

Jesse Aaron Davidson

Curriculum Vitae

1. Personal History

Current Position: Associate Professor, Pediatrics
Work Address: Children's Hospital, Colorado, Box 100 13123 East 16th
Ave., Aurora, CO 80045

2. Education and Training

1991-1995 Yale University, B.S. Molecular Biophysics and Biochemistry
1996-2000 Duke University School of Medicine, M.D.
1998-2000 University of North Carolina, Chapel Hill School of Public Health, M.P.H.
Epidemiology
2000-2001 Internal Medicine Internship, Mount Sinai Hospital, New York, NY
2004-2007 Pediatrics Residency, Children's Hospital, Colorado
2008-2013 Pediatric Cardiology Fellowship, Children's Hospital, Colorado
2008-2013 Pediatric Critical Care Fellowship, Children's Hospital, Colorado
2011-2013 Advanced Pediatric Echocardiography Fellowship, Children's Hospital,
Colorado
2013-2018 University of Colorado Graduate School, Clinical Sciences, M.Sc.

3. Academic Appointments

2007-2008 Senior Instructor, Department of Pediatrics, Section of Neonatology,
University of Colorado/Children's Hospital Colorado
2013-2019 Assistant Professor, Department of Pediatrics, Section of Pediatric
Cardiology, University of Colorado/Children's Hospital Colorado
2019-current Associate Professor, Department of Pediatrics, Section of Pediatric
Cardiology, University of Colorado/Children's Hospital Colorado

4. Work Assignments

Hospital

2015-2022 Associate Medical Director, Research Institute, Children's Hospital
Colorado
2022-current Medical Director, Child Health Research Enterprise, Children's Hospital
Colorado

Primary Military

2001-2002 Assistant Regimental Surgeon, 1st Marine Regiment, 1st Marine Division,
Camp Pendleton, CA

- 2002-2003 Battalion Surgeon, 3rd Battalion, 1st Marines, Camp Pendleton, CA
Deployed to Southwest Asia with 11th Marine Expeditionary Unit, June 2002-December 2002
Deployed to Iraq with 1st Marine Expeditionary Force as part of Operation Iraqi Freedom, January 2003-May 2003
- 2003-2004 Staff Physician, Branch Medical Clinic, Marine Corps Air Station, Miramar, CA
- 2004-2008 Individual Ready Reserve

Secondary Military

- 2001 Senior Medical Officer, Combined Arms Exercise, 29 Palms, CA
- 2002 Senior Medical Officer, Operation Eager Mace, Kuwait
- 2002 Senior Medical Officer, Operation Infinite Moonlight, Jordan
- 2003 Assistant Disaster Planning Officer, Marine Corps Air Station, Miramar

5. Honors and Recognition

Civilian

- 1995 Cum Laude, Yale University
- 1995 Honors in the Major of Molecular Biophysics and Biochemistry
- 1997 Health Professions Scholarship
- 2001 Nominee, Mount Sinai Excellence in Teaching Award
- 2005 Resident Teaching Award, Children’s Hospital Colorado
- 2007 Resident Teaching Award, Children’s Hospital Colorado
- 2012 Fellow Teaching Award, Pediatric Cardiology, Children’s Hospital Colorado
- 2014 Special Recognition Award, Pediatric Residency Recruitment, University of Colorado School of Medicine
- 2017 Clinical Research Site Award, INC Research; site Principal Investigator
- 2017, 2018 Research Leaders Academy, American Heart Association. Twice selected as one of 300 national research leaders in adult and pediatric cardiology to participate in a three-day academy to explore and debate research issues, develop a network for senior and future CVD and Stroke research thought leaders, and advance AHA Mission and encourage AHA engagement through Academy research network.
- 2019 Best Abstract, 12th International Conference on Neonatal and Childhood Pulmonary Vascular Disease (Senior Author)
- 2019 Award for Outstanding Research, Neonatal Cardiopulmonary Biology Young Investigator’s Forum (Senior Author)
- 2020 Silver Research Snapshot Award, Society of Critical Care Medicine Congress

Military by Precedence

- 2002 Navy and Marine Corps Commendation Medal, 11th Marine Expeditionary Unit

- 2004 Navy and Marine Corps Achievement Medal, Naval Medical Clinic, Marine Corps Air Station, Miramar
- 2003 Navy and Marine Corps Achievement Medal, Operation Iraqi Freedom
- 2003 Combat Action Ribbon, Operation Iraqi Freedom
- 2002 Fleet Marine Force Ribbon
- 2002 National Defense Medal
- 2002, 2003 Sea Service Deployment Ribbon, Awarded Twice

6. Professional Memberships and Leadership

- 2008-current American Heart Association
- 2010-current Pediatric Cardiac Intensive Care Society
- 2014-2022 Society of Critical Care Medicine
- 2015-2018 PCICS Research: Scientific Innovation Committee
- 2017-2018 PCICS Research: Scientific Innovation Committee Co-Leader
- 2023-2024 PCICS 2024 International Conference Planning Committee
- 2024-2025 CNOG 2025 13th Annual Scientific Sessions Conference Co-Chair

7. Major Committee and Service Responsibilities

- 2012-2017 Anticoagulation Safety Committee, Children’s Hospital Colorado
- 2013-current Pediatric Cardiology Fellowship Selection Committee
- 2015-2022 Associate Medical Director, Research Institute, Children’s Hospital Colorado
- 2015 Co-director for the inaugural CHCO Research Symposium
- 2017-2021 Children’s Hospital Colorado Representative to the Trial Innovation Network
- 2017-2023 Children’s Hospital Colorado Representative to TriNetX
- 2018-2024 Children’s Hospital Colorado Representative to i-ACT
- 2022-current Coalition for Pediatric Medical Research, Children’s Hospital Colorado Physician Representative
- 2022-2024 Medical Director, Child Health Research Enterprise, Anschutz Medical Campus

8. Licensing and Certifications

- 2004-present Pediatric Advanced Life Support Provider
- 2007-present General Pediatrics
- 2007-present Physician, Medical Board of Colorado
- 2014-present Pediatric Critical Care
- 2014-present Pediatric Cardiology

9. Inventions, Intellectual Property, and Patents Held or Pending

- 2016 U.S. Provisional Patent Application No. 62/359,075, filed July 6, 2016
Title: “Compounds, Compositions And Methods For Preventing And/Or

- 2017 Treating Inflammation And/Or Organ Dysfunction After Pediatric Cardiovascular Surgery” By: Jesse Davidson CU Ref: CH0006H-PPA1 New PCT International Patent Application No. PCT/US2017/040737, filed July 5, 2017 Title: “Compounds, Compositions And Methods For Preventing And/Or Treating Inflammation And/Or Organ Dysfunction After Pediatric Cardiovascular Surgery” By: Jesse Davidson CU Ref: CH0006H-PCT1.
- 2023 Provisional Patent P310427.US.01 filed July 7, 2023. Title: Circulating protein biomarkers of necrotizing enterocolitis. By: Jesse Davidson CU Ref CU6295H.
- 2023 Provisional Patent P312018.US.01 filed August 31, 2023. Title: “Biomarker compositions, protein panels, devices, and methods to identify risk of and treat pulmonary vascular inadequacy in single ventricle heart disease” By: Benjamin Frank and Jesse Davidson CU Ref: CU6337H.

10. Review and Referee Work

Grant Study Sections

- 2013-2017 Study Section Member: American Heart Association Research Grants-Clinical Outcomes Section
- 2017-current Study Section Member: American Heart Association Career Development Awards-Clinical Outcomes Section
- 2018 Study Section Member: Department of Defense Peer Reviewed Medical Research Program Clinical Trial Award
- 2019 Study Section Chair: Department of Defense Peer Reviewed Medical Research Program Focused Program Award
- 2021 Study Section Member: Special Emphasis Panel, Surgical Sciences, Biomedical Imaging, and Bioengineering IRG, NIH
- 2022-current Study Section Member: Additional Ventures Single Ventricle Research Fund
- 2024-current Study Section Member: American Heart Association 2024 Innovative Project Award Clinical and Population
- 2024 Study Section Member: Additional Ventures/American Heart Association Collaborative Science Award
- 2024-current NIH/NHLBI Mentored Patient Oriented Research Study Section (K23/K24)
- 2024 NIH U54 Rare Diseases Clinical Research Network (RDCRN) Review Panel member

Manuscript Review (Ad Hoc)

- 2012-current Manuscript reviewer for Pediatrics
- 2012-current Manuscript reviewer for OMICS Publishing Group-Clinical
- 2014-current Manuscript reviewer for Physiological Research
- 2015-current Manuscript reviewer for Critical Care Nursing
- 2016-current Manuscript reviewer for Journal of the American Society for Echocardiography

2018-current Manuscript reviewer for Translational Research
 2018-current Manuscript reviewer for American Journal of Respiratory and Critical Care Medicine
 2018-current Manuscript reviewer for PLOS One
 2019-current Manuscript reviewer for Archives of Disease in Childhood
 2020-current Manuscript reviewer for American Heart Journal
 2020-current Manuscript reviewer for Journal of Surgical Research
 2020-current Manuscript reviewer for Drug Design, Development and Therapy
 2021-current Manuscript reviewer for Pediatric Nephrology
 2021-current Manuscript reviewer for Expert Review of Clinical Pharmacology
 2021-current Manuscript reviewer for Metabolomics
 2022-current Manuscript reviewer for Journal of Cardiothoracic Surgery
 2022-current Manuscript reviewer for The Lancet Public Health
 2022-current Manuscript reviewer for Nature Communications
 2023-current Manuscript reviewer for World Journal of Pediatric Cardiology and Cardiac Surgery

Abstract Review

2018 Pediatric Cardiac Intensive Care Society International Meeting
 2019 Joint Paediatric Critical Care International Meeting
 2024 Pediatric Cardiac Intensive Care Society International Meeting

11. Invited Presentations

2009 European Association for Cardiothoracic Surgery; Vienna Austria, *Simulation Training for Care of Pediatric Heart Disease*
 2011 Second European Conference on Pediatric and Neonatal Cardiac Intensive Care, *Simulation Training for Care of Pediatric Heart Disease*
 2012 Eliza Fernie Pediatric Critical Care Nursing Symposium; Denver, Colorado, *Procalcitonin in the Intensive Care Unit*
 2013 3rd European Conference on Pediatric and Neonatal Cardiac Intensive Care, *Alkaline Phosphatase in Postoperative Cardiac Surgery*
 2013 3rd European Conference on Pediatric and Neonatal Cardiac Intensive Care, *Value of Procalcitonin after Pediatric Cardiac Surgery*
 2015 CHCO Research Symposium, Moderator, *What Does a Physician Scientist Clinical Research Career Look Like in 2015?*
 2017 CHCO Research Symposium, Moderator, *Patient Experience in Clinical Research*
 2018 Second Annual Pediatric Echocardiography Review, *Double Outlet Right Ventricle-Double Trouble*
 2018 Second Annual Pediatric Echocardiography Review, *How the Elephant Got Its Truncus*
 2022 Children's Hospital Foundation Children's Classic at Sanctuary, Featured Program Physician Speaker

- 2022 PCICS International Meeting 2022 Plenary: Innovation, Translation and Collaboration: *Recent Advances in the Field and Scientific Work from PCICS*
- 2022 PCICS International Meeting 2022 Panel: *Where to Start with Research in the CICU*
- 2023 Children’s Hospital Colorado Grand Rounds: *Multi-omic Approach to Congenital Heart Disease*
- 2023 AFMR Midwest Clinical and Translational Research Meeting: *Successfully Managing Clinical Responsibilities and Developing Translational Research Projects*
- 2023 ARBL Seminar Series, CSU Department of Biomedical Sciences: *Multi-omic Approach to Translational Research in Congenital Heart Disease.*
- 2024 Olink Biomarker Summit: *Proteomic Approach to Congenital Heart Disease*
- 2024 Little Heart’s Gala 2024: *CHD At its Heart, a Whole Child Problem to Solve*
- 2024 CNOC 13th Annual Scientific Sessions: *Building a Team and Changing Culture*
- 2024 PCICS 2024 *Neurodevelopment Preconference Workshop*; Lead Planner and Moderator
- 2024 PCICS 2024 *Mentoring a Group with Diverse Interests*; Lead Planner and Moderator
- 2024 PCICS 2024 *PCICS Research Breakout Session*; Moderator
- 2024 PCICS 2024 Plenary Session: *The Future is Coming: Cutting Edge Talks for ICU Attention Spans*; Invited Speaker

12. Teaching Record

Research Teaching: Summary of Mentoring Trainees and Junior Faculty

- 1) Years of Mentoring: 13
- 2) Number of Mentees: 26
- 3) Stages of Mentees: Junior faculty, pediatric subspecialty fellows (cardiology and critical care), residents (pediatrics and surgery), medical graduates, medical students, PhD candidate
- 4) Percent of Mentees in Academic Medicine: 91%
- 5) Mentee Publications: Twenty-nine publications with the mentee as first author
- 6) Mentee Research Awards: 15 awards/best abstract finalist selection at local, national, and international conferences
- 7) Current Mentee Funding (Davidson as Primary or co-Primary Mentor):
 - a. AHA Career Development Award (x3)
 - b. NIH K23
 - c. Centers of Biomedical Research Excellence (COBRE) Stage 1 Award
 - d. IDeA-CTR Pilot grant
 - e. Research and Innovation Scholars Award, Colorado Child Health Research Institute
 - f. CCTSI K12

- 8) Prior Mentee Funding (Davidson as Primary or co-Primary Mentor):
 - a. AHA Career Development Award
 - b. NHLBI R38 Stimulating Access to Research in Residency (StARR) Award (x2)
 - c. TL1 Team Oriented Training Across the Translational Sciences Spectrum
 - d. Gerber Novice Research Award
- 9) Current/Prior Mentee Independent Science Awards (Mentee as PI; Year):
 - a. Additional Ventures Tools & Tech Expansion Award (co-PI Frank; 2021)
 - b. Gerber Foundation Research Grant (PI Salomon; 2024)

Clinical Teaching

- 2013-current CICU-Supervision and bedside teaching of cardiology, intensive care, and neonatology fellows (35 hours per week 6 times per year)
- 2013-current Echocardiography-Supervision and lab/OR teaching of transesophageal and transthoracic echocardiography to categorical and senior imaging fellows (1-2 hours per week)

Clinical Presentations to Trainees

- 2013-current Cardiology and intensive care trainees: Average 2 formal lectures per year (recent topics included cardiac function, cardiac pharmacology, arrhythmias, neurologic injury, intestinal injury)
 Echo fellows: Average one lecture per year
 Sonographers: Average two lectures per year (ICU for the Sonographer)

13. Grant Support and Multi-Institutional Clinical Research

Ongoing Research Support

- 2024-2027 **CCTSI K12 MIMIC: Microbiome Mediated Indole Metabolism and Immune Response after Cardiopulmonary Bypass.** This mentored career development award studies the relationships among the intestinal microbiome, tryptophan catabolites, and host immune response during and preceding intestinal injury/necrotizing enterocolitis after neonatal and infant cardiothoracic surgery with cardiopulmonary bypass.
Role: Primary Mentor (PI Leroue)
- 2024-2029 **K24HL167910 Systems biology of acute and chronic multi-organ failure in children with congenital heart disease.** This Midcareer Investigator Award in Patient-Oriented Research application supports a program of clinical research and mentorship of early career investigators focused on using high-dimensional biochemical data to evaluate acute/chronic organ failure in children with CHD.
Role: Principal Investigator
 Total Direct Funds: \$583,605

- 2021-2026 R01 HL156936 **Metabolic profiling and comprehensive metabolic pathway mapping: a systems biology approach to cardiovascular failure and organ injury following infant congenital heart disease surgery.** Combined clinical cohort study and pre-clinical large animal study to determine the metabolic changes associated with cardiovascular failure and organ injury following infant cardiac surgery. The study employs both metabolic profiling as well as comprehensive mapping and pre-clinical modulation of the kynurenine pathway of tryptophan metabolism and nicotinamide metabolism.
Role: Principal Investigator
Total Direct Funds: \$2,394,048
- 2023-2027 K23HL163490 **Longitudinal pulmonary vascular development in children with single ventricle heart disease: a targeted small molecule biomarker approach.** This career development award examines metabolite and protein biomarkers of pulmonary vascular pathology in children undergoing staged repair of single ventricle heart disease.
Role: Primary Mentor (PI Frank)
Total Direct Funds: \$860,464
- 2024-2028 DOD IIRA PR231913 **Proteomic approach to biomarker development for acute, subacute, and chronic organ injury after neonatal congenital heart disease surgery.** The goal of this project is to leverage cutting edge proteomics techniques to perform both targeted and unbiased evaluation of protein biomarkers and biologic system dysregulation accompanying three key postoperative morbidities after neonatal cardiac surgery (acute cardiovascular morbidity, necrotizing enterocolitis, and chronic neurodevelopmental impairment).
Role: Principal Investigator
Total Direct Funds: \$1,600,000
- 2023-2026 AHA 23CDA1051738 **Impact of infant selenium status on outcomes after cardiac surgery with cardiopulmonary bypass.** This career development award will test if low serum Se levels perioperatively are associated with clinical outcomes, oxidative stress, inflammatory cytokines and metabolomic dysfunction in infants after cardiac surgery with cardiopulmonary bypass (CPB) (Aim 1) and determine if Se replacement perioperatively will increase serum and organ-specific Se levels, attenuating oxidative stress, pro-inflammatory cytokines, and metabolomic changes after CPB/deep hypothermic circulatory arrest in piglets.
Role: Primary Mentor (PI Sherlock)
Total Direct Funds: \$210,000
- 2023-2026 AHA 23CDA1038247 **Identifying novel imaging and serum biomarkers of Fontan failure: a metabolic approach.** This career

development award pairs novel MRI-based investigation of organ-specific blood flow and oxygen consumption with circulating metabolomic profiling to evaluate mechanisms of Fontan circulatory failure.

Role: Primary Mentor (PI Romanowicz)

Total Direct Funds: \$210,000

- 2023-2026 AHA 23CDA1045271 **Impact of intestinal dysbiosis and inflammatory metabolites after pediatric cardiac surgery with cardiopulmonary bypass.** This career development award seeks to map the microbiome in patients with congenital heart disease before and after CPB to determine microbial shifts, identify intestinal metabolite profiles linked with intestinal permeability, immune cell activation, and systemic inflammation following CPB, and utilize an intestinal organoid model to identify mechanisms that link microbiome and metabolite profiles with intestinal inflammation and permeability.
- Role: Co-Mentor (PI Salomon)**
Total Direct Funds: \$210,000

Pending Research Support

- 2024-2029 R01HL171146-01 **COMPASS Ancillary NeuroDevelopmental Outcomes (CAN-DO)** This study is an ancillary study examining neurodevelopmental outcomes in patients participating in or eligible for the Pediatric Heart Network COMPASS trial comparing BT shut to PDA stent as initial palliation for ductal dependent pulmonary blood flow.
- Role: Co-Investigator (PI Wolfe)**
Status: Scored (18th %; below recommended funding line for ESI PI)

Prior Research Support

- 2009-2011 NIH/NCRR Colorado CTSI Grant Number UL1 RR025780. **The Kinetics of Procalcitonin in Young Infants Undergoing Cardiovascular Surgery.** Awarded 7/2009-completed 6/2011. Prospective observational study in infants undergoing cardiothoracic surgery to evaluate the post-operation kinetics of procalcitonin and CRP and their relationship to post-operative infection and outcomes.
- Role: Principal Investigator**
Total Direct Funds: \$12,000
- 2013 Thrasher Research Fund Early Career Award. **Alkaline Phosphatase in Infant Cardiopulmonary Bypass: Kinetics and Relationship to Inflammation, Organ Injury, and Outcome.**
- Role: Principal Investigator**
Total Direct Funds: \$25,000

- 2013 American Heart Association Clinical Research Program-Southwest Affiliate. **Alkaline Phosphatase in Infant Cardiopulmonary Bypass: Kinetics and Relationship to Inflammation, Organ Injury, and Outcome.**
Role: Principal Investigator
Total Direct Funds: \$140,000
- 2013-2014 American Heart Association Clinical Research Program-National 13CRP17300016. **Alkaline Phosphatase in Infant Cardiopulmonary Bypass: Kinetics and Relationship to Inflammation, Organ Injury, and Outcome.**
Role: Principal Investigator
Total Direct Funds: \$140,000
- 2013-2015 NIH/NCRR Colorado CTSI Grant Number UL1 RR025780. **Alkaline Phosphatase in Infant Cardiopulmonary Bypass: Kinetics and Relationship to Inflammation, Organ Injury, and Outcome.**
Prospective study of the clinical risks of low alkaline phosphatase activity following infant cardiopulmonary bypass, the kinetics of alkaline phosphatase post-bypass, and capacity of alkaline phosphatase conversion of extracellular adenine nucleotides to adenosine. Funding dedicated to initiating the analysis of serum alkaline phosphatase capacity to convert extracellular adenine nucleotides to adenosine before and after cardiopulmonary bypass.
Role: Principal Investigator
Total Direct Funds: \$15,000
- 2016-2018 DOD PR152240. **Alkaline phosphatase for the prevention of intestinal and renal injury in a piglet model of cardiopulmonary bypass with deep hypothermic circulatory arrest.** Initial evaluation of the effects of systemically or enterally administered alkaline phosphatase to reduce injury to the intestines and kidneys in a porcine model of cardiopulmonary bypass.
Role: Principal Investigator
Total Direct Funds: \$200,000
- 2015-2018 NIH/NCRR Colorado CTSI Grant Number UL1 RR025780. **Cardiac Remodeling and Circulating Biomarkers in Pediatric Left Ventricular Pressure Loading Lesions.** Prospective cohort study assessing biomarkers of mid-term LV hypertrophy/remodeling after surgery for LV obstructive lesions.
Role: Primary Mentor (PI Frank)
Total Direct Funds: \$20,000
- 2014-2019 NIH/NHLBI 1K23HL123634 **Alkaline Phosphatase in Infant Cardiopulmonary Bypass: Kinetics and Relationship to**

Inflammation, Organ Injury, and Outcome. Prospective study of the clinical risks of low alkaline phosphatase activity following infant cardiopulmonary bypass, the kinetics of alkaline phosphatase post-bypass, and capacity of alkaline phosphatase conversion of extracellular adenine nucleotides to adenosine.

Role: Principal Investigator

Total Direct Funds: \$820,883

2017-2019 AHA17IRG33410724. **Alkaline phosphatase for the prevention of acute lung injury in a piglet model of cardiopulmonary bypass with deep hypothermic circulatory arrest.** Initial evaluation of the effects of systemically or enterally administered alkaline phosphatase to reduce injury to the lungs in a piglet model of cardiopulmonary bypass with deep hypothermic circulatory arrest.

Role: Principal Investigator

Total Direct Funds: \$150,000

2017-2020 NIH/NCRR Colorado CTSI Grant Number UL1 RR025780. **Pulmonary Vascular Growth in Infants with Single Ventricle Heart Disease: Deep Phenotyping and Biomarker Development.** This study will utilize both hypothesis-driven and unbiased approaches to the evaluation of pulmonary vascular development and post-operative complications/hypoxemia in single ventricle patients undergoing stage 2 palliation. Endothelin-1 levels will be the primary targeted biomarker, while unbiased approaches will include metabolomic and proteomic evaluation and pathway analysis.

Role: Primary Mentor (PI Frank)

Total Direct Funds: \$20,000

2017-2020 Gerber Foundation. **Hungry for more: applying the growth chart concept to the care we provide following congenital heart surgery.** Multicenter study utilizing automated data extraction to create care curves for post-operative management of children with congenital heart disease.

Role: Site Principal Investigator

Total Direct Funds: \$15,000 per site (\$300,000 total grant)

2018-2020 AHA18IPA34170070. **Pulmonary Vascular Growth in Infants with Single Ventricle Heart Disease: Deep Phenotyping and Biomarker Development.** This study will utilize both hypothesis-driven and unbiased approaches to the evaluation of pulmonary vascular development and post-operative complications/hypoxemia in single ventricle patients undergoing stage 2 palliation. Endothelin-1 levels will be the primary targeted biomarker, while unbiased approaches will include metabolomic and proteomic evaluation and pathway analysis.

Role: Principal Investigator

Total Direct Funds: \$200,000

- 2019-2021 NIH/NCRR Colorado CTSI Grant Number UL1 RR025780. **Using point of care ultrasound to measure perioperative edema in infants with congenital heart disease.** Pilot study of automated point of care ultrasound to quantify extravascular fluid overload in infants undergoing cardiac surgery.
Role: Primary Mentor (PI Persson)
Total Direct Funds: \$20,000
- 2020-2021 COEPS Small Grants Program **Cardiac Inpatient Neurodevelopmental Care Optimization.** This project focuses on improving short and intermediate-term neurodevelopmental outcomes in children <3 years of age who are hospitalized with congenital heart disease through reduction of harmful stimuli, increased formalized developmental therapy plans, and a focus on parental resiliency.
Role: Co-Primary Investigator
Total Direct Funds: \$21,000
- 2020-2023 AHA 20CDA35310498 **Longitudinal Pulmonary Vascular Development in Children with Single Ventricle Heart Disease.** This study provides longitudinal follow-up of our single ventricle cohort undergoing staged surgical repair, evaluating small molecule biomarkers of pulmonary vascular development, collateral formation, and clinical outcomes.
Role: Primary Mentor (PI Frank)
Total Direct Funds \$210,000
- 2021-2023 Additional Ventures Tools and Technology Expansion Award. **Proteomic Expansion of Longitudinal Pulmonary Vascular Development in Children with Single Ventricle Heart Disease.** This expansion award allows measurement of the targeted circulating proteome from our cohort of single ventricle patients in AHA 20CDA35310498.
Role: Co-Principal Investigator
Total Direct Funds: \$50,000
- 2023-2024 Gerber Novice Researcher Award. **Tryptophan metabolism, the intestinal microbiome, and enteral nutrition in infants undergoing cardio-pulmonary bypass.** Pilot study of microbial and host tryptophan catabolites and their relationship to enteral nutrition and intestinal injury after neonatal and infant cardiac surgery with cardiopulmonary bypass.
Role: Primary Mentor (PI Leroue)
Total Direct Funds: \$25,000

Multi-institution Clinical Research

- 1) Phase 3b, Multicenter, Open-label, Randomized Withdrawal Trial of the Effects of Titrated Oral SAMSCA (Tolvaptan) on Serum Sodium, Pharmacokinetics, and Safety in Children and Adolescent Subjects Hospitalized with Euvolemic or

- Hypervolemic Hyponatremia; Otsuka Pharmaceuticals; **Site Principal Investigator**
- 2) Multicenter, open-label, dose escalation study to evaluate safety, tolerability and pharmacokinetics of RLX030 in addition to standard of care in pediatric patients from birth to <18 years of age, hospitalized with acute heart failure; Novartis; **Site Principal Investigator**
 - 3) CPCCRN 059 PEACE; **Sub-Investigator (PI Mourani)**
 - 4) CPCCRN 041 PICqCPR; **Sub-Investigator (PI Mourani)**
 - 5) Phase III Double-Blind, Randomized, Placebo Controlled, Multi-Center Clinical Study to Evaluate the Efficacy and Safety of Intravenous L-Citrulline for the Prevention of Clinical Sequelae of Acute Lung Injury Induced by Cardiopulmonary Bypass in Pediatric Patients Undergoing Surgery for Congenital Heart Defects; **Site Co-Investigator**

14. Bibliography

Peer Reviewed Publications

- 1) Boshart H, Humphrey J, Deignan E, **Davidson J**, Drazba J, Yuan L, Oorshot V, Peters PJ, Bonafacino JS. The cytoplasmic domain mediates the localization of furin to the trans-Golgi network en route to the endosomal/lysosomal system. *J Cell Biol.* 1994 Sep; 126(5):1157-72.
- 2) **Davidson J**, Tong S, Hancock H, Hauck A, Da Cruz E, Kaufman J. Prospective validation of the vasoactive-inotropic score and correlation to short-term outcomes in neonates and infants after cardiothoracic surgery. *Intensive Care Med.* 2012 Jul; 38(7): 1184-90.
- 3) **Davidson J**, Tong S, Hauck A, Lawson DS, Jagers J, Kaufman J, Da Cruz E. Alkaline phosphatase activity after cardiothoracic surgery in infants and correlation with post-operative support and inflammation: a prospective cohort study. *Critical Care.* 2012 Aug 20; 16(4): R160.
- 4) Llamado R, Czaja A, Stence N, **Davidson J**. Continuous Octreotide Infusion for Sulfonylurea-Induced Hypoglycemia in a Toddler. *J Emer Med.* 2013 May.
- 5) **Davidson J**, Tong S, Hauck A, Lawson DS, Da Cruz E, Kaufman J. The kinetics of procalcitonin and C-reactive protein and the relationship to post-operative infection in young infants undergoing cardiovascular surgery. *Ped Res.* 2013 Sep; doi:10.1038/pr.2013.124
- 6) Pei-Ni Jone, Daniel Tapia, **Jesse Davidson**, Thomas E Fagan, Lorna Browne, Richard John Ing, Joseph Kay. Successful Treatment of Myocardial Infarction in an Infant with Kawasaki Disease. *Seminars in Cardiothoracic and Vascular Anesthesia* 2015 Dec; doi:10.1177/1089253215573328
- 7) S. R. Dominguez, B. Martin, H. Heizer, P.-N. Jone, S. Tong, **J. Davidson**, M. S. Anderson, M. P. Glode Procalcitonin (PCT) and Kawasaki Disease: Does PCT

- Correlate with IVIG-Resistant Disease, Admission to the Intensive Care Unit, or Development of Coronary Artery Lesions? 2014 Dec; doi: 10.1093/jpids/piv019
- 8) [Ben Frank*, **Jesse Davidson***] ***Co-first authors.**, Suhong Tong, Blake Martin, Marsha S. Anderson, Mary P. Glode, Samuel Dominguez, Pei-Ni Jone. Myocardial strain and strain rate in Kawasaki Disease: range, recovery, and relationship to systemic inflammation/coronary artery dilation. *J Clin Exp Cardiology* 2016; 7:4.
 - 9) **Jesse A. Davidson**, Tracy Urban, Suhong Tong, Mark Twite, Alan Woodruff, Paul E. Wischmeyer, Jelena Klawitter. Alkaline phosphatase, soluble extracellular adenosine nucleotides, and adenosine production after infant cardiopulmonary bypass. *PLOS One* 2016; 1-15.
 - 10) Amanda M. McIntosh, Suhong Tong, Sara J. Deakyne, [***Jesse A. Davidson, *Halden F. Scott**] ***Co-senior authors.** Validation of the Vasoactive Inotropic Score in Pediatric Sepsis. *Ped Crit Care Med.* 2017 Oct;18(10):1003-1005. PubMed PMID: 28976472.
 - 11) **Jesse Davidson**, Tracy Urban, Suhong Tong, Christine Baird, Alan Woodruff, Mark Twite, James Jagers, Eric Simoes, Paul Wischmeyer. Alkaline phosphatase in infant cardiopulmonary bypass: kinetics and relationship to organ injury and major cardiovascular events. *Journal of Pediatrics* 2017 Nov; 109:49-55.
 - 12) Benjamin Steven Frank, Tracy T Urban, Suhong Tong, Courtney Cassidy, Max B Mitchell, Christopher S Nichols, and **Jesse A. Davidson**. Endothelin-1 activation in pediatric patients undergoing surgical coarctation of the aorta repair. *World Journal of Cardiology.* 2017 Dec; 9(12):822-829.
 - 13) Jessica N. Persson, Christine H. Baird, Suhong Tong, Tracy T Urban, Jelena Klawitter, Paul E. Wischmeyer, and **Jesse A. Davidson**. Infant cardiopulmonary bypass: CD73 kinetics, association with clinical outcomes, and influence on serum adenosine production capacity. *Ped. Res.* 2017; doi:10.1038/pr.2017.325
 - 14) **Jesse A. Davidson**, Tracy T. Urban, Suhong Tong, Aline Maddux, Gerald Hill, Benjamin S. Frank, John D. Watson, James Jagers, Eric A. F. Simões, Paul Wischmeyer. Alkaline Phosphatase Activity and Endotoxemia after Infant Cardiothoracic Surgery. *Shock* 2019; 51(3), 328-336.
 - 15) **Jesse A. Davidson, MD, MPH**; Zachary Pfeifer, BS; Benjamin Frank, MD; Suhong Tong, MS; Tracy T. Urban, BS; Paul A. Wischmeyer, MD; Peter Mourani, MD; Bruce Landeck, MD; Uwe Christians, MD, PhD; Jelena Klawitter, PhD. Metabolomic fingerprinting of infants undergoing cardiopulmonary bypass: changes in metabolic pathways and association with mortality and cardiac intensive care unit length of stay. *J Am Heart Assoc.* 2018;7:e010711. doi: 10.1161/JAHA.118.010711
 - 16) Frank BS, Urban TT, Lewis K, Tong S, Cassidy C, Mitchell MB, Nichols CS, **Davidson JA**. Circulating biomarkers of left ventricular hypertrophy in pediatric coarctation of the aorta. *Congenit Heart Dis.* 2019 Jan 16.

- 17) **Jesse A. Davidson**, Ludmila Khailova, Amy Treece, Justin Robison, Danielle E. Soranno, James Jagers, Richard J. Ing, Scott Lawson, Suzanne Osorio Lujan. Alkaline Phosphatase Treatment of Acute Kidney Injury in an Infant Piglet Model of Cardiopulmonary Bypass with Deep Hypothermic Circulatory Arrest. *Scientific Reports* 2019; (9): 14175.
- 18) Benjamin Frank, Michal Schäfer, Johannes Douwes, D. Ivy, Steven Abman, **Jesse Davidson**, Sandra Burzlaff, Max Mitchell, Lorna Browne, Alex Barker, Uyen Truong, and Johannes Von Alvensleben. Novel Measures of Left Ventricular Electromechanical Discoordination Predict Clinical Outcomes in Children with Pulmonary Arterial Hypertension. *AJP-Heart and Circ Physiol.* 2020; 318(2): H401-412.
- 19) Angela S Czaja, Kathryn Collins, Robert J Valuck, Heather D Anderson, Debashis Ghosh, **Jesse A Davidson**. Validity of Administrative Claims-Based Algorithms for Ventricular Arrhythmia and Cardiac Arrest in the Pediatric Population. *Pharmacoepidemiol Drug Saf.* 13 April 2020
<https://doi.org/10.1002/pds.5001>
- 20) John D Watson, Tracy T Urban, Suhong S Tong, Jeanne Zenge, Ludmila Khailova, Paul E Wischmeyer and **Jesse Aaron Davidson**. Immediate Post-Operative Enterocyte Injury, as Determined by Increased Circulating Intestinal Fatty Acid Binding Protein, is Associated with Subsequent Development of Necrotizing Enterocolitis after Infant Cardiothoracic Surgery. *Frontiers in Pediatrics* 2020; 8(267) 1-11.
- 21) Angela S. Czaja, Heather D. Anderson, Debashis Ghosh, **Jesse Davidson**, Johnathan Campbell, Robert J. Valuck. Increased odds of ventricular arrhythmias associated with selective serotonin reuptake inhibitor use among the pediatric and young adult population: a case control study. *J Pediatr.* 2020 Jul 6: S0022-3476(20)30850-7. doi: 10.1016/j.jpeds.2020.07.007. PMID: 32645405
- 22) Ludmila Khailova, Justin Robison, James Jagers, Richard Ing, Scott Lawson, Amy Treece, Danielle Soranno, Suzanne Osorio Lujan, **Jesse A. Davidson**. Tissue alkaline phosphatase activity and expression in an experimental infant swine model of cardiopulmonary bypass with deep hypothermic circulatory arrest. *J Inflamm.* 2020 Aug 12;17:27. doi: 10.1186/s12950-020-00256-2. PMID: 32817746
- 23) Divya Sabapathy, Jelena Klawitter, Lori Silveira, Ludmila Khailova, Max B. Mitchell, Gareth J. Morgan, Michael V. DiMaria, Mark Twite, Benjamin S. Frank, **Jesse A. Davidson**. Activation of Kynurenine Pathway of Tryptophan Metabolism after Infant Cardiac Surgery with Cardiopulmonary Bypass: A Prospective Cohort Study. *Metabolomics* 2020 Sep;16(9):93. [10.1007/s11306-020-01714-x](https://doi.org/10.1007/s11306-020-01714-x)
- 24) Evan Pagano, Benjamin Frank, James Jagers, Mark Twite, Tracy T. Urban, Jelena Klawitter, **Jesse Davidson**. Alterations in Metabolites Associated with Hypoxemia in Neonates and Infants with Congenital Heart Disease. *Congenital Heart Disease* Sep 2020;15(4):251-265

- 25) Benjamin S Frank, Ludmila Khailova, Lori Silveira, Max B. Mitchell, Gareth J. Morgan, Elena W.Y. Hsieh, Michael V. DiMaria, Mark Twite, Jelena Klawitter, **Jesse A. Davidson**. Proteomic Profiling Identifies Key Differences between Inter-Stage Infants with Single Ventricle Heart Disease and Healthy Controls. *Translational Research* 2020 Oct;229:24-37. <https://doi.org/10.1016/j.trsl.2020.10.001>
- 26) **Jesse A Davidson**, Benjamin S Frank, Tracy T Urban, Mark Twite, James Jagers, Ludmila Khailova, Jelena Klawitter. Serum metabolic profile of postoperative acute kidney injury following infant cardiac surgery with cardiopulmonary bypass. *Pediatr Nephrol* 2021 Oct;36(10):3259-3269. doi: 10.1007/s00467-021-05095-8. PMID: 33954809
- 27) [Francesca Sperotto*, **Jesse A Davidson***], *Co-first authors Melissa N Smith-Parrish, Justin J Elhoff, Anjuli Sinha, Joshua J Blinder, Daniel E Ehrmann, Bradley S Marino, John N Kheir. Development of Care Curves Following the Stage 1 Palliation: A Comparison of Intensive Care Among 5 Centers. *J Am Heart Assoc*. 2021 June 1;10:e019396. doi: 10.1161/JAHA.120.019396 PMID: 34013742
- 28) Jessica N. Persson, Jacqueline Holstein, Lori Silveira, Aimee Irons, Taufiek Konrad Rajab, James Jagers, Mark D. Twite, Carly Scahill, Mary Kohn, Christine Gold, **Jesse A. Davidson**. Validation of Point-of-Care Ultrasound to Measure Perioperative Edema in Infants with Congenital Heart Disease. *Front. Pediatr*. 2021 August 23; 9:727571. PMID: 34497787 PMCID: PMC8419458
- 29) Sean J. Cooney, Jelena Klawitter, Ludmila Khailova, Justin Robison, James Jagers, Richard J. Ing, Scott Lawson, Benjamin S. Frank, Suzanne Osorio Lujan, **Jesse A. Davidson**. Regional lung metabolomic profile in a piglet model of cardiopulmonary bypass with circulatory arrest. *Metabolomics* 2021 September 22; 17(10):89. Doi: <https://doi.org/10.1007/s11306-021-01842-y>. PMID: 34553313 PMCID: PMC8457331
- 30) Benjamin S. Frank, Ludmila Khailova, Lori Silveira, Max B. Mitchell, Gareth J. Morgan, Michael V. DiMaria, **Jesse A. Davidson**. Increased Circulating Endothelin-1 is Associated with Post-Operative Hypoxemia in Infants with Single Ventricle Heart Disease Undergoing Superior Cavo-Pulmonary Anastomosis. *J Am Heart Assoc* 2022 Mar;11(6):e024007. 10.1161/JAHA.121.024007
- 31) **Jesse A. Davidson**, Justin Robison, Ludmila Khailova, Benjamin S. Frank, James Jagers, Richard Ing, Scott Lawson, John Iguidbashian, Eiman Ali, Amy Treece, Danielle E. Soranno, Suzanne Osorio-Lujan, Jelena Klawitter. Metabolomic profiling demonstrates evidence for kidney and urine metabolic dysregulation in a piglet model of cardiac surgery-induced acute kidney injury. *Am J Physiol Renal Physiol* 2022 May 9; 323: F20–F32, 2022. doi:10.1152/ajprenal.00039.2022
- 32) Kelsey G. Iguidbashian; Justin Robison; Ludmila Khailova; James Jagers; Richard Ing; Scott Lawson; Suzanne M. Osorio Lujan; Jelena Klawitter; **Jesse A. Davidson**. Changes in infant porcine pulmonary tissue oxylipins induced by

- cardiopulmonary bypass. *Pediatric Research* 2022 Nov;92(5):1274-1281.
<https://doi.org/10.1038/s41390-022-02125-5>
- 33) Jeffrey D. Salomon, Haowen Qiu, Dan Feng, Jacob Owens, Ludmila Khailova, Suzanne Osorio Lujan, John Iguidbashian, Yashpal S. Chhonker, Daryl J. Murry, Jean Jack Riethoven, Merry L. Lindsey, Amar B. Singh, **Jesse A. Davidson**. Piglet cardiopulmonary bypass induces intestinal dysbiosis and barrier dysfunction associated with systemic inflammation. *Dis Model Mech* 2023 May;16(5):dmm049742. <https://doi.org/10.1242/dmm.049742>.
- 34) Benjamin S. Frank, Ludmila Khailova, Jonathan Dekermanjian, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Uwe Christians, Michael V. DiMaria, Jelena Klawitter, **Jesse A. Davidson**. Interstage Single Ventricle Heart Disease Infants Show Dysregulation in Multiple Metabolic Pathways: Targeted Metabolomics Analysis. *JACC: Advances*, 2023 Jan;2(1):100169, <https://doi.org/10.1016/j.jacadv.2022.100169>
- 35) Kelly R. Wolfe, Sherrill D. Caprarola, Caelah Clark, **Jesse Davidson**, Melanie D. Everitt, Laura Faul, Colton Hageman, Sarah L. Kelly, Emily Maloney, Hilary Patteson, Sarah Scott, Alyse Talbot, Suhong Tong, and Kimberly L. DiMaria. Implementation of the Cardiac Inpatient Neurodevelopmental Care Optimization (CINCO) programme: an interdisciplinary, generalisable approach to inpatient neurodevelopmental care. *Cardiology in the Young* 2023 Dec;33(12):2581-2588. doi: 10.1017/S1047951123000562
- 36) Eiman A. Ali, Aneesa Syed, Ludmila Khailova, John P Iguidbashian, Alejandro Suarez-Pierre, Jelena Klawitter, Matthew Stone, Christopher A Mancuso, Benjamin S Frank, **Jesse A. Davidson**. Novel Biomarkers of Necrotizing Enterocolitis in Neonates Undergoing Congenital Heart Disease Surgery: a Pilot Cohort Study. *J Am Heart Assoc.* 2023 Jul;12(15):e030712. doi: 10.1161/JAHA.123.030712
- 37) Benjamin S. Frank, Debmalya Nandy, Ludmila Khailova, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael V. DiMaria, **Jesse A. Davidson**. Circulating Biomarkers of Extracellular Matrix Dysregulation are Associated with Adverse Post-Stage 2 Outcomes in Infants with Single Ventricle Heart Disease. *Scientific Reports*. 2023 Sep; 13(1):16318. <https://doi.org/10.1038/s41598-023-43562-4>
- 38) Lindsay M. Thomson, Christopher A. Mancuso, Kelly R. Wolfe, Ludmila Khailova, Sierra Niemiec, Eiman Ali, Michael Di Maria, Max Mitchell, Mark Twite, Gareth Morgan, Benjamin S. Frank, and **Jesse A. Davidson**. The proteomic fingerprint in infants with single ventricle heart disease in the interstage period: evidence of chronic inflammation and widespread activation of biological networks. *Front. Pediatr.* 2023 Dec;11. <https://doi.org/10.3389/fped.2023.1308700>
- 39) Benjamin S. Frank, Sierra Niemiec, Ludmila Khailova, Christopher A. Mancuso, Tanner Lehmann, Max B. Mitchell, Gareth J Morgan, Mark Twite, Michael V. DiMaria, Jelena Klawitter, **Jesse A. Davidson**. Arginine-NO Metabolites are

- Associated with Morbidity in Single Ventricle Infants Undergoing Stage 2 Palliation. *Pediatric Research*. 2024 Apr; online ahead of print. <https://doi.org/10.1038/s41390-024-03162-y>
- 40) Kelly R. Wolfe, Lindsay M. Thomson, Sierra Niemiec, Christopher A. Mancuso, Ludmila Khailova, Benjamin S. Frank, and **Jesse A. Davidson**. Early Circulating Biomarkers of Language Development in Single Ventricle Heart Disease. *JAMA Pediatr*. 2024;178(10):1072-1074. <https://doi.org/10.1001/jamapediatrics.2024.2507>
 - 41) Jacob Owens, Haowen Qiu, Cole Knoblich, Lisa Gerjevic, Jacques Izard, Linda Xu, Junghyae Lee, Sai Sundeep Kollala, Yashpal Chhonker, Daryl J Murry, Jean Jack Riethoven, **Jesse A Davidson**, Amar B Singh, Ali Ibrahimiyeh, Laura Ortmann, Jeffrey D Salomon. Feeding intolerance after pediatric cardiac surgery is associated with dysbiosis, barrier dysfunction, and reduced short-chain fatty acids. *Am J Physiol Gastrointest Liver Physiol* 2024 Nov 1;327(5):G685-G696. <https://doi.org/10.1152/ajpgi.00151.2024>
 - 42) Lindsay M. Thomson, Sierra Niemiec, Christopher A. Mancuso, Ludmila Khailova, Eiman Ali, Aneesa Syed, Kelly R. Wolfe, Jack Zakrzewski, Matthew Stone, Robert Hyslop, Benjamin S. Frank, and **Jesse A. Davidson**. Disruption of the Circulating Proteome in Neonates Receiving Extracorporeal Membrane Oxygenation Following Congenital Heart Disease Surgery: A Nested Case-Control Study. *J Pediatr* 2025;276:114322.
 - 43) Kelly R. Wolfe, Reagan Broach, Caelah Clark, Andrea Gerck, Sarah L. Kelly, Emily H. Maloney, Ariann Neutts, Hilary Patteson, Marisa Payan, Sarah Riessen, Sarah Watson, [Sherrill D. Caprarola*, **Jesse A. Davidson***]. *=co-senior authorship. Cognitive Outcomes and Delirium following Implementation of a Cardiac Inpatient Neurodevelopmental Care program for Children with Congenital Heart Disease. *JAMA Netw Open*. 2025 Jan 2;8(1):e2456324.
 - 44) Jennifer Romanowicz, Sierra Niemiec, Ludmila Khailova, Tanner Lehmann, Christopher A. Mancuso, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael V. DiMaria, Jelena Klawitter, [**Jesse A Davidson***, Benjamin S Frank*]. *=co-senior authorship. Perturbations of Tryptophan Catabolism via the Kynurenine Pathway are Associated with Stage 2 Postoperative Outcomes in Single Ventricle Heart Disease. *Physiol Rep*. 2024 Nov;12(22):e70133.
 - 45) **Jesse A. Davidson**, John Iguidbashian, Ludmila Khailova, Tanner Lehmann, Alejandro Suarez-Pierre, Lindsay M. Thomson, Jack Zakrzewski, Eiman Ali, Schuyler Lee, Benjamin S. Frank, Richard J. Ing, Matthew L. Stone, Suzanne Osorio Lujan, Sierra Niemiec, Christopher A. Mancuso. Cardiopulmonary bypass with deep hypothermic circulatory arrest results in organ-specific transcriptomic responses in pediatric swine. *Translational Research* 2025 Jan 17:277:64-74.
 - 46) Benjamin S. Frank, Sierra Niemiec, Ludmila Khailova, Christopher A. Mancuso, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael V. DiMaria, Carmen C. Sucharov, **Jesse A. Davidson**. Increased Endothelin-1 is Associated with Morbidity in Single Ventricle Heart Disease Children Undergoing Fontan Palliation. *JACC Advances* 2025 (In press).

Other Publications

- 1) Aschner Y, **Davidson JA**. Early Plasma Matrix Metalloproteinase Profiles Offer New Insight into the Biology and Prognosis of Pediatric Acute Respiratory Distress Syndrome. *AJRCCM*. Aug 2018.
- 2) McIntosh AM, **Davidson JA**, Scott HF. The authors reply. *Pediatr Crit Care Med*. 2017 Oct;18(10):1003-1005. PubMed PMID: 28976472
- 3) John D. Watson, **Jesse A. Davidson**. The Microbiome is a Welcome Addition to the Growing “Omes” of Cardiopulmonary Bypass in Congenital Heart Disease Surgery. *JACC: Basic to Translational Science*. 2021 April 27; 6(4):328-30. PMID: 33999038 PMCID: PMC8093563
- 4) **Jesse A. Davidson**, Lindsay M. Thomson, and Benjamin S. Frank. Omics Approaches to Mechanistic, Biomarker, and Therapeutic Development for Right Ventricular Failure in Congenital Right-Sided Obstructive Lesions: A Brave New World? *World Journal for Pediatric and Congenital Heart Surgery* 2024 March; 15(2): 174-6. DOI: 10.1177/21501351231217172

Scientific Abstracts

- 1) **Jesse Davidson MD MPH**, Amanda Hauck MD, Suhong Tong MS, Eduardo da Cruz MD, Jon Kaufman MD. Prospective validation of the vasoactive-inotropic score in neonates and infants after cardiothoracic surgery. Presented at the 15th Annual Update on Pediatric and Congenital Cardiovascular Disease. February 2011.
- 2) **Jesse Davidson, MD MPH**, Amanda Hauck, MD, Suhong Tong, MS, Eduardo DaCruz, MD, Jonathan Kaufman, MD. Alkaline Phosphatase Levels and Correlation to Outcomes after Cardiothoracic Surgery in Infants. Presentation at the Pediatric Academic Society Annual Meeting May 2011.
- 3) **Jesse Davidson MD MPH**, Amanda Hauck MD, Suhong Tong MS, Jon Kaufman MD, Eduardo da Cruz MD. The kinetics of procalcitonin in young infants undergoing cardiovascular surgery. Presented at Pediatric Cardiac Intensive Care Society December 2010 and 15th Annual Update on Pediatric and Congenital Cardiovascular Disease February, 2011.
- 4) Blake Martin MD, Samuel R. Dominguez, MD, PhD, Heather Heizer, PA-C, Pei-Ni Jone, MD, **Jesse Davidson, MD**, Marsha S. Anderson, MD, and Mary P. Glodé, MD. Procalcitonin (PCT) and Kawasaki Disease: Does PCT Correlate with Coronary Artery Lesions and/or IVIG Resistant Disease? Presented at Infectious Diseases Society of America Annual ID Week Conference October 2013.
- 5) **Davidson J**, Frank B, Tong S, Martin B, Anderson M, Glode M, Dominguez S, Jone P. Myocardial Mechanics in Kawasaki Disease: Relationship to Degree of Systemic Inflammation and Coronary Artery Dilatation. Presented at American Heart Association Scientific Sessions November 2013.

- 6) **Davidson JA**, Urban TT, Tong S, Twite M, Woodruff A, Da Cruz E, Wischmeyer P, Klawitter J. Alkaline Phosphatase, Extracellular Adenine Nucleotides, and Adenosine Production after Infant Cardiopulmonary Bypass. Presented at Pediatric Cardiac Intensive Care Society, December 2014.
- 7) Marsha S. Anderson, Samuel R. Dominguez, Heather R. Heizer, Pei-Ni Jone, **Jesse Davidson**, Mary P. Glodé. Rashless Kawasaki Disease (KD): Colorado's Experience. Presented at Eleventh International Kawasaki Disease Symposium, February 2015
- 8) **Davidson JA**, Urban TT, Tong S, Twite M, Baird C, Khailova L, Jagggers J, Wischmeyer P. Alkaline Phosphatase Activity after Infant Cardiac Surgery: Kinetics and Association with Post-operative Cardiovascular Support. Poster Presentation at AHA Scientific Sessions, November 2015.
- 9) **Jesse Davidson**, Tracy Urban, Suhong Tong, Christine Baird, Ludmila Khailova, James Jagggers, Paul Wischmeyer. Alkaline Phosphatase Activity Predicts Organ Injury and Dysfunction after Infant Cardiac Surgery. SCCM Critical Care Congress, February 2016. **Oral Presentation**
- 10) Amanda McIntosh, Suhong Tong, Sara Deakyne, Halden Scott*, **Jesse Davidson*** (*=**equal contribution to senior mentorship of this abstract**). Validation of the Vasoactive Inotropic Score in Pediatric Sepsis. SCCM Critical Care Congress, February 2016. **Oral Presentation**
- 11) Persson J, Baird C, Tong S, Urban TT, Klawitter J, Wischmeyer P, and **Davidson JA**. CD73 after infant cardiopulmonary bypass: kinetics, association with clinical outcomes, and influence of serum adenosine production capacity. Presented at Pediatric Cardiac Intensive Care Society, December 2016.
- 12) Benjamin S. Frank, Tracy Urban, Courtney Cassidy, Suhong Tong, Max Mitchell, Christopher Nichols, **Jesse Davidson**. Serum Endothelin-1 Level as a Biomarker of Concentric Left Ventricular Remodeling in Pediatric Coarctation of the Aorta. Pediatric Cardiac Intensive Care Society, Miami, FL, December 2016.
- 13) Urban TT, Mosley BS, Tong S, **Davidson JA**. Relationship between fluid overload, diuretic use and low electrolyte levels. Presented at Pediatric Cardiac Intensive Care Society, December 2016.
- 14) **Davidson JA**, Urban TT, Tong S, Baird C, Maddux A, Hill G, Jagggers J, Simões EAF, Wischmeyer P. Alkaline phosphatase and endotoxin activity after infant cardiopulmonary bypass. Presented at Pediatric Cardiac Intensive Care Society, December 2016.
- 15) Jenna Flemming, Carine Renner, Christine Baird, Jon Henderson, Paul Wischmeyer, **Jesse Davidson**. Alkaline phosphatase alters clot initiation, amplification, and propagation in healthy human adult donors. Shock Conference, June 2017
- 16) Anjuli Sinha, Sarah van den Bosch, Boston Children's Hosp, Boston, MA; **Jesse Davidson**, Children's Hospital Colorado, Aurora, CO; Melissa N Smith-Parrish, Ann & Robert H. Lurie Children's Hosp of Chicago, Chicago, IL; Justin Elhoff,

- Texas Children's Hosp, Houston, TX; Joshua J Blinder, Children's Hosp of Philadelphia, Philadelphia, PA; John Nagi Kheir, Boston Children's Hosp, Boston, MA Hungry for more: applying the growth chart concept to the care we provide following congenital heart surgery. Presented at American Heart Association Annual Scientific Sessions, November 2017.
- 17) Tracy Urban*, **Jesse A Davidson***, Marisa Payan, Suhong Tong, and Daniel E Ehrmann. *co-first authors. The Relationship Between Loop Diuretic Resistant Fluid Overload and Electrolyte Abnormalities after Congenital Heart Surgery. Presented at Pediatric Cardiac Intensive Care Society, December 2017.
 - 18) **Davidson JA**, Pfeifer Z, Urban TT, Frank B, Christians U, Wischmeyer PA, Klawitter J. Changes in metabolic pathways after infant cardiopulmonary bypass and association with mortality. Presented at Pediatric Academic Society May 2018. **Oral Presentation**
 - 19) Watson JD, Urban TT, Tong S, Zenge J, Khailova L, **Davidson JA**. Intestinal fatty acid binding protein, early feeding outcomes, and signs of necrotizing enterocolitis in infants undergoing cardiopulmonary bypass. Presented at Pediatric Academic Society May 2018
 - 20) Robison JW, Khailova L, Trejo Bittar H, Tong SS, Vohwinkel C, Osorio Lujan SM, **Davidson JA**. Characterization of cardiopulmonary bypass associated acute lung injury in an infant piglet model. Presented at Pediatric Academic Society May 2018. **Oral Presentation**
 - 21) Benjamin S Frank, Tracy T Urban, Karlise Lewis, Suhong Tong, Courtney Cassidy, Max B. Mitchell, Christopher S. Nichols, **Jesse A. Davidson**. Circulating Biomarkers of Left Ventricular Hypertrophy in Pediatric Coarctation of the Aorta. Presented at the American Heart Association 2018 Scientific Sessions November 2018.
 - 22) Evan Pagano, Benjamin Frank, Jelena Klawitter, **Jesse Davidson**. Metabolite Alterations Associated with Hypoxemia in Infants with Cyanotic Heart Disease. Presented at Pediatric Cardiac Intensive Care Society International Meeting December 2018.
 - 23) **Jesse Davidson**, Ludmila Khailova, Amy Treece, Justin Robinson, Danielle Soranno, James Jagers, Richard Ing, Scott Lawson, Suzanne Osorio Lujan. Alkaline Phosphatase Infusion in Infant Piglet Model of Cardiopulmonary Bypass with Deep Hypothermic Circulatory Arrest: Kinetics and Effect on Kidney Injury. Presented at the Pediatric Cardiac Intensive Care Society International Meeting December 2018. **Oral Presentation**
 - 24) Czaja, Angela S.; Anderson, Heather; **Davidson, Jesse**; Valuck, Robert. Risk of ventricular arrhythmia & cardiac arrest among children with mental health diagnoses. Pediatric Academic Society February 2019.
 - 25) Benjamin S. Frank, Karlise Lewis, Ludmila Khailova, Lori Silveira, Max B. Mitchell, Gareth J. Morgan, Mark Twite, D. Dunbar Ivy, Michael V. Di Maria, Jelena Klawitter, **Jesse A. Davidson**. Endothelin-1 activation is associated with post-operative hypoxemia in infants with single ventricle heart disease

- undergoing superior cavo-pulmonary anastomosis. 4th European Conference on Neonatal and Paediatric Pulmonary Vascular Disease October 2019 **Oral Presentation**
- 26) Benjamin S. Frank, Karlise Lewis, Ludmila Khailova, Lori Silveira, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael Di Maria, Jelena Klawitter, **Jesse A. Davidson**. Metabolomic Fingerprinting Identifies Significant Metabolic Pathway Alterations in Infants with Single Ventricle Heart Disease Prior to Superior Cavo-Pulmonary Anastomosis. AHA Scientific Sessions November 2019.
- 27) Benjamin S. Frank, Karlise Lewis, Ludmila Khailova, Lori Silveira, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael Di Maria, Jelena Klawitter, **Jesse A. Davidson**. Global Shifts in the Matabolome of Infants with Single Ventricle Heart Disease Before and After Superior Cavo-Pulmonary Anastomosis. AHA Scientific Sessions November 2019.
- 28) **Jesse Davidson**, Benjamin Frank, Tracy Urban, Ludmila Khailova, Jelena Klawitter. Serum metabolic fingerprint of acute kidney injury following infant cardiac surgery with cardiopulmonary bypass. AHA Scientific Sessions November 2019.
- 29) Divya Sabapathy, Jelena Klawitter, Lori Silveira, Max Mitchell, Gareth Morgan, Michael Di Maria, Mark Twite, Benjamin Frank, **Jesse Davidson**. Kynurenine Pathway Activation After Infant Cardiac Surgery. SCCM Congress February 2020 **Oral Presentation**
- 30) Justin Robison, Suzanne Osorio Lujan, Ludmila Khailova, Richard Ing, James Jagers, Jelena Klawitter, Jesse Davidson. Changes in infant oricine pulmonary tissue oxylipins induced by cardiopulmonary bypass. SCCM Congress February 2020 **Oral Presentation**
- 31) **Jesse Davidson**, Justin Robison, Amy Treece, Ludmilla Khailova, Danielle Soranno, James Jagers, Richard Ing, Scott Lawson, Suzanne Osorio Lujan, Jelena Klawitter. Metabolomic fingerprinting in a piglet model of infant cardiac surgery-induced acute kidney injury. SCCM Congress February 2020 **Oral Presentation**
- 32) Suzanne Osorio Lujan, Ludmila Khailova, Justin Robison, James Jagers, Richard Ing, Scott Lawson, **Jesse Davidson**. Experimental model for deep hypothermic cardiocirculatory arrest with peripheral cardiopulmonary bypass in swine. Association for European Paediatric and Congenital Cardiology 2020 Congress. May 2020. **Oral Presentation**
- 33) Laura Evers, Colton Hageman, Kimberly DiMaria, Kelly Wolfe, **Jesse Davidson**. Implementation of a Comprehensive Program to Improve Neurodevelopmental Outcomes for Inpatients with Congenital Heart Disease: Cardiac Inpatient Neurodevelopmental Care Optimization (CINCO). Cardiac Nerodevelopmental Outcomes Collaboration. December 2020
- 34) Laura Evers, Colton Hageman, Kimberly DiMaria, Kelly Wolfe, **Jesse Davidson**. Implementation of a Comprehensive Program to Improve Neurodevelopmental

- Outcomes for Inpatients with Congenital Heart Disease: Cardiac Inpatient Neurodevelopmental Care Optimization (CINCO). University of Colorado CCTSI Winter Poster Competition. January 2021. **Oral Presentation**
- 35) Jacqueline Holstein, Lori Silveira, **Jesse Davidson**, Jessica Persson. Using point-of-care ultrasound to measure perioperative edema in neonates with congenital heart disease. CHOP Cardiology 2021: 24th Annual Update on Pediatric and Congenital Cardiovascular Disease.
 - 36) Kelsey Iguidbashian, Ludmila Khailova, James Jaggars, Tracy Urban, Mark Twite, Jelena Klawitter, **Jesse A. Davidson**. Measurement of endogenous endocannabinoid levels following infant cardiac surgery and association with post-operative analgesia needs. CHOP Cardiology 2021: 24th Annual Update on Pediatric and Congenital Cardiovascular Disease.
 - 37) Ludmila Khailova, Justin Robison, Suzanne Lujan-Osorio, Eiman Ali, Richard Ing, John Iguidbashian, **Jesse Davidson**. Changes of mucins expression in lungs of infant piglets after cardiopulmonary bypass with deep hypothermic circulatory arrest. Pediatric Academic Society May 2022 **Oral Presentation**
 - 38) John Iguidbashian, Ludmila Khailova, Kelsey Iguidbashian, Matthew L Stone, Suzanne Osorio Lujan, **Jesse A Davidson**. Lung metabolic pathway analysis in an experimental piglet model of cardiopulmonary bypass. University of Colorado Department of Surgery 8th Annual Research Symposium 2022. **Oral Presentation**
 - 39) Kimberly DiMaria, Carly Scahill, Laura Evers, Suhong Tong, Megan Wilson, **Jesse Davidson**, Kelly R Wolfe, Sarah L Kelly, Amelia Wirth, Sherrill Caprarola. The Effect of Cardiac Arrest on Neurologic Outcomes for Patients with Congenital Heart Disease: A Pilot Study. Cardiac Neurodevelopmental Outcomes Collaborative October 2022
 - 40) Sherrill D. Caprarola, Kelly R. Wolfe, Sarah Scott, Kathleen Clark, Foster Rosemund, Sarah L. Kelly, Brenda Abbey, Emily Maloney, Caelah Clark, **Jesse Davidson**. A Dedicated Volunteer Program for Pediatric Inpatients with Congenital Heart Disease. Cardiac Neurodevelopmental Outcomes Collaborative October 2022
 - 41) **Jesse Davidson**, Benjamin Frank, Debmalya Nandy, Matthew Stone, John Iguidbashian, Ludmila Khailova, Eiman Ali. Circulating Proteomic Response to Neonatal and Infant Cardiothoracic Surgery with Cardiopulmonary Bypass. Pediatric Cardiac Intensive Care Society International Meeting December 2022
 - 42) Ludmila Khailova, Jelena Klawitter, John Iguidbashian, Eiman Ali, Alejandro Suarez Pierre, Matthew Stone, Richard Ing, Suzanne Osorio-Lujan, **Jesse Davidson**. Kidney tissue kynurenine pathway alterations in an infant piglet model of cardiopulmonary bypass with deep hypothermic circulatory arrest. Pediatric Cardiac Intensive Care Society International Meeting December 2022
 - 43) **Jesse Davidson**, Raleigh Jonscher, Ludmila Khailova, John Iguidbashian, Eiman Ali, Richard Ing, Matthew Stone, Genevieve Sparagna, Kathryn Chatfield. Effects of kynurenine pathway blockade on myocardial and kidney mitochondrial

- respiration in a swine model of pediatric cardiopulmonary bypass with deep hypothermic circulatory arrest. Pediatric Cardiac Intensive Care Society International Meeting December 2022
- 44) Eiman Ali, Benjamin Frank, John Iguidbashian, Aneesa Syed, Jelena Klawitter, Mark Twite, Matthew Stone, Ludmila Khailova, **Jesse Davidson**. Novel biomarkers of Nectrotizing Enterocolitis in Neonates Undergoing Congenital Heart Disease. Pediatric Cardiac Intensive Care Society International Meeting December 2022. **Oral Presentation**
- 45) Lindsay Thomson, Benjamin Frank, Kelly Wolfe, Ludmila Khailova, Eiman Ali, Michael DiMaria, **Jesse Davidson**. Proteomic fingerprint and motor development outcomes of patients with single ventricle heart disease in the inter-stage period. Pediatric Cardiac Intensive Care Society International Meeting December 2022.
- 46) John Iguidbashian, Li Lu, Ludmila Khailova, Xinsheng Deng, Swati Jain, Robert Plenter, James Jagers, Alkesh Jani, **Jesse Davidson**, Matthew L. Stone Hypothermic, acellular ex vivo heart perfusion results in comparable post-transplantation function to standard cold, static preservation in a novel murine preservation-transplantation model. University of Colorado Annual Surgery Symposium 2023.
- 47) Maya Hunter, Sherrill D. Caprarola MD, MSHS, **Jesse Davidson MD, MPH MSc**, Kimberly DiMaria DNP, Sarah L Kelly PsyD, Emily Maloney PT, DPT, PCS, Foster Rosemund MS, CCLS, Kelly R Wolfe PhD, Caelah Clark MS, CCC-SLP. American Sign Language as a Neurodevelopmental Intervention for Hearing Children with Congenital Heart Disease. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 48) Kelly R. Wolfe, PhD, ABPP-CN, Kimberly DiMaria, DNP, CPNP-AC, CCRN Sherrill D. Caprarola, MD, Sarah L. Kelly, PsyD, **Jesse Davidson, MD, MPH**, Caelah Clark, MS, CCC-SLP, Hilary Patteson, RN, Alyse Talbot, RN, Emily H. Maloney, PT, DPT, PCS. Implementation of the Cardiac Inpatient Neurodevelopmental Care Optimization (CINCO) Program is Sustainable and Associated with Reduced Delirium. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 49) Emily H Maloney PT, DPT, PCS, Caelah Clark, MS CCC-SLP, Sarah L. Kelly, PsyD, Hilary Patteson, BSN, RN, CPN, Kelly Wolfe, PhD, ABPP-CN, **Jesse Davidson, MD, MPH**, Kimberly DiMaria, DNP, CPNP-AC, Sherrill D. Caprarola, M. Augmenting Inpatient Cardiac Neurodevelopmental Care through Interdisciplinary Bedside Developmental Care Rounds. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 50) Sherrill D. Caprarola MD, Foster Rosemund MS, CCLS, Kathleen Clark CCLS, Emily Maloney PT, DPT, PCS, Caelah Clark MS, CCC-SLP, Kelly Wolfe PhD, ABPP-CN, Jesse Davidson MD, MPH, Sarah Scott MS, CCLS, Sarah L. Kelly, PsyD. “Volunteering is the highlight of my week!”: Training Volunteers to Bolster Developmental Care in Pediatric Cardiology Inpatient Units. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.

- 51) Tanner Lehmann; Eiman Ali; Sierra Niemiec; Marisa Payan; Christopher A. Mancuso; Ludmila Khailova; John Iguidbashian; Alejandro Suarez Pierre; Matthew Stone; Mark Twite; Benjamin Frank; Jelena Klawitter; **Jesse A. Davidson**. Dysregulated Tryptophan Metabolism Following Cardiopulmonary Bypass with Cardiac Surgery is Associated with Increased Vasoactive Inotropic Score Requirements. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 52) Benjamin S. Frank, Sierra Niemiec, Ludmila Khailova, Christopher A. Mancuso, Tanner Lehmann, Max B. Mitchell, Gareth J Morgan, Mark Twite, Michael V. DiMaria, Jelena Klawitter, **Jesse A. Davidson**. Impaired Arginine-Nitric Oxide Metabolism is Associated with Increased Morbidity in Infants with Single Ventricle Heart Disease Undergoing Stage 2 Palliation. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 53) Benjamin S. Frank, Debmalya Nandy, Ludmila Khailova, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael V. DiMaria, **Jesse A. Davidson**. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023. **Oral Presentation. Winner Best Basic and Translational Science Abstract, Finalist Overall Best Abstract Competition**
- 54) Benjamin Olsen, Piyagarnt Vichayavilas, Benjamin Frank, Ludmila Khailova, Jelena Klawitter, **Jesse Davidson**. Circulating Amino Acids in Infants Undergoing Congenital Heart Disease Surgery: Decreased Perioperative Levels in Patients Receiving Parenteral versus Enteral Nutrition. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023.
- 55) Lindsay Thomson, Eiman Ali, Aneesa Syed, Ludmila Khailova, Kelly R. Wolfe, Richard Ing, Matthew Stone, Benjamin Frank, and Jesse Davidson. The proteome in the post-operative period from cardiac surgery: comparing ECMO and non-ECMO patients. 8th World Congress of Pediatric Cardiology and Cardiac Surgery, August 2023. **Oral Presentation. Finalist Best CICU/NICU/ECMO Abstract**
- 56) Lindsay M. Thomson, Christopher A. Mancuso, Kelly R. Wolfe, Ludmila Khailova, Eiman Ali, Michael DiMaria, Max B Mitchell, Mark Twite, Gareth J Morgan, Benjamin Frank, and **Jesse Davidson**. The Proteomic Fingerprint in Patients with Single Ventricle Disease in the Interstage Period: Evidence of Chronic Inflammation and Widespread Activation of Biological Networks. 2023 AHA Scientific Sessions. **Oral Presentation. Finalist Young Hearts Early Career Investigator Award Competition.**
- 57) Jennifer Romanowicz, Jenifer Bunn, Erin Englund, Ludmila Khailova, Paul Polak, Benjamin Frank, Jenny Zablah, Alex Barker, Mehdi Moghari, **Jesse Davidson**. Utilization of T2 Prep for MR Oximetry Combined with 4D Flow Phase Contrast Imaging for Evaluation of Extracardiac Organ Oxygen Metabolism in Fontan Patients. Society for Cardiovascular Magnetic Resonance Annual meeting 2024. **Oral Presentation**

- 58) Hernandez A, Khailova L, Suarez-Pierre A, Iguidbashian J, Lehmann T, Seedorf G, Mandell EW, Nozik E, **Davidson JD**, Sherlock LG. A redistribution of the micronutrient selenium occurs after cardiopulmonary bypass with deep hypothermic cardiac arrest in infant piglets. 2024 Western Medical Research Conference. **Oral Presentation**
- 59) Zakrzewski J, Iguidbashian J, Lu L, Deng X, Drysdale N, Khailova L, Jagers J, **Davidson J**, Garcia A, Stone ML. Normothermic and Hypothermic, Acellular Ex vivo Heart Perfusion (EVHP) Results in Improved Graft Function Compared to Cold Static Preservation within a Murine Transplantation Model. 2024 WTSA Meeting.
- 60) Benjamin S. Frank, Sierra Niemiec, Ludmila Khailova, Christopher Mancuso, Max B. Mitchell, Gareth J. Morgan, Mark Twite, Michael V. DiMaria, **Jesse A. Davidson**. Increased Circulating Endothelin-1 is Associated with Post-Operative Morbidity in Children with Single Ventricle Heart Disease Undergoing Fontan Palliation. 2024 Single Ventricle Investigator Meeting. **Oral Presentation**
- 61) Tanner Lehmann, Ludmila Khailova, Christopher A. Mancuso, Sierra Niemiec, Jack Zakrzewski, John Iguidbashian, Alex Suarez Pierre, Matt Stone, **Jesse Davidson**. Expression of Kidney-specific Solute Carrier Genes Upregulated in Piglet Lungs Following Cardiopulmonary Bypass with Deep Hypothermic Circulatory Arrest. 2024 PCICS International Meeting.
- 62) Emily Maloney, Sherrill Caprarola, Caelah Clark, Andrea Gerck, Sarah Kelly, **Jesse Davidson**, Kelly Wolfe. CINCO Improves Access to Therapy Services, Delirium, and Neurodevelopmental Outcomes. 2024 PCICS International Meeting. **Oral Presentation** [Top QI Abstract](#)
- 63) Matthew K Leroue, Aline B Maddux, Tanner Lehmann, Sierra Niemiec, Christopher A. Mancuso, Ludmila Khailova, Peter M. Mourani, Jelena Klawitter, **Jesse A. Davidson**. Alteration in Indole Metabolites After Cardiopulmonary Bypass in Neonates and Infants. 2024 PCICS International Meeting.

Book Chapters

- 1) **Davidson J**, Schaffer M. Cyanotic Heart Disease. In: Berman's Pediatric Decision Making, Fifth Edition. Philadelphia: Elsevier, Inc; 2011, p. 538-541.
- 2) Francois Lacour-Gayet, Leo Lopez, **Jesse Davidson**, Eduardo da Cruz. Pulmonary Venous Stenosis. In book: Textbook of Pediatric and Congenital Cardiology, Cardiac Surgery and Cardiac Intensive Care, Edition: 1st, Publisher: Springer-Verlag London Ltd. 2014

Media Promotions of Our Team's Research

- 1) Data-Driven Discovery. *Q Magazine*. July 2023.
- 2) Speeding Up Cardiac Disease Research with Big Data. *Congenital Cardiology Today*. March 2024.

Other Products of Scholarship

- 1) CHCO Anticoagulation Dosing and Monitoring Guidelines (2013):
<https://policyportal.childrenscolorado.org/policy/Documents/Anticoagulation%20Dosing%20and%20Monitoring%20Protocols.pdf#search=anticoagulation>
- 2) Heart Institute Research Intake Form (2014)
- 3) CHCO Dobutamine Stress Echocardiogram Procedure (2015, 2018):
<https://policyportal.childrenscolorado.org/policy/Documents/Dobutamine%20Stress%20Echocardiogram%20Procedure.pdf#search=dobutamine>
- 4) CHCO Blood Draw Volumes, Recommendations for Maximum (2018)
https://policyportal.childrenscolorado.org/policy/Documents/Blood%20Draw%20Volumes_Maximum.pdf#search=blood%20draw%20volumes