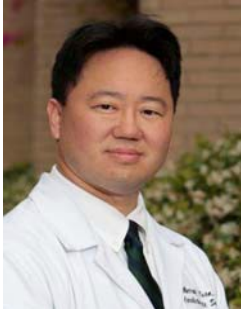


# Murray H. Kwon, M.D., MBA



## AWARDS

- The Paul C. Samson Award, 2000
- Stanford University School of Medicine Dean's Fellowship Award, 2000
- American Society of Transplant Surgeons
- Surgical Scientist Scholarship Award, 1999

## PUBLICATIONS

**Kwon MH**, Zhang JQ, Abrahamyan A, Zhang ZK, Gjertson DW, Ardehali A, Kobashigawa J, Shemin RJ, Reed EF: Characterization of Ventricular Assist Device Mediated Sensitization in the Bridge to Heart Transplant Patient. Accepted for Poster Presentation at AHA Basic Cardiovascular Sciences 2011 Scientific Sessions, New Orleans, LA, July 21, 2011

**Kwon MH**, Moriguchi JD, Kittleson M, Patel J, Kawano M, Davis S, Reed EF, Burch C, Velleca A, Stimpson E, Ardehali A, Kobashigawa JA: Lack of Sensitization In Patients Awaiting Heart Transplantation On Heartmate II Axial Flow Assist Devices. Accepted for Poster Presentation at ISHLT 30<sup>th</sup> Annual Meeting and Scientific Sessions, Chicago, IL, April 23, 2010

Wong S, Wong S, Moriguchi J, Kawano M, Kobashigawa J, Shemin R, **Kwon MH**: Primary Graft Dysfunction Does Not Lead to Increased Cardiac Allograft Vasculopathy in Surviving Patients, Accepted for Oral Presentation at ISHLT 30<sup>th</sup> Annual Meeting and Scientific Sessions, Chicago, IL, April 23, 2010

**Kwon MH**, Moriguchi JD, Ardehali A, Jocsion R, Marelli D, Laks H, Shemin RJ, Esmailian F: Use of Ventricular Assist Device as a Bridge to Cardiac Transplantation: Impact of Age and other Determinants of Outcomes, *Texas heart Journal*, 2009;36(3):214-9

**Kwon MH**, Suzuki T, Koransky ML, Penta K, Sakamoto G, Jahncke TL, Carter AJ, Quertermous T, Robbins RC: Comparison of the Novel Angiogenic Factor Developmental Endothelial Locus-1 with Vascular Endothelial Growth Factor in a Porcine Model of Cardiac Ischemia, *Annals of Thoracic Surgery*, 2003 Oct;76(4):1246-51

**Kwon MH**, Lijkwan MA, Jahncke CL, Murata S, Rothbard JB, Robbins RC: L-Arginine Polymers Enhance Coronary Flow and Reduce Oxidative Stress Following Cardiac Transplantation in Rats, *Journal of Thoracic and Cardiovascular Surgery*, 2003 Oct;126(4):1065-70

## VENTRICULAR ASSIST DEVICE THERAPY

Ventricular assist devices (VAD) are increasingly used in bridge to transplantation (BTT) situations in patients with heart failure refractory to medical management. Sensitization, or the development of anti-HLA antibodies, is a well-known complication of ventricular assist devices that may undermine patients' abilities to undergo heart transplantation.

Additionally, unlike for left ventricular failure, there are currently no long-term options for mechanical assist of the failing right ventricle. Such support options would have far reaching implications for RV failure patients ranging from those with ischemic cardiomyopathy, pulmonary hypertension, or various congenital cardiac anomalies.

The current laboratory projects thus range from the characterization of sensitization (i.e. development of circulating anti-HLA antibodies) in VAD patients to the development of a long-term right ventricular assist device. The specific projects are as follows.

1. Identify HLA antibody specificity and titer, Class I and Class II subtypes, isotype switching (IgM to IgG1, 2, 3, 4), complement fixation, and presence of non-HLA antibodies in patients undergoing VAD implantation.
2. Assess circulating HLA antibody attenuation and durability of response to desensitization protocols.
3. Evaluate donor specific HLA antibody development, duration of antibody expression post heart transplantation, incidence of acute cellular and antibody mediated rejection episodes, incidence of primary graft dysfunction, incidence of graft coronary artery disease, and survival in the sensitized BTT VAD patients.
4. Identify peripheral B cell frequencies and subpopulations following VAD implantation.
5. Develop a large animal model of right ventricular heart failure in calves secondary to volume overloading with a pulmonary arterial band.
6. Develop a large animal model of pulmonary hypertension in calves.
7. Assess the feasibility of long term axial flow ventricular assist device support of the failing right ventricle in a calf model of right heart failure