



R. Kirk Riemer

Sr Res Scientist-Basic Ls, Cardiothoracic Surgery - Pediatric Cardiac Surgery

Bio

INSTITUTE AFFILIATIONS

- Member (Staff), Cardiovascular Institute

Publications

PUBLICATIONS

- **Critical Role of Coaptive Strain in Aortic Valve Leaflet Homeostasis: Use of a Novel Flow Culture Bioreactor to Explore Heart Valve Mechanobiology.** *Journal of the American Heart Association*
Maeda, K., Ma, X., Hanley, F. L., Riemer, R. K.
2016; 5 (8)
- **Tetralogy of Fallot: aorto-pulmonary collaterals and pulmonary arteries have distinctly different transcriptomes** *PEDIATRIC RESEARCH*
Ma, X., Barboza, L. A., Siyahian, A., Reinhartz, O., Maeda, K., Reddy, V. M., Hanley, F. L., Riemer, R. K.
2014; 76 (4): 341-346
- **Dynamics of human myocardial progenitor cell Populations in the neonatal period** *ANNALS OF THORACIC SURGERY*
Amir, G., Ma, X., Reddy, V. M., Hanley, F. L., Reinhartz, O., Ramamoorthy, C., Riemer, R. K.
2008; 86 (4): 1311-1320
- **In Vivo Post-Cardiac Arrest Myocardial Dysfunction Is Supported by Ca²⁺/Calmodulin-Dependent Protein Kinase II-Mediated Calcium Long-Term Potentiation and Mitigated by Alda-1, an Agonist of Aldehyde Dehydrogenase Type 2.** *Circulation*
Woods, C. E., Shang, C., Taghavi, F., Downey, P., Zalewski, A., Rubio, G. R., Liu, J., Homburger, J. R., Grunwald, Z., Qi, W., Bollensdorff, C., Thanaporn, P., Ali, et al
2016; 134 (13): 961-977
- **Is Continuous Flow Superior to Pulsatile Flow in Single Ventricle Mechanical Support? Results from a Large Animal Pilot Study** *ASAIO JOURNAL*
Fujii, Y., Ferro, G., Kagawa, H., Centola, L., Zhu, L., Ferrier, W. T., Talken, L., Riemer, R. K., Maeda, K., Nasirov, T., Hodges, B., Amirriazi, S., Lee, et al
2015; 61 (4): 443-447
- **Hemodynamic Monitoring of Large Animal Chronic Studies After Median Sternotomy: Experiences With Different Telemetric Physiological Devices** *ASAIO JOURNAL*
Fujii, Y., Pitsillides, K., Ferro, G., Kagawa, H., Centola, L., Kinouchi, K., Zhu, L., Ferrier, W. T., Talken, L., Nasirov, T., Riemer, R. K., Reinhartz, O.
2015; 61 (3): 332-338
- **Embryology and Anatomy of Intrapulmonary Shunts** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*
McMullan, D. M., Riemer, R. K.
2015; 32: S190-S194
- **Fetal cardiac intervention: Improved results of fetal cardiac bypass in immature fetuses using the TinyPump device.** *journal of thoracic and cardiovascular surgery*
Sebastian, V. A., Ferro, G., Kagawa, H., Nasirov, T., Maeda, K., Ferrier, W. T., Takatani, S., Riemer, R. K., Hanley, F. L., Reddy, V. M.

2013; 145 (6): 1460-1464

- **Reconstruction of pulmonary artery with porcine small intestinal submucosa in a lamb surgical model: Viability and growth potential** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Boni, L., Chalajour, F., Sasaki, T., Snyder, R. L., Boyd, W. D., Riemer, R. K., Reddy, V. M.
2012; 144 (4): 963-?
- **Reconstruction of Pulmonary Artery in a Newborn Using a Porcine Small Intestinal Submucosal Patch** *ANNALS OF THORACIC SURGERY*
Chalajour, F., Barboza, L. A., Boni, L., Snyder, R., Hanley, F. L., Reddy, V. M., Riemer, R. K.
2012; 93 (4): 1311-1315
- **Maintenance Dose of Warfarin in Sheep and Effect of Diet: A Preliminary Report** *JOURNAL OF INVESTIGATIVE SURGERY*
Sasaki, T., Tsuda, S., Trujillo, M., Riemer, R. K., Reinhartz, O.
2012; 25 (1): 29-32
- **Challenges in Longer-Term Mechanical Support of Fontan Circulation in Sheep** *ASAIO JOURNAL*
Boni, L., Sasaki, T., Ferrier, W. T., Yeung, J. T., Reichenbach, S. H., Riemer, R. K., Reinhartz, O.
2012; 58 (1): 60-64
- **Cerebral Oxygen Metabolism During Total Body Flow and Antegrade Cerebral Perfusion at Deep and Moderate Hypothermia** *ARTIFICIAL ORGANS*
Sasaki, T., Boni, L., Riemer, R. K., Yeung, J. T., Ramamoorthy, C., Beckman, R., Gisner, C., Shuttleworth, P., Hanley, F. L., Reddy, V. M.
2010; 34 (11): 980-986
- **Optimal flow rate for antegrade cerebral perfusion** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Sasaki, T., Tsuda, S., Riemer, R. K., Ramamoorthy, C., Reddy, V. M., Hanley, F. L.
2010; 139 (3): 530-535
- **Deep Brain Hyperthermia While Rewarming from Hypothermic Circulatory Arrest** *41st Annual Meeting of the Society-of-Thoracic-Surgeons*
Amir, G., Ramamoorthy, C., Riemer, R. K., Hanley, F. L., Reddy, V. M.
WILEY-BLACKWELL PUBLISHING, INC.2009: 606-10
- **Recovery During Mid-Term Mechanical Support of Fontan Circulation in Sheep** *ASAIO JOURNAL*
Tsuda, S., Sasaki, T., Maeda, K., Riemer, R. K., Reichenbach, S. H., Reinhartz, O.
2009; 55 (4): 406-411
- **Morphological studies of pulmonary arteriovenous shunting in a lamb model of superior cavopulmonary anastomosis** *PEDIATRIC CARDIOLOGY*
McMullan, D. M., Reddy, V. M., Gottliebson, W. M., Silverman, N. H., Perry, S. B., Chan, F., Hanley, F. L., Riemer, R. K.
2008; 29 (4): 706-712
- **Identification and characterization of cells with high angiogenic potential and transitional phenotype in calcific aortic valve** *EXPERIMENTAL CELL RESEARCH*
Chalajour, F., Treede, H., Gehling, U. M., Ebrahimnejad, A., Boehm, D. H., Riemer, R. K., Ergun, S., Reichenspurner, H.
2007; 313 (11): 2326-2335
- **Visual light spectroscopy reflects flow-related changes in brain oxygenation during regional low-flow perfusion and deep hypothermic circulatory arrest** *31st Annual Meeting of the Western-Thoracic-Surgical-Association*
Amir, G., Ramamoorthy, C., Riemer, R. K., Davis, C. R., Hanley, F. L., Reddy, V. M.
MOSBY-ELSEVIER.2006: 1307-13
- **Antegrade cerebral perfusion reduces apoptotic neuronal injury in a neonatal piglet model of cardiopulmonary bypass** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Chock, V. Y., Amir, G., DAVIS, C. R., Ramamoorthy, C., Riemer, R. K., Ray, D., Giffard, R. G., Reddy, V. M.
2006; 131 (3): 659-665
- **Neonatal brain protection and deep hypothermic circulatory arrest: pathophysiology of ischemic neuronal injury and protective strategies** *ANNALS OF THORACIC SURGERY*
Amir, G., Ramamoorthy, C., Riemer, R. K., Reddy, V. M., Hanley, F. L.
2005; 80 (5): 1955-1964
- **Mechanical support of total cavopulmonary connection with an axial flow pump** *50th Annual Conference of the American-Society-for-Artificial-Internal-Organs*

- Riemer, R. K., Amir, G., Reichenbach, S. H., Reinhartz, O.
MOSBY-ELSEVIER.2005: 351–54
- **Preliminary results of fetal cardiac bypass in nonhuman primates** *84th Annual Meeting of the American-Association-for-Thoracic-Surgery*
Ikai, A., Riemer, R. K., Ramamoorthy, C., Malhotra, S., Cassorla, L., Amir, G., Hanley, F. L., Reddy, V. M.
MOSBY-ELSEVIER.2005: 175–81
 - **Pulmonary arteriovenous shunting in the normal fetal lung** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
McMullan, D. M., Hanley, F. L., Cohen, G. A., Portman, M. A., Riemer, R. K.
2004; 44 (7): 1497-1500
 - **Pulmonary expression of the hepatocyte growth factor receptor c-Met shifts from medial to intimal layer after cavopulmonary anastomosis** *83rd Annual Meeting of the American-Association-for-Thoracic-Surgery*
Ikai, A., Riemer, R. K., Ma, X. Y., Reinhartz, O., Hanley, F. L., Reddy, V. M.
MOSBY-ELSEVIER.2004: 1442–49
 - **A method for selectively limiting lumen diameter in corrosion casting** *MICROVASCULAR RESEARCH*
McMullan, D. M., Hanley, F. L., Riemer, R. K.
2004; 67 (3): 215-217
 - **Induced fibrillation is equally effective as crystalloid cardioplegia in the protection of fetal myocardial function** *82nd Annual Meeting of the American-Association-for-Thoracic-Surgery*
Malhotra, S. P., Thelitz, S., Riemer, R. K., Reddy, V. M., Suleman, S., Hanley, F. L.
MOSBY-ELSEVIER.2003: 1276–82
 - **Fetal myocardial protection is markedly improved by reduced cardioplegic calcium content** *ANNALS OF THORACIC SURGERY*
Malhotra, S. P., Thelitz, S., Riemer, R. K., Reddy, V. M., Suleman, S., Hanley, F. L.
2003; 75 (6): 1937-1941
 - **Robotic-assisted endoscopic thoracic aortic anastomosis in juvenile lambs** *5th Annual Meeting of the International-Society-for-Minimally-Invasive-Cardiac-Surgery*
Malhotra, S. P., Le, D., Thelitz, S., Hanley, F. L., Riemer, R. K., Suleman, S., Reddy, V. M.
FORUM MULTIMEDIA PUBLISHING, LLC.2003: 38–42
 - **The role of oxidative stress in the development of pulmonary arteriovenous malformations after cavopulmonary anastomosis** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Malhotra, S. P., Reddy, V. M., Thelitz, S., He, Y. P., McMullan, D. M., Hanley, F. L., Riemer, R. K.
2002; 124 (3): 479-485
 - **Cavopulmonary anastomosis induces pulmonary expression of the angiotensin II receptor family** *73rd Annual Scientific Sessions of the American-Heart-Association*
Malhotra, S. P., Reddy, V. M., Thelitz, S., He, Y. P., Hanley, F. L., Suleman, S., Riemer, R. K.
MOSBY-ELSEVIER.2002: 655–60
 - **Robotic-assisted endoscopic thoracic aortic anastomosis in juvenile lambs.** *heart surgery forum*
Malhotra, S. P., Le, D., Thelitz, S., Hanley, F. L., Riemer, R. K., Suleman, S., Reddy, V. M.
2002; 6 (1): 38-42
 - **Failing Fontan circulation sheep model and utilization of axial flow pump - Preliminary experiments** *8th World Congress on Heart Failure - Mechanisms and Management*
Reinhartz, O., Reichenbach, S. H., Ikai, A., Riemer, R. K., Karl, T. R.
MEDIMOND S R L.2002: 531–535
 - **Superior cavopulmonary anastomosis suppresses the activity and expression of pulmonary angiotensin-converting enzyme** *80th Annual Meeting of the American-Association-for-Thoracic-Surgery*
Malhotra, S. P., Riemer, R. K., Thelitz, S., He, Y. P., Hanley, F. L., Reddy, V. M.
MOSBY-ELSEVIER.2001: 464–69
 - **Regulation of uterine smooth muscle function during gestation** *PEDIATRIC RESEARCH*
Riemer, R. K., Heymann, M. A.
1998; 44 (5): 615-627

- **Regulation of ductus arteriosus patency by nitric oxide in fetal lambs: The role of gestation, oxygen tension, and vasa vasorum** *PEDIATRIC RESEARCH*
Clyman, R. I., Waleh, N., Black, S. M., Riemer, R. K., Mauray, F., Chen, Y. Q.
1998; 43 (5): 633-644
- **Growth factor induction of nitric oxide synthase in rat pheochromocytoma cells** *MOLECULAR BRAIN RESEARCH*
Sheehy, A. M., Phung, Y. T., Riemer, K. R., Black, S. M.
1997; 52 (1): 71-77
- **Increased expression of nitric oxide synthase in the myometrium of the pregnant rat uterus** *AMERICAN JOURNAL OF PHYSIOLOGY-ENDOCRINOLOGY AND METABOLISM*
Riemer, R. K., Buscher, C., Bansal, R. K., Black, S. M., He, Y. P., NATUZZI, E. S.
1997; 272 (6): E1008-E1015
- **Decline in myometrial nitric oxide synthase expression is associated with labor and delivery** *JOURNAL OF CLINICAL INVESTIGATION*
Bansal, R. K., Goldsmith, P. C., He, Y. P., Zaloudek, C. J., Ecker, J. L., Riemer, R. K.
1997; 99 (10): 2502-2508
- **RESPONSE OF GUINEA-PIG SMOOTH AND STRIATED URETHRAL SPHINCTER TO CROMAKALIM, PRAZOSIN, NIFEDIPINE, NITROPRUSSIDE, AND ELECTRICAL-STIMULATION** *NEUROUROLOGY AND URODYNAMICS*
VONHEYDEN, B., Riemer, R. K., Nunes, L., Brock, G. B., Lue, T. F., Tanagho, E. A.
1995; 14 (2): 153-168
- **GLYCERYL TRINITRATE STOPS ACTIVE LABOUR IN SHEEP** *3rd International Meeting on the Biology of Nitric Oxide*
Heymann, M. A., BOOTSTAYLOR, B., Roman, C., NATUZZI, E. S., Parer, J. T., Harrison, M. R., Riemer, R. K.
PORTLAND PRESS LTD.1994: 201-203
- **UTERINE SMOOTH MUSCLE CELLS EXHIBIT AGONIST-LINKED NITRIC OXIDE SYNTHASE ACTIVITY** *3rd International Meeting on the Biology of Nitric Oxide*
Riemer, R. K., NATUZZI, E. S., Baker, S. M., Heymann, M. A., Musci, T. J.
PORTLAND PRESS LTD.1994: 185-189
- **NITRIC-OXIDE SYNTHASE ACTIVITY IN THE PREGNANT UTERUS DECREASES AT PARTURITION** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*
NATUZZI, E. S., Ursell, P. C., Harrison, M., Buscher, C., Riemer, R. K.
1993; 194 (1): 1-8
- **MYOMETRIAL CHARACTERISTICS OF THE SYRIAN-HAMSTER UTERINE SMOOTH-MUSCLE CELL-LINE, SHM** *IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-ANIMAL*
Riemer, R. K., Sadovsky, Y., ROBERTS, J. M.
1993; 29A (6): 478-480
- **Myometrial characteristics of the syrian hamster uterine smooth muscle cell line, SHM.** *In vitro cellular & developmental biology. Animal*
Riemer, R. K., Sadovsky, Y., ROBERTS, J. M.
1993; 29 (6): 478-480
- **RESTORATION OF ESTROGEN-DEPENDENT PROGESTERONE-RECEPTOR EXPRESSION IN A UTERINE MYOCYTE CELL-LINE** *ENDOCRINOLOGY*
Sadovsky, Y., Kushner, P. J., ROBERTS, J. M., Riemer, R. K.
1993; 132 (4): 1609-1613
- **QUANTIFICATION OF PROSTAGLANDIN-E(1) RECEPTORS IN CAVERNOUS TISSUE OF MEN, MONKEYS AND DOGS** *UROLOGIA INTERNATIONALIS*
Aboseif, S., Riemer, R. K., Stackl, W., Lue, T., Tanagho, E.
1993; 50 (3): 148-152
- **THE CONCENTRATION OF ESTROGEN-RECEPTORS IN RABBIT UTERINE MYOCYTES DECREASES IN CULTURE** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*
Sadovsky, Y., Riemer, R. K., ROBERTS, J. M.
1992; 167 (6): 1631-1635
- **MYOCARDIAL CHOLINERGIC SIGNALING CHANGES WITH AGE** *PEDIATRIC RESEARCH*

- Birk, E., Riemer, R. K.
1992; 31 (6): 601-605
- **PROSTAGLANDINS MODULATE HORMONAL EFFECTS ON RABBIT MYOMETRIAL ALPHA-1-ADRENERGIC RESPONSES** *ENDOCRINOLOGY*
Hurd, W. W., Riemer, R. K., GOLDFIEN, A., ROBERTS, J. M.
1991; 129 (3): 1436-1442
 - **COCAINE DIRECTLY AUGMENTS THE ALPHA-ADRENERGIC CONTRACTILE RESPONSE OF THE PREGNANT RABBIT UTERUS** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*
Hurd, W. W., Robertson, P. A., Riemer, R. K., GOLDFIEN, A., ROBERTS, J. M.
1991; 164 (1): 182-187
 - **LEUKOTRIENE-C4, LEUKOTRIENE-D4, AND LEUKOTRIENE-E4 IN FETAL LAMB TRACHEAL FLUID** *JOURNAL OF DEVELOPMENTAL PHYSIOLOGY*
Velvis, H., KRUSELL, J., Roman, C., Soifer, S. J., Riemer, R. K., Heymann, M. A.
1990; 14 (1): 37-41
 - **PROGESTERONE PREVENTS LINKAGE OF RABBIT MYOMETRIAL ALPHA-2-ADRENERGIC RECEPTORS TO INHIBITION OF ADENYLATE-CYCLASE** *AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY*
Wu, Y. Y., Riemer, R. K., GOLDFIEN, A., ROBERTS, J. M.
1989; 160 (4): 838-844
 - **HORMONAL-REGULATION MYOMETRIAL ADRENERGIC RESPONSES - THE RECEPTOR AND BEYOND** *JOURNAL OF DEVELOPMENTAL PHYSIOLOGY*
ROBERTS, J. M., Riemer, R. K., Bottari, S. P., Wu, Y. Y., GOLDFIEN, A.
1989; 11 (3): 125-134
 - **ESTROGEN REDUCES BETA-ADRENOCEPTOR-MEDIATED CAMP PRODUCTION AND THE CONCENTRATION OF THE GUANYL NUCLEOTIDE-REGULATORY PROTEIN, GS, IN RABBIT MYOMETRIUM** *MOLECULAR PHARMACOLOGY*
Riemer, R. K., Wu, Y. Y., Bottari, S. P., Jacobs, M. M., GOLDFIEN, A., ROBERTS, J. M.
1988; 33 (4): 389-395
 - **ESTROGEN INCREASES ADRENERGIC-MEDIATED BUT NOT CHOLINERGIC-MEDIATED PRODUCTION OF INOSITOL PHOSPHATES IN RABBIT UTERUS** *MOLECULAR PHARMACOLOGY*
Riemer, R. K., GOLDFIEN, A., ROBERTS, J. M.
1987; 32 (5): 663-668
 - **RABBIT MYOMETRIAL OXYTOCIN AND ALPHA-2-ADRENERGIC RECEPTORS ARE INCREASED BY ESTROGEN BUT ARE DIFFERENTIALLY REGULATED BY PROGESTERONE** *ENDOCRINOLOGY*
Jacobson, L., Riemer, R. K., GOLDFIEN, A. C., Lykins, D., Siiteri, P. K., ROBERTS, J. M.
1987; 120 (3): 1184-1189
 - **RABBIT MYOMETRIAL ADRENERGIC SENSITIVITY IS INCREASED BY ESTROGEN BUT IS INDEPENDENT OF CHANGES IN ALPHA-ADRENOCEPTOR CONCENTRATION** *JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS*
Riemer, R. K., GOLDFIEN, A., ROBERTS, J. M.
1987; 240 (1): 44-50
 - **ACTIVATION OF UTERINE SMOOTH-MUSCLE CONTRACTION - IMPLICATIONS FOR EICOSANOID ACTION AND INTERACTIONS** *SEMINARS IN PERINATOLOGY*
Riemer, R. K., ROBERTS, J. M.
1986; 10 (4): 276-287
 - **RABBIT UTERINE OXYTOCIN RECEPTORS AND INVITRO CONTRACTILE RESPONSE - ABRUPT CHANGES AT TERM AND THE ROLE OF EICOSANOIDS** *ENDOCRINOLOGY*
Riemer, R. K., GOLDFIEN, A. C., GOLDFIEN, A., ROBERTS, J. M.
1986; 119 (2): 699-709
 - **RAPID AND SIMPLE PURIFICATION OF THE I-125-LABELED ALPHA-1 ADRENERGIC RADIOLIGAND 2-[BETA-(4-HYDROXYLPHENYLETHYL)AMINOMETHYL] TETRALONE (BE 2254) USING REVERSED-PHASE HIGH-PERFORMANCE LIQUID-CHROMATOGRAPHY** *JOURNAL OF CHROMATOGRAPHY*
Riemer, R. K., Kuhn, R. W.

1985; 338 (1): 236-241

- **SANGUINARINE - POSITIVE INOTROPIC ALKALOID WHICH INHIBITS CARDIAC $Na^+,K^+-ATPASE$** *EUROPEAN JOURNAL OF PHARMACOLOGY*

Seifen, E., Adams, R. J., Riemer, R. K.

1979; 60 (4): 373-377