David M. James

5942 SW 59th St
South Miami, FL, 33143

EDUCATION

Occidental College, Los Angeles, California — B.A. Biology, 2009
University of Miami, Miami, Florida — PhD, 2014 - 2021

GRANTS, HONORS AND AWARDS

Selle Award, Occidental Biology Dept outstanding student	2008
IMSD Graduate Fellowship	2014-2016
William H. Evoy Graduate Research Award	2016
Molecular Sciences Graduate Award	2016
HMMI Teaching Fellowship	2016-2017
McKnight Fellowship	2017-2018
NIH R21 RA Fellowship	2018-2020
Molecular Sciences Graduate Award	2018
Interdisciplinary Research Award	2018
Distinguished Poster, DDW conference	2018
Best Poster, PMSF conference	2018
American Microscopical Society Best Student Presentation, SICB	2019
Best Presentation, UM Biology Symposium	2021

RESEARCH EXPERIENCE

PhD Candidate
University of Miami, Miami, FL — August, 2014 – 2021
Principal Investigator: Julia Dallman, PhD
Experienced in developmental biology, neurobiology, and embryology, including tissue transplantations, sequencing, molecular cloning, and knock-down and knock-out techniques including morpholino and CRISPR/Cas methods. Current research aims at elucidating the role of enteric nervous system and GI tract in GI comorbidities experienced by autistic patients.

Lab Manager - Developmental Biology and Regenerative Medicine
Saban Research Institute CHLA, Los Angeles, CA — June, 2010 – June 2014
Principal Investigator: Kasper Wang, MD
Experience in laboratory techniques including protein extraction/blotting, Immunohistochemistry and imaging, PCR/RT-PCR/QPCR, advanced histology techniques, and basic cell culture techniques.
Proficient in murine survival surgical procedures including partial hepatectomies and bile duct ligation, and terminal surgeries focused on tissue collection.
Experience with virology work, including cell culture, inoculation, growth, and viral titers
Experience with alcohol gavage, CCl_4, and DDC hepatotoxin liver injury model in mice.

Manager, Invertebrate Husbandry: Quality Marine - Husbandry and Animal Care Department
Quality Marine Distributors, Los Angeles, CA — June, 2009-June, 2010
Supervisor: Adam Mangino, General Husbandry Manager
coral propagation, disease and parasite identification and treatment, quarantine procedures, general husbandry and holding.

Undergraduate Research and Laboratory Work - Biology Department
Occidental College, Los Angeles, CA December, 2007-May, 2009
Principal Investigator: Gary Martin, PhD
Initiated research project involving novel structures within *Conus spp.*

Laboratory Technician - Biology Department
Occidental College, Los Angeles, CA September, 2005-December 2005,
Supervisor: Gary Martin, PhD December 2007-May, 2009

Zebrafish Husbandry - Biology Department
Occidental College, Los Angeles, CA August, 2007-June, 2008
Supervisor: Joseph Schulz, PhD

Vantuna Research Group (VRG)
Occidental College, Los Angeles, CA January 2005 – June, 2005
Supervisor: Daniel Pondella, PhD

PUBLICATIONS AND PRESENTATIONS

Publications
***Co-first Author**

David M. James, Elizabeth A. Davidson, Julio Yanes, Baharak Moshiree, Julia E. Dallman, *The Gut-Brain-Microbiome Axis and Its Link to Autism: Emerging Insights and the Potential of Zebrafish Models,* Frontiers Cell and Dev, April 2021

Robert A. Kozol* · **David M. James*** · Ivan Varela · Sureni Sumathipala · Stephan Züchner · Julia E. Dallman, *Restoring Shank3 in rostral sensorimotor brainstem nuclei rescues reduced light-evoked behaviors in shank3ab-/- zebrafish,* Communications Biology, accepted 2020, under revisions. Preprint: https://www.researchsquare.com/article/rs-83115/v1

David M. James* · Robert A. Kozol* · Yuji Kajiwara · Adam L. Wahl · Emily C. Storrs · Joseph D. Buxbaum · Mason Klein · Baharak Moshiree · Julia E. Dallman, *Intestinal dysmotility in a zebrafish (Danio rerio) shank3a;shank3b mutant model of autism*, Molecular Autism, 2019 Jan 31, doi: 10.1186/s13229-018-0250-4

Robert Andrew Kozol · Alex J Abrams · **David James** · Elena Buglo · Qing Yan · Julia E Dallman*, Function over form: modeling groups of inherited neurological conditions in zebrafish*, Frontiers in Molecular Neuroscience, 2016 Jul 7, doi:10.3389/fnmol.2016.00055

Nirmala Mavila · Andrew Trecartin · Ryan Spurrier · Yi Xiao · Xiaogang Hou · **David James** · Xiaowei Fu · Brian Truong · Clara Wang · Gerald S. Lipshutz · Kasper S. Wang2 · Tracy C. Grikscheit, *Functional human and murine Tissue Engineered Liver is generated from adult stem/progenitor cells*, Stem Cells Translational Medicine, 2017 Jan 6, doi: 10.5966/sctm.2016-0205

David James · Cecilia A. Prator · Gary G. Martin · Joseph R. Schulz, *Morphology of sensory papillae on the feeding proboscis of cone snails (Mollusca, Gastropoda)*, Invertebrate Biology, 2014 May 5, DOI: 10.1111/ivb.12058

Nirmala Mavila · **David James** · Pranavkumar Shivakumar · Marie V. Nguyen · Sarah Utley · Katrina Mak · Allison Wu · Shengmei Zhou · Larry Wang · Christopher Vendyres · Megan Groff · Kinji Asahina · Kasper S Wang, *Expansion of PROMININ-1-expressing cells in association with fibrosis of biliary atresia*, Hepatology, 2014 Jul 17, doi: 10.1002/hep.27203

Ingrid Lua · **David James** · Jiaohong Wang · Kasper S Wang · Kinji Asahina, *Mesodermal Mesenchymal Cells Give Rise to Myofibroblasts, but Not Epithelial Cells, in Mouse Liver Injury,* Hepatology, 2014 April 28, doi: 10.1002/hep.27035

Marie V. Nguyen · Nirmala Mavila · **David James** · Kasper S. Wang, *PROMININ-1-expressing Progenitor Cells undergo Transforming Growth Factor-B (TGFB)-mediated Transdifferentiation into Myofibroblasts during Biliary Fibrosis*, Journal of the American College of Surgeons, 2014 Aug 22, doi.org/10.1016/j.jamcollsurg.2014.07.169

N. Mavila · R.G. Spurrier · C.V. Wang · **David James** · E. Barthel · S. Utley · T.C. Grikscheit · K.S. Wang, *Tissue-Engineered Liver Derived from Organ-Specific Stem Cells Demonstrates Bile Ducts and Albumin Production,* Journal of Surgical Research, 2014 Feb, DOI: 10.1016/j.jss.2013.11.676

Sarah Utley · **David James** · Nirmala Mavila · Marie V Nguyen · Christopher Vendryes · S. Michael Salisbury · Jennifer Phan · Kasper S Wang, *Fibroblast Growth Factor signaling regulates the expansion of A6-expressing hepatocytes in association with AKT-dependent β-catenin activation,* Hepatology 2013 Dec 21, doi: 10.1016/j.jhep.2013.12.017

N. Mavila · **David James** · P. Shivakumar · S. Utley · A. Wu · K. Mak · C. Vendyres · J. Bezerra · K. Wang, *Fgfr-Akt-Beta-Catenin and Tgfbeta-Smad3 Signaling Pathways are Associated With Expansion and Epithelial-Mesenchyme Trans-Differentiation of Cd133pos Cd49fpos Cells in Murine Model of Biliary Atresia,* Journal of Surgical Research, 2013 Feb, doi.org/10.1016/j.jss.2012.10.493

Nirmala Mavila · **David James** · Sarah Utley · Nguyen Cu · Orly Coblens · Katrina Mak · C Bart Rountree · Michael Kahn · Kasper S Wang, *Fibroblast Growth Factor Receptor-Mediated Activation of AKT-β-Catenin-CBP Pathway Regulates Survival and Proliferation of Murine Hepatoblasts and Hepatic Tumor Initiating Stem Cells,* PLoS ONE, 2012 Nov 30 doi.org/10.1371/journal.pone.0050401

S. Utley · C. Vendryes · **David James** · N. Mavila · M. Salisbury · J.C. Phan · K. Wang, *Fgf Signaling Promotes the Expansion of an A6/Hnf4alpha Co-Expressing Progenitor Cell Population During DDC-Induced Liver Injury Via Downstream Akt-Dependent Beta-Catenin Activation*, Journal of Surgical Research, 2012 Feb, doi.org/10.1016/j.jss.2012.10.181

Sarah B. Utley · **David M. James** · Nirmala Mavila · Jenn C. Phan, *Fibroblast growth factor and Notch signaling are associated with hepatic progenitor cell expansion after chronic liver injury,* Journal of the American College of Surgeons, 2011 Sept, 10.1016/j.jamcollsurg.2011.06.227

S. Utley · T. Berg · **David James** · S.M. Salisbury · J. Phan · G. Lam · S. Sullivan · N. Mavila · C. Vendryes · K. Wang, *Postnatally Induced Over-Expression of Fgf10 Promotes Notch Activation and Murine Hepatic Progenitor Cell Expansion,* Journal of Surgical Research, 2011

C. L. Vendryes · S. Utley · J. Phan · N. Mavila · **David James** · K. Wang, *Fibroblast Growth Factor Signaling Is Associated With Hepatic Progenitor Cell Expansion In A Model of DDC Liver Injury*, Journal of Surgical Research, 2010, 10.1016/j.jss.2010.11.530

Presentations and Posters

"Modeling Gastrointestinal Distress in Autism" Oral Presentation, UM Biology Symposium, Dec 2020

"The gut-brain axis: mutations in Autism related gene shank3 drive intestinal dysmotility, reduced activity in premotor brainstem that underlies light-based hyporeactivity." Oral Presentation, South East Regional Zebrafish Conference, Dec 2019

"The gut-brain axis: mutations in Autism related gene shank3 drive intestinal dysmotility, reduced activity in premotor brainstem that underlies light-based hyporeactivity." Oral Presentation, Cold Spring Harbor, November 2019

"A shank3 Loss-of-Function Model of Autism Spectrum Disease (ASD) Produces Intestinal Dysmotility and Reduced Serotonin Positive Enteroendocrine Cells" Oral Presentation, ZDM12, July 2019

"A shank3 Loss-of-Function Model of Autism Spectrum Disease (ASD) Produces Intestinal Dysmotility and Reduced Serotonin Positive Enteroendocrine Cells" Oral Presentation, SICB, January 2019

"Gut-Brain Axis; mechanisms of gastrointestinal dysfunction in Zebrafish models of Autism Spectrum Disorder" Oral presentation, McKnight Graduate Research Conference, February 2018

"Gut-Brain Axis; mechanisms of gastrointestinal dysfunction in Zebrafish models of Autism Spectrum Disorder" Oral presentation, Graduate Symposium, University of Miami, January 2018

"Gut-Brain Axis; mechanisms of gastrointestinal dysfunction in Zebrafish models of Autism Spectrum Disorder" Oral presentation, Graduate Symposium, University of Miami, December 2016

"*The Proboscis of Predatory Conus: Novel Sensory Structures and Rapid Tissue Regeneration"* Oral presentation, Society for Integrative and Comparative Biology (SICB), Seattle Convention Center, Seattle, WA, December 2010

"*The Proboscis of Predatory Conus: Novel Sensory Structures and Rapid Tissue Regeneration*" Oral presentation, The National Conference for Undergraduate Research (NCUR), University of Wisconsin, LaCrosse, April 2009.

"*The Proboscis of Predatory Conus: Sensory Structures and Tissue Regeneration"*

Oral presentation, Southern California Conference for Undergraduate Research (SCCUR), California Polytechnic University, Pomona, California, November 2008.

"*Predatory Conus spp: Sensory Structures and Tissue Regeneration"*
Oral presentation, The Undergraduate Research Center (URC), a competitive summer research conference, Occidental College, Los Angeles, California, August 2008

David M. James, Robert A. Kozol, Yuji Kajiwara, Adam Wahl, Emily Storrs, Mason Klein, Joseph D Buxbaum, Baharak Moshiree, Julia E. Dallman *"Gastrointestinal Dysmotility in a shank3 Loss of Function Model of Autism Spectrum Disorder"* Sunposium Neural Circuits Conference, March 2019

David M. James, Robert A. Kozol, Yuji Kajiwara, Adam Wahl, Emily Storrs, Mason Klein, Joseph D Buxbaum, Baharak Moshiree, Julia E. Dallman *"Gastrointestinal Dysmotility in a shank3 Loss of Function Model of Autism Spectrum Disorder"* Digestive Diseases Week Conference, June 2018

David M. James, Robert A. Kozol, Yuji Kajiwara, Adam Wahl, Emily Storrs, Mason Klein, Joseph D Buxbaum, Baharak Moshiree, Julia E. Dallman "Gastrointestinal Dysmotility in a shank3 Loss of Function Model of Autism Spectrum Disorder" PMSF Conference, July 2018

D. James, A. Whal, E. Storrs, R. Kozol, M. Klein, J. Dallman, *"Gut-Brain Axis; mechanisms of gastrointestinal dysfunction in Zebrafish models of Autism Spectrum Disorder"* Poster presentation, Graduate Research Intersections, University of Miami, Feb 2017

D. James, A. Whal, R. Kozol, M. Klein, J. Dallman, *"Gut-Brain Axis; mechanisms of gastrointestinal dysfunction in Zebrafish models of Autism Spectrum Disorder"* Poster presentation, Southeast Regional Developmental Biology Conference, May 2017

D. James, E. Storrs, R. Kozol, M. Klein, J. Dallman *"Identifying Mechanisms of Gastrointestinal Distress in Zebrafish models of Autism"* Poster presentation, Genetics Society of America, July 2016

D. James, E. Storrs, R. Kozol, M. Klein, J. Dallman *"Identifying Mechanisms of Gastrointestinal Distress in Zebrafish models of Autism"* Poster presentation, Phelan McDermid Syndrome Foundation, July 2016

TEACHING/MENTOR EXPERIENCE

Teaching Assistant, Science Made Sensible *U-Miami – Miami Dade Colleges*	September 2015 – May 2021
Teaching Assistant, HHMI Biology *U-Miami – Miami Dade Colleges*	September 2016 - May 2017
Teaching Assistant – Classics Department, *University of Miami*	September 2016 - December 2018
Undergraduate Mentorship Program, IMSD, *University of Miami*	August 2014 - August, 2015
Teaching Assistant - Zoology Department *Occidental College*	August, 2007 - January, 2008