



## Sushma Reddy

Assistant Professor of Pediatrics (Cardiology) at the Lucile Salter Packard Children's Hospital

Pediatrics - Cardiology

### CLINICAL OFFICES

- **Lucile Packard Children's Hospital**

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### Bio

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### CLINICAL FOCUS

- Cardiac Critical Care
- Pediatric Cardiology

### ACADEMIC APPOINTMENTS

- Assistant Professor - Med Center Line, Pediatrics - Cardiology
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

### ADMINISTRATIVE APPOINTMENTS

- Director, Pediatric Heart Center Biobank, (2009- present)

### HONORS AND AWARDS

- Poster of Distinction, North American Society for Pediatric Gastroenterology, Hepatology & Nutrition (2002)
- Section on Cardiology and Cardiac Surgery's Educational Travel Grant, American Academy of Pediatrics (10/7/2005)
- Finalist, Young Investigator Award in Basic Research, Section on Cardiology and Cardiac Surgery, American Academy of Pediatrics (10/7/2005)
- Council on Clinical Cardiology, Women in Cardiology Travel Grant, American Heart Association Scientific Sessions (11/13/2005)
- Pediatric Fellows Poster Award, Columbia University, NY (5/22/2006)

### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, AHA CVDY SCILL committee (2017 - present)
- Member, PCICS Research Committee (2016 - present)

### PROFESSIONAL EDUCATION

- Medical Education: Rajah Muthiah Medical College and Hospital Annamalai University (1998) India

- Residency: Children's Hospital of Michigan (2004) MI
- Fellowship: Morgan Stanley Children's Hospital (2008) NY
- Fellowship: Children's Hospital Boston (2009) MA
- Board Certification: Pediatric Cardiology, American Board of Pediatrics (2008)
- Board Certification, Pediatric Cardiology , American Board of Pediatrics (2018)

## Publications

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### PUBLICATIONS

- **IMPAIRED BIOENERGETICS IN RIGHT VENTRICULAR FAILURE IS ASSOCIATED WITH LIPID PEROXIDATION AND DECREASED MITOCHONDRIAL DYNAMICS**  
Hwang, H., Sandeep, N., Zhao, M., Hu, D., Lan, I., Coronado, M., Kooiker, K., Fajardo, G., Bernstein, D., Reddy, S.  
ELSEVIER SCIENCE INC.2019: 648
- **A process for academic societies to develop scientific statements and white papers: experience of the Pediatric Cardiac Intensive Care Society.** *Cardiology in the young*  
Reddy, S., Polito, A., Staveski, S., Dalton, H.  
2018: 1–4
- **Cardiovascular Disease in the Young Council's Science and Clinical Education Lifelong Learning Committee: Year in Review** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*  
Reddy, S., Marino, B. S., Baker-Smith, C. M., Beaton, A., Krawczeski, C. D., Miyake, C. Y., Cnota, J. F., Glatz, A. C., Feingold, B., Romano, J. C., Cabrera, A. G., John, A. S., Cohen, et al  
2018; 7 (21): e010617
- **Renin-Angiotensin-Aldosterone System Inhibitors for Right Ventricular Dysfunction in Tetralogy of Fallot Quo Vadis?** *CIRCULATION*  
Reddy, S., Bernstein, D., Newburger, J. W.  
2018; 137 (14): 1472–74
- **Physiological Mitochondrial Fragmentation Is a Normal Cardiac Adaptation to Increased Energy Demand.** *Circulation research*  
Coronado, M., Fajardo, G., Nguyen, K., Zhao, M., Kooiker, K., Jung, G., Hu, D. Q., Reddy, S., Sandoval, E., Stotland, A., Gottlieb, R. A., Bernstein, D.  
2018; 122 (2): 282–95
- **Loss of Endothelial Derived WNT5A is Associated with Reduced Pericyte Recruitment and Small Vessel Loss in Pulmonary Arterial Hypertension.** *Circulation*  
Yuan, K., Shamskhov, E. A., Orcholski, M. E., Nathan, A., Reddy, S., Honda, H., Mani, V., Zeng, Y., Ozen, M. O., Wang, L., Demirci, U., Tian, W., Nicolls, et al  
2018
- **miR-21 is associated with fibrosis and right ventricular failure.** *JCI insight*  
Reddy, S., Hu, D., Zhao, M., Blay, E., Sandeep, N., Ong, S., Jung, G., Kooiker, K. B., Coronado, M., Fajardo, G., Bernstein, D.  
2017; 2 (9)
- **Institution of Venous-arterial Extracorporeal Membrane Oxygenation Does Not Lead to Increased Wall Stress in Patients with Impaired Myocardial Function** *PEDIATRIC CARDIOLOGY*  
Koth, A. M., Axelrod, D. M., Reddy, S., Roth, S. J., Tacy, T. A., Punn, R.  
2017; 38 (3): 539-546
- **Compassionate deactivation of ventricular assist devices in pediatric patients** *JOURNAL OF HEART AND LUNG TRANSPLANTATION*  
Hollander, S. A., Axelrod, D. M., Bernstein, D., Cohen, H. J., Sourkes, B., Reddy, S., Magnus, D., Rosenthal, D. N., Kaufman, B. D.  
2016; 35 (5): 564-567
- **Time-dependent evolution of functional vs. remodeling signaling in induced pluripotent stem cell-derived cardiomyocytes and induced maturation with biomechanical stimulation** *FASEB JOURNAL*  
Jung, G., Fajardo, G., Ribeiro, A. J., Kooiker, K. B., Coronado, M., Zhao, M., Hu, D., Reddy, S., Kodo, K., Sriram, K., Insel, P. A., Wu, J. C., Pruitt, et al  
2016; 30 (4): 1464-1479
- **De Novo and Rare Variants at Multiple Loci Support the Oligogenic Origins of Atrioventricular Septal Heart Defects.** *PLoS genetics*

- Priest, J. R., Osoegawa, K., Mohammed, N., Nanda, V., Kundu, R., Schultz, K., Lammer, E. J., Girirajan, S., Scheetz, T., Waggott, D., Haddad, F., Reddy, S., Bernstein, et al  
2016; 12 (4)
- **Molecular Mechanisms of Right Ventricular Failure.** *Circulation*  
Reddy, S., Bernstein, D.  
2015; 132 (18): 1734-1742
  - **The vulnerable right ventricle.** *Current opinion in pediatrics*  
Reddy, S., Bernstein, D.  
2015; 27 (5): 563-568
  - **BMP2 Preserves Mitochondrial Function and DNA during Reoxygenation to Promote Endothelial Cell Survival and Reverse Pulmonary Hypertension** *CELL METABOLISM*  
Diebold, I., Hennigs, J. K., Miyagawa, K., Li, C. G., Nickel, N. P., Kaschwich, M., Cao, A., Wang, L., Reddy, S., Chen, P., Nakahira, K., Alcazar, M. A., Hopper, et al  
2015; 21 (4): 596-608
  - **Adrenergic receptor genotype influences heart failure severity and  $\beta$ -blocker response in children with dilated cardiomyopathy.** *Pediatric research*  
Reddy, S., Fung, A., Manlhot, C., Selamet Tierney, E. S., Chung, W. K., Blume, E., Kaufman, B. D., Goldmuntz, E., Colan, S., Mital, S.  
2015; 77 (2): 363-369
  - **Variability of characteristics and outcomes following cardiopulmonary resuscitation events in diverse ICU settings in a single, tertiary care children's hospital\*.** *Pediatric critical care medicine*  
Gupta, P., Yan, K., Chow, V., Dao, D. T., Gossett, J. M., Leong, K., Franzon, D., Halamek, L. P., Reddy, S., Berg, R. A., Roth, S. J., Nadkarni, V. M.  
2014; 15 (3): e128-41
  - **Atherosclerosis causing recurrent catastrophic aortopulmonary shunt dehiscence in a patient with Alagille syndrome.** *Pediatric cardiology*  
May, L., Hanley, F. L., Connolly, A. J., Reddy, S.  
2013; 34 (8): 1945-1948
  - **Deletion of the beta 2-adrenergic receptor prevents the development of cardiomyopathy in mice** *JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY*  
Fajardo, G., Zhao, M., Urashima, T., Farahani, S., Hu, D., Reddy, S., Bernstein, D.  
2013; 63: 155-164
  - **FK506 activates BMP2, rescues endothelial dysfunction, and reverses pulmonary hypertension.** *journal of clinical investigation*  
Spiekerkoetter, E., Tian, X., Cai, J., Hopper, R. K., Sudheendra, D., Li, C. G., El-Bizri, N., Sawada, H., Haghighat, R., Chan, R., Haghighat, L., de Jesus Perez, V., Wang, et al  
2013; 123 (8): 3600-3613
  - **Altered ubiquitin-proteasome signaling in right ventricular hypertrophy and failure.** *American journal of physiology. Heart and circulatory physiology*  
Rajagopalan, V., Zhao, M., Reddy, S., Fajardo, G., Wang, X., Dewey, S., Gomes, A. V., Bernstein, D.  
2013; 305 (4): H551-62
  - **Physiologic and molecular characterization of a murine model of right ventricular volume overload.** *American journal of physiology. Heart and circulatory physiology*  
Reddy, S., Zhao, M., Hu, D., Fajardo, G., Katznelson, E., Punn, R., Spin, J. M., Chan, F. P., Bernstein, D.  
2013; 304 (10): H1314-27
  - **Hypoxia-inducible factor-1 $\alpha$  in pulmonary artery smooth muscle cells lowers vascular tone by decreasing Myosin light chain phosphorylation.** *Circulation research*  
Kim, Y., Barnes, E. A., Alvira, C. M., Ying, L., Reddy, S., Cornfield, D. N.  
2013; 112 (9): 1230-1233
  - **Dynamic microRNA expression during the transition from right ventricular hypertrophy to failure** *PHYSIOLOGICAL GENOMICS*  
Reddy, S., Zhao, M., Hu, D., Fajardo, G., Hu, S., Ghosh, Z., Rajagopalan, V., Wu, J. C., Bernstein, D.  
2012; 44 (10): 562-575
  - **Recipient Genotype Is a Predictor of Allograft Cytokine Expression and Outcomes After Pediatric Cardiac Transplantation** *80th Annual Scientific Session of the American-Heart-Association (AHA)*

Auerbach, S. R., Manlhiot, C., Reddy, S., Kinnear, C., Richmond, M. E., Gruber, D., McCrindle, B. W., Deng, L., Chen, J. M., Addonizio, L. J., Chung, W. K., Mital, S.

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- **Genomic Profiling of Left and Right Ventricular Hypertrophy in Congenital Heart Disease** *53rd Annual Scientific Session of the American-College-of-Cardiology*  
Kaufman, B. D., Desai, M., Reddy, S., Osorio, J. C., Chen, J. M., Mosca, R. S., Ferrante, A. W., Mital, S.  
CHURCHILL LIVINGSTONE INC MEDICAL PUBLISHERS.2008: 760–67
- **Pyloric Stenosis** *AAP Textbook on Pediatric Care*  
Sushma Reddy, Deepak M Kamat  
2008; Chapter315
- **RAAS gene polymorphisms influence progression of pediatric hypertrophic cardiomyopathy** *77th Scientific Meeting of the American-Heart-Association*  
Kaufman, B. D., Auerbach, S., Reddy, S., Manlhiot, C., Deng, L., Prakash, A., Printz, B. F., Gruber, D., Papavassiliou, D. P., Hsu, D. T., Sehnert, A. J., Chung, W. K., Mital, et al  
SPRINGER.2007: 515–23
- **Failure of right ventricular adaptation in children with tetralogy of Fallot** *78th Annual Scientific Session of the American-Heart-Association*  
Reddy, S., Osorio, J. C., Duque, A. M., Kaufman, B. D., Phillips, A. B., Chen, J. M., Quaegebeur, J., Mosca, R. S., Mital, S.  
LIPPINCOTT WILLIAMS & WILKINS.2006: I37–I42
- **Inlet patch: Heterotopic gastric mucosa - Another contributor to supraesophageal symptoms?** *JOURNAL OF PEDIATRICS*  
Macha, S., Reddy, S., Rabah, R., Thomas, R., Tolia, V.  
2005; 147 (3): 379-382
- **Restrictive interatrial communication in hypoplastic left heart syndrome after modified Fontan repair** *ANNALS OF THORACIC SURGERY*  
Nemeh, H. W., Reddy, S., Walters, H. L., Hakimi, M., Ross, R. D.  
2003; 76 (6): 2089-2091