



POINTS OF INTEREST

July – September 2025

HONORS AND AWARDS

Beck Fitzpatrick (Ryan Lab)

Beck received a Highly Commended Abstract Award for scoring in the top 10% of abstracts at the Stem Cells, Cell Therapy, and Bioengineering in Lung Biology and Diseases Conference 20th Anniversary, July 2025, Burlington Vermont.

Ashley Goll (Tootle Lab)

Ashley received the Ballard & Seashore Fellowship for the Spring 2026 semester.

Dr. Salma Hassan (Drack Lab)

Salma successfully defended her thesis titled “Developing Novel Treatments for X-linked retinoschisis (XLRS).”

Emily Liu

Emily was awarded the Francis G. Byrnes Platform Abstract Presentation to present at the International LAM Research Conference and LAMposium.

Emily received the best basic science poster award at the International LAM Research Conference and LAMposium.



Shubha Murthy (Ryan Lab)

Shubha received a Highly Commended Abstract Award for scoring in the top 10% of abstracts at the Stem Cells, Cell Therapy, and Bioengineering in Lung Biology and Diseases Conference 20th Anniversary, July 2025, Burlington Vermont.

Aparna Pathmanathan

Aparna successfully passed her comprehensive exam.

Aparna was awarded the Post-Comprehensive Research Award Fellowship for the Spring 2026 Semester.

Jessica Smith (Dunnwald Lab)

Jessica was awarded the Excellence in Anatomy and Cell Biology Research Award for her poster presentation titled “Addressing Tumor Hypoxia through Intratumoral Oxygen Injection” at the Medical Student Research Conference.

Israel Wipf (Tootle Lab)

Israel received the Ballard & Seashore Fellowship for the Spring 2026 semester.

Sam Wuebker (Van Otterloo Lab)

Sam received the best graduate student poster presentation at the American Association of Anatomy’s Regional Meeting in Minneapolis.

APPOINTMENTS & SPECIAL RECOGNITION

Dr. Martine Dunnwald

Dr. Dunnwald has been nominated to be a member of the advisory committee for the International Federation of the Association of Anatomists.

Emily Liu

Emily was elected vice president of the CDB students.

Aparna Pathmanathan (Ryan Lab)

Aparna was elected president of the CDB students.

Sahebgowda Patil (Yang Lab)

Patil was elected as the faculty representative for the CDB students in the department.

Dr. Marc Pizzimenti

Dr. Pizzimenti was appointed as Chair of the Council on Teaching at the University of Iowa.

Dr. Amy Ryan

Dr. Ryan was appointed as a mentor for the 2025-2026 Executive Leadership Academy at the University of Iowa.

Zewei Zhang

Zewei has been elected as a representative in the Graduate Student Senate.

CEC COMMITTEE

This is Us

Thanks to Zewei and Shreya for participating in our first event of the academic year. The next “This is us” will take place in December; if you are interested, please let Madison or Martine Dunnwald know.

OTHER

New Hires:

Dr. Dakota Jones – Assistant Professor

- Analy Phonephakdy, Research Intern – Jones Lab
- Ellyse Froehlich, Research Intern – Jones Lab
- Yeo Gyun Yun, Postdoctoral Research Scholar – Jones Lab

Dr. Raji Shyam – Assistant Professor

- Shreya Ganguly, Research Assistant – Shyam Lab
- Hsuan-Yeh Pan, Postdoctoral Research Scholar – Jones Lab

CDB Students

- Grace Gottschamer – Genetics Student in the Dunnwald Lab
- Immaculate Edwin – Genetics Student in the Dupuy Lab

Genetics Students

- Emma Lowden – CDB Student in the Tootle Lab
- Sadia Islam Mou – CDB Student in the Tootle Lab
- Joy James – CDB Student in the Stephens Lab

SERCC

New Hire

The Scientific Editing and Research Communication Core (SERCC) is pleased to announce that Emily Huber, PhD, has joined our editorial staff as Scientific Editor and Writing Consultant. Emily is taking on the previous role of Jen Barr, who recently transitioned to a new role as Grant Writer.

Although Jen is still a member of the SERCC, she is additionally part of the newly launched Large-Scale Proposal Development Service (LSPDS), a joint initiative between the SERCC and the CCOM Research Administration Office (RASO).

Open Writing Sessions

The Scientific Editing and Research Communication Core (SERCC) has started hosting monthly open writing sessions for graduate students and post docs who are working on grant proposals and research articles as part of a course assignment or for submission. A scientific editor is available for one-on-one consultations and answering questions.

Oct. 17, Nov. 7, and Dec. 12, 2:00–4:00 p.m. in CMAB 106. For more information, contact heather-widmayer@uiowa.edu.

Recycling

The Frank and Rutkowski Lab recycled 15lbs of plastic saving 73lbs of CO₂E, 22gal of water, and 23lbs of fossil fuel reduced.

SPECIAL PRESENTATIONS

Dr. Martine Dunnwald

Dr. Dunnwald was session chair at the “Barrier of the Skin” Gordon Research Conference, Waterville Valley, NH, August 2025.

“Self-protection and Self-identity or the Fairy Tale of the Skin,” presented at the Annual Meeting of the Association for Medical Illustrators, Grand Rapids, MI, July 2025.

Beck Fitzpatrick, Brett Wineinger, and Jason Babcock (Ryan Lab)

“Structure-Function Relationships in Mucociliary Clearance: Impact of Co-Culturing CCDC40 Mutant and Wild-Type Airway Epithelial Cells In Vitro,” presented at the Stem Cells, Cell Therapy, and Bioengineering in Lung Biology and Diseases Conference 20th Anniversary, Burlington, VT, July 2025 and the 2025 Graduate Student Orientation Research Fair, Iowa City, IA, August 2025.

Dr. Lalit Gautam (Ryan Lab)

“Akt Activity is a Critical Regulator of Airway Epithelial Cell Fate Decisions,” presented at the 2025 Graduate Student Orientation Research Fair, Iowa City, IA, August 2025,

Dr. Masataka Kawai

“Cross-Bridge Mechanisms of Contraction in Skeletal and Cardiac Muscles,” presented at South-Central Minzu University, College of Life Sciences, Department of Food Science, Wuhan, China, May 2025.

Emily Liu (Ryan Lab)

“Loss of TSC2 Drives TGF- β Signaling in Lymphangioleiomyomatosis,” presented at the 2025 International LAM Conference and LAMposium, September 2025, Kansas City, Missouri and the 2025 Graduate Student Orientation Research Fair, Iowa City, IA, August 2025.

Shubha Murthy

“IGFBP3 Facilitates DNA Damage Repair to Preserve Airway Basal Cell Stemness,” presented at the Stem Cells, Cell Therapy, and Bioengineering in Lung Biology and Diseases Conference 20th Anniversary, Burlington VT, July 2025.

Dr. Amy Ryan

- Chaired the Stem Cells, Cell Therapy, and Bioengineering in Lung Biology and Diseases Conference 20th Anniversary, Burlington VT, July 2025.
- Poster Judge for the 2025 International LAM Conference and LAMposium, Kansas City, MO, September 2025.
- “Advancements in Human-Specific Tissue Models for Lymphangioleiomyomatosis (LAM),” presented at the 2025 International LAM Conference and LAMposium, Kansas City, MO, September 2025.
- “Integrative Models of Human Lung Disease: From Cellular Niches to Tissue-Level Function,” presented at the University of Iowa Department of Biomedical Engineering, Iowa City, IA, September 2025.

Dr. Raji Shyam

- Chaired a session at the 2025 Midwest Eye Research Symposium, Iowa City, IA, August 2025.
- “Analyzing the Interplay of Cellular Stresses using a Mouse Model of Fuchs Endothelial Dystrophy,” presented at the Midwest Eye Research Symposium, Iowa City, IA, August 2025.
- “New Discoveries in Fuchs Dystrophy” presented at the VA Center for the Prevention and Treatment of Visual Loss, Iowa City, IA, September 2025.

NEW GRANT AWARDS

Dr. Dakota Jones

Title: Mesenchymal Cell Plasticity and Signaling in Lung Regeneration

Sponsor: NIH

Role: PI

Total Award: \$533,828 direct costs, \$213,025 indirect costs

Emily Liu (Ryan Lab)

Title: The Role Of TGF- β in Cell-Cell Interactions in the Pathogenesis of Lymphangioleiomyomatosis

Sponsor: NIH
Role: PI
Total Award: \$117,420 direct costs

Dr. Amy Ryan

Title: Precision Medicine Center for Cystic Fibrosis
Sponsor: NIH
Role: PI
Total Award: \$3,750,000 direct costs, \$2,081,250 indirect costs

Title: Defining the Role of CFTR in Pancreatic Progenitor Cell Specification
Sponsor: CFF
Role: PI
Total Award: \$100,000 direct costs, \$12,000 indirect costs

Title: Stem Cells, Cell Therapy and Bioengineering in Lung Biology and Diseases Conference
Sponsor: NIH
Role: MPI
Total Award: \$35,000 direct costs

Dr. Raji Shyam

Title: Molecular Dysregulation in Fuchs Corneal Endothelial Dystrophy
Sponsor:
Role: NIH
Total Award: \$268,763 direct costs, \$94,300 indirect costs

Title: The Role of Mechanotransduction Signal in Fuchs' Endothelial Dystrophy
Sponsor: Cornea Research Foundation of America
Role: PI
Total Award: \$7,257 direct costs

Dr. Ling Yang

Title: Shaping Cardiac Immuno-Metabolic Homeostasis by the Lysosome
Sponsor: NIH
Role: Contact PI
Total Award: \$1,639,159 direct costs, \$772,044 indirect costs

SUBMITTED GRANTS

Dr. Brad Amendt

Title: The Role of Irx1 in Oral Tissue Repair, Regeneration and Maintenance
Sponsor: NIH
Role: PI
Total Award: 1,795,698 direct costs, \$972,529 indirect costs

Title: New Mouse Models for Craniofacial Anomalies
Sponsor: NIH
Role: PI

Total Award: 2,067,692 direct costs, 1,095,082 indirect costs

Dr. Hsuan-Yeh Pan (Shyam Lab)

Title: Age Associated Changes in the Corneal Endothelium

Sponsor: ARVO

Role: PI

Total Award: \$5,000 direct costs

Dr. Amy Ryan

Title: Generation of a Ferret Model of LAM

Sponsor: LAM

Role: PI

Total Award: \$50,000 direct costs

Title: Unraveling Isoform Specific Roles of Akt in CF Airway Inflammation and Repair

Sponsor: NIH

Role: PI

Total Award: \$ 2,428,966 direct costs, \$1,328,363 indirect costs

Dr. Amy Ryan & Dr. Ling Yang

Title: Investigating Pancreatic Cellular Interactions in Early CF-Related Diabetes Pathogenesis

Sponsor: NIH

Role: Co-PIs

Total Award: \$2,439,725 direct costs, \$1,344,063 indirect costs

Dr. Raji Shyam

Title: Evaluating The Extrinsic and Intrinsic Factors Regulating Corneal Endothelial Homeostasis

Sponsor: Genentech

Role: PI

Total Award: \$100,000 direct costs

NEW PUBLICATIONS

Dr. Masataka Kawai

Kawai M. (2025). The elementary step that generates force and sinusoidal analysis in striated muscle fibers. *Journal of muscle research and cell motility*, 46(2), 83–118.

<https://doi.org/10.1007/s10974-025-09693-z>

Dr. Bhagaban Mallik (Frank Lab)

Mallik, B., Bhat, S. A., Wang, X., & **Frank, C. A.** (2025). Mitochondrial Complex I and ROS control neuromuscular function through opposing pre- and postsynaptic mechanisms. *PLoS biology*, 23(9), e3003388. Advance online publication.

<https://doi.org/10.1371/journal.pbio.3003388>

Dr. Amy Ryan

Koc-Gunel, S., **Ryan, A. L.**, Winter, M., & Wagner, T. O. F. (2025). FGFR4 p.Gly388Arg polymorphism in PBMCs of LAM patients: findings of a pilot study. *Frontiers in medicine*, 12, 1544910. <https://doi.org/10.3389/fmed.2025.1544910>

Dr. Raji Shyam

Pattan, H. F., Murugan, S., **Shyam, R.**, & Tankam, P. (2025). Enabling In Vivo Longitudinal Evaluation of Descemet's Membrane Thickness in Wild-type and FECD Mice Using Self-Referenced Optical Coherence Microscopy. *Investigative ophthalmology & visual science*, 66(12), 60. <https://doi.org/10.1167/iovs.66.12.60>

Dr. Sam Stephens & Dr. Ling Yang

Blom, S. E., Narsian, P. R., Behan-Bush, R. M., Ankrum, J. A., **Yang, L., & Stephens, S. B.** (2025). Proinflammatory Cytokines Mediate Pancreatic β -Cell-Specific Alterations to Golgi Integrity via iNOS-Dependent Mitochondrial Inhibition. *Diabetes*, db250132. Advance online publication. <https://doi.org/10.2337/db25-0132>

Dr. Eric Van Otterloo

Leinheiser, A. K., Nguyen, T. T., Henry, K. M., Rosales, M., **Van Otterloo, E.**, & Grueter, C. E. (2025). Heterozygous Med13l mice recapitulate a developmental growth delay and craniofacial anomalies seen in MED13L syndrome. *Developmental dynamics : an official publication of the American Association of Anatomists*, 10.1002/dvdy.70079. Advance online publication. <https://doi.org/10.1002/dvdy.7007>

Please share news of your activities with Madison O'Leary for publication in the quarterly Points of Interest Newsletter. This information is circulated throughout the Department, as well as published on the ACB Department website.