



## RACP Foundation Research Awards

### FINAL REPORT

<b>Project / Program Title</b>	Atrial Fibrillation and Heart Failure: Exploring Determinants of Adverse and Favourable Outcomes	
<b>Name</b>	Dr Liang-Han Ling	
<b>Award Received</b>	2015	
<b>Report Date</b>	Vincent Fairfax Family Foundation Research Establishment	
<b>Chief Investigator / Supervisor</b>	Liang-Han Ling / David Kaye	
<b>Administering Institution</b>	Baker IDI Heart and Diabetes Institute	
<b>Funding Period</b>	Start Date:	1 January 2015
	Finish Date:	31 December 2015

#### PROJECT SUMMARY

Atrial fibrillation (AF) causes an irregular heartbeat and breathlessness. It is often poorly controlled with medications, resulting in weakening of the heart muscle, termed heart failure (HF). HF compounds breathlessness, and itself promotes AF.

AF and HF are both common, and when combined produce grave results including refractory breathlessness, stroke, and premature death. Treatment is problematic due to limited availability of effective therapies.

This project explores determinants of adverse and favourable outcomes in combined AF and HF, and examine new strategies in the treatment of this disease complex.

#### PROJECT AIMS / OBJECTIVES

The objective of this research was to examine determinants of adverse and favourable outcomes in patients with co-morbid AF and heart failure through the analysis of multicentre registry data recording characteristics and outcomes of AF ablation.

#### SIGNIFICANCE AND OUTCOMES

Atrial fibrillation and heart failure are becoming increasingly prevalent due to Australia's ageing population, yet interactions between these 2 common conditions are not clearly understood. Treatment options are limited and optimal management is unclear. This research begins to better define predictors of outcome in combined AF and heart failure in order to guide treatment, in particular, patient selection for AF ablation.

## **PUBLICATIONS / PRESENTATIONS**

1. Catheter ablation of AF in patients with heart failure: impact of maintaining sinus rhythm on heart failure status and long-term rates of stroke and death. Co-first (Ullah W, Ling LH), Prabhu S, et al. *Europace* 2016.
2. The Impact of Known Heart Disease on Long-Term Outcomes of Catheter Ablation in Patients with AF and Left Ventricular Systolic Dysfunction: A Multicenter International Study. Co-first (Prabhu S, Ling LH), Ullah W, et al. *J Cardiovasc Electrophysiol* 2016;27:281-9.
3. Comorbidity of atrial fibrillation and heart failure. Ling LH, Kistler PM, Kalman JM, Schilling RJ, Hunter RJ. *Nat Rev Cardiol* 2016;13:131-47.