



Ohio Physiological Society
33rd Annual Meeting
University of Cincinnati
September 28–29, 2018

OPS2018 Program

Friday, September 28	
<i>University of Cincinnati, Medical Campus–East CARE/Crawley Building and Medical Sciences Building Enter from 3230 Eden Avenue (opposite Eden Garage) or 231 Albert Sabin Way</i>	
2:00–5:00 pm	Registration <i>Atrium, CARE/Crawley Building</i>
4:00 pm	Opening Remarks <i>Kowalewski Auditorium, Kowalewski Hall, 3255 Eden Avenue</i> Opening Remarks Bryan Mackenzie, PhD <i>OPS President</i> Welcome Address Melanie Cushion, PhD <i>Senior Associate Dean, Research UC College of Medicine</i> OPS2018 Keynote Address Chair: Sakthivel Sadayappan, PhD MBA Myocardial regeneration: Uncommon sense for common problems Mark A Sussman, PhD <i>San Diego State University</i>
5:45 pm	Reception <i>Atrium, CARE/Crawley Building</i>
6:45 pm	Banquet <i>Kaplan Reception Hall, CARE/Crawley Building</i>

Saturday, September 29

University of Cincinnati, Medical Campus–East

CARE/Crawley Building and Medical Sciences Building

Enter from 3230 Eden Avenue (opposite Eden Garage) or 231 Albert Sabin Way

8:00–9:00 am

Registration and Continental Breakfast

Atrium, CARE/Crawley Building

9:00 am

Session 1

Kowalewski Auditorium, Kowalewski Hall, 3255 Eden Avenue

Welcome Comments

James P Herman, PhD

Chair, Department of Pharmacology & Systems Physiology

UC College of Medicine

Cardiovascular Physiology and Translational Science

Chairs: Sakthivel Sadayappan, PhD MBA and Jo El Schultz, PhD

1. Hydrogel mediated delivery of siRNA cocktail results in adult cardiomyocyte cell cycle re-entry and cardiac repair post-myocardial infarction
Perwez Alam (*Postdoctoral Fellow*), Rafeeq PH Ahmed, and Onur Kanisicak | *University of Cincinnati*
2. m6A mRNA methylation is a novel regulator of cardiac homeostasis and hypertrophy
Lisa E Dorn (*Graduate Student*), Jop H van Berlo, Chuan He, and Federica Accornero | *The Ohio State University*
3. Fibrinogen depletion attenuates angiotensin II-induced abdominal aortic aneurysm
Hannah Russell (*Graduate Student*), Keith Saum, Alexandra C Sundermann, Shannon M Jones, Anders Wanhainen, Todd L Edwards, Lori A Holle, Alisa S Wolberg, Matthew J Flick, and A Phillip Owens | *University of Cincinnati*

Student Data Blitz 1

Azucenas	Gawali	Hussein	Murdock	Sandella
Conrad	Hallak	Jahanpanah	Norman	Stogsdill
Crocker	Hanyu	Jones	Rakoczy	Thanekar
Emmert	Ho	Kim	Ramesh	Tran
Fershtman	Holokai	Lakes	Rose	

10:30 am

Refreshments

Atrium, CARE/Crawley Building

10:45 am

Poster Session 1

Presenters: Odd-numbered posters

Atrium, CARE/Crawley Building and Medical Sciences Building (Level E)

12:00 pm

Lunch

Kaplan Reception Hall, CARE/Crawley Building

1:00 pm	<p>Session 2 <i>Kowalewski Auditorium, Kowalewski Hall, 3255 Eden Avenue</i></p> <p>Metal Metabolism and Epithelial Transport Chair: Christopher M Gillen, PhD</p> <p>4. Zinc deficiency induces hypertension by promoting renal Na⁺ reabsorption Clintoria R Williams (<i>Assistant Professor</i>), Monisha Mistry, Aswathy M Cheriyan, Jasmine M Williams, Meagan K Naraine, Carla L Ellis, Rickta Mallick, Abinish Mistry, Jennifer L Gooch, Benjamin Ko, and Robert S Hoover <i>Wright State University</i></p> <p>5. Ablation of Na⁺/H⁺ exchanger-3 prevents iron loading in the Hfe mouse model of hereditary hemochromatosis Sydney L Stone (<i>Undergraduate Student</i>), T Alex Ruwe, John P Bonamer, Kyle R Vieth, Corbin R Azucenas, Ali Shawki, and Bryan Mackenzie <i>University of Cincinnati</i></p> <p>Student Data Blitz 2</p> <table border="0"> <tr> <td>Alogaili</td> <td>Engevik</td> <td>Jay</td> <td>Praljak</td> <td>Slone</td> </tr> <tr> <td>Chakraborty</td> <td>Gill</td> <td>Jensen</td> <td>Rama</td> <td>Soska</td> </tr> <tr> <td>Choi</td> <td>Green</td> <td>Jiang</td> <td>Ramicone</td> <td></td> </tr> <tr> <td>Danchine</td> <td>Hosawi</td> <td>Milton</td> <td>Ruwe</td> <td></td> </tr> </table>	Alogaili	Engevik	Jay	Praljak	Slone	Chakraborty	Gill	Jensen	Rama	Soska	Choi	Green	Jiang	Ramicone		Danchine	Hosawi	Milton	Ruwe	
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Danchine	Hosawi	Milton	Ruwe																		
2:00 pm	<p>Refreshments <i>Atrium, CARE/Crawley Building</i></p>																				
2:15 pm	<p>Poster Session 2 Presenters: Even-numbered posters <i>Atrium, CARE/Crawley Building and Medical Sciences Building (Level E)</i></p>																				
3:30 pm	<p>Session 3 <i>Kowalewski Auditorium, Kowalewski Hall, 3255 Eden Avenue</i></p> <p>Physiology from Adaptation to Z-Lines Chairs: Anil G Menon, PhD and Andrew A Voss, PhD</p> <p>6. Antarctic notothenioids, <i>Chaenocephalus aceratus</i> and <i>Notothenia coriiceps</i>, differ in stress signaling associated with acute warming Elizabeth Evans (<i>Graduate Student</i>) and Elizabeth Crockett <i>Ohio University</i></p> <p>7. Unraveling the complexities of cell cycle dynamics during stem cell differentiation Richard Ballweg (<i>Graduate Student</i>), Lee, Suengwon, Xiaonan Han, Philip Maini, Helen Byrne, Christian Hong, and Tongli Zhang <i>University of Cincinnati</i></p> <p>8. Selective knockdown of A2AR in CD8⁺ T cells using CD8-targeting nanoliposomes Hannah S Newton (<i>Graduate Student</i>), Michael J Arnold, Ameet Chimote, Trisha Wise-Draper, and Laura Conforti <i>University of Cincinnati</i></p> <p>9. Downstream proteins that facilitate sarcolemma membrane repair have potential as therapeutics for Duchenne muscular dystrophy Thomas A Kwiatkowski (<i>Graduate Student</i>), Aubrey Rose, Kevin McElhanon, Brian Paleo, Eric X Beck, Sayak Bhattacharya, and Noah Weisleder <i>The Ohio State University</i></p>																				
4:30 pm	<p>Business Meeting and Awards <i>Kowalewski Auditorium, Kowalewski Hall, 3255 Eden Avenue</i></p>																				

Please visit the Graduate Programs information table!

Posters

Atrium, CARE/Crawley Building and Medical Sciences Building (Level E)

Poster Session 1 | 10:45 am – 12:00 pm | Presenters: Odd-numbered posters

Poster Session 2 | 2:15 – 3:30 pm | Presenters: Even-numbered posters

1	Pulmonary epithelial knockout of TSC1 results in alveolar simplification in mice Rahul Sandella ^{1,2} , Nikolaos M Nikolaidis ² , John C Ernst ² , Lori B Pitstick ² , HuiXing Wu ² , John G Noel ² , Jason C Woods ^{3,4} , Jinbang Guo ⁴ , Francis X McCormack ²
2	Dimethylarginine dimethylaminohydrolase (DDAH) siRNA knockdown in a human pulmonary vascular co-culture cell model Avante Milton, Hanadi Almazroue, Leif D Nelin, Jennifer K Trittman
3	Role of transcription factor Sox17 in the development of vertebrate digestive and respiratory systems Melissa MacDonald ^{1,2} , Scott Rankin ² , David Ludeke ² , Aaron Zorn ²
4	Intracellular calcium mobilization requires TFF2 activation of CXCR4 and EGFR to promote epithelial repair Kristen A Engevik, Hikaru Hanyu, Andrea L Matthis, Eitaro Aihara, and Marshall H Montrose
5	Effect of <i>Helicobacter pylori</i> chemotaxis on gastric epithelial repair Hikaru Hanyu ¹ , Andrea L Matthis ¹ , Kristen A Engevik ¹ , Karen M Otteman ² , Marshall H Montrose ¹ , Eitaro Aihara ¹
6	Hedgehog signaling upregulates PD-L1 expression and promotes gastric cancer progression Jayati Chakrabarti ¹ , Loryn Holokai ² , LiJyun Syu ⁶ , Nina G Steele ⁷ , Julie Chang ³ , Jiang Wang ⁴ , Syed Ahmed ⁵ , Andrzej Dlugosz ^{6,7} , and Yana Zavros ¹
7	Heterogeneity of cell-cycle times within the intestinal crypts Yuhui Cao ^{1,2} , Suengwon Lee ¹ , and Christian I Hong ^{1,2}
8	Development of the intestinal circadian clock and its role in the response to <i>Clostridium difficile</i> toxin B Andrew E Rosselot ¹ , Toru Matsu-ura ¹ , Taylor R Broda ² , Nambirajan Sundaram ² , Michael A Helmrath ² , James M Wells ² , Sean R Moore ^{2,3} , and Christian I Hong ^{1,2}
9	Functional properties of mouse ferroportin, a cellular iron-export protein Corbin R Azucenas ^{1,2} , John P Bonamer ^{1,2} , T Alex Ruwe ^{2,3} , Kyle R Vieth ³ , Bo Qiao ⁴ , Tomas Ganz ⁴ , Elizabeta Nemeth ⁴ , and Bryan Mackenzie ^{1,2,3}
10	Hepcidin interaction with ferroportin in the <i>Xenopus</i> oocyte expression system T Alex Ruwe ^{1,2} , Kyle R Vieth ² , Sharraya Aschemeyer ³ , Bo Qiao ³ , Tomas Ganz ³ , Elizabeta Nemeth ³ , Bryan Mackenzie ^{1,2}
11	Oligomerization of ferroportin and the mechanism of autosomal dominance in ferroportin disease John P Bonamer ^{1,2} , T Alex Ruwe ^{1,3} , Corbin Azucenas ^{1,2} , Bo Qiao ⁴ , Kyle R Vieth ¹ , Tomas Ganz ⁴ , Elizabeta Nemeth ⁴ , Bryan Mackenzie ^{1,2,3}
12	TRPM7 channel inactivation Tetyana Zhelay and J Ashot Kozak
13	TRPP2 (PC2)-dependent channel of renal primary cilia also requires TRPM3 Gillian S Bryant ¹ , Steven J Kleene ¹ , Brian J Siroky ² , Julio A Landero-Figueroa ¹ , Bradley P Dixon ³ , Nolan W Pachciarz ² , Lu Lu ² , Nancy K Kleene ¹

14	Expression pattern and sequence analysis of <i>Aedes aegypti</i> sodium-dependent cation-chloride cotransporters Christopher M Gillen ¹ , Grace F Riley ¹ , John C Crow ¹ , Adrienne C DeBrosse ¹ , Mary E Sawyer ¹ , Megha Kalsi ² , Peter M Piermarini ²
15	Acetazolamide inhibits ammoniogenesis and prevents the correction of metabolic acidosis in rat Perwez Alam, Sihame Amlal and Hassane Amlal
16	High-protein diet and potassium depletion exacerbate ammonia synthesis and renal hypertrophy in rats with type I diabetes Sihame Amlal ^{1,2} , Perwez Alam ² and Hassane Amlal ²
17	Disparate effects of antibiotics on hypertension Sarah Galla ¹ , Saroj Chakraborty ¹ , Xi Cheng ¹ , Jiyoun Yeo ¹ , Blair Mell ¹ , Helen Zhang ¹ , Anna V Mathew ² , Matam Vijay-Kumar ¹ , and Bina Joe ¹
18	Salt-responsive metabolite, β-hydroxybutyrate, attenuates hypertension Saroj Chakraborty ¹ , Sarah Galla ¹ , Xi Cheng ¹ , Jiyoun Yeo ¹ , Blair Mell ¹ , V Singh ¹ , BS Yeoh ¹ , P Saha ¹ , Anna V Mathew ² , Matam Vijay-Kumar ¹ , Bina Joe ¹
19	Effect of osmotic mini-pump implantation on hypertension induced by chronic intermittent hypoxia Kajal Kamra ¹ , Ryan J Rakoczy ¹ , Richard JA Wilson ² , and Christopher N Wyatt ¹
20	Effect of AT1 receptor on renal and urinary biomarkers of acute kidney injury in 2K1C model of renovascular hypertension Sanjeev Dhakal, Anhar Hosawi, Laale F Alawi, Nadja Grobe, Khalid M Elased
21	Effect of sodium glucose co-transporter 2 (SGLT-2) inhibitor on the urinary shedding of ACE2 and neprilysin (NEP) in db/db diabetic mice Unmesha Thanekar, Rupinder Gill, Sanjeev Dhakal, Anhar Hosawi, and Khalid M Elased
22	Effect of insulin on renal and urinary shedding of biomarkers of diabetic kidney disease Rupinder K Gill, Esam Salem, Nadja Grobe, and Khalid M Elased
23	Circadian rhythm regimen combats type 2 diabetes in 2 subjects: Could disease progression be caused by a positive feedback loop? Kathleen Broomall ¹ , Avi Milgrom ²
24	Hepatic HAX-1 inactivation improves insulin sensitivity and mitochondrial energetics in mice Fawzi C Alogaili ¹ , Sivaprakasam Chinnarasu ² , Anja Jaeschke ² , Evangelia G Kranias ¹ , and David Y Hui ²
25	Global dysfunction of low-density lipoprotein receptor related protein-1 (LRP1) exacerbates diet-induced obesity and insulin resistance in mice Emily M Igel ¹ and David Y Hui ²
26	Apolipoprotein E receptor-2 deficiency impairs dendritic cell migration and efferocytosis Patrick Wolfkiel ¹ , Anja Jaeschke ² , Yan Ma ² , and David Y Hui ²
27	Human antigen R (HuR) regulates brown adipose tissue function Sarah R Anthony ¹ , Lindsey Lanzillotta ¹ , McKenzie Crist ¹ , Adrienne Guarnieri ¹ , Lisa Green ¹ , Sam Slone ¹ , Shannon Jones ¹ , Robert N Helsley ¹ , Jonathan M Brown ² , Mete Civelek ³ , A Phillip Owens ¹ , and Michael Tranter ¹
28	Effects of omega-3 and omega-6 fatty acids on NO and IL-6 cytokine concentrations in murine macrophages Veronika Danchine and Cristina Caldari-Torres

29	Developing a method of co-incubation of macrophages and adipocytes to evaluate cellular communication Jordan Beck and <u>Cristina Caldari-Torres</u>
30	A novel compound, D-CYSee, reverses the deleterious effects of opioids Monica Ghosh, Derek Damron
31	Synergistic depression of breathing due to concurrent ethanol and opioid use is centrally mediated Kajal Kamra, Yoon-Jae Yi, Christopher N Wyatt, <u>Ryan J Rakoczy</u>
32	Increasing or decreasing the excitability of V2a neurons activates accessory respiratory muscles Victoria N Jensen ¹ , Kari Seedle ⁴ , Sarah M Turner ⁴ , Steven A Crone ^{2,3,4}
33	Role of afferent innervation in neuromuscular contractures Brendan Ho ^{1,2} , Sia Nikolau ² , Liangjun Hu ² , and Roger Cornwall ²
34	Sialic acid therapy and gene therapy in a GNE myopathy model: Visualizing the endpoints Kelly E Hardin ^{1,4} and Paul T Martin ^{2,3}
35	Mechanisms of muscle stem cell fusion in muscular dystrophy Michael J Petransy ^{1,2} , Douglas P Millay ²
36	Survival of satellite cells underlies dystrophic skeletal muscle remodeling in the mouse Sarah S Han ^{1,2} , Justin G Boyer ^{2,3} , Jeffery D Molkentin ^{2,3}
37	Effects of altering plasma membrane lipid composition through dietary approaches on muscle membrane repair capacity Diana Hallak, Thomas A Bodnar Kwiatkowski, Kevin McElhanon, Brian Paleo, Eric X Beck, and Noah Weisleder
38	Membrane repair defects in the pathogenesis of myositis Kevin E McElhanon ¹ , Nicholas Young ² , Jeffrey Hampton ² , Eric X Beck ¹ , Zarife Sahenk ³ , Rohit Aggarwal ⁴ , Chester V Oddis ⁴ , Wael N Jarjour ² , Noah Weisleder ¹
39	Specific poloxamers increase membrane repair in dystrophic muscle fibers in a cell type dependent manner Aubrey L Rose, Thomas A Bodnar, Sayak Bhattacharya, Kevin McElhanon, Brian Paleo, Ana Capati, Eric X Beck, and Noah Weisleder
40	Dissecting the critical role of slow skeletal myosin binding protein-C in striated muscle function James W McNamara, Taejeong Song, Jennifer Schwanekamp, John N Lorenz, and Sakthivel Sadayappan
41	K⁺ and Rb⁺ affinities of the Na,K-ATPase α1 and α2 isozymes: An application of ICP-MS for quantification of Na⁺ pump kinetics in myofibers Natalie J Norman ^{1,2} , Hesamadin Hakimjavadi ^{1,2} , Cory A Stiner ^{4,5} , Tatiana L Radzyukevich ¹ , Jerry B Lingrel ³ , Julio A Landero Figueroa ^{1,4,5} , Judith A Heiny ^{1,2}
42	Characterization of postnatal cardiomyocyte maturation and proliferation in pigs Nivedhitha Velayutham, Christina M Alfieri, Emma J Agnew, Kyle W Riggs, R Scott Baker, Farhan Zafar, and Katherine E Yutzey
43	Classifying of arrhythmogenic cardiomyopathy-linked desmoplakin variants through molecular mechanisms of pathogenicity Tyler L Stevens ¹ , Heather Manning ¹ , Taylor Albertelli ² , Nathan T Wright ² , and Maegen Ackermann ¹

44	Inhibition of the RNA binding protein HuR reduces cardiac cell death following ischemia/reperfusion injury Samuel Slone ^{1,2} , Sarah R Anthony ¹ , Lisa Green ^{1,2} , Michelle L Nieman ² , John N Lorenz ² , and Michael Tranter ¹
45	Zebrafish Stx4 is crucial to the regulation of cardiac conduction during normal embryonic development and is an effective model of human disease Eliyahu Perl ^{1,2,3} , Padmapriyadarshini Ravisankar ³ , T LeighAnn VanDyke ³ , Carlos E Prada ^{5,6,7} , and Joshua S Waxman ^{3,4,5}
46	Nr2f1a is required to repress sinoatrial node identity within atrial cardiomyocytes in zebrafish Kendall E Martin ^{1,2} , Padmapriyadarshini Ravisankar ² , and Joshua S Waxman ²
47	Sectm1a deficiency aggravates endotoxin-induced inflammation and myocardial dysfunction Yutian Li ¹ , Shan Deng ^{1,5} , Xiaohong Wang ¹ , Nathan Robbins ² , Xingjiang Mu ¹ , Kobina Essandoh ¹ , Tianqing Peng ⁴ , Jack Rubinstein ² , David E Adams ³ , and Guo-Chang Fan ¹
48	Magnesium metal electrospun with polycaprolactone into nanofibrous fabrics has tissue reparative effects in vivo Xiaoxian An ¹ , Udhab Adhikari ⁵ , Tracy M Hopkins ² , Kevin J Little ^{2,4} , David B Hom ² , William R Heineman ³ , Narayan Bhattarai ⁵ , Sarah K Pixley ²
49	Chronic vagus nerve stimulation prevents sudden cardiac death in failing hearts Jeffrey S Crocker ^{1,2,3,4} , Daiana Vieira ^{3,4} , Kenneth G Parks ^{3,4} , Deeptankar DeMazumder ^{1,3,4}
50	Heart repair by CRISPR-induced cardiovascular progenitor cells Lin Jiang, Jialiang Liang, Wei Huang, Wenfeng Cai, Christian Paul, and Yigang Wang
51	Cardiac fibroblasts play a critical role during both fibrosis and reverse remodeling Shannon Jones ¹ , Hadi Khalil ² , Zhenling Liu ¹ , Yanli Zhao ¹ , Jeffery Molkenin ^{2,3} , and Onur Kanisicak ¹
52	Pharmacological inhibition of human antigen R (HuR) blunts fibroblast activation and cardiac fibrosis Lisa C Green ^{1,2} , Sarah R Anthony ¹ , Samuel Slone ^{1,2} , Lindsey Lanzillotta ¹ , John N Lorenz ² , Liang Xu ³ , and Michael Tranter ¹
53	PKA-phosphorylation of Hsp20 is associated with detrimental cardiac remodeling and early death George Gardner, Yutian Li, Guan-Sheng Liu, J Qian, Min Jiang, Wen-Feng Cai, Michael Tranter, Guo-Chang Fan, Jack Rubinstein, Evangelia Kranias
54	Tumor susceptibility gene 101 promotes physiological cardiac growth and attenuates pathological cardiac remodeling Kobina Essandoh ¹ , Xiaohong Wang ¹ , Shan Deng ¹ , Nathan Robbins ² , Wei Huang ³ , Xingjiang Mu ¹ , Jiangtong Peng ¹ , Yutian Li ¹ , Yigang Wang ³ , Jack Rubinstein ² , Guo-Chang Fan ¹
55	MicroRNA-33a/b inhibition attenuates microvesicle and monocyte tissue factor activity in the plasma of atherosclerotic non-human primates Bailey Stone ¹ , Adrien Mann ¹ , Sierra Paxton ² , Ryan E Temel ² , and A Phillip Owens ¹
56	Thrombin activation of platelet protease-activated receptor-4 (PAR4) augments atherosclerosis Megan S Jay ¹ , Shannon M Jones ¹ , Hannah M Russell ¹ , Adrien Mann ¹ , Nathan Robbins ¹ , Deborah A Howatt ² , Alan Daugherty ² , and A Phillip Owens ¹
57	Gut microbiota and circulating trimethylamine N-oxide (TMAO) are associated with aortic aneurysm formation Kelsey A Conrad ¹ , Shannon M Jones ¹ , Robert N Helsley ^{2,3} , Rebecca C Schugar ^{2,3} , Zeneng Wang ^{2,3} , Stanley L Hazen ^{2,3} , J Mark Brown ^{2,3} , and A Phillip Owens ¹

58	Metabolism of mTORC1-inhibited vascular endothelial cells Alyssa Solano ^{1,2} , Yoshi Odaka ² , and Richard Lang ^{2,3}
59	In vitro and in vivo strategies to develop targeted therapies for capillary lymphatic venous malformations Nora Lakes ^{1,2} , Jillian Goines ² , Patricia Pastura ³ , Timothy Le Cras ³ , and Elisa Boscolo ²
60	Analysis of pulsatile flow through an elastic tube using computational methods Niksa Praljak ¹ and Andrew Resnick ^{1,2}
61	Inhibition of UBE2N as a therapeutic approach in myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML) Vighnesh Ramesh ^{1,2} , Avery M Sampson ² , Laura Barreyro ² , Lyndsey C Bolanos ² , William L Seibel ³ , Daniel T Starczynowski ^{2,4}
62	FOXM1 inhibitor RCM-1 decreases carcinogenesis and nuclear β-catenin Nihar Rama, Samridhhi Shukla, David Milewski, and Tanya Kalin
63	Myeloid-derived suppressor cell mediated evasion of immune surveillance in pancreatic ductal adenocarcinoma Loryn Holokai ¹ , Jayati Chakrabarti ² , Jiang Wang ³ , Marina Pasca di Magliano ⁵ , Timothy Frankel ⁵ , Nina Steele ⁵ , Syed Ahmad ⁴ , and Yana Zavros ²
64	Myeloid-derived suppressor cells in pancreatic cancer: Implications in novel therapeutic approaches Mamdouh Salman A Alshehri, Anita Thyagarajan, and Ravi P Sahu
65	KRAS murine models in pancreatic cancer therapies Shorooq Khader, Anita Thyagarajan, and Ravi P Sahu
66	Ca²⁺ fluxes in PD1 positive exhausted T cells in head and neck cancer Martina Chirra ^{1,2} , Vaibhavkumar S. Gawali ¹ , Hannah Newton ¹ , Ameet Chimote ¹ , Trisha Wise-Draper ² , and Laura Conforti ¹
67	PD1 signaling alters store-operated Ca²⁺ entry in cytotoxic T cells of head and neck cancer patients Vaibhavkumar S Gawali ¹ , Ameet Chimote ¹ , Martina Chirra ^{1,2} , Trisha Wise-Draper ² , and Laura Conforti ¹
68	Failure to upregulate calmodulin underlies the suppressed KCa3.1 function and enhanced sensitivity to adenosine in CD8⁺ T cells of head and neck cancer patients Ameet A Chimote ¹ , Vaibhavkumar S Gawali ¹ , Trisha Wise-Draper ² , and Laura Conforti ¹
69	T-cell activation hinders therapeutic benefits of IFNγ blockade in hemophagocytic lymphohistiocytosis Amy Tran ^{1,2} , Nathaniel Evan Fox ² , Micah Evan Morris ² , Natalie Castillo ² , Vandana Chaturvedi ² , and Michael Jordan ²
70	Role of protein kinase-c and rho kinase in the cytotoxic effects of bitter melon extract on metastatic breast cancer cells Heeyun Choi and Bhupal P Bhetwal
71	Epstein–Barr virus nuclear antigen-2 (EBNA2) is altering host gene regulatory network by extensively rewiring chromatin landscape Ted Hong ^{1,2} , Mario Pujato ³ , Xiaoting Chen ³ , Daniel Miller ³ , Leah Kottyan ³ , John Harley ³ , and Matthew Weirauch ³

72	Establishing new organ on a chip Pharmaceutical Proof of Concept Center (PPOCC) Nazar J Hussein ^{1,2,8} , Charles Thodeti ³ , Moses Oyewumi ⁴ , Faye F Safadi ^{1,2,4,5,6} , Elliot Reed ^{7,8}
73	A novel regulatory role of trafficking protein particle complex-9 (TRAPPC9) in osteoarthritis Nazar J Hussein ^{1,2} , Faye F Safadi ^{1,2,3,4,5}
74	<i>Slco1b2</i>-genotype affects methotrexate pharmacokinetics and therapeutic response in a murine model of arthritis Zachary L Taylor, Heather Bear, Tomoyuki Mizuno, Alexander A Vinks, and Laura B Ramsey
75	Understanding the structure and basic function of small basic protein in biofilms Andrea L Ori ^{1,3} , Alexander E Yarawsky ^{2,3} , Andrew B Herr ^{3,4}
76	Effect of acoustic shadowing on oxygen scavenging from sono-sensitive perfluorocarbon droplets Rohan Srivastava ¹ , Haili Su ² , Karla P Mercado-Shekhar ² , Christy K Holland ^{2,3} , Kevin J Haworth ^{1,2,3}
77	Ascertaining the relationship between acoustic droplet vaporization and hemolysis Newsha Jahanpanah ¹ , Sneha Sherma ² , Karla P Mercado-Shekhar ² , Haili Su ² , Hunter Palcich ³ , Austin Wanek ³ , Kevin Haworth ^{1,2,3}
78	Increasing microfluidic flow rates decreases the size of microdroplet diameters Rachel Benton ¹ , Haili Su ² , Rohan Srivastava ² , Kevin J Haworth ^{2,3}
79	Dehydration prompts physiological and behavioral alterations in mosquitoes that likely contribute to increased West Nile virus transmission Chris J Holmes ¹ , Richard W Hagan ¹ , Elise M Szuter ¹ , Andrew E Rosselet ¹ , Samantha C Siler ¹ , Andrew J Rosendale ¹ , Jacob M Hendershot ¹ , Kiara SB Elliot ¹ , Emily C Jennings ¹ , Alex E Rizlallah ¹ , Yanyu Xiao ² , Jason L Rasgon ³ , Miki Watanabe ⁴ , Lindsey E Romick-Rosendale ⁴ , and Joshua B Benoit ¹
80	Midgut microbiome establishment in the northern house mosquito, <i>Culex pipiens</i>, is critical for dormancy preparation Elise M Didion ¹ , Zakee L Sabree ² , and Joshua B Benoit ¹
81	Are cryoprotective responses the same in different muscles? A dehydration and freezing study in Cope's gray treefrog (<i>Dryophytes chrysoscelis</i>) Briana Goines, Zachary Tegge, Spencer Dufresne, Michael Spikes, Clara do Amaral
82	Does mild dehydration trigger cryoprotective responses in the liver and heart of Cope's gray treefrog (<i>Dryophytes chrysoscelis</i>)? Spencer Dufresne, Zachary Tegge, Briana Goines, Michael Spikes, Clara do Amaral
83	Glycosylation of aquaporins lowers water and glycerol permeability in erythrocyte ghosts Brian Stogsdill, Jim Frisbie, and David Goldstein
84	Early signaling pathway of live yeast cell derivative in THP-1 monocytes Mridula Bethi, Donna J Schlemm, Stephen J Keller, Eric I Gruenstein
85	Withdrawn: Sectm1a is critical for macrophage phagocytosis during polymicrobial sepsis in mice Xingjiang Mu[±], Xiaohong Wang[±], Hongkuan Fan², Yutian Li[±], Shan Deng[±], Kobina Essandoh[±], Guo-Chang Fan[±]
86	Efficacy of mullein smoke in treating respiratory infections Cole Pelger, Linda Young, Kelly Hall, Chris Bowers, and Vicki Motz
87	Nasopharyngeal colonization by potentially pathogenic bacteria in pneumonia patients and effects of antibiotic therapy Hannah Kim, Alexis Juergensen, Cristina Garcia-Maurino, Samantha Sharpe, Jessica Estep, Sara Mertz, Rebecca Wallihan, Asuncion Mejias, Octavio Ramilo

88	Cardyscope, a low-cost, fixed-stage microscope for neuroscience research Mallory Soska and David C Sheridan
89	Analysis of early DTI-associated axonal histopathology in the corpus callosum of a novel rat model of X-linked hydrocephalus A Scott Emmert ^{1,2} , Shawn M Vuong ² , Crystal Shula ² , Diana Lindquist ³ , Weihong Yuan ³ , June Goto ² , and Francesco T Mangano ²
90	ROR1 and ROR2 attenuate Schwann cell tumorigenesis Craig S Thomson ^{1,2,3} , Katherine E Chaney ³ , David A Largaespada ⁴ , and Nancy Ratner ^{1,3}
91	Identifying a novel role for the retrosplenial cortex in Alzheimer's disease Din Selmanovic, Elizabeth Nguyen, Nik Balmer, Valentina Ghisays, and Matia B Solomon
92	Effects of repeated rotenone treatment on bioenergetics in SY5Y cells Isabella Ramicone ^{1,2} , Marla Perna ² , and Matthew Skelton ²
93	Contextual inquiry of the research data flow of the Greater Cincinnati/Northern Kentucky Stroke Study Paul Murdock ^{1,2} , Brett Harnett ² , Kathleen Alwell ³ , Dawn Kleindorfer ³ , Brett Kissela ³ , Danny TY Wu ²
94	Exercise as rehabilitation for adolescents with post concussive symptoms Fadhil Hussain ¹ , Megan Narad ² , Jennifer Taylor ² , Catherine Quatman-Yates ⁶ , Jason Hugentobler ³ , Paul J Gubanich ³ , Shari L Wade ^{2,4} , Brad G Kurowski ^{2,4,5}
95	Sleep restriction worsens daily life executive functioning in adolescents with ADHD Chaya Fershtman, Delna K Kapadia, and Stephen P Becker
96	Pharmacogenetic associations between CYP2C19 phenotype and sertraline efficacy and tolerability in youth with anxiety and depression Ethan Poweleit ¹ , Stacey Aldrich ² , Lisa Martin ² , Jeffery Strawn ³ , Laura Ramsey ^{1,4}
97	Effect of puberty on pain in adolescents Benjamin M Hunter ^{1,2} , Hadas Nahman-Averbuch ² , Eric Leon ² , Christopher D King ² , Frank Biro ² , Robert C Coghill ²
98	Eplerenone combined with currently used epidural steroid injection cause more significant and sustained pain relief than the steroid alone in a rat model of inflammatory low back pain Shaimaa Ibrahim, Wenrui Xie, Judith A Strong, Jun-Ming Zhang
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