

H. Joseph Yost, Ph.D., FAAA, SDBA
CURRICULUM VITAE
(updated January 2024)

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

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Citizenship: U. S. A.

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 Certificate, U. Utah School of Business, Administration for Physician Executives
2017 American Museum of Natural History Lepidoptera Course
2018 U. Utah Health Sciences Mentor Training Course
2022 CIMER (Center for Improvement of Mentored Experience in Training) *Entering Mentoring* Training Course (U. Utah)
2023 CIMER Trained Facilitator to Implement Research Mentor Training (U. Wisconsin)

III. HONORS

2023 – present: Inaugural Member, Society for Developmental Biology Academy (SDBA) for “your past and present contributions to the field of developmental biology, and your dedication to furthering knowledge in this area as a leader in research and as an exceptional educator. As developmental biology continues to gain prominence in the field of biomedical sciences, it becomes increasingly vital to educate the public and provide expert opinions on various controversial issues. Your continued support in promoting developmental biology is invaluable and we eagerly anticipate your future contributions.” (elected 2023)

2020 Gary C. Schoenwolf Mentoring Award “celebrates Pediatrics faculty members who embody the spirit of mentorship. This prestigious award acknowledges the time, sacrifice, and commitment of mentors who enable junior colleagues to achieve their academic potential in clinical, research and teaching activities.”

2019 University of Utah Distinguished Graduate Student and Postdoctoral Mentor Award “recognizes faculty who stand out for effectively guiding graduate students and postdoctoral scholars throughout their professional training in a continuing, multifaceted partnership sustained by mutual respect and concern. In addition, the award recognizes faculty who make a broad impact on mentorship by facilitating communities or building infrastructure for mentorship of graduate students and postdoctoral scholars.”

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

2017 – present: Fellow, American Association for Anatomy (FAAA, elected 2017)

2015 – present: Richard L. Stimson Presidential Endowed Chair, University of Utah

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

1996 – 2001 Established Investigator American Heart Association

1994 – 1996 McKnight Land-Grant Professorship, University of Minnesota

IV. PROFESSIONAL EXPERIENCE

A1. CURRENT ACADEMIC LEADERSHIP POSITIONS

Vice Chairman for Basic Science Research, Department of Pediatrics (11/2013 – current)

Pediatrics is one of the largest departments at the University of Utah, with over 380 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. In addition, we are enhancing the pipeline for the next generation of biomedical scientists with unique education outreach programs for individuals at all levels from historically underrepresented communities.

Director, Genomics Summer Research for Minorities “GSRM” (2018 - current).

This NIH National Human Genome Research Institute (NHGRI) program provides undergraduate participants (15 per year) from underrepresented (UR) groups with quality research opportunities in genomics fields, including training in bioinformatics and analysis of genomic datasets. We bring UR students from around the country to Utah to provide participants with professional development skills and a pathway to successfully navigate graduate school. Our long-term support services will ensure future success of all

participants, increasing the pipeline of underrepresented students into bioscience and genomics research careers.

Director, Initiative for Maximizing Student Development at the University of Utah (IMSD@U2) (2022 - current)

The mission of the IMSD@U2 program is to build a diverse and inclusive biomedical workforce. We train incoming graduate students from historically underrepresented (UR) groups and mentor them throughout the launch of their careers. Our program provides a dynamic recruiting and onboarding experience to support a successful start to graduate school, personalized and cohort mentoring throughout their graduate career, peer outreach efforts and community building, leadership development, and mentoring faculty to be outstanding mentors, to better meet the needs of the UR community.

Director, Developmental Biology Training Program “DBTG” (5/2011 - current).

This NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) T32 training program builds on the strengths of the developmental biology community at the University of Utah, providing fellowships for eight predoctoral and three postdoctoral fellows per year, selected from several departments and diverse backgrounds. The program provides trainees an outstanding environment and unique opportunities for career development.

Director, CDDRC Cardiovascular Development Data Resource Center (8/2020 – current).

This NHLBI Bench-to-Bassinet Resource Center is building a novel cloud-based platform that will combine a large collection of Next-Generation Sequencing datasets from the CvDC and the larger cardiovascular development community with a variety of new computational analysis tools.

A2. PREVIOUS ACADEMIC LEADERSHIP POSITIONS

Director, Cardiovascular Development Research Center (9/2009 – 2020).

This NIH Bench to Bassinet Consortium 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, BioEYES Utah (2015 – 2019)

Dr. Yost established the BioEYES program within the University of Utah’s Department of Pediatrics in 2015. BioEYES is a 4th-12th grade science education and community outreach program that provides classroom-based learning opportunities through the use of live zebrafish. The goal of BioEYES is to foster enthusiasm for science by offering students opportunities to explore life science using a hands-on approach to learning. By focusing BioEYES on Title I schools in the surrounding Salt Lake Valley, our goal is to bring science to students from underrepresented (UR) groups. We have provided this program to over 7,500 students in 19 schools (14 Title I schools). In keeping with our UR student outreach orientation, 44.4% of our students are identified as Hispanic or Latino, 9.5% as Black or African American, 8% as Pacific Islander or Hawaiian, and 5.9% as

Asian. We also run a summer camp STEM program and have assisted over 30 teachers with enhanced STEM education. For three years the program was sponsored by funds from the Department of Pediatrics, small grants from scientific societies and from local philanthropic donations. Because this is a highly interactive classroom experience, the program is on pause during the COVID pandemic, and we are currently restructuring the program, realigning it with the school districts' altered curriculum, and outreaching for additional philanthropic support to re-start this program.

Interim co-Director, University of Utah Molecular Medicine Program (3/2017 – 6/2018).

U2M2 has 28 faculty, a research portfolio over \$12M, and is the key multidepartment and interdisciplinary engine for laboratory research in 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.

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
- 2023 External Examiner, Dissertation Committee (Sara Filipa Silva Pestana), Universidade Nova de Lisboa, Portugal

C. EDITORIAL EXPERIENCE

- 2002 - current Associate Editor, *Developmental Dynamics* (manage ~30 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

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| <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>Journal of Microbiology and Biology Education</i> |
| <i>American Journal of Medical Genetics</i> | <i>Matrix Biology</i> |
| <i>American Journal of Physiology (Heart and Circulatory Physiology)</i> | <i>Mechanisms of Development</i> |
| <i>Biology Open</i> | <i>Molecular Biology of the Cell</i> |
| <i>BMC Developmental Biology</i> | <i>Molecular Cell</i> |
| <i>Cell</i> | <i>Molecular Medicine Today</i> |
| <i>Cell Reports</i> | <i>Nature</i> |
| <i>Current Biology</i> | <i>Nature Communications</i> |
| <i>Circulation</i> | <i>Nature 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>eLife</i> | <i>Teratology</i> |
| <i>Genes and Development</i> | <i>Trends in Cell Biology</i> |
| <i>Genetics</i> | <i>Trends in Genetics</i> |
| <i>Human Genetics</i> | <i>Trends in Microbiology</i> |
| <i>Journal of Cell Biology</i> | |

V. RESEARCH FUNDING

A. CURRENT RESEARCH AWARDS AND TRAINING GRANTS

T32 T32GM139805 Yost (contact MPI/PD)

02/01/2022- 01/31/2027

IMSD@University of Utah

Total Costs \$1,087,900

The mission of the IMSD@U2 program is to build a diverse and inclusive biomedical workforce. Substantial gains in the diversity of our incoming PhD classes over the last five years requires effective, sustained, and comprehensive efforts that fortify scientific career development for underrepresented (UR) students. The aims of the IMSD@U2 are to train and launch the careers of diverse, creative, and talented UR students by 1) continuing to build our successful recruitment program for UR students to our University of Utah Bioscience PhD programs; 2) developing and utilizing innovative programs to retain UR Trainees and Scholars through our ExCEEDS (Excellence in Career Enhancement, Education, Development and Diversity in Science) framework, thereby launching our UR trainees into successful careers; 3) preparing IMSD@U2 Trainees and Scholars to become confident leaders in biomedical research; and 4) mentoring faculty mentors, thus developing and fostering a research-intensive and inclusive environment in which UR scientists can flourish.

R01HL146854 Yost (PI)

02/15/2020-01/31/2024

The Roles of Neural Crest Derived Cardiomyocytes in Adult-Onset Heart Failure and Regeneration

Total Costs \$1,776,725

Our lab discovered a specialized group of ventricular cardiomyocytes that are derived from Neural Crest lineages (NC-CMs). The goal of this research is to discover the roles of NC-CMs in adult cardiac disease and adult heart regeneration, using zebrafish genetics and transgenics as a model system.

U01HL153007 Yost (contact PI)/Marth (MPI)/Tristani-Firouzi (MPI) 08/20/2020-07/31/2025

Cardiovascular Development Data Resource Center (CDDRC)

Direct Costs \$5,000,000

The CDDRC will provide an innovative cloud-based platform to facilitate the analysis, visualization and sharing of genomic data from research in heart development in several species. The CDDRC will bring together researchers with a diverse range of expertise, with the goal of understanding the causes of congenital heart disease in children.

R25HG009886 Yost (PI/PD)

12/01/2018-6/30/2023

(NCE 11/30/24, renewal submitted through 06/30/2029)

Genomics Summer Research for Magnificents: A Pathway to Promote Diversity in Science Research

Direct Costs \$1,214,250

The overall goals of this program are to provide undergraduate students from underrepresented (UR) groups with quality research opportunities in genomics fields, including training in bioinformatics, analysis of genomic datasets, and overall professional development, to increase the pipeline of underrepresented students in bioscience and genomics research careers.

T32 HD007491 Yost (contact MPI/PD)

09/29/1995-04/30/2028

Developmental Biology Training Program

Total Costs \$1,790,860 previous cycle; \$2,265,565 current cycle

This Program has a 28-year track record of training exceptional predoctoral and postdoctoral scientists in the field of Developmental Biology. The Program consists of individualized research training for eight predoctoral and three postdoctoral fellows annually, under the guidance of 41 faculty members from six Ph.D. degree-granting departments spread across the campus. 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. No salary support is provided for Dr. Yost by this training grant.

U01HL128711 Tristani-Firouzi/Yandell/Yost (MPI) 08/15/2015-07/31/2025

Bridging the gap between genomics and clinical outcomes in CHD

Total Costs \$2,842,800

Achieving the goal of translating genomic discoveries into improved clinical care requires the ability to integrate genotypes with multiple variables, including gene pathways, maternal and patient comorbidities, ancestry, and gender to optimally empower outcomes prediction. We will utilize our existing Utah AI platform to leverage data infrastructure across all Pediatric Cardiac Genomic Centers (PCGC) with the ultimate goal of creating collaborative best-practice means for CHD outcomes research.

R01HL153025 Tristani-Firouzi (PI); Yost (Co-I) 07/01/2020-06/30/2024

A Novel Role for NFATC1 in Modulating Cardiac Excitability

Direct Costs \$1,977,064

This project explores the molecular and electrophysiological role of NFATC1, a novel atrial fibrillation susceptibility gene, utilizing zebrafish and human iPSCs to study cardiac electrophysiology and arrhythmia susceptibility.

5U01HL131003 Yost (Subcontract PI); King/Cnota/Wagner (MPI) 01/01/2024-12/31/2024

Co-Chair, Pediatric Cardiac Genomics Consortium (PCGC) Steering Committee Chair

Total Costs \$26,237

The Pediatric Cardiac Genomics Consortium (PCGC) is a group of hospitals in the United States that conducts research studies in children with congenital or acquired heart disease. Dr. Yost serves as co-chair of the consortium steering committee for calendar year 2024.

B. COMPLETED RESEARCH AWARDS AND GRANTS

U01HL131698 Tristani-Firouzi/Yandell/Yost (MPI) 04/01/2016-03/31/2021

Integrating Genomic and Clinical Approaches to Sudden Death in the Young

Direct Costs \$3,225,128

The goal of the Utah Center is to use innovative concepts and collaborative methodologies to define the genomic basis for autopsy-negative SDY; functionally characterize candidate disease-causing variants; and facilitate evaluation of relatives of SDY victims.

American Heart Association Strategically Focused Research Network 17SFRN33630041

Tristani-Firouzi/Yandell/Silver/Fagerlin/Yost (MPI) 07/01/2017-06/30/2022

Total Costs \$3,709,200

Leveraging Big Data Science to Link Genomics, Epigenetics and the Family to Improve Health of Children with CHD. The overarching goals of the Utah SFRN Center are to improve quality of care and outcomes for children with congenital heart disease by (1) enhancing our understanding of disease etiology; (2) laying the foundation for prevention or prediction of CHD

and outcomes; and (3) improving health care delivery using a family-centered outcomes approach and shared decision making. Role: Training Director

UM1HL098160 Yost (PI) 9/30/2009-07/31/2021

Genome-wide Analysis of Cardiac Development in Zebrafish

Direct Costs \$5,499,408 cycle 1; \$2,500,000 cycle 2

This multidisciplinary Utah Cardiovascular Development Consortium center (Utah CvDC) is a collaborative group of zebrafish developmental biologists, cardiac physiologists, and experts in chromatin structure, proteomics, genome-wide gene network profiling, bioengineering and bioinformatics at the University of Utah, as part of the national Cardiovascular Development Consortium (CvDC) within the NIH Bench-to-Basement (B2B) Consortia.

U01HL131003 Yost (Subcontract PI); King/White (MPI) 06/01/2011-12/31/2020

Cincinnati Children's Hospital Medical Center / NIH/NHLBI.

CvDC Data Sharing Hub

Direct Costs \$1,634,299

We established a national data-sharing genomics hub for the CvDC consortium, including server hardware, web-based bioinformatics software and development of novel multi-organism genomics analysis programs at U. Utah. This datahub is currently being segued into our recently funded CDDRC (PI: Yost).

U01HL13100 Yost (Subcontract PI); King/White (MPI) 06/01/2011-12/31/2020

Cincinnati Children's Hospital Medical Center / NIH/NHLBI

CvDC Steering Committee Chair

Direct Costs \$55,875

The national CvDC consortium has a steering committee composed of four current CvDC centers, ACC representatives and NHLBI Program Officer. Dr. Yost chaired for one year in cycle 1 and two consecutive years in cycle 2.

“Zebrafish Swim Tunnel Respirometer”

University of Utah Research Instrumentation Fund

Period: 2018, Direct Costs \$28,701.49

Principal Investigator: H. Joseph Yost

“BioEyes Utah”

Society for Developmental Biology (SDB)

Period: PI: 04/15/2016 – 04/14/2017; Direct Costs: \$5,000

Principal Investigator: H. Joseph Yost, Co-PI: Judith Neugebauer

BioEYES is an outreach program with a mission to energize and inspire underrepresented groups into pursuing Science, Technology, Engineering, and Math (STEM) fields, by bringing zebrafish into the classroom. We have taught >5200 students in 17 schools in SLC 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

C. FELLOWSHIPS AND AWARDS TO POSTDOCS IN YOST LAB

“Investigating the role of Neural Crest-derived cells in zebrafish heart development and re-generation”
T32 Developmental Biology Training Grant
Awarded to: Julia Whittle, PhD
Period: 08/01/2023 – 07/31/2025

“The roles of microRNAs in the regulation of heart development and human congenital heart disease”

Canadian Institutes of Health Research (CIHR) Postdoctoral Fellowship
Awarded to: Chelsea Herdman, PhD
Period: 01/01/2020 – 12/31/2023, Total Costs: \$120,000

“Discovering mechanisms of Kabuki Syndrome neurodevelopmental defects in zebrafish and human iPSC-derived brain organoids.”

Warren Alpert Foundation Distinguished Scholar Award
Awarded to: María de los Angeles (Angie) Serrano, PhD
Period: 01/01/2020 – 12/31/2021, Total Costs: \$400,000

“Roles of KMT2D in Vasculogenesis”

American Heart Association
Awarded to: María de los Angeles (Angie) Serrano, PhD
Period: 07/01/2018 – 6/30/2020, Total Costs: \$106,532

“CvDC Collaborative Postdoctoral Fellow”

NHLBI CvDC Bench-to-Bassinet Collaborative Postdoctoral Fellowship
Awarded to: Chelsea Herdman, PhD
Period: 01/01/2018 – 12/31/2019, Total Costs: \$123,012

“Exploring the role of Kmt2d in vasculogenesis”

American Association of Anatomists Postdoctoral Fellowship
Awarded to: María de los Angeles (Angie) Serrano, PhD
Period: 01/01/2018 – 6/30/2018, Total Costs: \$10,000

“CvDC Collaborative Postdoctoral Fellow”

NHLBI CvDC Bench-to-Bassinet Collaborative Postdoctoral Fellowship
Awarded to: Bushra Gorski, PhD
Period: 07/01/2016 – 12/31/2018, Total Costs: \$119,438

“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, PhD
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, PhD
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, PhD
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, MD, PhD
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, MD
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

D. FELLOWSHIPS AND AWARDS TO UNDERGRADUATE OR GRADUATE STUDENTS IN YOST LAB

"2022 University of Utah Outstanding Undergraduate Researcher Awardee"

University of Utah, School of Medicine
Awarded to: Avery Abelhouzen

"Undergraduate Research Opportunities Program (UROP)" University of Utah

Awarded to: Avery Abelhouzen
Period: Summer 2019

"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
- 2001 – current Member, Scientific Advisory Board, CZAR (Centralized Zebrafish Animal Research) Core Facility
- 2008 – current Member, Health Sciences Research Core Facilities Scientific Advisory Board
- 2009 – current Member, Faculty Advisory Committee, Huntsman Cancer Institute High-Throughput Genomics & Bioinformatics Analysis (GBA) Shared Resource
- 2009 – current Member, Executive Committee, T32 in Cardiovascular Research
- 2015 – current Member, Scientific Advisory Board, Utah Genome Project (UGP)
- 2015 – current Member, Advisory Board, Women’s Reproductive Health Research (WRHR) Career Development Program (K12 PI: Robert Silver, OB GYN)
- 2015 – current Member, Heart Center Concept Committee
- 2015 – current Member, Selection Committee, Center for Clinical & Translational Science (CCTS)
- 2016 – current Member, Model Organisms Advisory Committee (MOAB)
- 2016 – current Member, Steering Committee, NHGRI T32 Postdoctoral Training Program in Genomic Medicine (PI: Lynn Jorde, Human Genetics)
- 2016 – current Member, Utah Integrative Science Committee
- 2017 – current Member, Health Sciences Research Forum
- 2017 – current Member, Scientific Advisory Board, Cell Sheet Tissue Engineering Center (cstecutah.com)
- 2018 – current Member, Executive Committee, University of Utah Molecular Medicine (U2M2) Program
- 2020 – current Member, Clinical Research Working Group (CRWC)
- 2020 – current Founding Co-Chair, Research Training and Career Development Committee (RTRAC)
- 2020 – current Member, Summer Programs Partnership Committee
- 2020 – current Member, VPCAT Executive Steering Committee
- 2021 – current Member, Utah Center for Genomic Discovery (UCGD) Advisory Committee
- 2021 – current Member, Philanthropy Research Committee, Primary Children’s Hospital
- 2024 – current Member, School of Medicine Research Advisory Council

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 – 2019 Member, M.D./Ph.D. Program Steering & Admissions 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 Member, Review Panel, Primary Children's Research Foundation
- 2001 – 2012 Internal Advisory Board, Children's Health Research Center (CHRCDA)
- 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 (RTP) Committee
- 2004 – 2006 Chairman, School of Medicine Retention, Promotion and Tenure (RTP) 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, PhD)
- 2006 Chairman, Oncological Sciences RPT committee (promotion of Susan Mango)
- 2009 – 2010 Member, USTAR search committee
- 2012 – 2013 Chairman, University Research Integrity Investigation Committee
- 2012 – 2018 Member, Benning Society Seminar Committee
- 2013 – 2017 Member, School of Medicine Research Advisory Committee (RAC)
- 2014 – 2016 Member, Scientific Advisory Board, Heritage 1K Genomics
- 2015 Chairman, School of Medicine Researcher Development & Investment Task Force
- 2015 Member, Selection Committee, Burton Pilot Project, College of Nursing
- 2015 – 2020 Member, Advisory Board, Building Interdisciplinary Research Careers in Women's Health (BIRCIWH K12 program, PI: Mike Varner, OB GYN)
- 2017 – 2018 V Foundation Pediatric Cancer Translational Award selection committee
- 2016 – 2018 Chairman, MD/PhD Program Executive board
- 2018 – 2019 Member, Search Committee for Division Chief, Pediatric Cardiology (successful recruit of Dr. Antonio G. Cabrera, MD)
- 2019 – 2020 Member, Selection Committee, U. Utah Distinguished Mentor Award
- 2019 – 2020 Member, Search Committee, Division Chief, Pediatric Critical Care (filled with internal candidate)
- 2019 – 2020 Member, Search Committee for Division Chief, Pediatric Hematology/Oncology (successful recruit of Dr. Michael Pulsipher)
- 2022 Co-chair, Search Committee for Vice Chair for Justice, Equity, Diversity and Inclusion (JEDI), successful recruit of Dr. Quang-Tuyen Nguyen
- 2022 Member, selection committee, Gary C. Schoenwolf Mentoring Award

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. LEADERSHIP ON NATIONAL ADVISORY BOARDS AND POLICY PANELS

- 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 (SDB Southwest representative, nationally elected)
- 2004 Chairman, NIH Hematology Special Emphasis Panel
- 2004-2009 External Advisory Board, Nevada Idea Network for Biomedical Research Excellence
- 2005 -2008 Board of Directors, Society for Developmental Biology (SDB Southwest Representative, nationally re-elected)
- 2008 Co-Chairman, American Heart Association National Peer Review Panel
- 2008-2010 Chairman, American Heart Association National Peer Review Panel
- 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
- 2010 Chairman, NIH Special Emphasis Panel ZHD1
- 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), Representative for Society for Developmental Biology (SDB)
- 2014-2015 Chairman, National Public Affairs Committee, American Association of Anatomists
- 2015-2018 National Scientific Advisory Committee, American Association of Anatomists
- 2017-2019 Public Affairs Committee, Society for Developmental Biology
- 2014-current Coalition for Pediatric Medical Research (CPMR; federal science policy organization of pediatric hospitals)
- 2019-2021 Chairman, NHLBI Cardiovascular Development (CvDC) Steering Committee

2019-2025 Science Policy Committee, Federation of American Societies for Experimental Biology (FASEB); Representative for American Association for Anatomy (AAA)

2021-2022 Member, FASEB Member Engagement Taskforce

2021-2024 Member, FASEB Leadership Development Committee

2021-2023 Chairman, Public Affairs Committee, Society for Developmental Biology (SDB)

2023 Elected to inaugural class of the Society for Developmental Biology (SDB) Academy

2023-2025 Mentor for AAA Science Advocacy Fellowship recipient (Dr. Laura Johnson)

B. MEMBERSHIP ON NATIONAL SCIENTIFIC PEER REVIEW COMMITTEES

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 (NSF), 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

2005 NIH Cardiovascular Differentiation and Development Study Section, ad hoc

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

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, 2017 Department of Defense (DoD) Peer Reviewed Medical Research Program (PRMRP) Focused Program Award (FPA) committee.

2018, 2020 NIH DEV-1 Peer Review Panel

2020 HHS Human Fetal Tissue Research Ethics Advisory Board (EAB) to the Secretary of Health and Human Services

2020 NIH ZRG1 CVRS-C Peer Review Panel

2021-2022 NIH Director's Transformative Research Award Panel

2022 American Heart Association Collaborative Science Award Pre-Proposal Review Panel

2022 NIH CDD Cardiovascular Differentiation and Development Review Panel

2023 American Heart Association CSA Proposal review panel

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. 2024 Co-organizer, NHLBI Bench-to-Bassinet Symposium, Bethesda, MD
2. 2020 Organizer, joint Weinstein Cardiovascular Development & Regeneration and NHLBI Bench-to-Bassinet Symposium (Virtual)
3. 2013 Organizer, Society for Developmental Biology, SDB SW Regional, Salt Lake City
4. 2012 Organizer, NHLBI Cardiovascular Development Consortium symposium, Chicago IL
5. 2012 Co-organizer, NHLBI Bench-to-Bassinet symposium, Philadelphia, PA
6. 2003 Co-organizer, Conference on “Stem Cells Therapies: From Test Tube to Current Clinical Trials” Huntsman Cancer Institute, Salt Lake City, UT
7. 2002 Organizer, 12th Weinstein Cardiovascular Development Conference, Salt Lake City
8. 1997 Co-organizer, Cold Spring Harbor Banbury Center, International Workshop on Handedness, Cold Spring Harbor Laboratory, NY
9. 1994 Chairman, Organizing Committee, 3rd Annual Symposium on Developmental Biology, Minneapolis, MN
10. 1993 Member, Organizing Committee, 2nd Annual Symposium on Developmental Biology, Minneapolis, MN
11. 1992 Member, Organizing Committee, 1st Annual Symposium on Developmental Biology, Minneapolis, MN

E. SYMPOSIUM SESSION CHAIRMAN, NATIONAL OR INTERNATIONAL

1. 4/23/24 Mechanisms Regulating Alveologenesis, the Final Stage of Lung Development, Anatomy Connected
2. 10/9/20 Joint Weinstein Cardiovascular Development & Regeneration and NHLBI Bench-to-Bassinet Symposium (Virtual)
3. 9/17/19 Newborn Screening Translational Research Network, NBSRTN2030 Researcher Needs Conference, Washington, DC
4. 4/23/18 "Stem Cells, CRISPR, Organoids" American Association of Anatomists Annual Meeting, Experimental Biology, San Diego, CA
5. 5/01/15 22nd Weinstein Cardiovascular Development Conference, Boston, MA
6. 2/16/13 "Genetic Disease Models" Southwest Regional Meeting, Society for Developmental Biology, Salt Lake City, UT
7. 1/19/13 "New Therapeutic Approaches for Myocardial Recovery" Utah Cardiac Recovery Symposium (UCARS), Salt Lake City, UT
8. 12/05/12 "Developmental Models of Disease" Personalized Medicine: Research and Care in Oncology and Beyond. Huntsman Cancer Institute, Salt Lake City, UT
9. 7/09/12 "Developmental Biology" Session, Proteoglycans Gordon Research Conference, Andover, NH
10. 5/06/11 "Cardiac Cell Signaling" Session, Weinstein Cardiovascular Development Conference, Cincinnati, OH
11. 3/17/09 Eunice Kennedy Shriver National Institute of Child Health and Human Development 6th Postdoctoral Fellow Workshop, Maritime Institute, Linthicum Heights, MD
12. 7/27/08 "Morphogenesis" Symposium, 67th Annual Meeting, Society for Developmental Biology, Philadelphia, PA
13. 6/27/08 "Emerging Gene Knockout Technology" Workshop, 8th International Meeting on Zebrafish Development & Genetics, Madison, WI
14. 5/16/08 "Signaling Pathways in Cardiogenesis" Weinstein Cardiovascular Development Conference, Houston, TX
15. 9/03/05 15th International Society of Developmental Biologists Congress, Sydney, Australia
16. 04/11/05 CDB Symposium "Origin and Development of the Vertebrate Traits" Kobe, Japan
17. 3/11/04 Keystone Symposia "Cardiac Development and Congenital Heart Disease" Keystone, CO
18. 2/6/04 "Translocations in Sarcoma, Molecular to Clinical Implications" Huntsman Cancer Institute, Salt Lake City, UT
19. 9/21/03 3rd International Conference on Proteoglycans "Pathobiology of Proteoglycans" Parma, Italy
20. 9/12/03 West Coast Zebrafish Conference, Salt Lake City, UT
21. 12/01/02 6th International Symposium on Congenital Heart Disease, Tokyo, Japan
22. 6/4/01 Juan March Foundation International Symposium, Madrid, Spain.
23. 6/9/00 10th Weinstein Cardiovascular Development Conference, St. Louis, MO
24. 5/29/98 8th Weinstein Cardiovascular Development Conference, Nashville, TN
25. 12/15/97 "Left-right asymmetry: From Molecules to Clinic" Session, American Society for Cell Biology, Washington, DC
26. 11/8/97 "Positional Information in the Developing Heart," American Heart Association 70th Scientific Symposium, Orlando, FL
27. 6/8/96 6th Weinstein Cardiovascular Development Conference, Philadelphia, PA
28. 10/10/95 4th Annual University of Minnesota Symposium in Developmental Biology, St. Paul, MN
29. 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 (AAAS)
American Association for Anatomy (AAA)
American Heart Association: Council on Basic Cardiovascular Sciences (AHA)
American Heart Association: Council on Cardiovascular Disease in the Young
American Society for Cell Biology
American Society for Matrix Biology
International Zebrafish Society (IZFS)
The Lepidopterists' Society
Society for Developmental Biology (SDB)
Society for Glycobiology

IX. TEACHING RESPONSIBILITIES

A. COURSES TAUGHT

2019 - 2020 (University of Utah)

ANAT 7760 Stem Cells Workshop (1 lecture)
Medical Student Summer research program (1 lecture)

2018 - 2019 (University of Utah)

ANAT 7760 Stem Cells Workshop (1 lecture)
Medical Student Summer research program (1 lecture)
MDCRC 6530 "Utilization of Animal Models in the Development of Clinical Models"
Pediatrics Grant Writing Workshop, intensive three-day retreat twice per year, to mentor grant writing by approximately twelve junior faculty from several departments

2017 - 2018 (University of Utah)

SOM Year 2 Phase 2 Facilitator: Circulation, Respiration and Regulation (7 sessions)
HGEN 6481 Cell Biology - Signal Transduction (1 lecture)
ANAT 7760 Stem Cells Workshop (1 lecture)
OncSci6700-001 "Utilization of Animal Models in the Development of Clinical Models" (1 lecture, 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

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

Undergraduate or High School Student Research Projects in Yost Lab (N=38)

1. Sally Hed (GCB 5590 Honors Research) Winter 1992
2. Murisiku Raifu (Minority High School Student Research Apprenticeship) Summer 1992
3. Catherine Park (U. Minnesota Undergraduate Thesis) 1994 – 1997
4. Nghi Lu (University of Utah ACCESS Program) Spring 1998
5. Carley Maak (Stanford University Undergraduate) Summer 1998
6. Michael Rich (Harvard Undergraduate, HCI Undergraduate Fellowship) Summer 1999
7. Russell Ray (U. Utah Undergraduate, Rhodes Scholar) Summer 1999
8. Carley Maak (Stanford University Undergraduate) Summer 1999
9. Victoria Alimov (University of Utah, AHA Undergraduate Fellowship) Summer 2000
10. Patrick Sullivan (University of Utah, HCI Undergraduate Fellowship) Summer 2000
11. Chris Lee (University of Pennsylvania Undergraduate) Summer 2000
12. Colby Fernelius (University of Utah, AHA Undergraduate Fellowship) Summer 2001
13. Erin Prewitt (University of Utah, HCI fellowship) Summer and Fall 2001
14. Rebecca Burton (New York University, AHA Undergraduate Fellowship) Summer 2002, 03
15. Lane Brian McMahan (University of Utah, HCI Undergraduate Fellowship) Summer 2003-04
16. Anmy Tran (University of Utah, ACCESS Student) 2002-04
17. Anoush Emrazian (University of Utah, ACCESS Student) 2003-present
18. Brant Nikolaus (University of Utah, AHA Undergraduate Fellowship) Summer 2005
19. David Muhlestein (Brigham Young University, AHA Undergraduate Fellowship) Summer 2005
20. Devin Busby (Brigham Young University, AHA Undergraduate Fellowship) Summer 2008
21. Elaine Martini (U. Ohio, Pediatrics Dept Fellowship; AHA Fellowship) Summer 2008; 2009
22. Michael Armajo (Native American Student Internship) Summer 2010
23. Pfawnn Eskee (Native American Student Internship) Summer 2010
24. Jen Akiona (U. Utah) October 2010 – January 2012 – grad school UFlorida,
25. Emily Means (U. Utah) 2012 -currently science reporter at KCPW
26. Annie Marsden (University of Chicago) Summer 2012 - Computer Science PhD Candidate at Stanford University
27. Antona Yost (West High School) Summer 2013 – USC undergrad, U.Michigan Grad
28. Jason Chen (Stanford University) Summer 2013 – Stanford Graduate student
29. Emily Graham (West High School) Summer 2014 - MD/PhD student at University of California San Francisco
30. Callie Housden (UVU undergraduate) 2017 – currently research staff in Yost lab
31. Trisheena Kills Pretty Enemy (Native American Research Intern program) Summer 2017 - graduate student in microbiology at Montana State University
32. Katherine Morelli (Magill University Undergraduate) Summer 2018

33. Tarlynn Tone-Pah-Hote (Native American Research Intern program) Summer 2018 - University of Minnesota, Morris
34. Shai Miguel (Genomics Summer Research for Minorities trainee) Summer 2019
35. Avery Abelhouzen (Biomedical Engineering Student) January 2019 – December 2021, UROP Fellow 2019 - Compliance Coordinator at GMG EnviroSafe
36. Alena Lovi-Borgmann (NHLBI Medical Student Research Program) Summer 2021 – medical student University of Utah
37. Cherokee Bodell (Genomics Summer Research for Minorities trainee) Summer 2021 - Post Bacc Researcher, Washington University in St. Louis
38. Divya Proper (Genomics Summer Research for Minorities trainee) Summer 2022 - undergraduate honors student College of Charleston

Graduate Student Thesis Research in Yost Lab (N=17)

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.
 Subsequent Employment: Research Director, R&D Systems; Senior Program Manager, Medtronic
 Current Employment: Health Economics, Boston Scientific

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 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: Research Associate, 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
Subsequent Employment: Postdoc in Jan Christian, then hired by Dr. Yost as inaugural
Program Manager for BioEYES Utah; transitioned to grade school teacher

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: Government Relations Associate at Lewis-Burke Associates LLC;
previous 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; PhD awarded May 2020
Current Employment: postdoctoral fellow, Stanford University

Luke Sanders (B.S. Biology) 2018-2020
Current Employment: Instructor, Anatomy Lab, University of Utah Medical School

Leonard Almeros (NARI trainee, B.S. UCSD) June 2021- May 2023
IM-Prep Post-Baccalaureate Research Education Program

Madison Baugh (B.S. Baylor) July 2022 - present

Graduate Student Rotation Research in Yost Lab (N = 55)

1. Kathleen Gibbons (Genetics rotation student), Spring 1992
2. Maria Danos (Genetics rotation student), Fall 1992
3. Julie Eschenlauer (Genetics rotation student), Winter 1993
4. Denise Robb (CDB rotation student), Spring 1993
5. Doug Bornemann (CDB rotation student), Spring 1993
6. Amy Teel (CDB rotation student), Summer 1993

7. Catherine Benson (Genetics rotation student), Fall 1993
8. Mike Zuck (M.D./Ph.D. rotation student), Winter 1994
9. Catherine Benson (Genetics rotation student), Spring 1994
10. Brian Hyatt (MCDBG rotation student), Summer 1994
11. Caroline Spike (MCDBG rotation student), Fall 1994
12. Gaunghui Chen (MCDBG rotation student), Winter 1995
13. Karl Clark (MCDBG rotation student), Fall 1995
14. Molly Wagner (Molecular Biology rotation student) Spring 1998
15. Chris Ricker (Molecular Biology rotation student) Fall 1999
16. Xhinghao Wang (Molecular Biology rotation student) Fall 1999
17. Bree Hill (Molecular Biology rotation student) Spring 1999
18. Andrew Pittman (Neuroscience rotation student) Fall 1999
19. Mark Smith (Molecular Biology rotation student) Spring 2000
20. Geoff Whitehead (Molecular Biology rotation student) Spring 2000
21. Lincoln Nadauld (MD/PhD Program rotation student) Summer 2000
22. Scott Witt (MD/PhD Program rotation student) Summer 2000
23. Mark Palfreyman (Molecular Biology rotation student) Summer 2000
24. Patricia Sacayon (Molecular Biology rotation student) Spring 2001
25. Hillary Crandell (MD/PhD Program rotation student) Summer 2001
26. Candice Kendell (Medical Student rotation) Summer 2001
27. Lei Wang (Molecular Biology rotation student) Winter 2003
28. Kristel Raelson (Molecular Biology rotation student) Spring 2003
29. Judith Neugebauer (Molecular Biology rotation student) Fall 2003
30. Josie Johnson (Molecular Biology rotation student) Fall 2003
31. Rui Wang (Molecular Biology rotation student) Fall 2003
32. Erin Cadwalader (Molecular Biology rotation student) Fall 2003
33. Jinjin Cai (Molecular Biology rotation student) Spring 2004
34. Timothy Dahlem (Molecular Biology rotation student) Spring 2004
35. Kelli Turner (Molecular Biology rotation student) Spring 2004
36. Hideaki Tomita (Molecular Biology rotation student) Spring 2004
37. Anna Verdina (Medical Student) Summer 2004
38. Stephen George (M.D./Ph.D. Program) Summer 2004
39. Maria Elias (Molecular Biology rotation student) Winter 2004
40. Megan Senchuck (Molecular Biology rotation student) Winter 2004
41. Wang Xu (Molecular Biology rotation student) Fall 2005
42. Matthew Terry (Molecular Biology rotation student) Spring 2008
43. Daria Drobysheva (Molecular Biology rotation student) Spring 2010
44. Sean Merrill (Molecular Biology rotation student) Fall 2010
45. Erin Young (Molecular Biology rotation student) Fall 2010
46. Satish Ghimire (Molecular Biology) Fall 2013
47. Bhawika Sharma Lamichhane (Molecular Biology) Spring 2014
48. Ben Jussila (Molecular Biology) Fall 2014
49. Thomas Carter (Molecular Biology) Spring 2015
50. Luke Sanders (Molecular Biology) Spring 2018
51. Jenna Weber (MD/PhD Program) Summer 2020
52. Maddie Swall, Fall 2021
53. Guangning Wang, Fall 2021
54. Lainie Boyle, Winter 2022
55. Madison Baugh, Spring 2022

Graduate Student Ph.D. Thesis Committees (N = 54)

1. Wenhao Xu (CDB), thesis defense, 9/4/92
2. Brian McAdams (Neurobiology), thesis proposal exam, 7/9/92; thesis defense, 12/18
3. David Wade (Neurobiology), thesis proposal exam, 8/5/92
4. Maura McGrail (Genetics), thesis proposal exam, 3/4/93; thesis defense, 9/19/96
5. Scott Fahrenkrug (Genetics), thesis proposal exam, 5/10/93; thesis defense, 10/10/96
6. Mindy Mosley (CDB), thesis proposal exam, 5/11/93
7. Mark Pirner (MD/Ph.D.), thesis proposal exam, 10/20/93, thesis defense 6/95
8. Kathleen Schroeder (MCDBG), thesis proposal exam, 6/14/94; thesis defense, 6/4/96
9. Christopher Kaufman (MCDBG), thesis proposal exam, 6/27/94, 12/14/94
10. Luann Klemme (MD/Ph.D.), thesis proposal exam, 12/1/94; thesis defense, 5/20/96
11. Amy Teel (MCDB&G), thesis proposal exam, 4/26/95; thesis defense, 5/29/96
12. Maria Danos (MCDB&G), thesis proposal exam, 6/9/95
13. Brian Hyatt (MCDB&G), thesis proposal exam, 11/13/96; thesis defense, 11/98
14. Denise Robb (MCDB&G), thesis proposal exam, 10/20/95
15. Carla Finis (MCDB&G), thesis defense, 6/96
16. Michael Zuck (MD/Ph.D.), thesis proposal exam, 10/96
17. Chatchai Chinpaisal (Pharmacology), thesis proposal exam, 11/96
18. Lisa M. Goering (Molecular Biology Program), thesis 2/7/03
19. Xinghai Li (Molecular Biology Program) thesis defense 10/12/01
20. Jill Howard (Molecular Biology Program) thesis defense 5/04/00
21. Clay Underwood (Molecular Biology Program) thesis defense 9/23/02
22. Mike Portereiko (Molecular Biology Program) thesis defense 6/02/03
23. Sarah Lange (Molecular Biology Program) M.S. Spring 2003
24. Caroline McKeown (Molecular Biology Program), thesis defense 5/6/04
25. Jennifer Rasmussen (Molecular Biology Program)
26. Terry Van Ray (Neurobiology), thesis defense 7/8/03
27. Dan Richardson (MB Program), thesis defense 10/13/03
28. Lincoln Nadauld (Jones Lab, M.D./Ph.D. Program), thesis defense 7/18/05
29. Dustin Updike (MB Program), thesis defense 12/13/05
30. Amy Prunuske (MB Program), thesis defense 1/27/06
31. Chris Sans (Molecular Biology), thesis defense 7/12/06
32. Lily Francis (Human Genetics) M.S. 6/06
33. Dawne Shelton (Jones Lab, MB Program), thesis defense 1/2007
34. Joshua Wythe (Grunwald Lab, MB Program), thesis defense 10/19/07
35. Kunal Rai (MB Program), thesis defense 7/18/06
36. Clint Jones (Pharmaceutics and Pharmaceutical Chemistry), thesis defense 8/2012
37. Magdalena Potok (Cairns Lab, MB Program), thesis defense 11/22/2013
38. Priya Choudhry (Trede Lab, MB Program), thesis defense 8/2011
39. Andres Romero-Carvajal (Piotrowski Lab, MB Program), thesis defense 6/2015
40. Kevin Breen (Vetter Lab, MD/PhD), thesis defense 5/2015
41. Ranajeet Singh Saund (Saijoh Lab, MB Program), thesis defense 12/2012
42. Marina Venero Galanternik (Piotrowski Lab, MB Program), thesis defense 5/8/2015
43. Mengyao Tan (Cairns Lab, MB Program), thesis defense 10/11/16
44. Uchenna Emechebe (Moon Lab, MB Program), thesis defense 11/2013
45. Matt Velinder (Jones Lab, MB Program)
46. Alex Chagovetz (David Grunwald lab; Human Genetics) thesis defense 12/2018
47. Tiffanie Dahl (Wolfgang Baehr Lab, Neuroscience Program), thesis defense 9/3/21
48. Guang Yang (Alex Shcheglovitov lab; Neurobiology) thesis defense 4/2022
49. Sarah Lusk (Kristen Kwan lab; Human Genetics)
50. Autumn McKnite (Pediatric Pharm)

51. Holly Thorpe (Clement Chow Lab, Human Genetics)
52. Sam Hickenlooper (Sarah Franklin Lab, CVRTI & Biochemistry)
53. Magnus Creed (Sarah Franklin Lab, CVRTI & Biochemistry)
54. Uchechuwu Mgbike (Nicole Link Lab, Neurobiology)

Graduate Student Preliminary or Capstone Examination Committees

| | |
|---|---------------------------|
| 1995 | Chris Peterson |
| Doug Bornemann (MCDB&G) | Dawne Shelton |
| 1996 | 2005 |
| Brian Hyatt (MCDB&G) | Karyn Sheaffer |
| Juan Abrahante-Llorens (MCDB&G) | Jin Jin Cai |
| 1998 | 2006 |
| Mike Portereiko (Molecular Biol. Program) | Kin-Hoe Chow |
| Lisa Goering (MB Program) | Jingyu Huang |
| Anna Paulson (MB Program) | Natalie Dutrow |
| Baird Ruch (MB Program) | 2009 |
| 1999 | Maria Elias |
| Dave Hutcheson (MB Program) | Stephen George |
| Matt Smith (MB Program) | Sheila Sampson |
| Sarah Lange (MB. Program) | Leah Owen |
| Terry Van Raay (Neuroscience Program) | Chuck Meeker |
| Eric Hempel (MB Program) | Marc Elgort |
| 2000 | Ranajeet Saund |
| Yuanyuan Wu (MB. Program) | Ramya Viswanathan |
| Miles Pufall (MB Program) | 2010 |
| 2001 | Marina Venero Galanternik |
| Chris Sans (MB Program) | Lisa Benko |
| Mary Nelson (MB Program) | 2011 |
| Xinghai Li (MB Program) | Yuanyuan Xie |
| 2002 | 2012 |
| Chris Pickett (MB Program) | Blake Wilde |
| Dustin Updike (MB Program) | 2013 |
| Adam Cadwallader (MB Program) | Rajalekshmy Shyam |
| Bargavi Thygarajan (MB Program) | 2019 |
| April Sullivan (MB Program) | Emily Dunn |
| 2003 | Pricilla Figueroa |
| Michelle Wallander | Ivy Morgan |
| Hsiao-Fen Han | 2020 |
| Dan Richardson | Aaron Leifer |
| Sean Green | Glen Couldwell |
| 2004 | |

C. Ph.D. or M.D. POSTDOCTORAL FELLOWS TRAINED IN YOST LAB (N = 31)

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

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: 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: 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, 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, 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: Associate 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 – 06/02
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: Professor, Wayne State University

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

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

Susan Morelli, M.D., Genetics and Neonatology, Department of Pediatrics
HHMI Fellowship

Current Employment: Pediatric Cardiologist

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 M. Parant (Ph.D., University of Texas, Houston 2001)

Postdoctoral Fellow, 9/03-10/10

Current Employment: Associate Professor (tenured), Department of Pharmacology and Toxicology,
University of Alabama, Birmingham, AL

Annita G. Peterson (Ph.D., Iowa State University, Ames 2004)

Postdoctoral Fellow, 6/05-5/15

Current Employment: Adjunct, Weber State University

Cammon Arrington (M.D./Ph.D. University of Iowa)

Assistant Professor of Pediatrics, Cardiology 10/05-05/2014

Current Employment: Pediatric Cardiologist, Stanford Children's Health - Lucile Packard Children's
Hospital Stanford, Palo Alto, CA

Luca Brunelli (M.D. University of Genoa; Ph.D. University of Turin)

Assistant Professor of Pediatrics, Neonatology 07/08-11/2016

Current Employment: Associate Professor, Pediatric Neonatology, U. Utah

Todd Townsend (Ph.D. Vanderbilt University 2008)

Postdoctoral Fellow, 11/08 – 10/14

Subsequent Employment: Commissioner's Fellow, U.S. Food and Drug Administration

Current Employment: Regional Medical Scientific Director, Cardiovascular & Metabolism at Merck

Judith Neugebauer (B.S. U.C. Davis, 2002; Ph.D. U. Utah 2009)

Postdoctoral Fellow, 6/09 – 03/12

Subsequent Employment: Director, BioEyes Program, University of Utah

Current Employment: Regional Medical Scientific Director, Cardiovascular & Metabolism at Merck

Colin Maguire (Ph.D. in Cardiovascular Sciences, Baylor College of Medicine 2009)

Postdoctoral Fellow (shared/collaborating with M. Condic), 02/10 - present

Current Position: Director, CCTS Cellular Translational Research Core, U. Utah

Bushra Gorski (Ph.D., University of Manchester UK 2010)

Postdoctoral Fellow, 09/10 – 12/2017 (CvDC Collaborative Fellowship)

Current Employment: Programmer/Analyst, Utah Center for Genetic Discovery

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; Phoebe S. Leboy Public Policy Fellow, Association for Women in Science (AWIS) 04/2012-04/2014
Current Position: Government Relations Associate, Lewis-Burke Associates, LLC

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

Sarah Abdul-Wajid (B.Sc. University of Toronto, Ph.D. University of California Santa Barbara)
Postdoctoral Fellow (T32 Cardiovascular Training Grant), 10/2015-9/2018
Current Position: Research Scientist, Omniome (biotech startup), San Diego, CA

María de los Angeles Serrano (B.S. National University of Misiones, Ph.D. National University of Tucumán, Argentina, 2015), awarded Warren Alpert Distinguished Scholarship
Current Position: 01/2022 Assistant Professor, Boston University School of Medicine

Chelsea Herdman (B.Sc. U. Manitoba – Collège Universitaire de Saint-Boniface. Ph.D. Université Laval, 2017); awarded CIHR Postdoctoral Fellowship
Current Position: 07/2022 CIHR Scientist

Julia Whittle (B.S. SUNY Geneseo; Ph.D. Washington University, St. Louis)
Postdoctoral Fellow 12/2022 - present.

Postdoctoral Fellows (in other labs) Mentoring Committees

Matthew Keefe, PhD (Joshua Bonkowsky Lab, Pediatrics)
Dana M. Talsness, PhD (2019, Clement Cho Lab, Human Genetics)
Clayton Carey, PhD (2020, James Gagnon Lab, Biology)
Simone Chiola, PhD (co-mentor for K99 application, Alex Shcheglovitov Lab, Neurobiology)
Marta W. Szulik, PhD (F32 2019-2022, Sarah Franklin Lab, CVRTI)
Saba Parvez, PhD (for K99/R00 award)

D. FACULTY MENTORING COMMITTEES (not including extensive *ad hoc* faculty mentoring as VC for Basic Science Research in Pediatrics, and in Molecular Medicine Program)

Norman Hu, Department of Pediatrics
Masaaki Yoshigi, M.D., Department of Pediatrics
Aylin Rodan, Department of Internal Medicine
Hunter Underhill, Department of Pediatrics
Alex Shcheglovitov, Department of Neurobiology
Matthew Rondina, faculty mentor for K24 award

X. PUBLICATIONS

A. ORIGINAL RESEARCH PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. O'Connor TM, Guaman MC, Randell KA, Keenan HT, Snowden J, Mack JW, Camp EA, Perez O, Chang ML, Myers AL, Nigrovic LE, O'Toole J, Reed JL, Reese J, Rosenberg AR, Slater AC, Wootton SH, Ziniel SI, Yost HJ, Murray KO, Shekerdemian L, Chumpitazi CE. Impact of the COVID-19 Pandemic on Pediatric Faculty: A Report from Nine Academic Institutions. **Pediatric Research** 2023 Jul 15. doi: 10.1038/s41390-023-02726-8. PMID: 37454186
2. Eisa-Beygi S, Hu MM, Kumar SN, Brooke E, Jeffery BE, Ross F, Collery RF, Vo N, Lamichanne BS, Yost HJ, Veldman MB, Link BA, Mesenchymal stromal cells facilitate tip cell fusion downstream of BMP-mediated venous angiogenesis. **Arterioscler Thromb Vasc Biol.** 2023 Jul;43(7):e231-e237. doi: 10.1161/ATVBAHA.122.318622. PMID: 37128914
3. Sable C, Li J, Tristani-Firouzi M, Fagerlin A, Silver R, Yandell M, Yost HJ, Beaton A, Dale J, Engel M, Watkins D, Spurney C, Skinner A, Armstrong S, Shah S, Allen N, Davis M, Hou L, Van Horn L, Labarthe D, Lloyd-Jones R, Marino B. The American Heart Association's Children's Strategically-Focused Research Network Experience. **JAHA: Journal of the American Heart Association** 2023 Apr 4;12(7):e028356. doi: 10.1161/JAHA.122.028356. Epub 2023 Mar 28. PMID: 36974754
4. Wesolowski S, Lemmon G, Hernandez EJ, Henrie A, Miller TA, Weyhrauch D, Puchalski MD, Bray BE, Shah RU, Deshmukh VG, Delaney R, Yost HJ, Eilbeck K, Tristani-Firouzi M, Yandell M. An explainable artificial intelligence approach for predicting cardiovascular outcomes using electronic health records. **PLOS Digit Health.** 2022;1(1). doi: 10.1371/journal.pdig.0000004. Epub 2022 Jan 18. PubMed PMID: 35373216; PubMed Central PMCID: PMC8975108.
5. Parvez S, Herdman C, Beerens M, Chakraborti K, Harmer ZP, Yeh JJ, MacRae CA, Yost HJ, Peterson RT. MIC-Drop: A platform for large-scale in vivo CRISPR screens. **Science** 2021 Aug 19:eabi8870. doi: 10.1126/science.abi8870. PMID: 34413171.
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A2. BioRxiv PREPRINT SUBMISSIONS (also submitted for peer review publication)

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108. Lamichhane BS, Bisgrove BW, Su YC, Demarest BL, Yost HJ. Syndecan 2 regulates hematopoietic lineages and infection resolution in zebrafish. BioRxiv doi: <https://doi.org/10.1101/2020.05.04.076786>
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B. INVITED REVIEWS IN JOURNALS

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116. Bisgrove BW, Yost HJ. The roles of cilia in developmental disorders and disease. **Development**. 2006 Nov;133(21):4131-43. Epub 2006 Oct 4. Review. PubMed PMID: 17021045.
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C. BOOKS, BOOK CHAPTERS AND BOOK REVIEWS

137. Cadwallader AB and Yost HJ (2013). "The Glycocode: Translating Heparan Sulfate Fine Structure into Developmental Function" In "Extracellular Matrix in Development" (D. DeSimone and R.P. Mecham, eds). Springer-Verlag. p3-18.
138. Amack JD and Yost HJ (2008). Establishing cardiac left-right asymmetry. In "Heart Development and Regeneration" (R. P. Harvey and N. Rosenthal, eds). Academic Press, San Diego.
139. Neugebauer JM and Yost HJ (2007) Divergent Roles of Hedgehog and Fibroblast Growth Factor Signaling in Left-Right Development. Cardiovascular Development (Rolf Bodmer, ed). Academic Press.
140. Yost HJ (2005) Microenvironment Provides Left-Right Instructions to Migrating Pre-cardiac Mesoderm. In Cardiovascular Development and Congenital Malformations: Molecular and Genetic Mechanisms (Michael Artman, D Woodrow Benson, Deepak Srivastava and Makoto Nakazawa, eds.) Blackwell Publishing, p 3 – 5.
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143. Tran A, Sato M, Yost HJ (2003) Morphological Analysis of Cardiac Defects in Neural Crest Deficient Zebrafish Embryos. Proceedings NCUR 2003. Univ. of North Carolina, Asheville, NC. Volume 3, 73.
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145. Yost HJ (2003) Special Issue: Zebrafish as a model system. (featured cover photo) **Developmental Dynamics** 228, number 7.
146. Ramsdell AF and Yost HJ (2001). Cardiac looping and the left-right axis: integrating morphological, molecular and genetic analyses of vertebrate left-right development. In Development of the Cardiovascular System, Volume 1 (R. J. Tomanek and R. Runyon, eds.) JAI Press, Greenwich, CT.
147. Opitz JM, Yost HJ and Clark EB (2000). Syndromes, developmental fields and human congenital cardiovascular malformations. In "Etiology & Morphogenesis of Congenital Heart Disease: Twenty Years of Progress in Genetics and Developmental Biology" (E.B. Clark, M. Nakazawa, A. Takao, eds.) Futura, N.Y., p 311 - 320.
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150. Yost HJ (1997). Embryo left from right (featured cover photo). **Journal of NIH Research** 9, 1.

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152. Yost HJ (1995). Breaking Symmetry: Left-Right Cardiac Development in *Xenopus laevis*. in "Fourth International Symposium on Etiology & Morphogenesis of Congenital Heart Disease - Developmental Mechanisms" (M. M. Markwald, E. B. Clark, A. Takao, eds.) Futura, N.Y., p 505-511.
153. Yost HJ (1992). *Xenopus*: Getting Reorganized. (Review of "The Early Development of *Xenopus laevis*: An Atlas of the Histology" by P. Hausen and M. Riebessell) **Trends in Genetics** 8, 186.
154. Yost HJ, Petersen RB and Lindquist S (1990). Posttranscriptional regulation of heat shock protein synthesis in *Drosophila*. In "Stress Proteins in Biology and Medicine" (R. I. Morimoto, A. Tissieres, and C. Georgopoulos, Eds.). Cold Spring Laboratory Press, p. 379-409.

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. 4/8/24 Speaker, "Negotiation & Faculty Positions" Annual NHGRI Trainee Symposium, Seattle, WA
2. 10/26/23 Speaker, "Pathogenic Variants in distinct domains of KMT2D show variability in cardiovascular phenotype in zebrafish models" Kabuki Syndrome Foundation Scientific Symposium (virtual)
3. 10/13/23 Speaker, "Cardiovascular Development Data Resource Center" NHLBI Bench-to-Basinet Symposium, Crystal City, VA
4. 5/5/23 Speaker, "Cardiovascular Development Data Resource Center" Weinstein Cardiovascular Development & Regeneration Symposium, San Diego, CA
5. 4/3/23 Speaker, "Negotiation & Faculty Positions" Annual NHGRI Trainee Symposium, Salt Lake City, UT
6. 3/25/23 Speaker, "Symmetry and Asymmetry in the Body Plan" American Association for Anatomy's inaugural Anatomy Connected Meeting, Washington, DC
7. 3/25/23 Speaker, "Getting to the heart of vascular development, disease and regeneration" American Association for Anatomy's inaugural Anatomy Connected Meeting, Washington, DC
8. 3/2/23 Speaker, "Cardiovascular Development and Predisposition to Adult Heart Disease" Gordon Research Conference on Neural Crest & Cranial Placodes, Tuscany, Italy
9. 9/21/22 Keynote Speaker, "Mechanisms of laterality defects and insights from congenital heart disease genomics" Childhood Liver Disease Research Network, Bethesda, MD (virtual)
10. 7/18/22 Board Meeting, Public Affairs Committee presentation, Society for Developmental Biology 81st Annual Meeting and Pan-American Society for Evolutionary Developmental Biology 4th Biennial Meeting, Vancouver, BC, Canada
11. 6/22/22 Presenter, 17th International Zebrafish Conference (IZFC), Montreal, Canada (hybrid, attended virtually)

12. 6/23/22 Speaker, "Interviewing Skills" Graduate and Professional School Admissions Virtual Mini Expo, U. Utah
13. 6/8/22 Speaker, "Left-Right Organizers, Gaps and Barriers" Biology and Physics of Left-Right Patterning Company of Biologists Workshop, Buxted Park, East Sussex, UK
14. 5/23/22 Invited attendee, Expanded Reason Congress, Universidad Francisco de Vitoria, Madrid, Spain
15. 5/14/22 Speaker, "Cardiovascular Development Data Resource Center" (and poster judge), Weinstein Cardiovascular Development and Regeneration Symposium, Marseilles, France
16. 4/2022 Speaker "Faculty Negotiations" Annual NHGRI Trainee Symposium, Durham, NC
17. 4/1/22 Board Meeting, American Association for Anatomy, Annual Meeting at Experimental Biology, Philadelphia, PA
18. 11/5/21 Speaker, "Lab Management: Who to Hire, When to Separate from Mentor" Pediatric Critical Care and Trauma Scientist Development Program (PCCTSDP) National Annual Retreat, Deer Valley, UT
19. 8/31/21 Speaker, "Cardiovascular Development and Predisposition to Adult Heart Disease" American Association for Anatomy & Developmental Dynamics Webinar (Virtual)
20. 1/27/21 Speaker, "Moving from Candidate Alleles to Functional Analyses" Center for Genomic Medicine, University of Utah (Virtual)
21. 9/24/20 Speaker, "Mentoring Up" Utah Postdoc Association Inaugural Panel (Virtual)
22. 9/20/19 Speaker, "Structuring a Research Group to Promote Research Integrity" American Heart Association Research Leaders Academy (AHA RLA) Baltimore, MD
23. 5/16/19 Speaker, "Embryonic Neural Crest derived Cardiomyocytes (NC-Cms) in trabeculation, adult heart failure and cardiac regeneration." 52nd Japanese Society for Developmental Biology, Osaka, Japan.
24. 1/15/19 Speaker, "Neural Crest derived Cardiomyocytes (NC-Cms) and *jag2b* in adult-onset cardiomyopathy, heart failure and cardiac regeneration" 8th Strategic Conference for Zebrafish Investigators, Asilomar 15 January 2019
25. 10/11/18 Speaker, "Transcriptionally Distinct Neural Crest Derived cardiomyocytes; subclinical CHD leads to adult-onset heart failure" NHLBI Bench-to-Basinet Symposium, Bethesda, MD
26. 05/05/18 Plenary Speaker, Pediatric Academic Societies (PAS) & Asian Society for Pediatric Research, Toronto, Canada
27. 01/11/2018 Speaker, "Adult heart failure: a developmental genetics perspective" 6th Annual Utah Cardiac Recovery (U-CARS) Symposium, Salt Lake City, UT
28. 11/01/17 Plenary Speaker, Fifth Zebrafish Meeting of China: Developmental Genetics and Disease Models, Wuzhen, Shanghai, China
29. 07/07/17 Speaker, Susan Lindquist Memorial Symposium, Whitehead Institute, Massachusetts Institute of Technology, Cambridge, MA
30. 04/25/17 The 2017 Henry Gray Scientific Achievement Lecture, American Association of Anatomists, Experimental Biology Meeting, Chicago, IL
31. 06/02/16 Keynote Speaker, Frontiers of Developmental Biology (49th Annual meeting moved from Kumamoto due to earthquake), Japanese Society of Developmental Biologists, Tokyo, Japan
32. 05/20/16 Symposium speaker, Fifth International Multiple Hereditary Exostoses (MHE) Research Conference, West Palm Beach, FL
33. 10/03/15 Symposium Speaker, Society for Developmental Biology (SDB) Southwest Regional Meeting, Dallas, TX
34. 05/02/15 Symposium Speaker, 22nd Weinstein Cardiovascular Conference, Boston, MA
35. 03/01/15 Symposium speaker, Gordon Research Conference on Glycobiology: Glycans as mediators of interactions between molecules, cells and organisms, Lucca (Barga), Italy

36. 05/05/14 Symposium Speaker, Pediatric Academic Societies (PAS) & Asian Society for Pediatric Research, Vancouver, Canada
37. 04/28/14 Symposium Chairman "From the Lab to the Capitol: A Scientist's Guide to Advocacy" FASEB, San Diego, CA.
38. 01/16/14 Keynote Speaker, AHA Heart of Gold recipient, First Annual AHA Utah Research Reception, Salt Lake City, Utah
39. 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
40. 6/01/13 Symposium speaker, Syndecans in Cell Regulation and Disease, Leuven, Belgium
41. 1/22/13 Symposium speaker, 5th Strategic Conference of Zebrafish Investigators, Asilomar, CA
42. 11/4/12 Symposium speaker, Fourth International Multiple Hereditary Exostoses (MHE) Research Conference, Philadelphia, PA
43. 7/8/12 Discussion leader, Gordon Research Conference on Proteoglycans, Proctor Academy, Andover, New Hampshire
44. 4/29/12 Symposium speaker, VI International Meeting of the Latin American Society for Developmental Biology, Montevideo, Uruguay
45. 6/20/11 Symposium speaker, Gordon Research Conference on Developmental Biology, Proctor Academy, Andover, New Hampshire
46. 3/18/11 Symposium speaker, Cardiovascular, Hypertension and Diabetes Symposium, University of Utah, Salt Lake City, UT
47. 10/24/10 Symposium speaker, Society for Glycobiology Symposium, American Society for Matrix Biology Meeting, Charleston, S.C.
48. 6/23/10 Symposium speaker, 43rd Annual Meeting, Japanese Society of Developmental Biologists, Kyoto, Japan
49. 3/16/10 Symposium speaker, Gordon Research Conference on Fibroblast Growth Factors in Development and Disease, Ventura, CA
50. 2/23/10 Symposium speaker, Keystone Symposium on *Cilia, Signaling and Human Disease*, Monterey, CA
51. 12/21/09 Symposium speaker, Lubkin Fund for MHE Research, San Diego, CA
52. 11/13/09 Symposium speaker, Society for Glycobiology, San Diego, CA
53. 10/31/09 Symposium speaker, 3rd International Multiple Hereditary Exostoses Conference, Boston, MA
54. 9/5/09 International Society for Developmental Biology (ISDB), Edinburgh, Scotland
55. 5/7/09 National Committee member, Weinstein Cardiovascular Development Conference, San Francisco, CA
56. 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
57. 3/10/09 Symposium speaker (canceled), Gordon Research Conference on Vascular Biology, Venura, CA
58. 7/27/08 Board of Directors, 67th Annual Meeting Society of Developmental Biology (SDB), Philadelphia, PA
59. 7/08/08 Symposium speaker, Gordon Research Conference on Proteoglycans, Proctor Academy, Andover, New Hampshire
60. 7/02/08 Symposium speaker, Teratology Society Annual Symposium, Monterey, CA
61. 6/27/08 Symposium workshop chairman, 8th International Meeting on Zebrafish Development and Genetics, Madison, WI
62. 5/16/08 National Committee member, Weinstein Cardiovascular Development Conference, Houston, TX

63. 9/16/07 Symposium speaker, Fifth International Conference on Proteoglycans, Rio de Janeiro, Brazil
64. 8/4/07 Symposium speaker, FASEB Symposium: The Biology of Cilia and Flagella, Saxtons River, VT (canceled for lab move)
65. 2/02/07 2nd Strategic Conference of Zebrafish Investigators, Asilomar, CA.
66. 8/29/06 Symposium speaker, McLaughlin Research Institute Annual Biomedical Research Workshop, Great Falls, MT
67. 5/19/06 Symposium speaker, "Is Asymmetry the Biological Ground State?" Developmental Dynamics Annual Symposium, Salt Lake City, UT
68. 10/28/05 Keynote speaker, Southwest Regional Developmental Biology Symposium, Boulder, CO
69. 9/03/05 Symposium speaker, 15th International Society of Developmental Biologists (ISDB) Congress, Sydney, Australia
70. 4/11/05 Symposium speaker, 3rd Annual Cell and Developmental Biology Symposium: Origin and Development of the Vertebrate Traits, Kobe, Japan
71. 3/07/05 Symposium speaker, Gordon Research Conference on Glycobiology, Ventura, CA
72. 9/16/04 Symposium speaker, International Xenopus Meeting, Woods Hole, MA
73. 6/14/04 Symposium speaker, Gordon Research Conference on Basement Membranes, Roger Williams University, Bristol, RI
74. 6/04/04 Symposium speaker, Developmental Biology Symposium, University of California, San Francisco, CA
75. 3/11/04 Symposium speaker, Keystone Symposia-Cardiac Development and Congenital Heart Disease, Keystone, CO
76. 2/15/04 Symposium speaker, 15th Utah Conference on Pediatric Cardiovascular Disease, Deer Valley, UT
77. 2/6/04 Symposium speaker, Translocations in Sarcoma, Molecular to Clinical Implications, Huntsman Cancer Institute, Salt Lake City, UT
78. 12/4/03 Symposium speaker, Society for Glycobiology, San Diego, CA
79. 10/21/03 Symposium speaker, Third Annual Cardiovascular Symposium, UTSW, Dallas, Tx
80. 9/21/03 Symposium speaker, 3rd International Conference on Proteoglycans, "Pathobiology of Proteoglycans," Parma, Italy
81. 9/19/03 Keynote Address, Southwest Regional Developmental Biology Meeting, Salt Lake City, UT
82. 4/14/03 Symposium speaker, FASEB/AAA Symposium on "Gastrulation", San Diego, CA
83. 4/12/03 Symposium speaker, FASEB/EB Symposium "Zebrafish plumbing: heart and vessels" session, San Diego, CA
84. 3/21/03 Keynote speaker, West Coast Regional Developmental Biology Meeting, Friday Harbor Marine Biology Laboratory, WA
85. 12/01/02 Symposium speaker, 6th International Symposium on Congenital Heart Disease, Tokyo, Japan
86. 11/18/02 Symposium speaker, American Heart Assoc. 75th Scientific Symposium, Chicago, IL
87. 8/14/02 Organizer and Moderator, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT
88. 7/8/02 Symposium speaker, Gordon Research Conference on Proteoglycans, Proctor Academy, Andover, NH
89. 6/12/02 Symposium speaker, 5th International Conference on Zebrafish Development and Genetics, Madison, WI
90. 5/30/02 Symposium speaker, Cold Spring Harbor Symposium on Quantitative Biology, NY
91. 8/14/01 Organizer and Moderator, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT
92. 7/23/01 Symposium speaker, West Coast Zebrafish Meeting, Seattle, WA.

93. 7/9/01 Symposium speaker, "The TGF-beta superfamily: signaling and development" FASEB Symposium, Tuscon, AZ.
94. 6/4/01 Symposium speaker, Juan March Foundation International Symposium, Madrid, Spain.
95. 5/18/01 Symposium Speaker, 11th Weinstein Cardiovascular Development Conf., Dallas, TX.
96. 4/2/01 Symposium speaker, "Patterning during Development: Insights from Zebrafish," American Association of Anatomists, Orlando, FL.
97. 3/22/01 Symposium Speaker, "Early Cardiac Development and Cardiac Laterality" Cardiovascular Development Symposium, Charleston, SC.
98. 3/2/01 Symposium speaker, 32nd Annual March of Dimes Clinical Genetics Conference, Miami, FL.
99. 11/12/00 Symposium speaker, "Model Organisms and Congenital Disease" American Heart Association 73rd Scientific Symposium, New Orleans, LA.
100. 9/30/00 Symposium speaker, 10th Robert J. Gorlin Conference on Dysmorphology, Minneapolis, MN.
101. 9/11/00 Symposium speaker, 4th Scientific Meeting of the Heart Failure Society of America, Boca Raton, FL.
102. 8/8/00 Invited participant, American Heart Association Western Affiliate Undergraduate Round Table, Salt Lake City, UT.
103. 6/9/00 Symposium speaker, 10th Weinstein Cardiovascular Development Conference, St. Louis, MO.
104. 6/3/00 Symposium speaker, UCSF Developmental Biology Symposium, San Francisco, CA.
105. 5/6/00 Presenter, American Heart Association Research Symposium, Dallas, TX.
106. 11/15/99 Symposium speaker, Rachford International Symposium "Transcriptional Control of Embryogenesis", Children's Hospital Medical Center, Cincinnati, OH.
107. 11/9/99 Symposium speaker, "State-of-the-Art" Lecture, American Heart Association 72nd Scientific Symposium, Atlanta, GA.
108. 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.
109. 8/9/99 Symposium speaker, Gordon Research Conference on Human Molecular Genetics, Salve Regina University, Newport, RI.
110. 3/14/99 Symposium speaker, 6th International Workshop on Fetal Genetic Pathology, Dead Sea, Israel.
111. 12/8/98 Symposium speaker, 5th International Symposium on Etiology & Morphogenesis of Congenital Heart Disease - Developmental Mechanisms, Tokyo, Japan.
112. 10/28/98 Symposium speaker, "Left-Right Axis and Associated Malformations" Session, American Society of Human Genetics Annual Meeting, Denver, CO.
113. 6/7/98 Symposium speaker, FASEB Summer Research Conference on "Intracellular RNA Sorting, Transport, and Localization." Snowmass, CO.
114. 5/29/98 Symposium speaker, 8th Weinstein Cardiovascular Development Conference, Nashville, TN.
115. 4/18/98 Symposium speaker, Session on "Early Development", Experimental Biology/American Association of Anatomists, San Francisco, CA.
116. 12/15/97 Symposium speaker, "Left-right asymmetry: From Molecules to Clinic" Session, American Society for Cell Biology, Washington, DC.
117. 11/18/97 Symposium speaker, Cold Spring Harbor Banbury Center, Workshop on Handedness, Cold Spring Harbor Laboratory, NY.
118. 11/8/97 Symposium speaker, "Positional Information in the Developing Heart" American Heart Association 70th Scientific Symposium, Orlando, FL.
119. 7/12/97 Symposium speaker, 5th International Congress of Vertebrate Morph., Bristol, England.

120. 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.
121. 3/31/97 Symposium speaker, 61st Annual Scientific Meeting of Japanese Circulation Society, Tokyo.
122. 2/3/97 Workshop invited participant, Current Advances in Defining the Zebrafish Genome, Boston, MA.
123. 10/12/96 Symposium speaker, Symposium on Vertebrate Left-Right Asymmetry, Society for Pediatric Pathology, Houston, TX.
124. 8/21/96 Symposium speaker, American Heart Association Scientific Conference on the Molecular Biology of the Normal, Hypertrophied and Failing Heart, Snowbird, UT
125. 7/12/96 Symposium speaker, Gordon Research Conference on Motile & Contractile Systems, New England College, Heniker, NH.
126. 6/7/96 Symposium speaker, 6th Weinstein Cardiovascular Development Conference, Philadelphia, PA.
127. 6/26/95 Symposium speaker, Gordon Research Conference on Developmental Biology, Andover, NH.
128. 6/3/95 Symposium speaker, 5th Weinstein Cardiovascular Development Conference, University of Rochester, NY.
129. 3/27/95 Symposium speaker, American Heart Association Scientific Conference on the Molecular, Cellular, and Functional Aspects of Cardiovascular Development, New Orleans, LA.
130. 11/26/93 Symposium speaker, "Fourth International Symposium on Etiology & Morphogenesis of Congenital Heart Disease" Tokyo, Japan.
131. 6/25/92 Symposium speaker, Gordon Research Conference on Biological Regulatory Mechanisms, Holderness, NH.
132. 2/21/91 Symposium speaker, "Biological Asymmetries and Handedness "Ciba Foundation Symposium, London, UK.

XII. INVITED DEPARTMENTAL SEMINARS

1. 3/1/24 "Development, Genetics and Cardiac Disease: Building a multidisciplinary research program" Pediatrics Department, University of Utah, Salt Lake City, UT
2. 12/11/23 "Development, Genetics and Cardiac Disease" Department of Biology, The Catholic University of America, Washington, DC
3. 7/29/23 "Cardiovascular Development and Predisposition to Adult Heart Disease" PPG Annual Retreat, Herman B Wells Center for Pediatric Research, Indiana University School of Medicine, Indianapolis, IN
4. 4/18/23 "Cardiovascular Development and Predisposition to Adult Heart Disease" Massachusetts General Hospital Cardiovascular Research Center (CVRC), Harvard Medical School, Boston, MA
5. 9/8/22 "Cardiovascular Development and Predisposition to Adult Heart Disease" University of Oregon, Eugene, OR
6. 4/11/19 "Embryonic Neural Crest Cells in adult-onset cardiomyopathy and cardiac regeneration" University of Hawaii, Honolulu, Hawaii
7. 10/18/18 "BioEYES: Using zebrafish to create innovative science education for K-12 students. University of Utah Department of Pediatrics
8. 1/27/16 University of Minnesota School of Medicine, Lillehei Heart Institute Seminar, Minneapolis, MN
9. 11/2/15 Washington University School of Medicine, Department of Developmental Biology, St. Louis, MO

10. 1/29/15 University of Iowa, Interdisciplinary Graduate Program in Molecular & Cellular Biology, Iowa City, IA
11. 2/26/14 University of Arizona, Department of Cellular and Molecular Medicine, Tucson, AZ
12. 5/29/13 University of Minnesota, Lillehei Heart Institute, Minneapolis, MN
13. 4/16/13 University of Oregon, Department of Chemistry and Biochemistry, Eugene, OR
14. 1/14/13 University of Pennsylvania, Institute for Regenerative Medicine and Department of Cell & Developmental Biology, Philadelphia, PA
15. 9/27/12 University of California, Santa Barbara, Department of Molecular, Cellular, & Developmental Biology, Santa Barbara, CA
16. 2/23/11 Princeton University, Department of Molecular Biology, Princeton, NJ
17. 10/19/10 Vanderbilt University, Department of Pharmacology, Memphis, TN
18. 9/21/10 The University of Chicago, Committee on Development, Regeneration, and Stem Cell Biology, Chicago, IL
19. 4/21/10 University of Minnesota, Lillehei Heart Institute, Minneapolis, MN
20. 2/09/10 Yale University Department of Genetics, New Haven, CT
21. 5/08/08 University of Minnesota, Dept. Genetics, Cell Biology and Development, Minneapolis, MN
22. 3/17/08 U.C. San Francisco, Cardiovascular Research Institute and the Gladstone Institutes of Cardiovascular Diseases, San Francisco, CA
23. 2/28/08 Albert Einstein School of Medicine, Dept. Molecular Genetics, New York, NY
24. 11/19/07 University of Pennsylvania, Department of Cell & Developmental Biology, Philadelphia, PA
25. 10/15/07 Duke University (invited by grad students in Cell & Developmental Biology Program), Department of Biology, Durham, NC
26. 10/10/07 University of Utah, Department of Neurobiology & Anatomy, Salt Lake City, UT
27. 3/22/07 Texas A&M, Department of Biology, Collegeville, TX
28. 3/15/07 Dartmouth School of Medicine, Lebanon, NH
29. 2/16/07 University of Utah, Division of Pediatric Cardiology, Salt Lake City, UT
30. 12/06/06 University of Utah, Huntsman Cancer Institute and Department of Oncological Sciences, Salt Lake City, UT
31. 11/08/06 Harvard University School of Medicine, Department of Genetics & Boston Children's Hospital, Boston, MA
32. 3/23/06 Grand Rounds speaker "Stem Cells: Current Scientific Perspective" Department of Pediatrics, University of Utah, Salt Lake City, UT
33. 11/09/05 University of Michigan, Department of Internal Medicine, Ann Arbor, MI
34. 04/19/05 Blaffer Lecture, M.D. Anderson Cancer Center, Houston, TX
35. 03/01/05 The Burnham Institute, Division of Stem Cells & Regeneration, La Jolla, CA
36. 12/2/04 University of California, San Diego, Department of Cellular and Molecular Medicine, San Diego, CA
37. 4/1/04 Nora Eccles Treadwell Distinguished Lecture, Cardiovascular Research & Training Institute, University of Utah, Salt Lake City, UT
38. 3/29/04 European Molecular Biology Laboratory, Monterotondo (Roma), Italy
39. 2/11/04 The Samuel Lunenfeld Research Institute at Mt. Sinai Hospital, Toronto, Canada
40. 1/26/04 Johns Hopkins Medical School, Institute of Genetic Medicine, Baltimore, MD
41. 12/19/03 Huntsman Cancer Institute, inaugural lecture in "Lab Lights", Salt Lake City UT
42. 1/13/03 University of Texas Medical School, Department of Physiology, San Antonio, TX
43. 12/06/02 RIKEN Centre for Developmental Biology, Kobe, Japan
44. 12/03/02 University of Tokyo, Department of Cell Biology and Anatomy, Tokyo, Japan
45. 9/05/02 University of Colorado, Boulder, Department of Molecular, Cell and Developmental Biology, Boulder, CO
46. 12/14/01 University of California, San Diego, Department of Medicine, San Diego, CA

47. 11/28/01 University of Utah, Huntsman Cancer Institute Director's Series, Salt Lake City, UT
48. 10/25/01 University of Wisconsin, Department of Anatomy, Madison, WI
49. 5/16/01 Vanderbilt University School of Medicine, Department of Cell Biology, Nashville, TN
50. 04/05/01 Columbia University College of Physicians & Surgeons, Department of Biochemistry, New York, NY.
51. 3/28/01 University of Pennsylvania School of Medicine, Department of Medicine and Department of Cell and Molecular Biology, Philadelphia, PA.
52. 1/23/01 University of Utah, Department of Pediatrics, Salt Lake City, UT
53. 11/2/00 University of Rochester School of Medicine, Center for Human Genetics and Molecular Pediatric Disease, Rochester, NY.
54. 10/18/00 University of Utah, Department of Oncological Sciences, Salt Lake City, UT
55. 12/2/99 University of Arizona, Department of Biological Sciences, Tucson, AZ.
56. 9/27/99 University of Utah, Division of Pediatric Cardiology, Salt Lake City, UT.
57. 9/8/99 University of North Carolina School of Medicine, Department of Cell Biology and Anatomy, Chapel Hill, NC.
58. 4/16/99 University of Iowa, Department of Biological Sciences, Iowa City, IA.
59. 3/3/99 Stanford University, Dept. of Developmental Biology and Genetics, Palo Alto, CA.
60. 2/9/99 M.D. Anderson Cancer Center, Blaffner Seminar Series, Department of Molecular Genetics, Houston, TX.
61. 1/28/99 Washington University, Department of Cardiovascular Medicine, St. Louis, MO.
62. 11/18/98 Yale University, Department of Cell Biology, New Haven, CT.
63. 11/4/98 Harvard Medical School, Department of Genetics, Boston, MA.
64. 5/22/98 University of Utah, Department of Neurobiology and Anatomy, Salt Lake City, UT.
65. 5/9/97 University of Minnesota, Medical School Dean's Research Seminar, Minneapolis
66. 4/14/97 UT Southwest Medical Center, Hamon Center for Basic Cancer Research, Dallas
67. 4/10/97 Harvard Medical School, Department of Cell Biology, Boston, MA.
68. 4/1/97 Tokyo Women's College, Department of Pediatric Cardiology, The Heart Institute of Japan, Tokyo, Japan.
69. 1/16/97 University of Illinois Medical School, Department of Biochemistry, Chicago, IL.
70. 12/2/96 Washington University, Department of Pediatrics and Department of Molecular Biology and Pharmacology, St. Louis, MO.
71. 11/14/96 University of Colorado, Dept. Molecular, Cell & Developmental Biology, Boulder, CO.
72. 11/8/96 Baylor Medical School, Department of Pathology, Houston, TX.
73. 10/23/96 University of Utah, Department of Pediatrics and Department of Neurobiology and Anatomy, Salt Lake City, UT.
74. 6/25/96 Harvard Medical School, Department of Microbiology and Molecular Genetics and Molecular Medicine Unit, Beth Israel Hospital, Boston, MA.
75. 6/24/96 Harvard Medical School, Massachusetts General Hospital Cardiovascular Research Center, Charleston, MA.
76. 5/21/96 Mount Sinai School of Medicine, Brookdale Center for Molecular Biology, NY, NY.
77. 4/19/96 Medical University of South Carolina, Dept. Cell Biology and Anatomy, Charleston, SC.
78. 4/10/96 University of Pennsylvania Medical School, Dept. Cell and Developmental Biology, Philadelphia, PA.
79. 4/8/96 Fox Chase Cancer Center, Institute for Cancer Research, Philadelphia, PA.
80. 2/12/96 University of Maryland, Department of Biological Sciences, Baltimore, MD.
81. 1/5/96 University of Minnesota, Dept. of Cell Biology and Neuroanatomy, Minneapolis, MN.
82. 4/13/95 Macalester College, Department of Biology, St. Paul, MN.
83. 4/3/95 Cornell University Medical College, Dept Cell Biology and Anatomy, New York, NY.
84. 2/16/95 St. Cloud State University, Department of Biology, St. Cloud, MN.
85. 11/11/94 University of Wisconsin, Department of Zoology, Madison, WI.
86. 4/21/93 University of Minnesota, Department of Orthopedic Surgery, Minneapolis, MN.

87. 4/5/93 University of Minnesota, Lab. Medicine & Pathology, Minneapolis, MN.
88. 2/18/93 University of Minnesota, Institute of Human Genetics, Minneapolis, MN.
89. 2/5/93 Carleton College, Department of Biology, Northfield, MN.
90. 1/25/93 U. Minnesota, Center for Wound Healing and Reparative Medicine, Minneapolis, MN.
91. 10/8/92 University of Colorado, Dept Molecular, Cell & Developmental Biology, Boulder, CO.
92. 1/9/92 University of Minnesota, Department of Genetics & Cell Biology, St. Paul, MN.
93. 5/22/91 Yale University School of Medicine, Department of Genetics, New Haven, CT.
94. 4/8/91 Bay Area Research in Frogs, University of California, Berkeley, CA.
95. 4/3/91 Yale University School of Medicine, Department of Anatomy, New Haven, CT.
96. 3/13/91 University of Virginia, Department of Biology, Charlottesville, VA.
97. 3/7/91 Columbia University, College of Physicians and Surgeons, Department of Anatomy & Cell Biology, New York, NY.
98. 2/15/91 Cambridge University, Department of Zoology, Cambridge, UK.
99. 2/11/91 U. Minnesota, Department of Cell Biology & Neuroanatomy, Minneapolis, MN.
100. 2/4/91 University of Rochester, Department of Biology, Rochester, NY.
101. 2/1/91 Thomas Jefferson University, Department of Biochemistry & Molecular Biology, Philadelphia, PA.

OTHER PRESENTATIONS, PUBLIC OR EDUCATIONAL

- 5/31/2000 Lecture and lab tour, East High School AP Biology class, Salt Lake City, UT.
- 2001-2007 Monthly patient and family tours, Huntsman Cancer Institute Center for Children
- 2/3/2003 Leap 3 undergraduate student program, lab tour
- 9/2005 Teton Science School for 5th Grade Students, Jackson Hole, WY
- 2006-2008 Faculty Advisor, "Piping Utes" University of Utah Bagpipe Club
- various dates Science Fair Judge for middle schools
- 2010-2012 Secretary and founding Board Member, Utah Pibroch Society (non-profit organization to promote classical Piobaireachd music education)