

POINTS OF INTEREST

October-December 2023

HONORS AND AWARDS

Emily Adelizzi (Dunnwald Lab)

Emily won second place for her poster presentation at the Society for Craniofacial and Genetics and Developmental Biology Annual Meeting.

Mia Bruno (Dunnwald Lab)

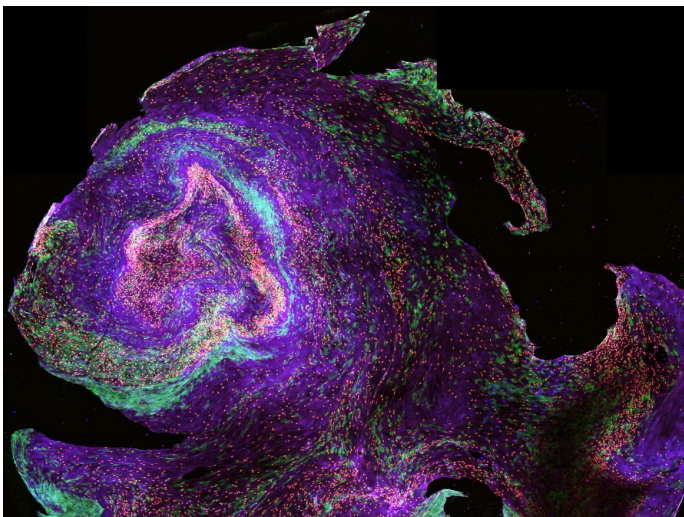
Mia won first place for her poster presentation at the Fall Undergraduate Festival at the University of the Virgin Islands.

Tim Nguyen (Van Otterloo Lab)

Tim received the Best Graduate Student Presentation for his presentation titled “It Takes Two to Tango: TFAP2 Paralogs in a Frontonasal Dysplasia-Related Neural Crest Gene Regulatory Network,” at the Society for Craniofacial Genetics & Developmental Biology 46th Annual Meeting.

Dr. Weam Shahin (Engelhardt Lab)

Dr. Shahin won first place with the following image for the Iowa Arts in Science (IAS) contest.



The following were recognized for reaching a milestone in their service to the ACB Department

Five Years

Dan Buckingham, Ryan Glesner, Meihui Luo, Dr. Jesse Riordan

Ten Years

Dr. Nathan Holton

Fifteen Years

Dr. Fang Lin and Dr. Tom Rutkowski

APPOINTMENTS & SPECIAL RECOGNITION

Emily Adelizzi (Dunnwald Lab)

Emily was appointed as the new graduate student representative for faculty.

Dr. Thomas Rutkowski

Dr. Rutkowski has been appointed as a permanent member of the Hepatobiliary Pathophysiology (HBPP) NIH study section.

Dr. Rutkowski has been appointed to the Board of Reviewing Editors at eLife.

Avery Stricker

Avery was admitted to the University of Iowa College of Dentistry.

Please see an appreciation note from Dr. Robert Tallistch, Emeritus Professor of Biology from Augustana college regarding the recent Deeded Body Memorial Service:

“Even though I told you in person, I feel it needs to be said again. Thank you for the wonderful memorial service for the donors to the Deeded Body Program at the University of Iowa Carver School of Medicine. I have attended numerous of these services in the past and, like the others, this one again reinforced my decision to be a donor to your program.

As one that served as an anatomist at my institution for 43 years, I have dissected numerous donors, as have my students. The words of the students and yours, Dr. Hoffmann, reinforced why I loved my work and interaction with my students and with the donors they and I dissected. Thank you for the compassion and love that you and the anatomy faculty clearly have for their work and for the donors, and it all starts with you and your staff Brian.”

ACB DEI COMMITTEE

Friday Coffee and Cake 9:00-10:00 AM

To continue building a strong ACB community, you are all invited to stop by every Friday morning between 9:00-10:00 AM for a cup of coffee and maybe some treats in the ACB Breakroom. This weekly mingling is an opportunity for all of us to know each other better and share life and science experiences.

Meditation Room

Daily blocks of time will be dedicated to meditation/prayer/quiet moments in the 1-430 conference room (11:30 AM – 1:00 PM and 2:00 PM - 3:30 PM until daylight saving).

UPCOMING EVENTS

ACB Annual Holiday Party

The ACB Annual Holiday Party will take place on Friday, February 9th, from 6:00 PM – 9:30 PM at the Iowa City ReUnion Brewery (113 East College Street)

SPECIAL PRESENTATIONS

Emily Adelizzi (Dunnwald Lab)

Adelizzi, E., Singh, S., Heffner, C., Murray, S., Cornell, R. A., & Dunnwald, M. “The periderm protein Zfp750 is required for murine digit fusion but is dispensable for palatogenesis,” Society for Craniofacial and Genetics and Developmental Biology Annual Meeting, October 2023.

Dr. Martine Dunnwald

Dr. Dunnwald represented the BSP program at the California Diversity Forum at the University of San Francisco.

Dr. Dunnwald was invited to give a seminar titled “Functional Validation of Cleft Associated Genes,” at the University of San Francisco’s Craniofacial Seminar Series, October 2023.

Dr. John Engelhardt

“Lunar-CFTR mRNA Improve Mucociliary Clearance in CF Ferrets” presented at the North American Cystic Fibrosis Conference, Phoenix, AZ, November 2023

Invited Conference Participation at Emily’s Entourage 2023 Scientific Symposium entitled “The Promise of Gene-Based Therapies for Cystic Fibrosis,” Philadelphia, PA, December 2023

Served on the University of Alabama External Advisory Committee, Review of Rat Resource Center and UAB CF Research Center, October 2023

Dr. Marc Pizzimenti

Rosenbaum, M.E. & Pizzimenti, M.A. Interactive Lecturing Workshop. Teaching Scholars Program, CCOM (2023)

Dr. Xingshen Sun (Engelhardt Lab)

“Effects of Ivacaftor on Pancreas in CFTR-G551D Ferrets” presented at the North American Cystic Fibrosis Conference, Phoenix, AZ, November 2023

“Effects of Ivacaftor on Exocrine Pancreas Regeneration in CFTR-G551D Ferrets” FOE Diabetes Research Center Annual Retreat, the University of Iowa, November 2023

Tim Nguyen (Van Otterloo Lab)

“It Takes Two to Tango: TFAP2 Paralogs in a Frontonasal Dysplasia-Related Neural Crest Gene Regulatory Network,” Society for Craniofacial Genetics & Developmental Biology 46th Annual Meeting, October 2023.

NEW GRANT AWARDS

Campbell Mitvalsky (Dunnwald Lab)

Campbell received an Undergraduate Research Supply Grant from the Office of Undergraduate Research at the University of Iowa.

Riley Leonard (Amendt Lab)

Riley waws awarded the Ballard & Seashore Dissertation Fellowship for the Spring 2024 semester.

Nikki Recka (Van Otterloo Lab)

Samantha was appointed to the T90/R90 training program in oral health research at the College of Dentistry.

SUBMITTED GRANTS

Dr. Martine Dunnwald

Title: Skin Color Disparities in Microneedling for Drug Delivery

Sponsor: NIH

Role: PI

Total Award: \$1,697,800 direct costs, \$904,002 indirect costs

Title: Formation and Function of the Periderm
Sponsor: NSF
Role: PI
Total Award: \$954,847.14 direct costs, \$482,039.10 indirect costs

Dr. John Engelhardt

Title: Investigating Cellular Senescence in Cystic Fibrosis Ferrets with Non-tuberculous Mycobacterial Lung Infection
Sponsor: Oklahoma State University
Role: PI
Total Award: \$123,513 direct costs, \$14,822 indirect costs

Emily Liu (Ryan Lab)

Title: Investigating the Role of Hic-5 (TGFB11) in Lymphangiomyomatosis (LAM)
Sponsor: NSF
Role: PI
Total Award: \$138,000 direct costs

Uchechi Okorafor (Young Lab)

Title: 1240336 - National Ataxia Foundation Graduate Research Fellowship
Sponsor: National Ataxia Foundation
Role: PI
Total Award: \$25,000 direct costs

Dr. Amy Ryan

Title: The Mechanistic Role of HIC-5 in the Pathogenesis of Lymphangiomyomatosis.
Sponsor: The Orphan Disease Center
Role: PI
Total Award: \$64,591 direct costs, \$6,459 indirect costs

Dr. Sam Young

Title: Development of a Novel Viral Vector Gene Therapy Approach to treat CACNA1A Cerebellar Disorders
Sponsor: The Orphan Disease Center
Role: PI
Total Award: \$67,029 direct costs, \$6,703 indirect costs

Dr. Miao Yu

Title: Regulation of distal basal cells in terminal and respiratory airway regeneration

Sponsor: University of Illinois at Chicago
Role: PI
Total Award: \$734,580 direct costs, \$407,692 indirect costs

NEW PUBLICATIONS

Dr. John Engelhardt Lab

Ning K, Zhang X, **Feng Z**, Hao S, Kuz CA, Cheng F, **Park SY**, McFarlin S, Engelhardt JF, **Yan Z**, Qui J. Inhibition of DNA-dependent protein kinase catalytic subunit boosts rAAV transduction of polarized human airway epithelium. *Molecular Therapy: Methods & Clinical Development*, 2023, 31:101115. PMID:10568418 DOI: 10.1016/j.omtm.2023.101115

Dr. Andy Frank

Mallik, B., & Frank, C. A. (2023). Is creatine a CNS neurotransmitter?. *eLife*, 12, e91824. <https://doi.org/10.7554/eLife.91824>

Dr. Darren Hoffmann

Fuller MJ, Mix MR, Voigt E, **Hoffmann DS**, Geyer PK. Organizing guidelines for accessible and inclusive research retreats. *Trends in Biochemical Sciences*; 2024. (Accepted; in-press) <https://doi.org/10.1016/j.tibs.2023.12.003>.

Colclough, T. M. & Howitz, W. J. & Mann, D. & Kearns, K. & **Hoffmann, D. S.**, (2023) "Meanings of community: Educational developers experience care, satisfying contributions, and belonging in a collaboration across institutions", *To Improve the Academy: A Journal of Educational Development* 42(2): 9. DOI: <https://doi.org/10.3998/tia.2637>

Dr. Tom Rutkowski Lab

Liu, K., Zhao, C., **Adajar, R. C.**, DeZwaan-McCabe, D., & **Rutkowski, D. T.** (2023). A beneficial adaptive role for CHOP in driving cell fate selection during ER stress. *EMBO Reports*. <https://doi.org/10.1101/2023.03.19.533325>

Dr. Amy Ryan Lab

Harriott NC, Chimenti MS, **Ryan AL**. MixOmics Integration of Biological Datasets Identifies Highly Correlated Key Variables of COVID-19 severity. *bioRxiv : the preprint server for biology. Forthcoming*. doi: <https://doi.org/10.1101/2023.09.14.557558>.

Harriott, N. C., & Ryan, A. L. (2023). Proteomic profiling identifies biomarkers of COVID-19 severity. *Heliyon*, 10(1), e23320. <https://doi.org/10.1016/j.heliyon.2023.e23320>

Quiroz, E. J., Kim, S., **Gautam, L. K.**, Borok, Z., Kintner, C., & **Ryan, A. L.** (2023). RBL2 represses the transcriptional activity of Multicilin to inhibit multiciliogenesis.

Accepted: *Cell Death and Disease*, 2023.08.04.551992.
<https://doi.org/10.1101/2023.08.04.551992>

Roth D, Tuğçe Şahin A, Ling F, Senger CS, **Quiroz EJ**, **Calvert BA**, Van Der Does A, Güney TG, Tepho N, Glasl S, Van Schadewijk A, Von Schledorn L, Olmer R, Kanso E, Nawroth JC, **Ryan AL**. Structure-function relationships of mucociliary clearance in human airways. *bioRxiv : the preprint server for biology*. 2023 December. doi: <https://doi.org/10.1101/2023.12.24.572054>.

Dr. Marc Pizzimenti

Pizzimenti, M.A., Zhang, X., Goetz, J.E., & Saha, P.K. Preserving trabecular bone structure in gross specimens with paraffin wax for the study of osteoporosis. *J Plastination (Accepted 11/10/2023)*

Dr. Eric Van Otterloo Lab

Nguyen TT*, Mitchell JM*, **Kiel MD**, **Kenny CP**, Li H, Jones KL, Cornell RA, Williams TJ, Nichols JT, **Van Otterloo E**. TFAP2 paralogs regulate midfacial development in part through a conserved ALX genetic pathway. *Development*. 2024 Jan 1;151(1):dev202095. doi: 10.1242/dev.202095. PMID: 38063857. *Co-first authorship.

Dr. Ziyang Yan (Engelhardt Lab)

Hao, S., Ning, K., Kuz, C. A., Xiong, M., Zou, W., **Park, S. Y.**, McFarlin, S., **Yan, Z.**, & Qiu, J. (2023). SARS-CoV-2 infection of polarized human airway epithelium induces necroptosis that causes airway epithelial barrier dysfunction. *Journal of medical virology*, 95(9), e29076. <https://doi.org/10.1002/jmv.29076>

Ning K, Zhang X, **Feng Z**, Hao S, Kuz CA, Cheng F, **Park SY**, McFarlin S, Engelhardt JF, **Yan Z**, Qui J. Inhibition of DNA-dependent protein kinase catalytic subunit boosts rAAV transduction of polarized human airway epithelium. *Molecular Therapy: Methods & Clinical Development*, 2023, 31:101115. PMID:10568418 DOI: 10.1016/j.omtm.2023.101115

Hao, S., Zhang, X., Ning, K., **Feng, Z.**, **Park, S. Y.**, Aksu Kuz, C., McFarlin, S., Richart, D., Cheng, F., Zhang, E. Y., Zhang-Chen, A., **Yan, Z.**, & Qiu, J. (2023). Identification of host essential factors for recombinant AAV transduction of the polarized human airway epithelium. *Journal of virology*, 97(12), e0133023. <https://doi.org/10.1128/jvi.01330-23>

Yan Z. (2023). In vivo genome editing shows promise for treating pulmonary diseases. *Molecular therapy : the journal of the American Society of Gene Therapy*, 31(12), 3361. <https://doi.org/10.1016/j.ymthe.2023.11.004>

Dr. Ling Yang

Sebag SC, Qian Q, Upara C, Ding Q, Cao H, Hong L, Ling Yang* (2024) A Medium Chain Fatty Acid, 6-hydroxyhexanoic acid (6-HHA), Protects Against Obesity and Insulin Resistance. *Acta Pharmaceutica Sinica B*. Accepted

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