

MIDWEST SDB **IN CINCINNATI** **2026 REGIONAL MEETING**

September 25-27

**hosted by Cincinnati Children's
at the Graduate by Hilton Hotel
midwestsdbincincy.org**



A horizontal banner with a light blue background. On the left, the text "MIDWEST SDB" is written in a large, stylized, purple font with a white outline. Below it, "IN CINCINNATI" is written in a smaller, purple font with a white outline. On the right, the year "2026" is written in a purple font with a white outline. The banner is decorated with horizontal stripes in light blue, cyan, lime green, pink, and magenta.

MIDWEST SDB

IN CINCINNATI

2026

Table of contents:

Sponsors

Venue Floor Plan and Event Space Designation

Career & Mentoring Workshop Details

Meeting Program

Poster Session Details

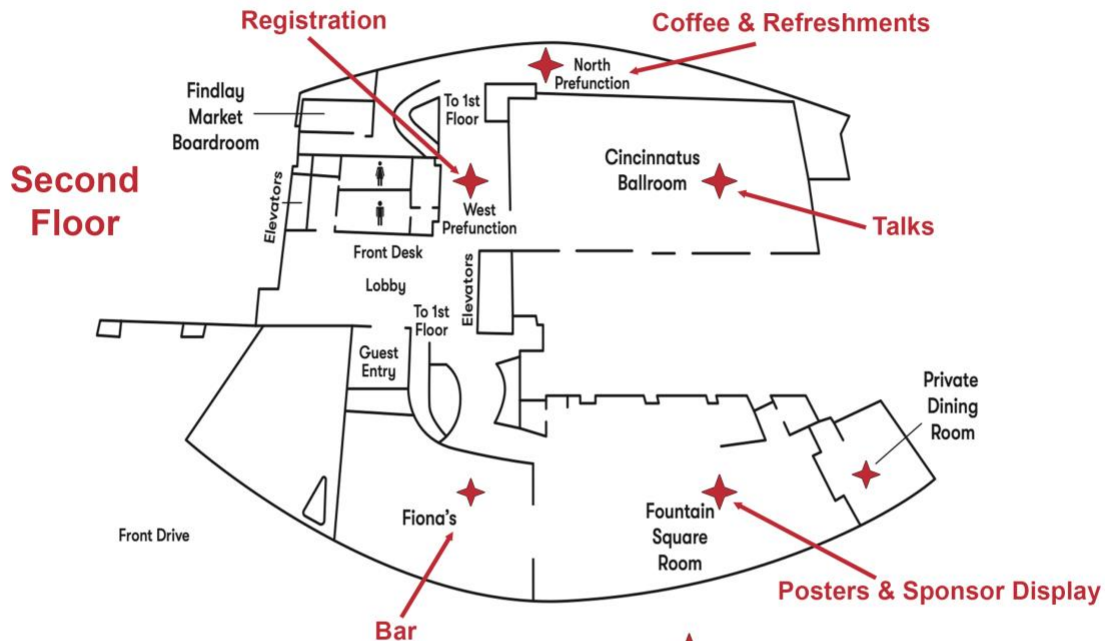






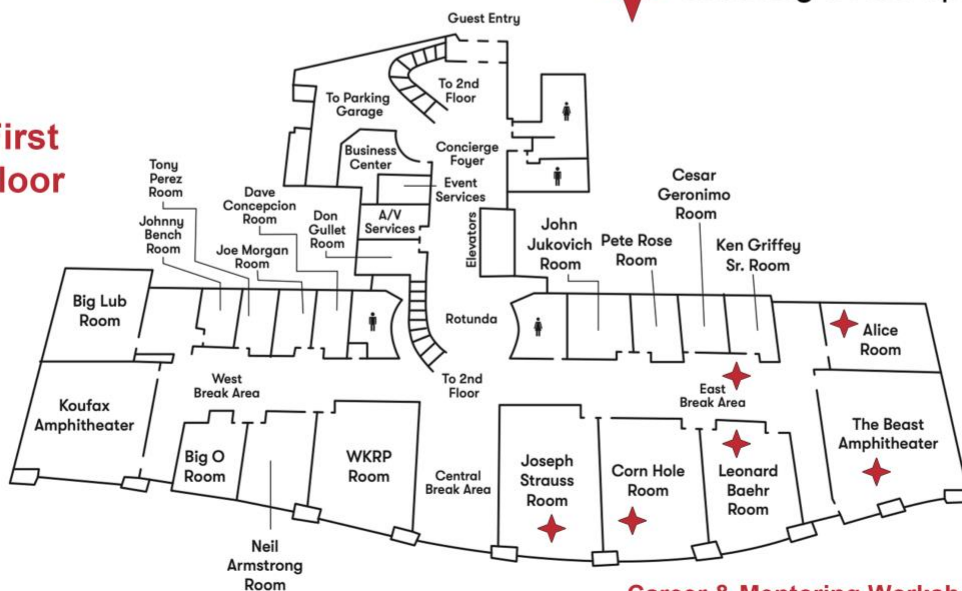
EVENT SPACE floor plans

151 Goodman Street, Cincinnati, OH 45219



meeting event spaces

First Floor



Career & Mentoring Workshops



Regional Meeting · Career Development Track

Career & Mentoring Workshops

Cincinnati, OH

Saturday, September 26 - 2026

Two back-to-back workshop sessions, offered lunchtime on Saturday. The full slate of six workshops runs in **both** sessions, so pick one to attend at 12:15 and a different one at 1:00.

Session One

12:15 – 1:00 PM

Session Two

1:00 – 1:45 PM

Offered in both sessions

● AI in Education

● Junior Faculty Mentoring

● Science Outreach to the Public

● Successful Mentor-Mentee Relationships

● Applying for Graduate School & Postdoc Positions

● Faculty Careers at Primarily Undergraduate Institutions

■ AI in Education: please bring your laptop — this session includes hands-on activities.



Reserve your spot

Scan the code to choose your workshop for each session. Space is limited, so sign up early — walk-ins welcome if seats remain.



Midwest Society for Developmental Biology Meeting

Friday, September 25 – 27, 2026

Graduate Hotel, 151 Goodman Dr., Cincinnati, OH 45219

Talks to be upload to the conference computer before each session.

2 Keynote:	40 minutes + 5 minutes Q&A
4 Invited speakers:	25 minutes + 5 minutes Q&A
30 Selected Abstract talks:	12 minutes + 3 minutes Q&A
19 Poster Preview Flash talks:	90 seconds

Predocs speakers are indicated in **blue**, Postdocs in **green**, Faculty in **black**.

Prizes will be awarded for best postdoc, predoc, prebac presentations (talk or poster), as well as for trainees who ask the best question(s).

Friday, September 25

2:30-4:00 pm	Registration & Poster Setup (West Pre-function)
4:00-4:15 pm	Welcome & Opening Remarks (Cincinnati Ballroom): Aaron Zorn , Cincinnati Children's
4:15-4:30 pm	Society of Developmental Biology Update: Sharon Amacher , Ohio State University, Midwest Representative
4:30-5:15 pm	Session 1 (Cincinnati Ballroom) Chair: Samantha Brugmann , Cincinnati Children's Keynote: Deneen Wellik, PhD , University of Wisconsin-Madison <i>Hox genes in Development and Disease</i>

Sponsored by: **DSHB** 

5:15-6:30 pm

Session 2 (Cincinnatus Ballroom)

Chair: **Ben Allen**, University of Michigan

5:15-5:30

Nicole Pek, Cincinnati Children's Hospital Medical Center

Vessel Organoids Reveal FOXF1 Variant-Specific Regulation of Mesoderm and Capillary Development

5:30-5:45

George Roy, The Ohio State University

Characteristics of sRNA-Driven Transposon Methylation in Plant Zygotic Genome Activation

5:45-6:00

Joydip Barua, Miami University

Müller Glia Ion Homeostasis Preserves Retinal Integrity and Protects Retinal Ganglion Cells

6:00-6:15

Blair Leach, Cincinnati Children's Hospital Medical Center

Fibroblast-Derived FOXF1 Coordinates Alveolar Development and Capillary Maturation

6:15-6:20

Marian Piekarczyk, Senior Technical Specialist Regenerative Medicine, Cell Biology, and Cell Therapy workflows, Thermo Fisher Scientific

Building relevant and reproducible organoids: Controlled 3D PSC-derived workflows for improved maturity and function

6:20-6:35

Poster preview flash talks

Poster #1 **Eric Wu**, University of Michigan - Ann Arbor

Poster #2 **Sarah Alhilu**, Miami University

Poster #3 **Maxim Shajenko**, ADA Forsyth Institute

Poster #9 **Taylor Simmons**, University of Iowa

Poster #10 **Omodasola Ola**, Cincinnati Children's Hospital Medical Center

Poster #11 **Paige Ramkisoon**, Cincinnati Children's Hospital Medical Center

Poster #12 **Quentin Phillips**, Cincinnati Children's Hospital Medical Center

Poster #13 **Parna Dutta**, Cincinnati Children's Hospital Medical Center

Poster #25 **Gopal Kushawah**, Stowers Institute for Medical Research

- 6:35-9:30 pm** **Poster Session 1 - Sponsor Display (Fountain Square Room)**
heavy hors d'oeuvres and bar
- 6:35-8:00** **Odd numbers** Posters 1-33
- 8:00-9:30** **Even numbers** Posters 2-34



ThermoFisher
SCIENTIFIC

Sponsored by:

Saturday, September 26

- 8:00-8:30 am** **Coffee and light pastries (North Pre-function Area)**
- 8:30-10:00 am** **Session 3 (Cincinnatus Ballroom)**
Chair: **Cristina Cebrian**, Cincinnati Children's
- 8:30-8:45** **Shelbie Wenner**, Cincinnati Children's Hospital Medical Center
HSPA2 Regulates Translation During Meiosis
- 8:45-9:00** **Josy Joseph**, Indiana University Bloomington
Identifying the molecular mechanism of beetle horn formation
- 9:00-9:15** **Anthony Treichel**, Stowers Institute for Medical Research
Streamlined mRNA targeting and phenotyping reveal non-essential roles of maternally encoded zebrafish microproteins during MZT
- 9:15-9:30** **Omodasola Adekeye**, University of Maine
Loss of Ptprq disrupts podocyte development, structure, and function
- 9:30-9:45** **Electra Coffman**, The Ohio State University
Adherens junctions and the spectrin-actin cytoskeleton function interdependently to maintain cortical lens transparency with age
- 9:45-10:00** **Benjamin Gilbert**, Nationwide Children's Hospital
Pathogenic variation in MECOM is associated with non-syndromic congenital heart disease
- 10:00-10:30 am** **Break: Coffee, Lemonade & Cookies (North Pre-function Area)**
- 10:30-12:00 pm** **Session 4 (Cincinnatus Ballroom)**
Chair: **Rosa Ventrella**, Midwestern University
- 10:30-10:45** **Grace Gottschamer**, University of Iowa
*Periderm-like cells are present on the surface of *lrf6* knockout mouse embryos*

- 10:45-11:00 **Avelina Lee**, Cincinnati Children's Hospital Medical Center
Investigating the role of ESRP2 in craniofacial development using the cleft primary palate (cpp) avian model
- 11:00-11:15 **Jaclyn Olberding**, University of Iowa
Ectoderm-mediated patterning of the mandible during mouse development
- 11:15-11:30 **Lisa Wirtz**, University of Michigan
Striatin-Interacting Phosphatases and Kinases complex is an important cytoskeletal organizer during skin epidermal development
- 11:30-12:00 **Invited talk-1, Education Session (attendees bring your laptop)**
Anna Cunningham, MEd, PhD, Washington University in St. Louis
Optimizing Your Research with Artificial Intelligence Tools
- 12:00-2:00 pm** **Box Lunch and Career & Mentoring Workshops (1st floor locations)**
Topics offered in both sessions:
AI in Education (attendees bring your laptops)
Junior Faculty Mentoring
Science Outreach to the Public
Successful Mentor-Mentee Relationships
Applying for Graduate School & Post-doc Positions
Faculty Careers at Primarily Undergraduate Institutions
Sign up ahead of time. Space is limited. Walk-ins welcome if seats remain.
- 12:15-1:00 **Career & Mentoring Workshop Session - 1**
- 1:00-1:45 **Career & Mentoring Workshop Session - 2**
- 2:00-3:30 pm** **Session 5 (Cincinnatus Ballroom)**
Chair: **Sarah Petersen**, Kenyon College
- 2:00-2:30 **Invited talk-2**
Chris Wolverton, PhD, Ohio Wesleyan University,
Fractional Gravity on the ISS Uncovers a Novel Plant Gravity Sensory System
- 2:30-2:45 **Patrizia Tornabene**, Cincinnati Children's Hospital Medical Center
Modeling Cystic Fibrosis pancreatic disease using human iPSC-derived pancreatic organoids

- 2:45-3:00 **Rei Yagasaki**, University of Michigan
How fluid dynamics and cellular mechanics shape colonic crypts
- 3:00-3:15 **Bailey Weatherbee**, Cincinnati Children's Hospital Medical Center
Multifunctional RNA-binding transcription factors coordinate cell states in development
- 3:15-3:30 **Sushant Bangru**, Morgridge Institute for Research
Adaptive osteoblast behaviors permitting regeneration of plucked scales from disabled progenitor pools
- 3:30-4:00 pm Break: Coffee, Lemonade & Cookies (North Pre-function Area)**
- 4:00-5:30 pm Session 6 (Cincinnatus Ballroom)**
Chair: **Debora Sinner**, Cincinnati Children's
- 4:00-4:30 **Invited talk-3**
Kevin Cox Jr., PhD, Washington University in St. Louis,
Building a Spatial and Transcriptomic Framework for Transcription Factor Regulation in Duckweed
- 4:30-4:45 **Matthew Riccetti**, Cincinnati Children's Hospital Medical Center
Dorsal respiratory group neurons specified by Gsx2 drive the hypoxic ventilatory response
- 4:45-5:00 **Josefina Doffo**, Stowers Institute for Medical Research
Regulated Intron Removal as a Post-Transcriptional Strategy in Neural Development and Disease
- 5:00-5:15 **Jacob Gafranek**, Cincinnati Children's Hospital Medical Center
Atrial regeneration profiling reveals chamber-specific recovery dynamics within the zebrafish epicardium
- 5:15-5:30 **Poster preview flash talks**
- Poster #35 **Paloma Jolly**, Miami University
 - Poster #36 **Amalia Hunt**, Kenyon College
 - Poster #37 **Taylor Roy**, Cincinnati Children's Hospital Medical Center
 - Poster #47 **Shantanu Karandikar**, University of Wisconsin - Milwaukee
 - Poster #48 **Hariharan Karthikeyan**, Cincinnati Children's Hospital
 - Poster #49 **Sachin Wagh**, Creighton University
 - Poster #50 **Benjamin Akande**, Miami University

Poster #51 **Tayo Adeke**, Mount Desert Island Biological Laboratory
Poster #63 **Archana Singh**, Cincinnati Children's Hospital Medical Center
Poster #64 **Mohammad Fazle Azim**, Kenyon College

5:30-6:30 pm **Poster Session 2 set up (Fountain Square Room)**
6:30-9:30 pm **Poster Session 2 - Sponsors Display (Fountain Square Room)**
heavy hors d'oeuvres/bar
6:30-8:00 **Odd numbers** Posters 35-71
8:00-9:30 **Even numbers** Posters 36-72



Sponsored by: **Division of Developmental Biology**

Sunday, September 27

8:00-8:30 am **Coffee and pastries (North Pre-function Area)**

8:30-9:15 am **Session 7 (Cincinnati Ballroom)**
Chair: **Aaron Zorn**, Cincinnati Children's

Keynote: **James Wells, PhD**, Cincinnati Children's Hospital
Modeling human GI development and disease with organoids



Sponsored by: **Nikon**

9:15-10:30 am **Session 8 (Cincinnati Ballroom)**
Chair: **Jennifer Gutzman**, University of Wisconsin-Milwaukee

9:15-9:30 **Timothy Nguyen**, Cincinnati Children's Hospital Medical Center,
A BIRC5 molecular rheostat regulates cranial neural crest differentiation timing

9:30-9:45 **Kongju Zhu**, Harvard Medical School
Defective human somitogenesis in the absence of HOX genes

9:45-10:00 **Jingyue Xu**, Cincinnati Children's Hospital Medical Center
Foxf2 and Twist1 acts cooperatively to pattern the embryonic palatal mesenchyme and regulate palatal musculoskeletal integration

10:00-10:15	Paul Huber , University of Kentucky <i>Modeling neural plate border differentiation using a Xenopus organoid system</i>
10:15-10:30	Rebecca Clements , Kenyon College <i>Developmental regulation of antigen presentation machinery in human erythroid progenitors may contribute to fetal and perinatal immunity</i>
10:30-11:00 am	Break: Coffee, Lemonade & Cookies (North Prefunction Area)
11:00-12:30 pm	Session 9 (Cincinnatus Ballroom) Chair: Mark Charlton-Perkins , Miami University
11:00-11:30	Invited talk-4 Noah Mitchell, PhD , The University of Chicago <i>Bistable canalization of 3D chiral morphogenesis</i>
11:30-11:45	Kemal Keseroglu , Northwestern University <i>Two distinct timers control vertebrate embryo segmentation</i>
11:45-12:00	Peter Kropp , Kenyon College <i>Mitochondrial control of germ cell differentiation and death in a C. elegans model of MEPAN syndrome</i>
12:00-12:15	Isha Verma , University of Michigan <i>Education, Emulation, And Ethics-Based Teaching Activity Helps Learners Appreciate the Importance of Neurodiversity</i>
12:15-12:30	Timothy Plageman , The Ohio State University <i>Retinal dystrophy-associated morphological defects are caused by disruption of Shroom3-dependent cell contractions within the outer limiting membrane</i>
12:30-12:45 pm	Awards Ceremony Chairs: Debora Sinner and Rosa Ventrella
12:45-1:00 pm	Closing – Aaron Zorn , Cincinnati Children's



MIDWEST SDB IN CINCINNATI

2026

Friday, September 25

6:35-9:30 pm Poster Session 1 (Fountain Square Room)

6:30-8:00 **Odd numbers** Posters 1-33

8:00-9:30 **Even numbers** Posters 2-34

Poster #1

Eric Wu, Idse Heemskerk, Zong-Yuan Liu, Kyoung Jo, Gauri Patel, Zhiyuan Yu, LiAng Yao, Seth Teague, Craig Johnson, Jason Spence

Endogenous FGFs drive ERK-dependent cell fate patterning in 2D human gastruloids

University of Michigan - Ann Arbor, United States

Poster #2

Sarah Alhilu¹, Benjamin Callaway¹, Caiden Duskey¹, Aiden Kraan¹, Diego Pareja¹, Kwangmin Choi², Lisa Martin², Carlo Prada³, Nancy Ratner², Mark Charlton-Perkins¹

Modeling NF1 Tumor Initiation and Genetic Modifier Effects in Zebrafish.

¹Miami University, Oxford, USA; ²CCHMC, Cincinnati, USA; ³Lurie Children's, Chicago, USA

Poster #3

Maxim Shajenko, Jack Sheehan, Subbroto Saha, Chengji Zhou

Surface Ectodermal Transcriptomics of Spinal Neural Tube Closure

ADA Forsyth Institute, United States

Poster #4

Brendan Teiken¹, Wenying Zhang², Ammar Husami², Quinn LaFave¹, Mosab Alquraish¹, William Balistreri¹, Akihiro Asai¹, Chunyue Yin^{1,3,4}

Utilizing Zebrafish to Model Liver Disease Caused by ANKS3 Deficiency

¹Division of Gastroenterology, Hepatology and Nutrition, Cincinnati Children's Hospital Medical Center, USA; ²Division of Human Genetics, Cincinnati Children's Hospital Medical Center, USA; ³Division of Developmental Biology, Cincinnati Children's Hospital Medical Center, USA; ⁴Center for Undiagnosed and Rare Liver Disease, Cincinnati Children's Hospital Medical Center, USA

Poster #5

Shoshana Marcus¹, Eleonora Scalia², Marcus Keatinge², Rafael Almeida², Daniel Soong², David Lyons², Sarah Petersen¹

Dynamics of Glial-Specific Damage and Remyelination in the Peripheral Nervous System

¹Kenyon College, USA; ²University of Edinburgh, Scotland

Poster #6

Hannah Truong¹, Bailey Weatherbee¹, Shreyasi Mukherjee², Aaron Zorn¹

Multifunctional RNA-binding Transcription Factors Coordinate Cell States in Development

¹Cincinnati Children's Hospital Medical Center, United States of America; ²Harvard Medical School and Massachusetts General Hospital, United States of America

Poster #7

Laura Romano, Immanuel Mamphey, Anna Pak

Investigating the effect of exposure to chemicals associated with agricultural runoff on the embryogenesis and reproductive output of freshwater snails

Denison University, United States

Poster #8

Peyton Morrow

Unlocking Regeneration: How Newts Develop and Restore Their Eyes

Miami University, USA

Poster #9

Taylor Simmons, Dayton Gatewood, Jaclyn Olberding, Timothy Nguyen, Fan Shao, Colin Kenny, Huojun Cao, Eric Van Otterloo

Identifying redundant functions of AP-2 α and AP-2 β in epidermal development.

University of Iowa, USA

Poster #10

Omodasola Ola^{1,2}, Shelbie Wenner^{1,2}, Natalie Pfaltgraff¹, Esther Ushuhuda¹, Maria Mikedis^{1,2}

DAZL-dependent regulation of RA signaling in progenitors during spermatogenesis

¹Cincinnati Children's Hospital Medical center, USA; ²University of Cincinnati, USA

Poster #11

Paige Ramkissoon, Kimberly Cochran, Samantha Brugmann

Uncovering an Ectodermal Role of ARID1A during Craniofacial Morphogenesis

Cincinnati Children's Hospital, USA

Poster #12

Quentin Phillips

SOX factors modulate WNT/ β -Catenin-mediated transcription during embryonic lung development

Cincinnati Children's Hospital Medical Center, USA

Poster #13

Parna Dutta^{1,2}, Nathaniel King¹

Gbx2 defines pharyngeal foregut endoderm identity and regulates pharyngeal pouch transcriptional programs

¹*Cincinnati Children's Hospital Medical Center, USA*; ²*University of Cincinnati, USA*

Poster #14

Irene Jingyun Jin, Tyler Huycke

Architectural regeneration of intestinal villi

University of Michigan, USA

Poster #15

Isabella Ford, Thomas Taylor, Matthew Riccetti, Jenna Green, Kimberly Wagner, Cheng-Lun Na, Anne-Karina Perl

Meox2 Controls Myofibroblast Function Through Indirect Regulation of Hedgehog

Cincinnati Children's Hospital Medical Center, USA

Poster #16

Andrew Fernandes, Christopher Ahn, Hee-Woong Lim

Retinoic acid signaling promotes myocardial Wnt signaling necessary for atrioventricular valve development in zebrafish

Cincinnati Children's Medical Center, USA

Poster #17

Karla Garcia, Katie Cameron, J. Raul Pérez-Estrada, Erika Grajales-Esquivel, Katia Del Rio-Tsonis

The Two Sides of Lens Regeneration: The Dorsal-Ventral Axes

Miami University, USA

Poster #18

Irina Voda, Joseph Finks, Aden Jamal, Blair Leach, Courtney Stockman, Jenna Green, Kimberly Wagner, Anne Karina Perl

Fibroblast-Derived CXCL12 Maintains Pulmonary Capillary Endothelial Identity During Postnatal Alveologenesis

Cincinnati Children Hospital Medical Center, USA

Poster #19

Aidan Goodwin^{1,2}, Erika Grajales-Esquivel^{1,2}, Stacy Bendezu Sayas^{1,2}, Katia Del Rio-Tsonis^{1,2}

Uncovering the Epigenetic Factors Driving Chicken RPE Reprogramming

¹Center for Visual Sciences at Miami University (CVSMU), USA; ²Department of Biology, CMSB Program, Miami University, USA

Poster #20

Lindsay Helock^{1,2}, Joshua Waxman²

Tbx20 Balances Cardiac and Pharyngeal Progenitor Specification in Zebrafish

¹Pharmacology, Physiology, and Neurobiology Graduate Program, University of Cincinnati, USA;

²Molecular Cardiovascular Biology Division and Heart Institute, Cincinnati Children's Research Foundation, USA

Poster #21

Praise Joel¹, Charlotte Meyer-Gerards², Cally Xiao², Marta Grzonka²

Disssecting the Mitotic Surveillance Pathway (MSP)

¹Michigan, USA; ²CECAD Cluster of Excellence, University of Cologne, Germany

Poster #22

Shili Wu, Fangli Weng, Josefina Perez, Laurence Lemaire

Mapping Neural Cell Identities in the Central Nervous System of *Ciona intestinalis*

Saint Louis University, USA

Poster #23

Jacob Weaver, Anil Upreti, Brad Wagner, Jared Tangeman, Michael Robinson

FOX3 Promotes Lens Development via Active Chromatin Maintenance and Distinct Repression of Neural Gene Programs

Miami University, USA

Poster #24

Josefina Perez¹, Shili Wu¹, Fangli Weng¹, Wei Lin¹, Michael Levine², Laurence Lemaire¹

Role of Lmx1 in Neural Tube Morphogenesis in the invertebrate chordate *Ciona*

¹Saint Louis University, USA; ²Princeton University, USA

Poster #25

Gopal Kushawah

Spatio-temporally regulated maternal RNA decay factor essential for zebrafish development

Stowers Institute for Medical Research, USA

Poster #26

Gabrielle Lathrop¹, Nicole Xie¹, Yam Prasad Aryal¹, Jingyue Xu¹, Hee Woong Lim¹, Rulang Jiang^{1,2}, Yu Lan^{1,2}

Netrin-1 expression and function in craniofacial development

¹Cincinnati Children's Hospital Medical Center, USA; ²University of Cincinnati - College of Medicine, USA

Poster #27

Bitan Saha, Amulya Adavalli, Joshua Waxman

Cardiac contractions establish endocardial heterogeneity needed for cardiac jelly homeostasis and chamber-specific growth

Cincinnati Children's Hospital Medical Center, USA

Poster #28

Yam Prasad Aryal¹, Yilun Huang¹, Yu Lan^{1,2,3}, Rulang Jiang^{1,2,3}

Sf3b2 heterozygous mice exhibit defects in vertebral patterning and strain-background dependent ocular and craniofacial abnormalities

¹Division of Developmental Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA; ²Division of Plastic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA; ³Departments of Pediatrics and Surgery, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA

Poster #29

Nirpesh Adhikari¹, Yu Lan^{1,2,3}, Rulang Jiang^{1,2,3}

Twist1 acts upstream and as an obligatory partner of Alx1 in specifying frontonasal identity of the neural crest-derived craniofacial mesenchyme

¹Division of Developmental Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA; ²Division of Plastic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA; ³Departments of Pediatrics and Surgery, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA

Poster #30

Ekasit Sonpho¹, Vidyanand Sasidharan¹, Charles A.S. Banks¹, Eric J. Ross¹, Carlos Guerrero-Hernández¹, Frederick G. Mann Jr.¹, Carolyn Brewster¹, Neelanshi Jain¹, Beatrice Broglia¹, Sean A. McKinney¹, Kexi Yi¹, Zulin Yu¹, Alejandro Sánchez Alvarado^{1,2}

Geranylgeranylation is Broadly Required for Vesicular Trafficking and Tissue Regeneration in Planarians

¹Stowers Institute for Medical Research, USA; ²Howard Hughes Medical Institute, USA

Poster #31

Anna Statsenko¹, Amartya Mitra², Lucy Lucy Bailei¹, Itunu Adewoye¹, Elke Buschbeck², Mark Charlton-Perkins¹

Vitreous chamber expansion drives refractive development and emmetropization

¹Miami University, USA; ²University of Cincinnati, United States

Poster #32

Bau-Lin Huang¹, Sean Davis², Eiki Koyama³, Maurizio Pacifici³, Susan Mackem¹

A pivotal Wnt antagonist role in promoting digit joint (interzone) specification by constraining Wnt activity

¹National Cancer Institute-Frederick, MD, USA; ²University of Colorado-Anschutz School of Medicine, Denver, CO, USA; ³Children's Hospital of Philadelphia, Philadelphia, PA, USA

Poster #33

Han Liu¹, Jingyue Xu¹, Eri Iwasawa¹, Yueh-Chiang Hu^{1,2}, Yu Lan^{1,2}, Jason Tchieu^{1,2}, Hee Woong Lim¹, Rulang Jiang^{1,2}

Deletion at the *SIX2* locus causes frontonasal dysplasia through chromatin domain fusion and altered enhancer-gene interactions

¹Cincinnati Children's Hospital Medical Center, USA; ²University of Cincinnati College of Medicine, USA

Poster #34

Le Xu

Mesothelial Plasticity Specifies a Pleural Immune Circuit that Orchestrates Lung Regeneration

Cincinnati Children's Hospital Medical Center, USA

Saturday, September 26

6:30-9:30 pm **Poster Session 2 (Fountain Square Room)**

6:30-8:00 **Odd numbers** Posters 35-71

8:00-9:30 **Even numbers** Posters 36-72

Poster #35

Paloma Jolly

Investigating the effects of elevated retinoic acid on vascular development in zebrafish

Miami University, USA

Poster #36

Amalia Hunt, Joseph Lee, Kunqi Shi, Chanda Maambo, Karen Hicks

Identifying Genes Involved in Seasonal Reproduction of *Physcomitrium patens* using QLTseq

Kenyon College, USA

Poster #37

Taylor Roy^{1,2}, Sophia Hsin-Jung Li¹, Maple Adkins-Threats¹, Xufeng Xue¹, Jim Wells^{1,2}, Aaron Zorn^{1,2}

Modeling human fetal gastrointestinal tract in a microfluidic device

¹Cincinnati Children's Hospital Medical Center, United States; ²University of Cincinnati, United States

Poster #38

Jonathan Yui

Tandem Knockdown of *Celsr2* and *Celsr3* in *Xenopus tropicalis* on the Genetic Pathogenesis of Congenital Hydrocephalus

Department of Pediatrics, Yale University School of Medicine, United States

Poster #39

Alexandra Kelly¹, Eleonora Scalia², Marcus Keatinge², Rafael G. Almeida², Daniel Y. H. Soong², David A. Lyons², Sarah C. Petersen¹

Debris Clearance and Repair Following Glial-Specific Damage in the Peripheral Nervous System

¹Kenyon College, USA; ²University of Edinburgh, United Kingdom

Poster #40

Callan McKernan^{1,2}, Shelbie Wenner^{2,3}, Omodasola Ola², Natalie Pfaltzgraff², Maria Mikedis^{2,4}

Induced Expression of Meiotic Transcription Factor MEIOSIN is Not Sufficient to Broadly Promote Premature Meiotic Entry

¹University of Michigan, College of Literature, Science, and The Arts, Ann Arbor, MI, United States;

²Reproductive Sciences Center, Division of Developmental Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States; ³Medical Scientist Training Program, University of Cincinnati College of Medicine, Cincinnati, OH, United States; ⁴Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, OH, United States

Poster #41

Thomas Taylor¹, Matthew Riccetti², Jenna Green¹, Kimberly Wagner¹, Cheng-Lun Na¹, Isabella Ford^{1,3}, Anne-Karina Perl^{1,2,4}

Reexamining Alveolarization through the Perspective of MEOX2+ Alveolar Fibroblasts

¹Division of Neonatology and Pulmonary Biology, Cincinnati Children's Hospital Medical Center, United States of America; ²Division of Development Biology, Cincinnati Children's Hospital Medical Center, United States of America; ³College of Engineering and Applied Science, University of Cincinnati, United States of America; ⁴Department of Pediatrics, University of Cincinnati College of Medicine, United States of America

Poster #42

Shannon Barr, Abdul Rafay Ali Jan, Lily Vondrell

Root Cap-Specific Gene Editing Using a Tissue-Specific Promoter with Cas9 as a Tool for Dissecting Root Gravitropic Signaling

Ohio Wesleyan University, USA

Poster #43

Olivia Boyea¹, Kendall Martin², Hee-Woong Lim², Joshua Waxman², Jennifer Schumacher¹

Expression of novel genes during cardiovascular development in zebrafish

¹Miami University, USA; ²Cincinnati Children's Hospital Medical Center, USA

Poster #44

Kahlan Kahmann^{1,2}, Madison Ringer^{1,2}, Yanzhen Zhang^{1,2}, Matt Kofron^{1,2}, Cristina Cebrian^{1,2}

Hyaluronic Acid Deposition in the Nephrogenic Zone is Dispensable for Nephron Progenitor Cell Viability

¹Cincinnati Children's Hospital, United States; ²University of Cincinnati, United States

Poster #45

Ethan Kendall, Nour Sayed, Aryesh Acharjee, Jacob Weaver

Expression pattern of *FOXE3* during early stage chick development

Miami University, USA

Poster #46

Guimba, James Eschtruth, Luke Hanson, Stepannil Kalasava, Lilly Richardson, Alexanna Taylor, Gary M. Lange

Developmental impacts of environmentally relevant exposure to alternative bisphenols in the juvenile through pubertal period in rats (*Rattus norvegicus*)

Department of Biology, Saginaw Valley State University, United States

Poster #47

Shantanu Karandikar, Laura Rolfs, Taylor Brittain, Jennifer Gutzman

Role of Non-Muscle Myosin IIA in Kidney Development and *MYH9*-Related Disease.

University of Wisconsin-Milwaukee, USA

Poster #48

Hariharan Karthikeyan¹, Nicole A. Edwards¹, Lu Han¹, Karyn L. Robert², Steven A. Vokes³, Sumeda Nandadasa², Aaron M. Zorn¹

Mechanisms of Hedgehog/GLI-dependent regulation of Tracheoesophageal morphogenesis

¹Division of Developmental Biology, Cincinnati Children's Hospital and Medical Center, Cincinnati, OH 45220, USA; ²Department of Pediatrics, UMass Chan Medical School, Worcester, MA, USA;

³Department of Molecular Biosciences, University of Texas at Austin, Austin, TX 78712, USA

Poster #49

Sachin Wagh, Kristina Ly

Temporal Dynamics of Basement Membrane Remodeling During Stria Vascularis Development

Creighton University, USA

Poster #50

Benjamin Akande¹, Sylvie Earlewine¹, Grace Leonard¹, Zoe Zwick¹, Jonathon T Hill², John Postlethwait³, Saulius Sumanas⁴, Jennifer A Schumacher¹

Solving an enigma: dissecting TGF- β activity during cardiac outflow tract formation in the zebrafish heart.

¹Miami University, USA; ²Brigham Young University, USA; ³University of Oregon, USA; ⁴University of South Florida, USA

Poster #51

Benjamin Akande¹, Sylvie Earlewine¹, Grace Leonard¹, Zoe Zwick¹, Jonathon T Hill², John Postlethwait³, Saulius Sumanas⁴, Jennifer A Schumacher¹

Solving an enigma: dissecting TGF- β activity during cardiac outflow tract formation in the zebrafish heart.

¹Miami University, USA; ²Brigham Young University, USA; ³University of Oregon, USA; ⁴University of South Florida, USA

Poster #52

Benjamin Callaway, Caiden Duskey, Diego Pareja, Isabella Klapwijk, Mia Angulo, Ronald Henkel, Aidan Kraan, Sarah Alhilu, Mark Charlton-Perkins

A CRISPR-based Zebrafish Model of NF1 that Provides Novel Insights into CNS Tumors

Miami University of Ohio, USA

Poster #53

Itunu Adewoye¹, Anna Statsenko¹, Amartya Mitra², Elke Buschbeck², Mark Charlton-Perkins¹

Identifying Altered Refractive Development in a Zebrafish Model of Myopia

¹Miami University, USA; ²University of Cincinnati, USA

Poster #54

Yanzhen Zhang

Defining the Role of ETV4/5 in Nephron–Collecting Duct Connectivity and Cystic Kidney Development

Cincinnati Children's Medical Center, United States of America

Poster #55

Clare Austin, Thomas Gallagher, Sharon Amacher

Understanding segmentation clock oscillatory gene regulation and function

The Ohio State University, USA

Poster #56

Kristina Sattler^{1,2,3}, Brian Paleo^{1,2,3}, Mackenzie Roth⁴, Kara Bradley⁴, Megan Winkler⁴, Wakako Yoshioka⁵, Ichizo Nishino⁵, Christoph Lepper^{1,2,3}, Kelly Crowe⁶

Assessment of Lectin Staining Biomarkers for GNE Myopathy Gene Therapy

¹Department of Physiology and Cell Biology, The Ohio State University, USA; ²Dorothy M. Davis Heart and Lung Research Institute, The Ohio State University, USA; ³Wexner Medical Center, The Ohio State University, USA; ⁴Department of Biology, Mount St. Joseph University, USA; ⁵Department of Neuromuscular Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry (NCNP), Japan; ⁶College of Osteopathic Medicine, Division of Physiology and Pathology, Xavier University, USA

Poster #57

Dayton Gatewood¹, Jaclyn Olberding¹, Taylar Simmons¹, Timothy Nguyen^{1,2}, Fan Shao¹, James Thomas¹, Erliang Zeng¹, Brad Amendt¹, Huojun Cao¹, Colin Kenny¹, Eric Van Otterloo¹

Reinforcement of the frontonasal neural crest identity by TFAP2 transcription factors

¹University of Iowa, USA; ²Cincinnati Children's Hospital, USA

Poster #58

Ashley Cunha^{1,2}, Margaret Hanlon¹, Hee Woong Lim^{1,2}, Joshua Waxman^{1,2}

Cephalic epicardial-derived Igfb2b signaling is required for zebrafish outflow tract growth

¹Cincinnati Children's Hospital Medical Center, USA; ²University of Cincinnati College of Medicine, USA

Poster #59

Nicholas Russell¹, Sarah Trovillion¹, Esther Won², Nicole Edwards², Daniel Swarr^{1,3}, William Zacharias^{1,3}, Debora Sinner^{1,3}

BAF-Dependent Chromatin Remodeling Coordinates Patterning Signals and Matrisome Programs during Respiratory Tract Development

¹Cincinnati Children's Hospital Medical Center, Department of Neonatology and Pulmonary Biology, United States of America; ²University of Michigan Medical School, Cell and Developmental Biology, United States of America; ³University of Cincinnati College of Medicine, Department of Pediatrics, United States of America

Poster #60

Caroline Eichhorn¹, Sarah Trovillion¹, Nicholas Russell¹, Anne-Karina Perl^{1,2}, Zhiyuan (ZY) Chen^{2,3}, Hee-Woong Lim^{2,4}, Debora Sinner^{1,2}

Investigating ARID1a/ARID1b-mediated pathways in lung development and disease

¹Cincinnati Children's Hospital Medical Center, Neonatology and Pulmonary Biology, USA; ²University of Cincinnati, College of Medicine, USA; ³Cincinnati Children's Hospital Medical Center, Division of Reproductive Sciences, USA; ⁴Cincinnati Children's Hospital Medical Center, Division of Bioinformatics, USA

Poster #61

Matthew Janik¹, Monica Blatnik^{1,2}, Thomas Gallagher¹, Sharon Amacher¹

Investigating Btg/Tob1 proteins in post-transcriptional regulation of oscillatory gene transcripts

¹The Ohio State University, USA; ²Oberlin College, USA

Poster #62

Bolu Osifalujo, Hariharan Karthikeyan, Aaron Zorn

Characterizing the Cell Biology of Tracheoesophageal Morphogenesis

Cincinnati Children's Medical Hospital Center, USA

Poster #63

Archana Singh¹, Kendall E Martin^{1,2}, Margaret A Hanlon¹, Joshua S Waxman^{1,3}

Nr2f1a and Tbx5a cooperatively promote atrial cardiomyocyte differentiation in zebrafish

¹*Molecular Cardiovascular Biology Division and Heart Institute, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, 45229, USA;* ²*Molecular Genetics, Biochemistry, and Microbiology Graduate Program, University of Cincinnati College of Medicine, Cincinnati, OH, 45267, USA;* ³*Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, OH 45229, USA*

Poster #64

Mohammad Fazle Azim¹, Kristen Edgeworth^{1,2}, Stuart Hilton¹, Alanta Burdrys¹, Erika Conant¹, Viktoriya Coneva¹, Karen A. Hicks¹

Investigating the functional conservation of EARLY FLOWERING 3 in land plants

¹*Kenyon College, Gambier, Ohio, USA;* ²*Donald Danforth Plant Science Center, St Louis, Missouri, MO, USA*

Poster #65

Yizi Zhang¹, Xinyuan Li¹, Hailong Lyu², Courtney Stockman¹, Kathleen Cook¹, Xiaoyue Chang¹, Xufeng Xue², William Zacharias¹, Anne-Karina Perl¹, Le Xu¹

Mesothelial plasticity driven by mechanical force orchestrates lung regeneration

¹*Division of Pulmonary Biology, Cincinnati Children's Hospital Medical Center, Department of Pediatrics, Cincinnati, OH 45229, USA, USA;* ²*Division of Developmental Biology, Center for Stem Cell and Organoid Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA, USA*

Poster #66

David Paulding¹, Genevieve Kendall^{1,2}

Core mechanisms of infantile rhabdomyosarcoma across diverse fusion oncoproteins

¹*Center for Childhood Cancer Research, The Abigail Wexner Research Institute, Nationwide Children's Hospital, Columbus, OH 43215, USA;* ²*Department of Pediatrics, The Ohio State University College of Medicine, Columbus, OH 43210, USA*

Poster #67

Ethan Castillo, Victoria Prince

Schwann Cell Derived ErbB Signaling Influences Anterior Lateral Line Development

University of Chicago, United States of America

Poster #68

Courtney Stockman¹, Irina Voda^{1,2}, Blair Leach^{1,3}, Joseph Finks¹, Aden Jamal^{1,4}, Kimberly Wagner¹, Jenna Green¹, Anne-Karina Perl^{1,5}

A Specialized Fibroblast Niche Instructs Alveolar Capillary Endothelial Identity Through Localized CXCL12 Signaling

¹Neonatology and Pulmonary Biology, Cincinnati Children's Hospital Medical Center, USA; ²Department of Pharmacology, Physiology, and Neurobiology Graduate Program, University of Cincinnati College of Medicine, USA; ³Department of Pathobiology & Molecular Medicine Graduate Program, University of Cincinnati College of Medicine, USA; ⁴Department of Biomedical Engineering, University of Cincinnati, USA; ⁵Department of Pediatrics, University of Cincinnati College of Medicine, USA

Poster #69

Cole Milas, Paul Huber, Betsy Schock

Using HCR to assess Cell Differentiation in Neural Crest-Induced Explants

University of Kentucky, USA

Poster #70

Laura Romano, Thao Trang Nguyen

Investigating the effect of temperature on the embryogenesis and reproductive output of freshwater snails

Denison University, USA

Poster #71

Aden Jamal^{1,2}, Kimberly Wagner¹, Ruby Wilson¹, Joseph Finks¹, Irina Voda^{1,3}, Jessica Babros¹, Jenna Green¹, Courtney Stockman¹, Anne-Karina Perl^{1,4}

MEOX2+ Fibroblast Progenitors Respond to Neonatal Hyperoxia During Alveolar Development

¹Neonatology and Pulmonary Biology, Cincinnati Children's Hospital Medical Center, United States; ²Department of Biomedical Engineering, University of Cincinnati, United States; ³Department of Pharmacology, Physiology, and Neurobiology Graduate Program, University of Cincinnati College of Medicine, United States; ⁴Department of Pediatrics, University of Cincinnati College of Medicine, United States

Poster #72

Archana Venkatesh¹, Keishi Kishimoto², Ivan Moskowitz³, Aaron Zorn¹

Differentiation of hPSCs into tracheal-esophageal mesenchyme *in vitro* as a model to study human disease and development

¹Center for Stem Cell and Organoid Medicine (CuSTOM), Division of Developmental Biology, Cincinnati Children's Hospital, Cincinnati, United States; ²Laboratory for Lung Development and Regeneration, RIKEN Center for Biosystems Dynamics Research (BDR), Kobe, Japan; ³Departments of Pediatrics, The University of Chicago, Chicago, United States

