA Undergraduate Fellowship) Summer 2005
Devin Busby (Brigham Young University, AHA Undergraduate Fellowship) Summer 2008
Elaine Martini (U. Ohio, Pediatrics Dept Fellowship; AHA Fellowship) Summer 2008; 2009
Michael Armajo (Native American Student Internship) Summer 2010
Pfaawn Eskee (Native American Student Internship) Summer 2010
Jen Akiona (U. Utah) October 2010 – January 2012
Emily Means (U. Utah) 2012
Annie Marsden (University of Chicago) Summer 2012
Antona Yost (West High School) Summer 2013
Jason Chen (Stanford University) Summer 2013
Emily Graham (West High School) Summer 2014

C. Ph.D. or M.D. POSTDOCTORAL FELLOWS TRAINED

Jeffrey Boore (Ph.D., U. Michigan)
National Institutes of Health Postdoctoral Fellow, 10/92 - 4/96.
Current Employment: Department Head, Evolutionary Genomics, DOE Joint Genome Institute,
Lawrence Berkeley National Laboratory; Adjunct Professor, UC Berkeley

Jamie L. Lohr (M.D., UC San Diego, 1988; A.B., University of California, Berkeley)
Child Health Research Center Research Postdoctoral Fellow, 8/95 – 8/97.
Current Employment: Associate Professor (tenured), Dept. Pediatrics, University of Minnesota,
Minneapolis, MN

Jeffrey Essner (Ph.D., U. Minnesota, 1996; B.S. University of Iowa)
Postdoctoral Fellow, 8/96 - 10/96; Research Associate 8/97 – 6/02
2002-05 Director of Operations, Discovery Genomics, Minneapolis, MN
Current Employment: Associate Professor (tenured), Iowa State University

Ann F. Ramsdell (Ph.D., Medical University of South Carolina 1996)
American Heart Association Postdoctoral Fellow, 8/97 – 5/00
Current Employment: Associate Professor, Dept. Regenerative Medicine & Cell Biology, Med. U.
South Carolina, Charleston, S.C. and Associate Professor (tenured) U South Carolina, Columbia,
SC.

Wendy Thomas (Ph.D., University of California, Irvine, 1995; B.A., University of Colorado,
Boulder) Postdoctoral Associate, 11/97 – 4/99.

Anne Pollack (Ph.D., University of California, San Francisco, 1996)
American Heart Association Postdoctoral Fellow, 7/00 – 7/01
Current Employment: Assistant Professor, Dept. Cell Biology and Anatomy, University of Arizona,
Tucson, AZ

Kazushi Yasuda (M.D. Nagoya City University Medical School, 1995)
Postdoctoral Fellow, AHA funded, 10/01 – 10/03
Current Employment: Private Practice physician, Japan

Kenneth L. Kramer (Ph.D., University of Cincinnati, 1998, B.S., University of Dayton)
National Institutes of Health Postdoctoral Fellow, 1/98 – 6/04
Previous Employment: Investigator, Developmental Biology, NHLBI, Bethesda, MD.
Current Employment: Assistant Professor, Creighton University School of Medicine.

Robert “Wyc” Cheatham (M.D. Mercer University, Macon 1999)
CHRC Research Fellowship, 7/02 – 7/04
Current Employment: Neonatologist, Intermountain Health Care

Brent Bisgrove (Ph.D., Indiana University, 1993; MSc. and B.Sc., University of Victoria)
Postdoctoral Fellow, 1/98 – present
Current Employment: Senior Research Scientist, Yost Lab

William Branford (Ph.D., University of Cincinnati, 1997; B.S., University of Toledo)
National Institutes of Health Postdoctoral Fellow, 1/98 – 6/05
Current Employment: Assistant Professor, Wayne State University

Mariko Sato (M.D., Tohoku University, Sendai, Japan, 1987)
American Heart Association Postdoctoral Fellow, 1/99 – 6/06
Current Employment: Assistant Professor, Dept. Pediatrics, University of Utah

Phillip Barnette (M.D./DVM Oregon Health Sciences University, Portland, 1997)
Hematology Research Training Grant, 7/01 – 6/04
Current Employment: Associate Professor of Pediatrics, University of Utah

Jeffrey Amack (Ph.D. University of Wisconsin, Madison 2001)
Postdoctoral Fellow, NRSA funded 9/02-8/07
Current Employment: Associate Professor (tenured), Cell and Developmental Biology, SUNY
Upstate Medical University, Syracuse, NY

John Parant (Ph.D., University of Texas, Houston 2001)
Postdoctoral Fellow, 9/03-10/10
Current Employment: Assistant Professor (tenure track), Department of Pharmacology and
Toxicology, University of Alabama, Birmingham, AL

Annita Peterson (Ph.D., Iowa State University, Ames 2004)
Postdoctoral Fellow, 6/05-5/15

Cammon Arrington (M.D./Ph.D. University of Iowa)
Assistant Professor of Pediatrics, Cardiology 10/05-05/2014
Current Employment: Stanford Hospitals & Clinics, San Jose, CA

Luca Brunelli (M.D. University of Genoa; Ph.D. University of Turin)
Assistant Professor of Pediatrics, Neonatology 07/08-11/2016
Current Employment: Division Chief, Neonatology, University of Nebraska, Omaha

Todd Townsend (Ph.D. Vanderbilt University 2008)

Postdoctoral Fellow, 11/08 – 10/14
Current Employment: Commissioner's Fellow, U.S. Food and Drug Administration

Judith Neugebauer (B.S. U.C. Davis, 2002; Ph.D. U. Utah 2009)
Postdoctoral Fellow, 6/09 – 03/12
Current Employment: Director, BioEyes Program, University of Utah

Colin Maguire (Ph.D. in Cardiovascular Sciences, Baylor College of Medicine 2009)
Postdoctoral Fellow (shared/collaborating with M. Condic), 02/10 - present
Current Employment: Director, CCTS Cellular Translational Research Core, U. Utah

Bushra Gorski (Ph.D., University of Manchester UK 2010)
Postdoctoral Fellow, 09/10 - present

Jonathon Hill (Ph.D, Columbia University, 2010)
Postdoctoral Fellow, 09/10 – 6/15/15
Current Position: Assistant Professor (tenure track), Brigham Young University

Erin Cadwalader (B.S. University of Wisconsin, 2003; PhD U.Utah 2010)
Postdoctoral Fellow, 01/2011 – 12/2012
Current Employment: Phoebe S. Leboy Public Policy Fellow, Association for Women in Science (AWIS), Washington DC

Shiela Samson (B.S. University of the Philippines, 2002; Ph.D. U. Utah 2011)
Postdoctoral Fellow, 06/2011 – 02/2013
Current Employment: Postdoctoral Fellow, MRC National Institute for Medical Research, Mill Hill, London

Fabienne Poulain (B.S. and Ph.D., University of Paris, France)
Postdoctoral Fellow, 12/2012 – 12/2014
Current Position: Assistant Professor (tenure track), University of South Carolina, Columbia, SC

María de los Angeles Serrano (B.S. National University of Misiones, Ph.D. National University of Tucumán, Argentina)
Postdoctoral Fellow, 05/2015 – present

Sarah Abdul-Wajid (B.Sc. University of Toronto, Ph.D. University of California Santa Barbara)
Postdoctoral Fellow (T32 Cardiovascular Training Grant), 10/2015-present

Other Individuals mentored through collaborative research in Yost lab

Sungu Armagan, Ph.D. Dept. of Management (Currently Assistant Professor, Florida Int. Univ.)
Norman Hu, Research Assistant Professor, Department of Pediatrics
Susan Morelli, M.D., HHMI Fellow, Genetics and Neonatology, Department of Pediatrics
Masaaki Yoshigi, M.D., Research Associate Professor, Department of Pediatrics

X. PUBLICATIONS

A. ORIGINAL RESEARCH PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Lyozin GT, Kosaka Y, Bhattacharje G, Yost HJ, Brunelli L. Direct Isolation of Seamless Mutant Bacterial Artificial Chromosomes. **Curr Protoc Mol Biol**. 2017 Apr 3;118:8.6.1-8.6.29. doi: 10.1002/cpmb.34. PMID: 28369677
2. Gittenberger-de Groot AC, Hoppenbrouwers T, Miquerol L, Kosaka Y, Poelmann RE, Wisse LJ, Yost HJ, Jongbloed MR, DeRuiter MC, Brunelli L. 14-3-3epsilon Controls Multiple Developmental Processes in the Mouse Heart. **Dev Dyn**. 2016 Aug 31. doi: 10.1002/dvdy.24440. PMID: 27580238
3. Merchant SS, Kosaka Y, Yost HJ, Hsu EW, Brunelli L. Micro-Computed Tomography for the Quantitative 3-Dimensional Assessment of the Compact Myocardium in the Mouse Embryo. **Circ J**. 2016 Jul 25;80(8):1795-803. doi: 10.1253/circj.CJ-16-0180. Epub 2016 Jun 15. PMID: 27301409
4. Karanth S, Zinkhan EK, Hill JT, Yost HJ, Schlegel A. FOXN3 Regulates Hepatic Glucose Utilization. **Cell Rep**. 2016 Jun 21;15(12):2745-55. doi: 10.1016/j.celrep.2016.05.056. Epub 2016 Jun 9. PMID: 27292639
5. Bowles NE, Jou CJ, Arrington CB, Kennedy BJ, Earl A, Matsunami N, Meyers LL, Etheridge SP, Saarel EV, Bleyl SB, Yost HJ, Yandell M, Leppert MF, Tristani-Firouzi M, Gruber PJ. Exome analysis of a family with Wolff-Parkinson-White syndrome identifies a novel disease locus. **Am J Med Genet A**. 2015 Aug 18. doi: 10.1002/ajmg.a.37297. PMID: 26284702
6. Percival SM, Thomas HR, Amsterdam A, Carroll AJ, Lees JA, Yost HJ, Parant JM. Variations in dysfunction of sister chromatid cohesion in *esco2* mutant zebrafish reflect the phenotypic diversity of Roberts syndrome. **Dis Model Mech**. 2015 Aug 1;8(8):941-55. doi: 10.1242/dmm.019059. Epub 2015 Jun 4. PMID:26044958
7. Nash D, Arrington CB, Kennedy BJ, Yandell M, Wu W, Zhang W, Ware S, Jorde LB, Gruber PJ, Yost HJ, Bowles NE, Bleyl SB. Shared Segment Analysis and Next-Generation Sequencing Implicates the Retinoic Acid Signaling Pathway in Total Anomalous Pulmonary Venous Return (TAPVR). **PLoS One**. 2015 Jun 29;10(6):e0131514. doi: 10.1371/journal.pone.0131514. eCollection 2015. PMID:26121141
8. Lyozin GT, Bressloff PC, Kumar A, Kosaka Y, Demarest BL, Yost HJ, Kuehn MR, Brunelli L. Isolation of rare recombinants without using selectable markers for one-step seamless BAC mutagenesis. **Nat Methods**. 2014 Sep;11(9):966-70. doi:10.1038/nmeth.3030. Epub 2014 Jul 13. PubMed PMID: 25028895; PubMed Central PMCID: PMC4149595.
9. Hill JT, Demarest BL, Bisgrove BW, Su YC, Smith M, Yost HJ. Poly peak parser: Method and software for identification of unknown indels using sanger sequencing of polymerase chain reaction products. **Dev Dyn**. 2014 Aug 27. doi:10.1002/dvdy.24183. [Epub ahead of print] PubMed PMID: 25160973. PubMed Central PMCID: In Process
10. Neugebauer JM, Yost HJ. FGF signaling is required for brain left-right asymmetry and brain midline formation. **Dev Biol**. 2014 Feb 1;386(1):123-34. doi:10.1016/j.ydbio.2013.11.020. Epub 2013 Dec 12. PubMed PMID: 24333178; PubMed Central PMCID: PMC3970204.
11. Samson SC, Ferrer T, Jou CJ, Sachse FB, Shankaran SS, Shaw RM, Chi NC, Tristani-Firouzi M, Yost HJ. 3-OST-7 regulates BMP-dependent cardiac contraction. **PLoS Biol**. 2013 Dec;11(12):e1001727. doi: 10.1371/journal.pbio.1001727. Epub 2013 Dec 3. PubMed PMID: 24311987; PubMed Central PMCID: PMC3849020.

12. Arrington CB, Peterson AG, Yost HJ. Sdc2 and Tbx16 regulate Fgf2-dependent epithelial cell morphogenesis in the ciliated organ of asymmetry. **Development**. 2013 Oct;140(19):4102-9. doi: 10.1242/dev.096933. PubMed PMID: 24046323; PubMed Central PMCID: PMC3775420.
13. Neugebauer JM, Cadwallader AB, Amack JD, Bisgrove BW, Yost HJ. Differential roles for 3-OSTs in the regulation of cilia length and motility. **Development**. 2013 Sep;140(18):3892-902. doi: 10.1242/dev.096388. Epub 2013 Aug 14. PubMed PMID: 23946439; PubMed Central PMCID: PMC3754482.
14. Peterson AG, Wang X, Yost HJ. Dvr1 transfers left-right asymmetric signals from Kupffer's vesicle to lateral plate mesoderm in zebrafish. **Dev Biol**. 2013 Oct 1;382(1):198-208. doi: 10.1016/j.ydbio.2013.06.011. Epub 2013 Jun 17. PubMed PMID: 23791819; PubMed Central PMCID: PMC3888838.
15. Tay HG, Schulze SK, Compagnon J, Foley FC, Heisenberg CP, Yost HJ, Abdelilah-Seyfried S, Amack JD. Lethal giant larvae 2 regulates development of the ciliated organ Kupffer's vesicle. **Development**. 2013 Apr;140(7):1550-9. doi: 10.1242/dev.087130. PubMed PMID: 23482490; PubMed Central PMCID: PMC3596994.
16. Jurisch-Yaksi N, Rose AJ, Lu H, Raemaekers T, Munck S, Baatsen P, Baert V, Vermeire W, Scales SJ, Verleyen D, Vandepoel R, Tylzanowski P, Yaksi E, de Ravel T, Yost HJ, Froyen G, Arrington CB, Annaert W. Rer1p maintains ciliary length and signaling by regulating γ -secretase activity and Foxj1a levels. **J Cell Biol**. 2013 Mar 18;200(6):709-20. doi: 10.1083/jcb.201208175. Epub 2013 Mar 11. PubMed PMID: 23479743; PubMed Central PMCID: PMC3601348.
17. Maguire CT, Demarest BL, Hill JT, Palmer JD, Brothman AR, Yost HJ, Condic ML. Genome-wide analysis reveals the unique stem cell identity of human amniocytes. **PLoS One**. 2013;8(1):e53372. doi: 10.1371/journal.pone.0053372. Epub 2013 Jan 10. PubMed PMID: 23326421; PubMed Central PMCID: PMC3542377.
18. Hill JT, Demarest BL, Bisgrove BW, Gorski B, Su YC, Yost HJ. MMAPP: mutation mapping analysis pipeline for pooled RNA-seq. **Genome Res**. 2013 Apr;23(4):687-97. doi: 10.1101/gr.146936.112. Epub 2013 Jan 8. PubMed PMID: 23299975; PubMed Central PMCID: PMC3613585.
19. Chang B, Gorbea C, Lezin G, Li L, Shan L, Sakai N, Kogaki S, Otomo T, Okinaga T, Hamaoka A, Yu X, Hata Y, Nishida N, Yost HJ, Bowles NE, Brunelli L, Ichida F. 14-3-3 ϵ gene variants in a Japanese patient with left ventricular noncompaction and hypoplasia of the corpus callosum. **Gene**. 2013 Feb 15;515(1):173-80. doi: 10.1016/j.gene.2012.12.049. Epub 2012 Dec 20. PubMed PMID: 23266643.
20. Arrington CB, Bleyl SB, Matsunami N, Bowles NE, Leppert TI, Demarest BL, Osborne K, Yoder BA, Byrne JL, Schiffman JD, Null DM, DiGeronimo R, Rollins M, Faix R, Comstock J, Camp NJ, Leppert MF, Yost HJ, Brunelli L. A family-based paradigm to identify candidate chromosomal regions for isolated congenital diaphragmatic hernia. **Am J Med Genet A**. 2012 Dec;158A(12):3137-47. doi: 10.1002/ajmg.a.35664. Epub 2012 Nov 19. PubMed PMID: 23165927; PubMed Central PMCID: PMC3507422.
21. Kosaka Y, Cieslik KA, Li L, Lezin G, Maguire CT, Saijoh Y, Toyo-oka K, Gambello MJ, Vatta M, Wynshaw-Boris A, Baldini A, Yost HJ, Brunelli L. 14-3-3 ϵ plays a role in cardiac ventricular compaction by regulating the cardiomyocyte cell cycle. **Mol Cell Biol**. 2012 Dec;32(24):5089-102. doi: 10.1128/MCB.00829-12. Epub 2012 Oct 15. PubMed PMID: 23071090; PubMed Central PMCID: PMC3510533.
22. Cadwalader EL, Condic ML, Yost HJ. 2-O-sulfotransferase regulates Wnt signaling, cell adhesion and cell cycle during zebrafish epiboly. **Development**. 2012 Apr;139(7):1296-305. doi:

- 10.1242/dev.078238. Epub 2012 Feb 22. PubMed PMID: 22357927; PubMed Central PMCID: PMC3294434.
23. Bisgrove BW, Makova S, Yost HJ, Brueckner M. RFX2 is essential in the ciliated organ of asymmetry and an RFX2 transgene identifies a population of ciliated cells sufficient for fluid flow. **Dev Biol.** 2012 Mar 1;363(1):166-78. doi: 10.1016/j.ydbio.2011.12.030. Epub 2011 Dec 29. PubMed PMID: 22233545; PubMed Central PMCID: PMC3347763.
 24. Lezin G, Kosaka Y, Yost HJ, Kuehn MR, Brunelli L. A one-step miniprep for the isolation of plasmid DNA and lambda phage particles. **PLoS One.** 2011;6(8):e23457. doi: 10.1371/journal.pone.0023457. Epub 2011 Aug 15. PubMed PMID: 21858126; PubMed Central PMCID: PMC3156146.
 25. Wythe JD, Jurynece MJ, Urness LD, Jones CA, Sabeh MK, Werdich AA, Sato M, Yost HJ, Grunwald DJ, Macrae CA, Li DY. Hadp1, a newly identified pleckstrin homology domain protein, is required for cardiac contractility in zebrafish. **Dis Model Mech.** 2011 Sep;4(5):607-21. doi: 10.1242/dmm.002204. Epub 2011 May 31. PubMed PMID: 21628396; PubMed Central PMCID: PMC3180224.
 26. Wang G, Cadwallader AB, Jang DS, Tsang M, Yost HJ, Amack JD. The Rho kinase Rock2b establishes anteroposterior asymmetry of the ciliated Kupffer's vesicle in zebrafish. **Development.** 2011 Jan;138(1):45-54. doi: 10.1242/dev.052985. Epub 2010 Nov 23. PubMed PMID: 21098560; PubMed Central PMCID: PMC2998165 (photo featured on journal cover).
 27. Parant JM, George SA, Holden JA, Yost HJ. Genetic modeling of Li-Fraumeni syndrome in zebrafish. **Dis Model Mech.** 2010 Jan-Feb;3(1-2):45-56. doi: 10.1242/dmm.003749. PubMed PMID: 20075382; PubMed Central PMCID: PMC2806900.
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 29. Arrington CB, Yost HJ. Extra-embryonic syndecan 2 regulates organ primordia migration and fibrillogenesis throughout the zebrafish embryo. **Development.** 2009 Sep;136(18):3143-52. doi: 10.1242/dev.031492. PubMed PMID: 19700618; PubMed Central PMCID: PMC2730369.
 30. Neugebauer JM, Amack JD, Peterson AG, Bisgrove BW, Yost HJ. FGF signalling during embryo development regulates cilia length in diverse epithelia. **Nature.** 2009 Apr 2;458(7238):651-4. doi: 10.1038/nature07753. Epub 2009 Feb 25. Erratum in: *Nature*. 2010 Jan 21;463(7279):384. PubMed PMID: 19242413; PubMed Central PMCID: PMC2688717.
 31. Wang X, Yost HJ. Initiation and propagation of posterior to anterior (PA) waves in zebrafish left-right development. **Dev Dyn.** 2008 Dec;237(12):3640-7. doi: 10.1002/dvdy.21771. PubMed PMID: 18985756; PubMed Central PMCID: PMC2858685.
 32. Wolman MA, Sittaramane VK, Essner JJ, Yost HJ, Chandrasekhar A, Halloran MC. Transient axonal glycoprotein-1 (TAG-1) and laminin-alpha1 regulate dynamic growth cone behaviors and initial axon direction in vivo. **Neural Dev.** 2008 Feb 20;3:6. doi: 10.1186/1749-8104-3-6. PubMed PMID: 18289389; PubMed Central PMCID: PMC2278142. (photo featured on journal cover)
 33. Kwan KM, Fujimoto E, Grabher C, Mangum BD, Hardy ME, Campbell DS, Parant JM, Yost HJ, Kanki JP, Chien CB. The Tol2kit: a multisite gateway-based construction kit for Tol2 transposon transgenesis constructs. **Dev Dyn.** 2007 Nov;236(11):3088-99. PubMed PMID: 17937395.
 34. Amack JD, Wang X, Yost HJ. Two T-box genes play independent and cooperative roles to regulate morphogenesis of ciliated Kupffer's vesicle in zebrafish. **Dev Biol.** 2007 Oct 15;310(2):196-210. Epub 2007 Jun 4. PubMed PMID: 17765888.

35. Luo W, Peterson A, Garcia BA, Coombs G, Kofahl B, Heinrich R, Shabanowitz J, Hunt DF, Yost HJ, Virshup DM. Protein phosphatase 1 regulates assembly and function of the beta-catenin degradation complex. **EMBO J**. 2007 Mar 21;26(6):1511-21. Epub 2007 Feb 22. PubMed PMID: 17318175; PubMed Central PMCID: PMC1829374.
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41. Cadwallader AB, Yost HJ. Combinatorial expression patterns of heparan sulfate sulfotransferases in zebrafish: I. The 3-O-sulfotransferase family. **Dev Dyn**. 2006 Dec;235(12):3423-31. PubMed PMID: 17075882.
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B. INVITED REVIEWS IN JOURNALS

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C. BOOKS, BOOK CHAPTERS AND BOOK REVIEWS

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D. PATENTS

1. Copyright licensed software (2012) Mutation Mapping Analysis Pipeline for Pooled RNA-seq (MMAPPR)
2. Provisional Patent (2010): Identification of Tumor Suppressor Genes in Zebrafish and a novel p53 Mutant as a Model for Cancer

XI. INVITED SYMPOSIUM AND KEYNOTE LECTURES (1991 - PRESENT)

1. 04/2017 2017 Henry Gray Lecture, American Association of Anatomists, Experimental Biology Meeting, Chicago, IL

2. 06/02/16 Keynote Speaker, Frontiers of Developmental Biology (49th Annual meeting moved from Kumomoto due to earthquake), Japanese Society of Developmental Biologists, Tokyo, Japan
3. 05/20/16 Symposium speaker, Fifth International Multiple Hereditary Exostoses (MHE) Research Conference, West Palm Beach, FL
4. 10/03/15 Symposium Speaker, Society for Developmental Biology Southwest Regional Meeting, Dallas, TX
5. 05/02/15 Symposium Speaker, 22nd Weinstein Cardiovascular Conference, Boston, MA
6. 03/01/15 Symposium speaker, Gordon Research Conference on *Glycobiology: Glycans as mediators of interactions between molecules, cells and organisms*, Lucca (Barga), Italy
7. 05/05/14 Symposium Speaker, Pediatric Academic Societies (PAS) & Asian Society for Pediatric Research, Vancouver, Canada
8. 04/28/14 Symposium Chairman “From the Lab to the Capitol: A Scientist’s Guide to Advocacy” FASEB, San Diego, CA.
9. 01/16/14 Keynote Speaker, AHA Heart of Gold recipient, First Annual AHA Utah Research Reception, Salt Lake City, Utah
10. 06/15/13 Symposium speaker, “Making and breaking the left-right axis: laterality in development and disease” Satellite Symposium, 17th International Congress of Developmental Biology, Cancun, Mexico
11. 6/01/13 Symposium speaker, Syndecans in Cell Regulation and Disease, Leuven, Belgium
12. 1/22/13 Symposium speaker, 5th Strategic Conference of Zebrafish Investigators, Asilomar, CA
13. 11/4/12 Symposium speaker, Fourth International Multiple Hereditary Exostoses (MHE) Research Conference, Philadelphia, PA
14. 4/29/12 Symposium speaker, VI International Meeting of the Latin American Society for Developmental Biology, Montevideo, Uruguay
15. 6/20/11 Symposium speaker, Developmental Biology Gordon Conference, Proctor Acad., NH
16. 3/18/11 Symposium speaker, Cardiovascular, Hypertension and Diabetes Symposium, University of Utah, Salt Lake City, UT
17. 10/24/10 Symposium speaker, Society for Glycobiology Symposium, American Society for Matrix Biology Meeting, Charleston, S.C.
18. 6/23/10 Symposium speaker, 43rd Annual Meeting, Japanese Society of Developmental Biologists, Kyoto, Japan
19. 3/16/10 Symposium speaker, Gordon Research Conference on *Fibroblast Growth Factors in Development and Disease*, Ventura, CA
20. 2/23/10 Symposium speaker, Keystone Symposium on *Cilia, Signaling and Human Disease*, Monterey, CA
21. 12/21/09 Symposium speaker, Lubkin Fund for MHE Research, San Diego, CA
22. 11/13/09 Symposium speaker, Society for Glycobiology, San Diego, CA
23. 10/31/09 Symposium speaker, 3rd International Multiple Hereditary Exostoses Conference, Boston, MA
24. 9/5/09 International Society for Developmental Biology, Edinburgh, Scotland
25. 5/7/09 National Committee member, Weinstein Cardiovascular Development Conference, San Francisco, CA
26. 3/17/09 Keynote speaker, Eunice Kennedy Shriver National Institute of Child Health and Human Development 6th Postdoctoral Fellow Workshop, Maritime Institute, Linthicum Heights, MD

27. 3/10/09 Symposium speaker (canceled), Vascular Biology Gordon Research Conference, Venura, CA
28. 7/27/08 Board of Directors, 67th Annual Meeting Society of Developmental Biology, Philadelphia, PA
29. 7/08/08 Symposium speaker, Proteoglycan Gordon Research Conference, NH
30. 7/02/08 Symposium speaker, Teratology Society Annual Symposium, Monterey, CA
31. 6/27/08 Symposium workshop chairman, 8th International Meeting on Zebrafish Development and Genetics, Madison, WI
32. 5/16/08 National Committee member, Weinstein Cardiovascular Development Conference, Houston, TX
33. 9/16/07 Symposium speaker, Fifth International Conference on Proteoglycans, Rio de Janeiro, Brazil
34. 8/4/07 Symposium speaker, FASEB Symposium: The Biology of Cilia and Flagella, Saxtons River, VT (canceled for lab move)
35. 2/02/07 2nd Strategic Conference of Zebrafish Investigators, Asilomar, CA.
36. 8/29/06 Symposium speaker, McLaughlin Research Institute Annual Biomedical Research Workshop, Great Falls, MT
37. 5/19/06 Symposium speaker, "Is Asymmetry the Biological Ground State?" Developmental Dynamics Annual Symposium, Salt Lake City, UT
38. 10/28/05 Keynote speaker, Southwest Regional Developmental Biology Symposium, Boulder, CO
39. 9/03/05 Symposium speaker, 15th International Society of Developmental Biologists Congress, Sydney, Australia
40. 4/11/05 Symposium speaker, 3rd Annual Cell and Developmental Biology Symposium: Origin and Development of the Vertebrate Traits, Kobe, Japan
41. 3/07/05 Symposium speaker, Gordon Research Conference on Glycobiology, Ventura, CA
42. 9/16/04 Symposium speaker, International Xenopus Meeting, Woods Hole, MA
43. 6/14/04 Symposium speaker, Membrane Biology Gordon Conference, Bristol, RI
44. 6/04/04 Symposium speaker, Developmental Biology Symposium, University of California, San Francisco, CA
45. 3/11/04 Symposium speaker, Keystone Symposia-Cardiac Development and Congenital Heart Disease, Keystone, CO
46. 2/15/04 Symposium speaker, 15th Utah Conference on Pediatric Cardiovascular Disease, Deer Valley, UT
47. 2/6/04 Symposium speaker, Translocations in Sarcoma, Molecular to Clinical Implications, Huntsman Cancer Institute, Salt Lake City, UT
48. 12/4/03 Symposium speaker, Society for Glycobiology, San Diego, CA
49. 10/21/03 Symposium speaker, Third Annual Cardiovascular Symposium, UTSW, Dallas, Tx
50. 9/21/03 Symposium speaker, 3rd International Conference on Proteoglycans, "Pathobiology of Proteoglycans," Parma, Italy
51. 9/19/03 Keynote Address, Southwest Regional Developmental Biology Meeting, Salt Lake City, UT
52. 4/14/03 Symposium speaker, FASEB/AAA Symposium on "Gastrulation", San Diego, CA
53. 4/12/03 Symposium speaker, FASEB/EB Symposium "Zebrafish plumbing: heart and vessels" session, San Diego, CA
54. 3/21/03 Keynote speaker, West Coast Regional Developmental Biology Meeting, Friday Harbor Marine Biology Laboratory, WA

55. 12/01/02 Symposium speaker, 6th International Symposium on Congenital Heart Disease, Tokyo, Japan
56. 11/18/02 Symposium speaker, American Heart Assoc. 75th Scientific Symposium, Chicago, IL
57. 8/14/02 Organizer and Moderator, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT
58. 7/8/02 Symposium speaker, Gordon Conference on Proteoglycans, Andover, NH
59. 6/12/02 Symposium speaker, 5th International Conference on Zebrafish Development and Genetics, Madison, WI
60. 5/30/02 Symposium speaker, Cold Spring Harbor Symposium on Quantitative Biology, NY
61. 8/14/01 Organizer and Moderator, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT
62. 7/23/01 Symposium speaker, West Coast Zebrafish Meeting, Seattle, WA.
63. 7/9/01 Symposium speaker, "The TGF-beta superfamily: signaling and development" FASEB Symposium, Tuscon, AZ.
64. 6/4/01 Symposium speaker, Juan March Foundation International Symposium, Madrid, Spain.
65. 5/18/01 Symposium Speaker, 11th Weinstein Cardiovascular Development Conf., Dallas, TX.
66. 4/2/01 Symposium speaker, "Patterning during Development: Insights from Zebrafish," American Association of Anatomists, Orlando, FL.
67. 3/22/01 Symposium Speaker, "Early Cardiac Development and Cardiac Laterality" Cardiovascular Development Symposium, Charleston, SC.
68. 3/2/01 Symposium speaker, 32nd Annual March of Dimes Clinical Genetics Conference, Miami, FL.
69. 11/12/00 Symposium speaker, "Model Organisms and Congenital Disease" American Heart Association 73rd Scientific Symposium, New Orleans, LA.
70. 9/30/00 Symposium speaker, 10th Robert J. Gorlin Conference on Dysmorphology, Minneapolis, MN.
71. 9/11/00 Symposium speaker, 4th Scientific Meeting of the Heart Failure Society of America, Boca Raton, FL.
72. 8/8/00 Invited participant, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT.
73. 6/9/00 Symposium speaker, 10th Weinstein Cardiovascular Development Conference, St. Louis, MO.
74. 6/3/00 Symposium speaker, UCSF Developmental Biology Symposium, San Francisco, CA.
75. 5/6/00 Presenter, American Heart Association Research Symposium, Dallas, TX.
76. 11/15/99 Symposium speaker, Rachford International Symposium "Transcriptional Control of Embryogenesis", Children's Hospital Medical Center, Cincinnati, OH.
77. 11/9/99 Symposium speaker, "State-of-the-Art" Lecture, American Heart Association 72nd Scientific Symposium, Atlanta, GA.
78. 11/7/99 Symposium speaker, "The Genetic Basis of Heart Formation: From Normal Development to Congenital Disease," American Heart Association 72nd Scientific Symposium, Atlanta, GA.
79. 8/9/99 Symposium speaker, Gordon Research Conference on Human Molecular Genetics, Newport, RI.
80. 3/14/99 Symposium speaker, 6th International Workshop on Fetal Genetic Pathology, Dead Sea, Israel.
81. 12/8/98 Symposium speaker, 5th International Symposium on Etiology & Morphogenesis of Congenital Heart Disease - Developmental Mechanisms, Tokyo, Japan.

82. 10/28/98 Symposium speaker, "Left-Right Axis and Associated Malformations" Session, American Society of Human Genetics Annual Meeting, Denver, CO.
83. 6/7/98 Symposium speaker, FASEB Summer Research Conference on "Intracellular RNA Sorting, Transport, and Localization." Snowmass, CO.
84. 5/29/98 Symposium speaker, 8th Weinstein Cardiovascular Development Conference, Nashville, TN.
85. 4/18/98 Symposium speaker, Session on "Early Development", Experimental Biology/American Association of Anatomists, San Francisco, CA.
86. 12/15/97 Symposium speaker, "Left-right asymmetry: From Molecules to Clinic" Session, American Society for Cell Biology, Washington, DC.
87. 11/18/97 Symposium speaker, Cold Spring Harbor Banbury Center, Workshop on Handedness, Cold Spring Harbor Laboratory, NY.
88. 11/8/97 Symposium speaker, "Positional Information in the Developing Heart" American Heart Association 70th Scientific Symposium, Orlando, FL.
89. 7/12/97 Symposium speaker, 5th International Congress of Vertebrate Morph., Bristol, England.
90. 5/31/97 Symposium speaker, 11th Annual Biologic Basis of Pediatric Practice Symposium "Hearts, Hands, and Laterality: The Design of the Human Body" Deer Valley, UT.
91. 3/31/97 Symposium speaker, 61st Annual Scientific Meeting of Japanese Circulation Society, Tokyo.
92. 2/3/97 Workshop invited participant, Current Advances in Defining the Zebrafish Genome, Boston, MA.
93. 10/12/96 Symposium speaker, Symposium on Vertebrate Left-Right Asymmetry, Society for Pediatric Pathology, Houston, TX.
94. 8/21/96 Symposium speaker, American Heart Association Scientific Conference on the Molecular Biology of the Normal, Hypertrophied and Failing Heart, Snowbird, UT
95. 7/12/96 Symposium speaker, Gordon Research Conference on Motile & Contractile Systems, Heniker, NH.
96. 6/7/96 Symposium speaker, 6th Weinstein Cardiovascular Development Conference, Philadelphia, PA.
97. 6/26/95 Symposium speaker, Gordon Research Conference on Developmental Biology, Andover, NH.
98. 6/3/95 Symposium speaker, 5th Weinstein Cardiovascular Development Conference, University of Rochester, NY.
99. 3/27/95 Symposium speaker, American Heart Association Scientific Conference on the Molecular, Cellular, and Functional Aspects of Cardiovascular Development, New Orleans, LA.
100. 11/26/93 Symposium speaker, "Fourth International Symposium on Etiology & Morphogenesis of Congenital Heart Disease" Tokyo, Japan.
101. 6/25/92 Symposium speaker, Gordon Research Conference on Biological Regulatory Mechanisms, Holderness, NH.
102. 2/21/91 Symposium speaker, "Biological Asymmetries and Handedness" Ciba Foundation Symposium, London, UK.

XII. INVITED DEPARTMENTAL SEMINARS

1. 1/27/16 University of Minnesota School of Medicine, Lillehei Heart Institute Seminar, Minneapolis, MN

2. 11/2/15 Washington University School of Medicine, Department of Developmental Biology, St. Louis, MO
3. 1/29/15 University of Iowa, Interdisciplinary Graduate Program in Molecular & Cellular Biology, Iowa City, IA
4. 2/26/14 University of Arizona, Department of Cellular and Molecular Medicine, Tucson, AZ
5. 5/29/13 University of Minnesota, Lillehei Heart Institute, Minneapolis, MN
6. 4/16/13 University of Oregon, Department of Chemistry and Biochemistry, Eugene, OR
7. 1/14/13 University of Pennsylvania, Institute for Regenerative Medicine and Department of Cell & Developmental Biology, Philadelphia, PA
8. 9/27/12 University of California, Santa Barbara, Department of Molecular, Cellular, & Developmental Biology, Santa Barbara, CA
9. 2/23/11 Princeton University, Department of Molecular Biology, Princeton, NJ
10. 10/19/10 Vanderbilt University, Department of Pharmacology, Memphis, TN
11. 9/21/10 The University of Chicago, Committee on Development, Regeneration, and Stem Cell Biology, Chicago, IL
12. 4/21/10 University of Minnesota, Lillehei Heart Institute, Minneapolis, MN
13. 2/09/10 Yale University Department of Genetics, New Haven, CT
14. 5/08/08 University of Minnesota, Dept. Genetics, Cell Biology and Development, Minneapolis, MN
15. 3/17/08 U.C. San Francisco, Cardiovascular Research Institute and the Gladstone Institutes of Cardiovascular Diseases, San Francisco, CA
16. 2/28/08 Albert Einstein School of Medicine, Dept. Molecular Genetics, New York, NY
17. 11/19/07 University of Pennsylvania, Department of Cell & Developmental Biology, Philadelphia, PA
18. 10/15/07 Duke University (invited by grad students in Cell & Developmental Biology Program), Department of Biology, Durham, NC
19. 10/10/07 University of Utah, Department of Neurobiology & Anatomy, Salt Lake City, UT
20. 3/22/07 Texas A&M, Department of Biology, Collegeville, TX
21. 3/15/07 Dartmouth School of Medicine, Lebanon, NH
22. 2/16/07 University of Utah, Division of Pediatric Cardiology, Salt Lake City, UT
23. 12/06/06 University of Utah, Huntsman Cancer Institute and Department of Oncological Sciences, Salt Lake City, UT
24. 11/08/06 Harvard University School of Medicine, Department of Genetics & Boston Children's Hospital, Boston, MA
25. 3/23/06 Grand Rounds speaker "Stem Cells: Current Scientific Perspective" Department of Pediatrics, University of Utah, Salt Lake City, UT
26. 11/09/05 University of Michigan, Department of Internal Medicine, Ann Arbor, MI
27. 04/19/05 Blaffer Lecture, M.D. Anderson Cancer Center, Houston, TX
28. 03/01/05 The Burnham Institute, Division of Stem Cells & Regeneration, La Jolla, CA
29. 12/2/04 University of California, San Diego, Department of Cellular and Molecular Medicine, San Diego, CA
30. 4/1/04 Nora Eccles Treadwell Distinguished Lecture, Cardiovascular Research & Training Institute, University of Utah, Salt Lake City, UT
31. 3/29/04 European Molecular Biology Laboratory, Monterotondo (Roma), Italy
32. 2/11/04 The Samuel Lunenfeld Research Institute at Mt. Sinai Hospital, Toronto, Canada
33. 1/26/04 Johns Hopkins Medical School, Institute of Genetic Medicine, Baltimore, MD
34. 12/19/03 Huntsman Cancer Institute, inaugural lecture in "Lab Lights", Salt Lake City UT

35. 1/13/03 University of Texas Medical School, Department of Physiology, San Antonio, TX
36. 12/06/02 RIKEN Centre for Developmental Biology, Kobe, Japan
37. 12/03/02 University of Tokyo, Department of Cell Biology and Anatomy, Tokyo, Japan
38. 9/05/02 University of Colorado, Boulder, Department of Molecular, Cell and Developmental Biology, Boulder, CO
39. 12/14/01 University of California, San Diego, Department of Medicine, San Diego, CA
40. 11/28/01 University of Utah, Huntsman Cancer Institute Director's Series, Salt Lake City, UT
41. 10/25/01 University of Wisconsin, Department of Anatomy, Madison, WI
42. 5/16/01 Vanderbilt University School of Medicine, Department of Cell Biology, Nashville, TN
43. 04/05/01 Columbia University College of Physicians & Surgeons, Department of Biochemistry, New York, NY.
44. 3/28/01 University of Pennsylvania School of Medicine, Department of Medicine and Department of Cell and Molecular Biology, Philadelphia, PA.
45. 1/23/01 University of Utah, Department of Pediatrics, Salt Lake City, UT
46. 11/2/00 University of Rochester School of Medicine, Center for Human Genetics and Molecular Pediatric Disease, Rochester, NY.
47. 10/18/00 University of Utah, Department of Oncological Sciences, Salt Lake City, UT
48. 12/2/99 University of Arizona, Department of Biological Sciences, Tucson, AZ.
49. 9/27/99 University of Utah, Division of Pediatric Cardiology, Salt Lake City, UT.
50. 9/8/99 University of North Carolina School of Medicine, Department of Cell Biology and Anatomy, Chapel Hill, NC.
51. 4/16/99 University of Iowa, Department of Biological Sciences, Iowa City, IA.
52. 3/3/99 Stanford University, Dept. of Developmental Biology and Genetics, Palo Alto, CA.
53. 2/9/99 M.D. Anderson Cancer Center, Blaffner Seminar Series, Department of Molecular Genetics, Houston, TX.
54. 1/28/99 Washington University, Department of Cardiovascular Medicine, St. Louis, MO.
55. 11/18/98 Yale University, Department of Cell Biology, New Haven, CT.
56. 11/4/98 Harvard Medical School, Department of Genetics, Boston, MA.
57. 5/22/98 University of Utah, Department of Neurobiology and Anatomy, Salt Lake City, UT.
58. 5/9/97 University of Minnesota, Medical School Dean's Research Seminar, Minneapolis
59. 4/14/97 UT Southwest Medical Center, Hamon Center for Basic Cancer Research, Dallas
60. 4/10/97 Harvard Medical School, Department of Cell Biology, Boston, MA.
61. 4/1/97 Tokyo Women's College, Department of Pediatric Cardiology, The Heart Institute of Japan, Tokyo, Japan.
62. 1/16/97 University of Illinois Medical School, Department of Biochemistry, Chicago, IL.
63. 12/2/96 Washington University, Department of Pediatrics and Department of Molecular Biology and Pharmacology, St. Louis, MO.
64. 11/14/96 University of Colorado, Department of Molecular, Cell and Developmental Biology, Boulder, CO.
65. 11/8/96 Baylor Medical School, Department of Pathology, Houston, TX.
66. 10/23/96 University of Utah, Department of Pediatrics and Department of Neurobiology and Anatomy, Salt Lake City, UT.
67. 6/25/96 Harvard Medical School, Department of Microbiology and Molecular Genetics and Molecular Medicine Unit, Beth Israel Hospital, Boston, MA.
68. 6/24/96 Harvard Medical School, Massachusetts General Hospital Cardiovascular Research Center, Charleston, MA.

69. 5/21/96 Mount Sinai School of Medicine, Brookdale Center for Molecular Biology, New York, NY.
70. 4/19/96 Medical University of South Carolina, Department of Cell Biology and Anatomy, Charleston, SC.
71. 4/10/96 University of Pennsylvania Medical School, Department of Cell and Developmental Biology, Philadelphia, PA.
72. 4/8/96 Fox Chase Cancer Center, Institute for Cancer Research, Philadelphia, PA.
73. 2/12/96 University of Maryland, Department of Biological Sciences, Baltimore, MD.
74. 1/5/96 University of Minnesota, Dept. of Cell Biology and Neuroanatomy, Minneapolis, MN.
75. 4/13/95 Macalester College, Department of Biology, St. Paul, MN.
76. 4/3/95 Cornell University Medical College, Dept Cell Biology and Anatomy, New York, NY.
77. 2/16/95 St. Cloud State University, Department of Biology, St. Cloud, MN.
78. 11/11/94 University of Wisconsin, Department of Zoology, Madison, WI.
79. 4/21/93 University of Minnesota, Department of Orthopedic Surgery, Minneapolis, MN.
80. 4/5/93 University of Minnesota, Lab. Medicine & Pathology, Minneapolis, MN.
81. 2/18/93 University of Minnesota, Institute of Human Genetics, Minneapolis, MN.
82. 2/5/93 Carleton College, Department of Biology, Northfield, MN.
83. 1/25/93 University of Minnesota, Center for Wound Healing and Reparative Medicine, Minneapolis, MN.
84. 10/8/92 University of Colorado, Department of Molecular, Cell and Developmental Biology, Boulder, CO.
85. 1/9/92 University of Minnesota, Department of Genetics & Cell Biology, St. Paul, MN.
86. 5/22/91 Yale University School of Medicine, Department of Genetics, New Haven, CT.
87. 4/8/91 Bay Area Research in Frogs, University of California, Berkeley, CA.
88. 4/3/91 Yale University School of Medicine, Department of Anatomy, New Haven, CT.
89. 3/13/91 University of Virginia, Department of Biology, Charlottesville, VA.
90. 3/7/91 Columbia University, College of Physicians and Surgeons, Department of Anatomy & Cell Biology, New York, NY.
91. 2/15/91 Cambridge University, Department of Zoology, Cambridge, UK.
92. 2/11/91 University of Minnesota, Department of Cell Biology & Neuroanatomy, Minneapolis, MN.
93. 2/4/91 University of Rochester, Department of Biology, Rochester, NY.
94. 2/1/91 Thomas Jefferson University, Department of Biochemistry & Molecular Biology, Philadelphia, PA.

OTHER PRESENTATIONS, PUBLIC OR EDUCATIONAL

- 6/01-6/07 Monthly patient and family tours, Huntsman Cancer Institute Center for Children
 2006-2008 Faculty Advisor, "Piping Utes" University of Utah Bagpipe Club
 9/9-12/2005 Teton Science School for 5th Grade Students, Jackson Hole, WY
 2/3/03 Leap 3 undergraduate student program, lab tour
 various dates Science Fair Judge for middle schools
 5/31/00 Lecture and lab tour, East High School AP Biology class, Salt Lake City, UT.
 7/10 – 6/12 Secretary and founding Board Member, Utah Pibroch Society (non-profit organization to promote classical Piobaireachd music education)