

# MIDWEST SDB

## IN CINCINNATI

### 2025 REGIONAL MEETING

*Cincinnati Children's Hospital*

*September 19-21*

*[midwestsdbincincy.org](http://midwestsdbincincy.org)*





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**2025**

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## Midwest Society for Developmental Biology Meeting Program Sept. 19-21, 2025

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

Keynote 40 minutes + 5 minutes Q&A

Invited speakers 25 minutes + 5 minutes Q&A

Selected Abstract talks 12 minutes + 3 minutes Q&A

Poster Preview Flash talks 1 minute - 1 PowerPoint slide, no animations, no strict template, pre-loaded to conference computer prior to the entire session

Predocs speakers are indicated in **blue** and Postdocs in **green**.

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

### Friday, September 19 - University of Cincinnati, Kresge Auditorium

- 3:30-4:30 pm**            **Registration & Poster Setup** (light refreshments)
- 4:30-4:45 pm**            **Welcome & Opening Remarks: Aaron Zorn**, Cincinnati Children's
- 4:45-5:00 pm**            **Society of Developmental Biology Update:**  
**Sharon Amacher**, Ohio State University, Midwest Representative
- 5:00-5:45 pm**            **Session 1 Chair: Samantha Brugmann**, Cincinnati Children's
- Keynote: **Paul Trainor**, Stowers Institute for Medical Research  
*Global processes and gene-environment interactions have tissue-specific effects on development, phenotypic variant, and in disease pathogenesis.*
- 5:45-7:00 pm**            **Session 2 Chair: Ben Allen**, University of Michigan
- 5:45-6:00                **Rebekah Rushforth**, Nationwide Children's Hospital  
*Functional tubulin autoregulation is required for proper neurogenesis*
- 6:00-6:15                **Simon Han**, Cincinnati Children's  
*A dual role for Gli3 signaling in cranial neural crest development*
- 6:15-6:30                **Chung-Ju Yeh**, The Ohio State University  
*FGFR1 and FGFR4 are essential regulators of muscle stem cell quiescence*
- 6:30-6:45                **Muzi Li**, University of Chicago  
*Activation Versus Repression: Divergent Initiation of Axis Specification in Drosophila and the Midge Chironomus*

6:45-7:00

**Poster preview flash talks**

- Poster #5 **Chidiogo Azuka**, Michigan State University  
Poster #6 **Sushant Bangru**, Morgridge Institute for Research  
Poster #12 **Jeyoon Bok**, University of Michigan  
Poster #13 **Benjamin Callaway**, Miami University of Ohio  
Poster #15 **Xuyao Chang**, Cincinnati Children's  
Poster #16 **Electra Coffman**, The Ohio State University  
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Poster #27 **Thomas Gallagher**, The Ohio State University  
Poster #28 **Tushar Ganjawala**, Cincinnati Children's  
Poster #34 **Yilun Huang**, Cincinnati Children's & Univ of Cincinnati  
Poster #38 **Praise Joel**, University of Michigan  
Poster #40 **Hariharan Karthikeyan**, Cincinnati Children's  
Poster #43 **Avelina Lee**, Cincinnati Children's  
Poster #44 **Lauren Levesque**, The Ohio State University  
Poster #46 **Ramon Macias**, The Ohio State University

7:00-9:30 pm

**Poster Session 1 - Sponsor Display (Kresge Hallway)**

heavy hors d'oeuvres and bar

7:00-8:15

**Odd numbers** Posters 1-49

8:15-9:30

**Even numbers** Posters 2-50

**Saturday, September 20<sup>th</sup> - Cincinnati Children's, Buildings D and S**

8:00-8:30 am

**Registration & Coffee (Sabin Auditorium Atrium, Building D)**

8:30-10:30 am

**Session 3 (Sabin Auditorium)** Chair: **Cristina Cebrian**, Cincinnati Children's

8:30-8:45

**Dominic Kolonay**, The Ohio State University  
*MED12 is a Regulator of Calcium Gene Expression in the Developing Heart*

8:45-9:00

**Elaine Kushkowski**, University of Chicago  
*Zebrafish neural crest progenitor domain revealed by ventral gastrula fate map*

9:00-9:15

**Farina Aziz**, Michigan State University  
*The Power of Paralogues: Sox15 and Sox21 in Early Embryonic Development*

- 9:15-9:30 **Hyunwook Lee**, Cincinnati Children's  
*The BAF complex is required for respiratory development and alveolar type 1 cell fate acquisition*
- 9:30-9:45 **Andrew Vontell**, The Ohio State University  
*Developmental consequences of DNA binding by a rhabdomyosarcoma fusion oncoprotein in vivo*
- 9:45-10:00 **Benjamin Akande**, Miami University  
The pendulum swing: a novel zebrafish mutant with defects in cardiopharyngeal development
- 10:00-10:15 **Anna Lubertozzi**, The Ohio State University  
*Afadin Orchestrates Tricellular Adherens Junctions and Lens Tissue Architecture*
- 10:15-10:30 **Gabriella Voit**, University of Wisconsin Milwaukee  
*Understanding Laminin-111's Role in Mediating Mechanical Stress During Zebrafish Brain Morphogenesis*
- 10:30-11:00 am Break (Sabin Auditorium Atrium)**
- 11:00-12:30 pm Session 4 (Sabin Auditorium) Chair: Sarah Petersen, Kenyon College**
- 11:00-11:05 Nikon Center of Excellence Sponsor talk
- 11:05-11:20 **Sejuti Naurin**, University of Kentucky  
*Chemokine signaling during optic fissure fusion in zebrafish*
- 11:20-11:35 **Courtney Stockman**, Cincinnati Children's  
*Matrix Fibroblast-Derived CXCL12 Regulates Capillary Maturation and Secondary Septation During Alveologenesis*
- 11:35-11:50 **Rosa Ventrella**, Midwestern University  
*Utilizing the genetics and genomics competencies developed by the Association of Professors of Human and Medical Genetics (APHMG) to monitor student progress and identify Precision Medicine Program strengths and areas of improvement*
- 11:50-12:20 **Jason Organ**, Indiana School of Medicine  
*Communicating with Public Audiences Requires Different Approaches*
- 12:30-1:45 pm Lunch and Discussion Tables (Cincinnati Children's D Cafe)**
- 12:45-1:15 Round table session - 1
- 1:15-1:45 Round table session - 2

- 2:00-3:30 pm**      **Session 5 (Sabin Auditorium)** Chair: **Rosa Ventrella**, Northwestern University
- 2:00-2:30      **Katy Rothenberg**, University of Iowa  
*Adherens junction recycling and reinforcement drive collective epithelial migration*
- 2:30-2:45      **Gopal Kushawah**, Stowers Institute for Medical Research  
*Cth1 is a spatio-temporal maternal RNA decay factor essential for zebrafish development*
- 2:45-3:00      **Nicole Edwards**, Cincinnati Children's  
*Disrupted endosomal trafficking of polarity proteins causes congenital trachea-esophageal separation defects*
- 3:00-3:15      **Kelli Johnson**, University of Michigan  
*Mapping mesenchymal diversity in the developing human intestine and organoids*
- 3:15-3:30      **Nirpesh Adhikari**, Cincinnati Children's  
*The ALX family transcription factors determine frontonasal identity of the neural crest-derived craniofacial mesenchyme*
- 3:30-4:00 pm**      **Break (Sabin Auditorium Atrium)**
- 4:00-6:00 pm**      **Session 6 (Sabin Auditorium)** Chair: **Debora Sinner**, Cincinnati Children's
- 4:00-4:30      **Ivan Radin**, University of Minnesota  
*Evolution of organellar mechanosensing*
- 4:30-4:45      **Bitan Saha**, Cincinnati Children's  
*Nr2f1a-Notch signaling interactions balance chamber-specific endocardial identity necessary for cardiac development*
- 4:45-5:00      **Zong-Yuan Liu**, University of Michigan  
*Endogenous FGFs drive ERK-dependent cell fate patterning in 2D human gastruloids*

- 5:00-5:15 **Jose Raúl Perez-Estrada**, Miami University  
*Modulating RPE Plasticity to Bypass Neurocompetence Barriers*
- 5:15-5:30 **Elena Albizzati**, Cincinnati Children's  
*The Nuclear Factor I gene family dictates the temporal progression of cortical development by establishing radial glia cell identity*
- 5:30-5:45 **Jeremy Lerma**, The Ohio State University  
*Validation of Duchenne muscular dystrophy candidate modifiers using a CRISPR-based approach in zebrafish*
- 5:45-6:00 **Poster preview flash talks**  
 Poster #51 **Amartya Mitra**, University of Cincinnati  
 Poster #59 **Daniel Paluh**, University of Dayton  
 Poster #61 **Meet Patel**, University of Kentucky  
 Poster #62 **David Paulding**, Cincinnati Children's  
 Poster #63 **Nicole Pek**, Cincinnati Children's  
 Poster #65 **Josefina Perez**, Saint Louis University  
 Poster #66 **Quentin Phillips**, Cincinnati Children's  
 Poster #69 **Matthew Riccetti**, Cincinnati Children's  
 Poster #75 **Vered Shacham-Silverberg**, Cincinnati Children's  
 Poster #78 **Morgan Smith**, Nationwide Children's Hospital  
 Poster #80 **Matthew Stocker**, Cincinnati Children's  
 Poster #87 **Isha Verma**, University of Michigan, Ann Arbor  
 Poster #90 **Bailey Weatherbee**, Cincinnati Children's  
 Poster #93 **Shelbie Wenner**, Cincinnati Children's & Univ of Cincinnati  
 Poster #103 **Barbara Zhao**, Cincinnati Children's & Univ of Cincinnati
- 6:00-6:30 pm **Poster Session 2 set up (Cincinnati Children's Research Pavilion, S1.203/4)**
- 6:30-9:00 pm **Poster Session 2 - Sponsors Display (S1.203/4 Research Pavilion)**  
heavy hors d'oeuvres/bar
- 6:30-7:45 **Odd numbers** Posters 51-103
- 7:45-9:00 **Even numbers** Posters 52-104

**Sunday, September 21<sup>st</sup> (Cincinnati Children's, Sabin Auditorium Building D)**

- 8:00-8:30 am**            **Coffee and light pastries (Sabin Auditorium Atrium)**
- 8:30-9:15 am**            **Session 7 (Sabin Auditorium) Chair: Sharon Amacher, Ohio State University**  
  
Keynote: **Mayssa Mokalled**, Washington University  
*Out of the tank approaches to promote neural repair*
- 9:15-10:30 am**            **Session 8 (Sabin Auditorium) Chair: Jennifer Gutzman, University of Wisconsin Milwaukee**
- 9:15-9:30                **Karen Hicks**, Kenyon College  
*Seasonal reproductive development in the moss Physcomitrium patens*
- 9:30-9:45                **Joyce Fernandes**, Miami University  
*Glial remodeling during reorganization of peripheral abdominal nerves in Drosophila*
- 9:45-10:00                **Ignacio Garcia Gomez**, Northwestern University  
*Targeted Cell Interconversions Reveal Inner Hair Cell Induction of Supporting Cell Identity and Distribution in the Organ of Corti*
- 10:00-10:15                **Charles Lovely**, University of Louisville  
*Mutations in the Bmp signaling components sensitize zebrafish and humans to ethanol-induced jaw malformation*
- 10:15-10:30                **Coral Zhou**, University of Kansas  
*Mechanisms of genome scaling during embryogenesis and evolution in Xenopus*
- 10:30-11:00 am**            **Coffee break (Sabin Auditorium Atrium)**
- 11:00-12:30 pm            **Session 9 (Sabin Auditorium) Chair: Mark Charlton-Perkins, Miami University**
- 11:00-11:30                **Julie Merkle**, University of Evansville  
*To be or not to be: unraveling cell fate decisions in the Drosophila germline*

- 11:30-11:45      **Betsy Schock**, University of Kentucky  
*The C-terminal domain of SoxB1 and SoxE factors mediates differential protein function during neural crest cell formation*
- 11:45-12:00      **Tyler Huycke**, University of Michigan  
*Growing together: coordinated cell and tissue mechanics drive intestinal villus elongation*
- 12:00-12:15      **Laurence Lemaire**, Saint Louis University  
*Neural crest lineage in the protovertebrate model *Ciona**
- 12:15-12:30      **Maria Mikedis**, Cincinnati Children's  
*MEIOC prevents continued mitotic cycling and promotes meiotic entry during mouse oogenesis*
- 12:30-12:45 pm      **Awards Ceremony Chairs: Debora Sinner and Rosa Ventrella**
- 12:45-1:00 pm      **Closing – Aaron Zorn**, Cincinnati Children's



### Poster Session 1 - Sponsor Display (Kresge Hallway, University of Cincinnati)

- 7:00-8:15              **Odd numbers** Posters 1-49  
8:15-9:30              **Even numbers** Posters 2-50

**Poster 1**    Mayowa Akinwale<sup>1</sup>, Ansley Conchola<sup>1</sup>, Renee Hein<sup>1</sup>, Zhiwei Zhao<sup>1</sup>, Xiangning Dong<sup>1</sup>, Peggy Hsu<sup>1</sup>, Tristian Frum<sup>1</sup>, Ian Glass<sup>2</sup>, Jason Spence<sup>1</sup> **STAT3 Driven Regulation of Lower Airway Progenitor Cells in the Developing Lung** <sup>1</sup>University of Michigan, USA; <sup>2</sup>University of Washington, USA

**Poster 2**    Skylie Antle<sup>1</sup>, Kendall Martin<sup>2</sup>, Hee-Woong Lim<sup>2</sup>, Joshua Waxman<sup>2</sup>, Jennifer Schumacher<sup>1</sup>  
**Analyzing expression patterns and function of cardiac genes during zebrafish embryogenesis** <sup>1</sup>Miami University, USA; <sup>2</sup>Cincinnati Children's, USA

**Poster 3** Clare Austin, Thomas Gallagher, Monica Blatnik, Kathryn Thompson, Danielle Pvirre **Investigating the role of P-bodies in Pnrc2-mediated oscillatory gene transcript decay** *The Ohio State University, USA*

**Poster 4** Nairi Azazian, Farina Aziz, Fei Fang, Liangliang Sun, Amy Ralston **Proteomics of Modified Pre-Implantation Mouse Embryos** *Michigan State University, USA*

**Poster 5** Chidiogo Azuka, Jian Liu, Xiangshu Jin **Structural Basis of Fsc1-Mediated Autophagosome-Vacuole Fusion in Fission Yeast Autophagy** *Michigan State University, USA*

**Poster 6** Sushant Bangru<sup>1,2</sup>, Lucas Garcia<sup>2</sup>, Kazunori Ando<sup>1</sup>, Rebecca Myatt<sup>1</sup>, Pierre Gillotay<sup>1</sup>, Stefano Di Talia<sup>2</sup>, Kenneth Poss<sup>1,3</sup> **Interrogating signaling and growth dynamics in regenerating scales in zebrafish**

<sup>1</sup>Morgridge Institute for Research, USA; <sup>2</sup>Department of Cell Biology, Duke University, Durham, NC, USA; <sup>3</sup>Department of Cell & Regenerative Biology, University of Wisconsin, Madison, WI, USA

**Poster 7** Joydip Barua, Aidan Kraan, Jake Gallagher, J. Andrew Jones, Mark Charlton-Perkins **Müller Glia Potassium Ion Buffering Prevents Retinal Inflammation and Protects Retinal Ganglion Cells** *Miami University, USA*

**Poster 8** Stacy Bendezu-Sayas<sup>1,2</sup>, Carlos Charris-Dominguez<sup>1,2</sup>, Erika Grajales-Esquivel<sup>1,2</sup>, Jared A. Tangeman<sup>1,2</sup>, Katia Del Rio-Tsonis<sup>1,2</sup> **Intercellular Signaling Orchestrates Gene Regulatory Networks in Transitional States of RPE Reprogramming** <sup>1</sup>Department of Biology, Miami University, Oxford, OH, USA; <sup>2</sup>Center for Visual Sciences at Miami University, Oxford, OH, USA

**Poster 9** Bayla Bessemer<sup>1,2</sup>, Rolf Stottmann<sup>1,3</sup> **Hydroxysteroid 17-Beta Dehydrogenase 7 (Hsd17b7) is Required for Proper Mammalian Development** <sup>1</sup>Nationwide Children's Hospital, Steve and Cindy Rasmussen Institute for Genomic Medicine, USA; <sup>2</sup>The Ohio State University, Department of Veterinary Biosciences, USA; <sup>3</sup>The Ohio State University, Department of Pediatrics, USA

**Poster 10** Yoshitha Bhargav, Jonathan Hildebrand, Nelchi Prashali, Joyce Fernandes **Formation of the terminal nerve trunk in Drosophila: reorganization of axons and glia** *Miami University, United States of America*

**Poster 11** Md Eleus Hussain Bhuiya, Jeremy Lynch **Molecular Remodeling of the Oosome During Pole Cell Formation in *Nasonia vitripennis*** *Department of Biological Sciences, University of Illinois Chicago, USA*

**Poster 12** Jeyoon Bok<sup>1</sup>, Yung Su Kim<sup>1</sup>, Fangyi Cheng<sup>1</sup>, Chongjian Gao<sup>1</sup>, Zhuowei Zhou<sup>1</sup>, Norio Kobayashi<sup>1</sup>, Aoife Tang<sup>2</sup>, Xufeng Xue<sup>1,3</sup>, Pulin Li<sup>4</sup>, Jianping Fu<sup>1</sup> **A controllable human spinal cord model with full dorsoventral patterning** <sup>1</sup>University of Michigan, USA; <sup>2</sup>Greenhills School, USA; <sup>3</sup>Cincinnati Children's Hospital Medical Center, USA; <sup>4</sup>Whitehead Institute for Biomedical Research, USA

**Poster 13** Benjamin Callaway<sup>1</sup>, Caiden Duskey<sup>1</sup>, Diego Pareja<sup>1</sup>, Isabella Klapwijk<sup>1</sup>, Aiden Krann<sup>1</sup>, Kwangmin Choi<sup>2</sup>, Lisa Martin<sup>2</sup>, Katherine Chaney<sup>2</sup>, Carlos Prada<sup>3</sup>, Nancy Ratner<sup>2</sup>, Mark Charlton-Perkins<sup>1</sup>

**CRISPR-based Zebrafish Model that Provides Novel Insights into Putative Modifier Genes of Neurofibromatosis Type-1** <sup>1</sup>Miami University of Ohio, USA; <sup>2</sup>Cincinnati Children's Hospital, United States; <sup>3</sup>Lurie Children's Hospital, United States

**Poster 14** Colby Cassidy<sup>1,2</sup>, Tushar H. Ganjawala<sup>2</sup>, Prativa Amom<sup>2</sup>, Breana D. Anderson<sup>1,2</sup>, Radmehr Molaei<sup>1,2</sup>, Jorin T. Hanson<sup>1,2</sup>, Amanda L. Zacharias<sup>2,3</sup> **Roles for fate specifying transcription factors in collective cell migrations and fate transformations in *C. elegans* embryogenesis** <sup>1</sup>University of Cincinnati, USA; <sup>2</sup>Division of Pulmonary Biology, Cincinnati Children's Hospital Medical Center, USA; <sup>3</sup>University of Cincinnati College of Medicine, USA

**Poster 15** Xuyao Chang<sup>1</sup>, Wenqi Li<sup>2</sup>, Satoshi Matsui<sup>3</sup>, Cindy Huynh<sup>1</sup>, Craig Erickson<sup>1</sup>, Feng Guo<sup>4</sup>, Gustav Cederquist<sup>5</sup>, Lorenz Studer<sup>5</sup>, Makiko Iwafuchi<sup>1</sup>, Amelle Shillington<sup>1</sup>, Constantinos Chronis<sup>6</sup>, Jason Tchieu<sup>1</sup> **ZMYND11 Functions in Bimodal Regulation of Latent Genes and Brain-like Splicing to Safeguard Corticogenesis** <sup>1</sup>Cincinnati Children's Hospital Medical Center, USA; <sup>2</sup>University of Texas Southwestern Medical Center, USA; <sup>3</sup>Osaka University, Japan; <sup>4</sup>Indiana University Bloomington, USA; <sup>5</sup>Memorial Sloan Kettering Cancer Center, USA; <sup>6</sup>University of Illinois College of Medicine, USA

**Poster 16** Electra Coffman, Timothy Plageman Jr. **Arvcf stabilizes adherens junctions and Ankyrin-B protein within the lens fiber cell membrane** *The Ohio State University, USA*

**Poster 17** Parna Dutta<sup>1,2</sup>, Kyle McCracken<sup>1,2</sup> **Investigating the mechanisms of pharyngeal foregut pattern based on in vivo developmental trajectories** <sup>1</sup>Cincinnati Children's Hospital Medical Center, USA; <sup>2</sup>University of Cincinnati, USA

**Poster 18** Sylvie Earlewine<sup>1</sup>, Grace Leonard<sup>1</sup>, Benjamin Akande<sup>1</sup>, John Postlewait<sup>2</sup>, Saulius Sumanas<sup>3</sup>, Jennifer Schumacher<sup>1</sup> **Insights into cardiopharyngeal development from a novel zebrafish mutant.** <sup>1</sup>Miami University, USA; <sup>2</sup>University of Oregon, USA; <sup>3</sup>University of South Florida, USA

**Poster 19** Anna Evans, Noah Pison, Nathaniel Wells **A new tool in the box: Establishment of *Xenopus* embryonic stem cell** *University of Wisconsin-Milwaukee, USA*

**Poster 20** Edward Farrow<sup>1,2</sup>, Smitha Rao<sup>3</sup>, Simon J. Y. Han<sup>1,2</sup>, Xuyao Chang<sup>1</sup>, Cindy Hyunh<sup>3</sup>, Samantha A. Brugmann<sup>3,4,5,6</sup>, Hee-Woong Lim<sup>4,7</sup>, Jason Tchieu<sup>3,4,5</sup>, Kenneth Campbell<sup>3,4,5</sup>, Brian Gebelein<sup>3,4,5</sup> **Establishment of a doxycycline-inducible system to study the regulatory functions of the homeodomain transcription factor GSX2 in human lateral ganglionic eminence (LGE)-like progenitors *in vitro*** <sup>1</sup>Cincinnati Children's, Graduate Program in Development, Stem Cells and Regenerative Medicine, Cincinnati, OH, United States; <sup>2</sup>University of Cincinnati College of Medicine, Medical-Scientist Training Program, Cincinnati, OH, United States; <sup>3</sup>Cincinnati Children's, Division of Developmental Biology, Cincinnati, OH, United States; <sup>4</sup>University of Cincinnati College of Medicine, Department of Pediatrics, Cincinnati, OH, United States; <sup>5</sup>Cincinnati Children's, Center for Stem Cell & Organoid Medicine, Cincinnati, OH, United States; <sup>6</sup>Cincinnati Children's, Division of Plastic Surgery, Cincinnati, OH, United States; <sup>7</sup>Cincinnati Children's, Division of Biomedical Informatics, Cincinnati, OH, United States

**Poster 21** Andrew Fernandes **Early retinoic acid signaling is necessary to produce a population of Wnt signaling cardiomyocytes that drive atrioventricular valve development.** *Cincinnati Children's Medical Center, USA*

**Poster 22** Carlos Ferran-Heredia **Identifying and Modeling the Origins of the Metanephric Mesenchyme** *Cincinnati Children's / University of Cincinnati, USA*

**Poster 23** Bassit Fijabi<sup>1</sup>, Seth Teague<sup>1</sup>, Emily Freeburne<sup>1,2</sup>, Hina Khan<sup>1</sup>, Craig Johnson<sup>1</sup>, David Brückner<sup>3</sup>, Idse Heemskerk<sup>1</sup> **Combinatorial Cell Signals Encode Cell Fate and Positional Information in 2D Human Gastruloids** <sup>1</sup>*University of Michigan, United States;* <sup>2</sup>*Bio-Techne, United States;* <sup>3</sup>*University of Basel, Switzerland*

**Poster 24** Nicole Franks<sup>1</sup>, Hannah Schrader Dear<sup>1</sup>, Ella Markley<sup>1</sup>, Alexander Holtz<sup>2</sup>, Jane Song<sup>3</sup>, Craig Johnson<sup>1</sup>, Paola Medina-Cabrera<sup>1</sup>, Daniela Hernandez<sup>1</sup>, Praise Joel<sup>1</sup>, Marina Pasca di Magliano<sup>1,4,5</sup>, Deneen Wellick<sup>6</sup>, Benjamin Allen<sup>1</sup> **GLI<sup>FHV</sup> mice: a novel tool to investigate GLI processing and localization.** <sup>1</sup>*Department of Cell & Developmental Biology, University of Michigan, Ann Arbor, MI 48109, USA;* <sup>2</sup>*Center for Regenerative Medicine, Boston Medical Center, Boston, MA 02118, USA;* <sup>3</sup>*Genentech, South San Francisco, CA 94080, USA;* <sup>4</sup>*Department of Surgery, University of Michigan, Ann Arbor, MI 48109, USA;* <sup>5</sup>*Rogel Cancer Center, University of Michigan, Ann Arbor, MI 48109, USA;* <sup>6</sup>*Department of Cell and Regenerative Biology, University of Wisconsin, Madison, WI 53705, USA*

**Poster 25** Jacob Gafranek **Investigation of the response to cryoinjury in the zebrafish atrium reveals abbreviated regenerative dynamics** *Cincinnati Children's Hospital Medical Center, USA*

**Poster 26** Prashant Gaikwad<sup>1</sup>, Thomas Rüllicke<sup>2</sup>, Simon Hippenmeyer<sup>3</sup>, Matthew Kofron<sup>1,4</sup>, Cristina Cebrian<sup>1,4</sup> **A streamlined method for optical clearing of non-perfused mouse tissues for light sheet microscopy imaging.** <sup>1</sup>*Cincinnati Children's Hospital Medical Center, United States of America;* <sup>2</sup>*University of Veterinary Medicine Vienna, Austria;* <sup>3</sup>*Institute of Science and Technology Austria, Austria;* <sup>4</sup>*University of Cincinnati College of Medicine, United States of America*

**Poster 27** Thomas Gallagher, Monica Blatnik, Clare Austin, Kathryn Thompson, Danielle Pvirre, Angelina Morgan, Michael Kearse, Sharon Amacher **Pnrc2 promotes rapid mRNA decay and coordinately supports embryonic development with P-body factors Ddx6 and Ddx61** *The Ohio State University, USA*

**Poster 28** Tushar Ganjawala<sup>1</sup>, Julia Jeffrin<sup>1</sup>, Amanda Zacharias<sup>1,2</sup> **Investigating effect of maternal hyperglycemia on embryo development by recording real-time metabolic response in *C. elegans* embryos using genetically encoded fluorescent biosensors identifies key roles for glycolysis in promoting specific cell migrations** <sup>1</sup>*Divisions of Neonatology and Pulmonary Biology, Children's Hospital Medical Center, USA;* <sup>2</sup>*Department of Pediatrics, University of Cincinnati Medical School, USA*

**Poster 29** Karla Akari Garcia<sup>1</sup>, Kelly Tseng<sup>1</sup>, Irene Vorontsova<sup>2</sup> **Conserved Mechanism in Vision Development: Lens Nucleus Centralization in *Xenopus Laevis*** <sup>1</sup>*University of Las Vegas, Nevada, United States;* <sup>2</sup>*University of Auckland, New Zealand*

**Poster 30** Jade Ghanayem<sup>1</sup>, J. Raul Perez-Estrada<sup>1,2</sup>, Caroline Kennelly<sup>1</sup>, Lehua Hoops<sup>1</sup>, Katia Del Rio-Tsonis<sup>1,2</sup> **Unraveling the FGF Signaling Cascade in RPE Reprogramming** <sup>1</sup>*Department of Biology, Miami University, Oxford, OH, US;* <sup>2</sup>*Center for Visual Sciences, Miami University, Oxford, OH, US*

**Poster 31** Erika Grajales-Esquivel, Carlos M Charris Dominguez, Stacy Bendezu-Sayas, Jared A Tangeman, Raul Perez-Estrada, Katia Del Rio-Tsonis **Transcriptional and Chromatin Dynamics Governing Neurogenic Competence of Retinal Pigment Epithelium** *Miami University, USA*

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**Poster 33** Tyler Hoard, Daniela Hernandez, Katie Liu, Roman Giger, Benjamin Allen **Semaphorin Receptors Antagonize Wnt Signaling Through Beta-Catenin Degradation** *University of Michigan, United State of America*

**Poster 34** Yilun Huang, Zhaoming Wu, Paul Iyyanar, Yu Lan, Rulang Jiang **Identification and characterization of enhancer elements regulating *Alx1* expression and function during craniofacial development** *Division of Developmental Biology, Cincinnati Children's Hospital Medical Center and University of Cincinnati College of Medicine, USA*

**Poster 35** Samantha Igaz **Measures of lifespan in fruit flies exposed to environmentally relevant concentrations of bisphenols: Implications for embryology and development** **Samantha Igaz\***, Sophia Moberly, Halie Stemple, Katie Mullin, Alexanna Taylor and Gary M. Lange **Department of Biology Saginaw Valley State University** *Saginaw Valley State University, USA*

**Poster 36** Fariha Islam, Jeremy Lynch **Assembly and Age-Related Degeneration of the *Nasonia vitripennis* Oosome** *Biological Sciences, University of Illinois at Chicago, USA*

**Poster 37** Paul Iyyanar<sup>1</sup>, Logan Willeke<sup>1</sup>, Jesus M. Leal<sup>1</sup>, Russell Chuah<sup>1</sup>, Katarina Dunn<sup>1</sup>, Rolf W. Stottmann<sup>1,2</sup> **An ENU Forward Genetic Screen Identifies Novel Craniofacial Genes** <sup>1</sup>*Steve and Cindy Rasmussen Institute for Genomic Medicine, Abigail Wexner Research Institute, Nationwide Children's Hospital, Columbus, OH 43205, USA;* <sup>2</sup>*Department of Pediatrics, The Ohio State University College of Medicine, Columbus, OH 43210, USA*

**Poster 38** Praise Joel<sup>1</sup>, Charlotte Meyer-Gerards<sup>2</sup>, Cally Xiao<sup>2</sup>, Marta Grzonka<sup>2</sup> **Dissecting The Mechanism of The Mitotic Surveillance Pathway** <sup>1</sup>*University Of Michigan, United States;* <sup>2</sup>*CECAD Cluster of Excellence, University of Cologne, Germany*

**Poster 39** Jinwen Kang, Peiyao Liu, Shoko Ichimura, Lauryn Cook, Zhiyuan Chen **Polycomb Repressive-Deubiquitinase Complex Safeguards Oocyte Epigenome and Female Fertility by Restraining Polycomb Activity** *Cincinnati Children's Hospital Medical Center, USA*

**Poster 40** Hariharan Karthikeyan<sup>1</sup>, Nicole Edwards<sup>1</sup>, Lu Han<sup>1</sup>, Steve Vokes<sup>2</sup>, Sumeda Nandadasa<sup>3</sup>, Aaron Zorn<sup>1</sup> **Mechanisms of Hedgehog signaling-dependent GLI signaling in Tracheoesophageal Development** <sup>1</sup>*Cincinnati Children's Hospital and Medical Center, USA;* <sup>2</sup>*University of Texas at Austin, USA;* <sup>3</sup>*UMass Chan Medical School, USA*

**Poster 41** Hank Kern, Christoph Lepper, Kedryn Baskin **Med12 is Essential for Skeletal Muscle Development** *Department of Physiology and Cell Biology, The Ohio State University, United States*

**Poster 42** Rosa Kwon **Determining the Effects of *mecr-1* Gene Deletion on the *Caenorhabditis elegans* Germ Line Through Expression Analysis of FOG-3 and LIN-41** *Kenyon College, USA*

**Poster 43** Avelina Lee, Samantha A. Brugmann **Investigating the role of *ESRP2* in craniofacial development using the *cleft primary palate (cpp)* avian model** *Cincinnati Children's Hospital Medical Center, USA*

**Poster 44** Lauren Levesque, Kara Braunreiter, Susan Cole **Notch-dependent mRNA decay of the transcriptional repressor *Hes7* during somitogenesis** *Molecular Genetics, The Ohio State University, USA*

**Poster 45** Bo Li **Foxa2-dependent uterine glandular cell differentiation is essential for successful implantation** *Cincinnati Children's Hospital Medical Center, USA*

**Poster 46** Ramon Macias<sup>1,2</sup>, Rolf Stottmann<sup>1,2</sup> **Functional Redundancy of *Tubb2a* and *Tubb2b* in Embryonic Brain Development** <sup>1</sup>*The Ohio State University, United States;* <sup>2</sup>*Nationwide Children's Hospital, United States*

**Poster 47** Elizabeth Manning **Investigating the Role of *MECR-1* on Spermatogenesis in *C. elegans*** *Kenyon College, USA*

**Poster 48** Ella Markley<sup>1</sup>, Hannah Schrader Dear<sup>1</sup>, Nicole Franks<sup>1</sup>, Alexander Holtz<sup>2</sup>, Jane Song<sup>3</sup>, Craig Johnson<sup>1</sup>, Paola Medina-Cabrera<sup>1</sup>, Daniela Hernandez<sup>1</sup>, Praise Joel<sup>1</sup>, Marina Pasca di Magliano<sup>1,4,5</sup>, Deneen Wellik<sup>6</sup>, Benjamin Allen<sup>1</sup> **Developing a Novel Mouse Model to Investigate GLI Localization during Hedgehog-Dependent Neural Patterning** <sup>1</sup>*Department of Cell & Developmental Biology, University of Michigan, Ann Arbor, MI 48109, United States* ; <sup>2</sup>*Center for Regenerative Medicine, Boston Medical Center, Boston, MA 02118, United States;* <sup>3</sup>*Genentech, South San Francisco, CA 94080, United States;* <sup>4</sup>*Department of Surgery, University of Michigan, Ann Arbor, MI 48109, United States;* <sup>5</sup>*Rogel Cancer Center, University of Michigan, Ann Arbor, MI 48109, United States;* <sup>6</sup>*Department of Cell and Regenerative Biology, University of Wisconsin, Madison, WI 53705, United States*

**Poster 49** Sarah McLeod<sup>1</sup>, Raisa Bailon-Zambrano<sup>2</sup>, Sandhya Paudel<sup>1</sup>, Melissa Scott-Preusse<sup>1</sup>, James Nichols<sup>2</sup>, Lindsey Barske<sup>1</sup> **Exploring Midline Appendage Evolution Through Ectopic Fin Development in *pax9* Mutant Zebrafish** <sup>1</sup>*Cincinnati Children's Hospital Medical Center, USA;* <sup>2</sup>*University of Colorado Anschutz Medical Campus, USA*

**Poster 50** Kelli Johnson<sup>1</sup>, Xiangning Dong<sup>1</sup>, Yu-Hwai Tsai<sup>1</sup>, Angeline Wu<sup>1</sup>, Sydney Clark<sup>2</sup>, Sha Huang<sup>1</sup>, Rachel Zwick<sup>3,4</sup>, Ian Glass<sup>5</sup>, Katherine Walton<sup>1</sup>, Ophir Klein<sup>4,6</sup>, Jason Spence<sup>1,7,8</sup>

**Mapping mesenchymal diversity in the developing human intestine and organoids**

<sup>1</sup>Department of Internal Medicine, Division of Gastroenterology, University of Michigan

Medical School, USA; <sup>2</sup>Department of Cellular and Molecular Biology, University of Michigan

Medical School, USA; <sup>3</sup>Department of Cell Biology, NYU Grossman School of Medicine, USA;

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Washington, USA; <sup>6</sup>Department of Pediatrics, Cedars-Sinai Guerin Children's, USA;

<sup>7</sup>Department of Cell and Developmental Biology, University of Michigan Medical School, USA;

<sup>8</sup>Department of Biomedical Engineering, University of Michigan and University of Michigan College of Engineering, USA

## **Poster Session 2 - Cincinnati Children's Research Pavilion, S1.203/4**

6:30-7:45

**Odd numbers** Posters 51-103

7:40-9:00

**Even numbers** Posters 52-104

**Poster 51** Amartya Mitra, Shubham Rathore, Aaron Stahl, Elke Buschbeck **Establishing Parallels Between Eye Types** *University of Cincinnati, USA*

**Poster 52** Sophia Moberly, Azalee Almond, Aayushi Gandhi, Xsandrie Guimba, Nathaniel James, Katie Mullin, Alexanna Taylor, Gary Lange **Developmental effects of environmentally relevant exposure to bisphenol-S in the juvenile period impacts responses of rats (*Rattus norvegicus*): Comparisons to bisphenol-A** *Saginaw Valley State University, USA*

**Poster 53** Brendan Moran **Role of LOTUS domain and DEAD-box proteins in condensate assembly and small RNA production** *The Ohio State University, USA*

**Poster 54** Peyton Morrow<sup>1</sup>, J. Raul Perez-Estrada<sup>1,2</sup>, Katia Del Rio-Tsonis<sup>1,2</sup> **Salamander Eye Morphogenesis** <sup>1</sup>Department of Biology, Miami University, Oxford, OH, US; <sup>2</sup>Center for Visual Sciences, Miami University, Oxford, OH, US

**Poster 55** Cimran Nakum, Brandi Bull, Sunitha Yarlagadda, Shalini Indugula, Meredith Schuh **Perinatal exposures during preterm birth and susceptibility to acute and chronic kidney disease** *Cincinnati Children's Hospital and Medical Center, USA*

**Poster 56** Elysa Ng **Sticking to the Plan: Mechanisms of Floorplate Patterning in Zebrafish Spinal Cord Morphogenesis** *Washington University at St Louis, USA*

**Poster 57** Timothy Nguyen<sup>1</sup>, Fan Shao<sup>1</sup>, Jennyfer Mitchell<sup>2</sup>, J.C. Thomas<sup>1</sup>, Jaclyn Olberding<sup>1</sup>, Erliang Zeng<sup>1</sup>, Huojun Cao<sup>1</sup>, James Nichols<sup>2</sup>, Brad Amendt<sup>1</sup>, Colin Kenny<sup>1</sup>, Eric Van Otterloo<sup>1</sup> **A mouse model for dissecting gene regulation networks underlying midface development and dysplasia** <sup>1</sup>University of Iowa, United States; <sup>2</sup>University of Colorado, United States

**Poster 58** Hoang Nguyen, Daniel Buchholz **Synergistically regulated genes by two hormones during frog metamorphosis** *University of Cincinnati, United States*

**Poster 59** Daniel Paluh **Evolution and development of the frog mouth: from tadpole keratinized mouthparts to adult teeth** *University of Dayton, USA*

**Poster 60** Hana Pan, Brian Basinski, Charukesi Sivakumar, Qiang Li, Jing Xu, Rajesh Rao  
**Investigating PRDM13 and its Protein Interactors in their Contribution to CNS Disorders**  
*University of Michigan - Ann Arbor, United States of America*

**Poster 61** Meet Patel **Elucidating the molecular role of prom1b in photoreceptors using zebrafish**  
*University of Kentucky, USA*

**Poster 62** David Paulding<sup>1</sup>, Simon Han<sup>1</sup>, Jonathan Timmons<sup>1</sup>, Michelle Caye<sup>1</sup>, Alexa Riedel<sup>1</sup>, Samantha Brugmann<sup>1,2</sup>, Lindsey Barske<sup>1,2</sup> **Early requirement for NR2F nuclear receptors in the mouse cranial neural crest** <sup>1</sup>*Cincinnati Children's Hospital Medical Center, USA;*  
<sup>2</sup>*University of Cincinnati, USA*

**Poster 63** Nicole Pek<sup>1,2</sup>, Konrad Thorner<sup>1</sup>, Hee-Wong Lim<sup>1,2</sup>, Darrell Kotton<sup>3</sup>, Robert Rottier<sup>4</sup>, Aaron Zorn<sup>1,2</sup>, Mingxia Gu<sup>5,6</sup> **Uncovering Mechanisms Underlying Capillary Maldevelopment Caused By FOXF1 Mutations Using A 3D In Vitro Vascular Model System** <sup>1</sup>*Cincinnati Children's, USA;* <sup>2</sup>*College of Medicine, University of Cincinnati, USA;* <sup>3</sup>*Center for Regenerative Medicine, Boston University, USA;* <sup>4</sup>*Erasmus University Medical Center, Netherlands;* <sup>5</sup>*David Geffen School of Medicine, UCLA, USA;* <sup>6</sup>*Broad Stem Cell Research Center, USA*

**Poster 64** Alyssa Pennell, Jeremy Lerma, Kamorah Ryhlick, Joseph Beljan, Olivia Carraher, Gavin Muniz, Sharon Amacher **Investigating the impact of adams17 on Duchenne muscular dystrophy in zebrafish** *Department of Molecular Genetics, The Ohio State University, Columbus, OH, USA*

**Poster 65** Laurence A. Lemaire<sup>1,2</sup>, Josefina Perez<sup>1</sup>, Shili Wu<sup>1</sup>, Wei Lin<sup>1</sup>, Michael Levine<sup>2</sup> **Role of Lmx1 in Neural Tube Morphogenesis in the invertebrate chordate *Ciona*** <sup>1</sup>*Saint Louis University, USA;* <sup>2</sup>*Princeton University, USA*

**Poster 66** Quentin Phillips **SOX factors modulate WNT/Beta-Catenin-mediated transcription during embryonic lung development** *Cincinnati Children's Hospital Medical Center, USA*

**Poster 67** Jordyn Mensh<sup>1</sup>, Bonnie Wu<sup>1</sup>, Darren Bridgewater<sup>2</sup>, Thomas Drysdale<sup>3</sup>, Timothy Plageman<sup>1</sup>  
**Junctional contraction of outer limiting membrane is required for normal postnatal retinal development** <sup>1</sup>*The Ohio State University, College of Optometry, USA;* <sup>2</sup>*Department of Pathology and Molecular Medicine, Faculty of Health Sciences, McMaster University, Canada;* <sup>3</sup>*Department of Physiology and Pharmacology, Schulich School of Medicine & Dentistry, Western University, Canada*

**Poster 68** Kurt Reynolds<sup>1</sup>, Rolf Stottmann<sup>1,2</sup> **Collagen processing deficiencies underlie skeletal defects and clefting in P4hb mutant mouse models** <sup>1</sup>*Nationwide Children's Hospital, USA;* <sup>2</sup>*The Ohio State University, USA*

**Poster 69** Matthew Riccetti<sup>1</sup>, Patrick Woller<sup>2,3</sup>, Amy Riesenber<sup>1</sup>, Avelina Lee<sup>1,4</sup>, Matthew Revilla<sup>3</sup>, Laura Tweedie<sup>1,4,5</sup>, Steven Crone<sup>2,3</sup>, Kenneth Campbell<sup>1,4,5</sup> **Gsx2 is essential for the neurogenesis and function of the dorsal respiratory group neurons** <sup>1</sup>*Division of Developmental Biology, Cincinnati Children's, Cincinnati, OH, USA;* <sup>2</sup>*Neuroscience Graduate Program, University of Cincinnati College of Medicine, Cincinnati, OH, USA;* <sup>3</sup>*Division of Neurosurgery, Cincinnati Children's, Cincinnati, OH, USA;* <sup>4</sup>*DSRM Graduate Program, University of Cincinnati College of Medicine, Cincinnati, OH, USA;* <sup>5</sup>*MSTP Program, University of Cincinnati College of Medicine, Cincinnati, OH, USA*

**Poster 70** Lizza Roman<sup>1</sup>, Daniel O. Kechele<sup>1</sup>, J Guillermo Sanchez<sup>1</sup>, Kentaro Tominaga<sup>2</sup>, James Wells<sup>1,3,4</sup> **Using human intestinal organoids to study the development of tissue-resident macrophages** <sup>1</sup>*Division of Developmental Biology, Cincinnati Children's, Cincinnati, OH, USA;* <sup>2</sup>*Division of Gastroenterology and Hepatology, Graduate School of Medical and Dental Sciences, Niigata University, Niigata, Japan;* <sup>3</sup>*Division of Endocrinology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA;* <sup>4</sup>*Center for Stem Cell and Organoid Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, OH,, USA*

**Poster 71** Nicholas Russell<sup>1,2</sup>, Sarah Trovillion<sup>1,2</sup>, Natalia Bottasso-Arias<sup>1,2</sup>, Daniel Swarr<sup>1,2,3</sup>, William Zacharias<sup>1,2,3</sup>, Debora Sinner<sup>1,2,3</sup> **Defining the Role of Chromatin Remodeling in Respiratory Tract Development.** <sup>1</sup>*Perinatal Institute, Cincinnati Children's Hospital and Medical Center, USA;* <sup>2</sup>*Division of Pulmonary Biology, Cincinnati Children's Hospital and Medical Center, USA;* <sup>3</sup>*Department of Pediatrics, University of Cincinnati College of Medicine, USA*

**Poster 72** Kristina Sattler<sup>1</sup>, Christoph Lepper<sup>1</sup>, Kelly Crowe<sup>2</sup> **Evaluating lectin biomarkers for GNE Myopathy gene therapy** <sup>1</sup>*The Ohio State University, USA;* <sup>2</sup>*Xavier University, USA*

**Poster 73** Kiera Savage, Ian McCrary, Amy Ralston, Ph.D. **Investigating the mechanisms of primitive endoderm lineage specification *in vitro* using mouse primitive endoderm stem cells** *Michigan State University, USA*

**Poster 74** Nour Sayed<sup>1</sup>, Jacob Weaver<sup>1</sup>, Brad Wagner<sup>1</sup>, Milan Jamrich<sup>2</sup>, Paul Overbeek<sup>2</sup>, Anil Upreti<sup>3</sup>, Michael Robinson<sup>1</sup> **Functional studies of mice with novel Foxe3 mutations** <sup>1</sup>*Miami, USA;* <sup>2</sup>*Baylor College of Medicine, USA;* <sup>3</sup>*Harvard Medical School, USA*

**Poster 75** Vered Shacham-Silverberg<sup>1,2</sup>, Daniel O. Kechele<sup>1,2</sup>, Mansa Krishnamurthy<sup>3</sup>, James M. Wells<sup>1,2,3</sup> **Modeling Human Esophageal Development and Disease Using iPSC-Derived Epithelial-Mesenchymal Raft Cultures** <sup>1</sup>*Division of Developmental Biology, Cincinnati Children's, USA;* <sup>2</sup>*Center for Stem Cell and Organoid Medicine (CuSTOM), Cincinnati Children's, USA;* <sup>3</sup>*Division of Endocrinology, Cincinnati Children's, USA*

**Poster 76** Emily Shifley **Involving developmental biology students in science education outreach** *Northern Kentucky University, USA*

**Poster 77** Charukesi Sivakumar, Qiang Li, Jing Xu, Hana Pan, Rajesh Rao **Elucidating the role of MOF in retinal development and disease** *University of Michigan - Ann Arbor, United States of America*

**Poster 78** Morgan Smith **COPB2 and Corticogenesis: How Vesicle Trafficking Shapes Brain Development** *Nationwide Children's Hospital, USA; The Ohio State University, USA*

**Poster 79** Anna Statsenko<sup>1</sup>, Vishista Vulpala<sup>2</sup>, Caiden Duskey<sup>1</sup>, Lucy Bailey<sup>1</sup>, Elke Buschbeck<sup>3</sup>, Mark Charlton-Perkins<sup>1</sup> **Studying Genetic Forms of High Myopia in Developing Zebrafish Larvae** <sup>1</sup>*Miami University, USA;* <sup>2</sup>*William Mason High School, United States;* <sup>3</sup>*University of Cincinnati, United States*

**Poster 80** Matthew Stocker<sup>1,2</sup>, Lee Halevi<sup>3</sup>, Lisa Gutzwiller<sup>1</sup>, Olfri Axelrod<sup>3</sup>, David Sprinzak<sup>3</sup>, Brian Gebelein<sup>1</sup> **Quantitative analysis of the Notch transcriptional response using synthetic biology and *Drosophila* genetics** <sup>1</sup>*Cincinnati Children's Hospital Medical Center, USA;* <sup>2</sup>*University of Cincinnati, USA;* <sup>3</sup>*Tel Aviv University, Israel*

**Poster 81** Nicholas Strash<sup>1</sup>, Abigail Vallie<sup>1</sup>, Sha Huang<sup>1</sup>, Marisa Patsy<sup>2</sup>, Nenad Bursac<sup>2</sup>, Jason Spence<sup>1</sup> **Scalable Engineered Human iPSC-derived Intestinal Tissues with Uniaxial Tension**  
<sup>1</sup>University of Michigan, United States; <sup>2</sup>Duke University, United States

**Poster 82** Mariya Kibtiya Sumiya, Elizabeth M. Duncan **Exploring the Functional Conservation of shoc2 in ERK-mediated Tissue Homeostasis and Regeneration of *Schmidtea mediterranea*** University of Kentucky, USA, United States

**Poster 83** Thomas Taylor, Matthew Riccetti, Jenna Green, Kimberly Wagner, Cheng-Lun Na, Anne-Karina Perl **Homeobox Transcription Factor MEOX2 functions as a key regulator of the developmental alveolar niche** Cincinnati Children's Hospital Medical Center, USA

**Poster 84** James "Kenny" Triplett<sup>1,2</sup>, Xiaowen Zhong<sup>1,2</sup>, Arman Eshshaghi Bayat<sup>2</sup>, Dazhuan Xin<sup>2</sup>, Eva Nicholson<sup>2</sup>, Nong Chen<sup>2</sup>, Richard Lu<sup>1,2</sup> **Native Histone H3.3K27M Mutation on Developing Brain and Diffused Midline Glioma (DIPG/DMG)** <sup>1</sup>University of Cincinnati, United States; <sup>2</sup>Cincinnati Children's Hospital, United States

**Poster 85** Esther Ushuhuda<sup>1</sup>, Jenniluyng Nguyen<sup>2</sup>, Natalie Pfaltzgraff<sup>1</sup>, Matthew Kofron<sup>1</sup>, Maria Mikedis<sup>1,2</sup> **MEIOC prevents continued mitotic cycling and promotes meiotic entry during mouse oogenesis** <sup>1</sup>Cincinnati Children's Hospital, USA; <sup>2</sup>Whitehead Institute, United States

**Poster 86** Madison Velez, Abigale Wisenbach, Katie Mullin **Developmental shaping by the dual effects of elevated ambient temperature and Bisphenol-S exposure examined in fruit flies (*Drosophila melanogaster*)** Saginaw Valley State University, USA

**Poster 87** Isha Verma **Developmental biology teaching lessons on regeneration and stem cells using the Planarian model system** University of Michigan, Ann Arbor, USA

**Poster 88** Bennett Andrassy, Maximos McCune, Beija Waltmunson, Sarah Petersen **Co-Migration of Peripheral Axons and Neural Crest Cells Requires *tcf15/paraxis*** Kenyon College, USA

**Poster 89** Chin Wang<sup>1,2,3</sup>, Hannah Lathrop<sup>2,4</sup>, Wen Tang<sup>1,2,3,4</sup> **Determining the function of human TDRD7 in RNA granule formation** <sup>1</sup>Department of Biological Chemistry and Pharmacology, The Ohio State University (OSU), United States; <sup>2</sup>Center for RNA Biology, OSU, United States; <sup>3</sup>Molecular, Cellular and Developmental Biology Program, OSU, United States; <sup>4</sup>Ohio State Biochemistry Program, OSU, United States

**Poster 90** Bailey Weatherbee<sup>1</sup>, Scott Rankin<sup>1</sup>, Yann Audic<sup>2</sup>, Agnes Mereau<sup>2</sup>, Luc Paillard<sup>2</sup>, Shreyasi Mukherjee<sup>3</sup>, Hannah Truong<sup>1</sup>, Aaron Zorn<sup>1</sup> **Multifunctional RNA-binding Transcription Factors Coordinate Cell States in Development** <sup>1</sup>Cincinnati Children's Hospital Medical Center, USA; <sup>2</sup>Institute Genetics & Development of Rennes, France; <sup>3</sup>Harvard Medical School, USA

**Poster 91** Jacob Weaver<sup>1</sup>, Anil Upreti<sup>2</sup>, Jared Tangeman<sup>3</sup>, Milan Jamrich<sup>4</sup>, Paul Overbeek<sup>4</sup>, Brad Wagner<sup>1</sup>, Michael Robinson<sup>1</sup> **Upregulation of multiple neural transcripts in FoxE3 null lenses** <sup>1</sup>Miami University, USA; <sup>2</sup>Harvard Medical School, USA; <sup>3</sup>Johns Hopkins University, USA; <sup>4</sup>Baylor College of Medicine, USA

**Poster 92** Emma Wei **Exploring the roles of alternative polyadenylation of *elavl1a* expression and function during zebrafish embryogenesis** Oberlin College of Arts and Sciences, USA

**Poster 93** Shelbie Wenner<sup>1,2</sup>, Natalie Pfaltzgraff<sup>2</sup>, Esther Ushuhuda<sup>2</sup>, Maria Mikedis<sup>2,3</sup>  
**MEIOC Regulates HSPA2 to Coordinate the Timing of Early Meiosis** <sup>1</sup>Medical Scientist  
Training Program, University of Cincinnati College of Medicine, USA; <sup>2</sup>Reproductive Sciences  
Center, Division of Developmental Biology, Cincinnati Children's, USA; <sup>3</sup>Department of  
Pediatrics, University of Cincinnati College of Medicine, USA

**Poster 94** Rachel Wiley, Sarah Paramore, Victoria Prince **The Role of the Fat1a/Lar Polarity  
Module in Zebrafish Pronephric Collective Cell Migration** University of Chicago, USA

**Poster 95** Zach Wright, Hannah Rice, Dan Bergstralh **Fas2 Mediated Cell Reintegration**  
University of Missouri, USA

**Poster 96** Manqi Wu<sup>1</sup>, Danielle Becker<sup>2</sup>, Sha Huang<sup>2</sup>, Ansley Conchola<sup>2</sup>, Yusoo Lee<sup>2</sup>,  
Mengkun Yang<sup>2</sup>, Michael Downey<sup>2</sup>, Ian Glass<sup>3,4</sup>, Gail Deutsch<sup>5,6</sup>, Peggy Hsu<sup>7,8</sup>, Tristan Frum<sup>2</sup>,  
Jason Spence<sup>1,2,8,9</sup> **Elucidating Mechanisms Regulating Alveolar Type 2 (AT2) Differentiation  
using iPSC-Derived Bud Tip Organoids** <sup>1</sup>Department of Cell and Developmental Biology,  
University of Michigan Medical School, USA; <sup>2</sup>Department of Internal Medicine, Division of  
Gastroenterology and Hepatology, University of Michigan Medical School, USA; <sup>3</sup>Department  
of Pediatrics, Division of Developmental Medicine, University of Washington, Seattle  
Children's Hospital, USA; <sup>4</sup>Division of Genetic Medicine, University of Washington, Seattle  
Children's Hospital, USA; <sup>5</sup>Center for Respiratory Biology and Therapeutics, Seattle Children's  
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Oncology, University of Michigan Medical School, USA; <sup>8</sup>Rogel Cancer Center, University of  
Michigan Medical School, USA; <sup>9</sup>Department of Biomedical Engineering, University of  
Michigan College of Engineering, USA

**Poster 97** Shili Wu, Liam Rodman, Laurence Lemaire **Remodeling of the *Ciona intestinalis*  
central nervous system** Saint Louis University, USA

**Poster 98** Jingyue Xu<sup>1</sup>, Han Liu<sup>1</sup>, Mohammed Sayed<sup>1</sup>, Yilun Huang<sup>1</sup>, Yu Lan<sup>1,2</sup>, Hee Woong  
Lim<sup>1</sup>, Rulang Jiang<sup>1,2</sup> **Foxd1 regulates musculoskeletal development and integration during  
palatogenesis** <sup>1</sup>Cincinnati Children's Hospital, USA; <sup>2</sup>University of Cincinnati College of  
Medicine, USA

**Poster 99** Inah Yang, Xuyao Chang, Joel Blair, Jason Tchieu **Human Embryonic Stem Cell-  
Derived Olfactory Epithelium Model** Cincinnati Children's Hospital Medical Center, United  
States

**Poster 100** Juli Liu, Sheng Liu, Jun Wan, Lei Yang **Decoding human-specific mechanisms in  
the regulatory of early heart development** IU School of Medicine, USA

**Poster 101** Mateo Zevallos, Rejenae Dockery, Carson McNulty, Tessa Zecchino, Reece  
Ratermann, Richard White, Aaron Goldman **The roles of translation initiation factor  
homologs during zebrafish regeneration** The Ohio State University, USA

**Poster 102** Alex Zhang, Michael Wen, Victoria Prince **Investigating zebrafish neural crest  
cell fate restriction by imaging transcription in vivo** University of Chicago, USA

**Poster 103** Barbara Zhao<sup>1,2</sup>, Helen Warheit-Niemi<sup>1</sup>, Kathleen Cook<sup>1</sup>, Andrea Toth<sup>1,2</sup>, Satish Madala<sup>2</sup>, William Zacharias<sup>1,2</sup> **Stressed transitional epithelial cells differentiate into alveolar-basal intermediates during fibrotic lung remodeling** <sup>1</sup>*Cincinnati Children's Hospital Medical Center, United States;* <sup>2</sup>*University of Cincinnati College of Medicine, United States*

**Poster 104** Andrew Vontell<sup>1,2</sup>, Jack Kucinski<sup>1,2</sup>, Alexi Tallan<sup>1,2</sup>, Katherine Silvius<sup>2</sup>, Cenny Taslim<sup>2</sup>, Benjamin Stanton<sup>1,2,3,4</sup>, Genevieve Kendall<sup>1,2,3</sup> **Developmental consequences of DNA binding by a rhabdomyosarcoma fusion oncoprotein *in vivo*.** <sup>1</sup>*Molecular, Cellular and Developmental Biology Program, The Ohio State University, Columbus, OH, USA, USA;* <sup>2</sup>*Center for Childhood Cancer Research, The Abigail Wexner Research Institute, Nationwide Children's Hospital, Columbus, OH, USA, USA;* <sup>3</sup>*Department of Pediatrics, The Ohio State University College of Medicine, Columbus, OH, USA, USA;* <sup>4</sup>*Department of Biological Chemistry and Pharmacology, The Ohio State University College of Medicine, Columbus, OH, USA, USA*

