



# Points of Interest

October – December 2020

## Honors and Awards



### **Chandler Jensen-Cody (Interdisciplinary Graduate Student)**

#### **Seashore and Ballard Dissertation Fellowship**

Received for his focused work on understanding the proteins and molecular pathways that govern basal cell function in the context of airway homeostasis and during injury repair.



### **Maureen Lamb (Interdisciplinary Graduate Student)**

#### **Defining the Functions of the Actin Bundling Protein Fascin In Invasive, Collective Cell Migration**

Successfully defended her above titled thesis.



### **Bertha Martin (Cell & Developmental Biology Graduate Student)**

#### **Defining the Pathophysiology Of C3 Glomerulopathy – An Ultra-Rare Complement-Mediated Renal Disease**

Successfully defended her above titled thesis.



# Appointments & Special Recognition



## Kathleen Andersen

- Recognition by the **Iowa Association of Nurse Anesthetists**:
  - “For your dedication, support, and selfless service to the Certified Registered Nurse Anesthetists’ profession in Iowa. Your personal efforts have contributed immensely to the unprecedented scope of practice that Iowa CRNAs have today. Your assistance has truly been invaluable thus setting the Gold Standard for CRNA practice.”  
September 2020



## Dr. Doug Bartels

- Appointed as Executive Director for the National Ferret Research and Resource Center, 1 October 2020



## Dr. Tina Tootle

- Appointed to the Editorial Board of *Genetics*
- Guest editor for Special Issue: Reviews in Actin Cytoskeletal Dynamics. *Biology* (Basel)



## Dr. Ling Yang

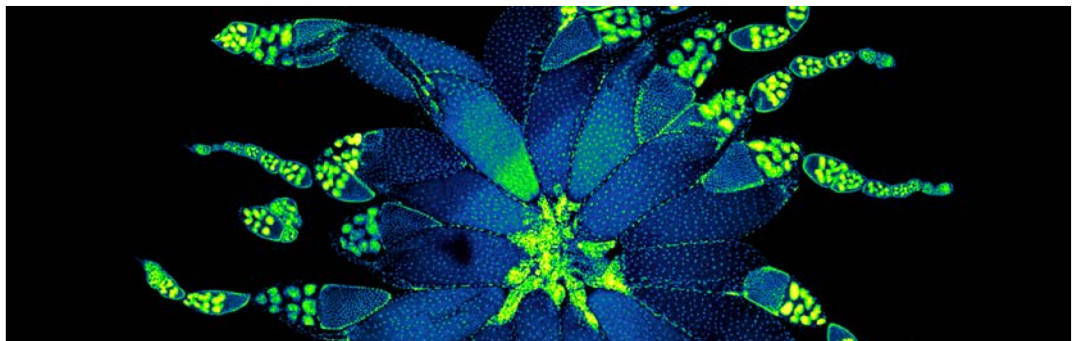
- Appointment as an Editorial Board member of *Acta Pharmaceutica Sinica B* (APSB)

# Special Presentations



## Dr. John Engelhardt

- 10/20 - “Ferret Models of Cystic Fibrosis and CFTR Function” (Session entitled: CFTR-Directed Therapy Experiences in Animal Models”) presented at the NACFC-Virtual Livestream Symposium
- 10/20 - “Gene Editing to Understand CF and Identify Target Cells for in Vivo Correction” (Session entitled: “State of the Art: Gene Editing Techniques for Understanding & Treatment of Disease”) presented at the NACFC-Virtual Livestream Symposium
- 12/20 - “Genetic Modeling in the Ferret to Study Disease Pathophysiology, Stem Cell Biology and Genetic Therapies” presented at the Trans-NIH Animal Model Validation Workshop Series (Virtual)
- 12/20 - “Novel Ferret Model at AAT Deficiency”, presented at the 20<sup>th</sup> Gordon L. Snider Critical Issues Workshop of the Alpha-1 Foundation “The Promise of Gene -based interventions of Alpha-1 Antitrypsin Deficiency” (Virtual)



# New Grant Awards



## **Dr. Martine Dunnwald**

**Title:** Functional assessment of *ARHGAP29* human genetic variants in vitro

**Sponsor:** American Association for Anatomy

**Project Period:** 1/1/2021 – 12/31/2021

**Total Award:** \$25,000



## **Dr. John Engelhardt**

**Title:** Development of Cystic Fibrosis Models in the Ferret

**Sponsor:** Cystic Fibrosis Foundation

**Grant/Contract #:** ENGELH08XX0

**Project Period:** 06/01/08-09/30/23

**Total Award All Three Years:** \$4,806,064

**Title:** Regenerative Properties of Airway Submucosal Gland Stem Cells Niches (Path to a Cure – Epithelial Stem Cell Consortium 2020)

**Sponsor:** Cystic Fibrosis Foundation

**Grant/Contract #:** Forthcoming

**Project Dates:** 02/01/21-01/31/24

**Total Award All Three Years:** \$923,998



## **Dr. Tom Rutkowski**

**Title:** The role of TCA dependent NADPH production in endoplasmic reticulum homeostasis and susceptibility to NASH

**Sponsor:** FOEDRC

**Project Period:** 9/2020 – 9/2021 (with possibility of a 1-year renewal)

**Total Award:** \$50,000

# New Publications



## **Dr. Martine Dunnwald**

### **“Murine excisional wound healing model and histological morphometric wound analysis.”**

Rhea, L., Dunnwald, M. *J Vis Exp* Aug 21 (162). doi: 10.3791/61616. PMID: 32894272



## **Dr. John Engelhardt**

### **“Derivation of induced pluripotent stem cells from ferret somatic cells.”**

Gao, J., Petraki, S., Sun, X., Brooks, L.A., Lynch, T.J., Hsieh, C.L., Elteriefi, R., Lorenzana, Z., Punj, V., Engelhardt, J.F., Parekh, K.R., and Ryan, A.L. 2020. *Am J Physiol Lung Cell Mol Physiol* 318:L671-L83. pmcid:PMC7191474

### **“Detargeting Lentiviral-Mediated CFTR Expression in Airway Basal Cells Using miR-106b.”**

Choi SH, Reeves RE, Romano Ibarra GS, Lynch TJ, Shahin WS, Feng Z, Gasser GN, Winter MC, Evans TIA, Liu X, Luo M, Zhang Y, Stoltz DA, Devor EJ, Yan Z, Engelhardt JF. *Genes (Basel)*. 2020 Oct 6;11(10). doi: 10.3390/genes11101169. PubMed PMID: 33036232; PubMed Central PMCID: PMC7601932

### **“Repeat Dosing of AAV2.5T to Ferret Lungs Elicits an Antibody Response that Diminishes Transduction in an Age-Dependent Manner.”**

Tang Y, Yan Z, Lin S, Huntemann ED, Feng Z, Park SY, Sun X, Yuen E, Engelhardt JF. *Mol Ther Methods Clin Dev*. 2020 Dec 11;19:186-200. doi: 10.1016/j.omtm.2020.09.008. eCollection 2020 Dec 11. PubMed PMID: 33209961; PubMed Central PMCID: PMC7648090



## **Dr. Nathan Swailes**

### **“From Scope to Screen: The Evolution of Histology Education’ in Biomedical Visualisation Vol 6.”**

Chapman JA., Lee LMJ and Swailes, N., (2020), *Advances in Experimental Medicine and Biology*, Rea PM., (ed.) 1260, pp. 75-107, DOI: [10.1007/978-3-030-47483-6\\_5](https://doi.org/10.1007/978-3-030-47483-6_5)

# New Publications



## Dr. Tina Tootle

### **“Fascin in cell migration: more than just an actin bundling protein.”**

Lamb M and TL Tootle. (2020). Review. *Biology (Basel)*. 9(11):403. PMID: 33212856

### **“Nuclear Actin.”**

Green NM, Kimble GC, Talbott DE and TL Tootle. (Accepted). Invited review. *eLS*.



## Dr. Ziyang Yan

### **“Detargeting Lentiviral-Mediated CFTR Expression in Airway Basal Cells Using miR-106b.”**

Choi SH, Reeves RE, Romano Ibarra GS, Lynch TJ, Shahin WS, Feng Z, Gasser GN, Winter MC, Evans TIA, Liu X, Luo M, Zhang Y, Stoltz DA, Devor EJ, Yan Z, Engelhardt JF. *Genes (Basel)*. 2020 Oct 6;11(10). doi: 10.3390/genes11101169. PubMed PMID: 33036232; PubMed Central PMCID: PMC7601932

### **“Long-Term Modeling of SARS-CoV-2 Infection of In Vitro Cultured Polarized Human Airway Epithelium.”**

Hao S, Ning K, Kuz CA, Vorhies K, Yan Z, Qiu J. *mBio*. 2020 Nov 6;11(6). doi: 10.1128/mBio.02852-20. PubMed PMID: 33158999; PubMed Central PMCID: PMC7649230

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Tang Y, Yan Z, Lin S, Huntemann ED, Feng Z, Park SY, Sun X, Yuen E, Engelhardt JF. *Mol Ther Methods Clin Dev*. 2020 Dec 11;19:186-200. doi: 10.1016/j.omtm.2020.09.008. eCollection 2020 Dec 11. PubMed PMID: 33209961; PubMed Central PMCID: PMC7648090