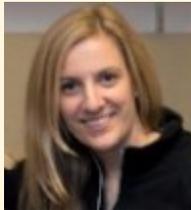


## HeRO News & Updates: August 2017



**R21 Awarded to Erin Buckley, PhD:** Dr. Buckley's proposal "Microvascular cerebral blood flow measured with diffuse correlation spectroscopy in children with sickle cell disease", will assess the feasibility of a new, low-cost, non-invasive technology known as diffuse correlation spectroscopy. The technology will quantify blood

Stem Cell Reports  
Article

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Downregulation of *LGR5* Expression Inhibits Cardiomyocyte Differentiation and Potentiates Endothelial Differentiation from Human Pluripotent Stem Cells

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<http://dx.doi.org/10.1016/j.stemcr.2017.07.005>

**Xu lab published in August  
*Stem Cell***

**Reports:** Understanding molecules involved in differentiation of human pluripotent stem cells (hPSCs) into cardiomyocytes and endothelial cells is important in advancing hPSCs for cell therapy

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flow in the brain of sickle cell patients through a complementary set of experiments in model systems, mice with sickle cell disease, and human patients. The long-term goal of our research is to use diffuse correlation spectroscopy for longitudinal evaluation of blood flow in children with sickle cell disease in order to reduce the incidence of stroke, to guide therapies, and to ultimately improve outcomes. [Read more.](#)

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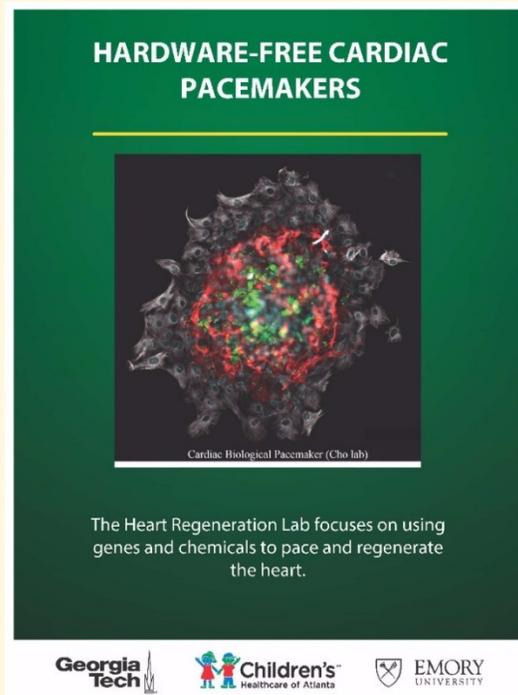
**K08 Awarded to Pam**

**Winterberg, MD:** Chronic kidney disease (CKD) causes early death from a type of heart failure due to a thick and stiff heart. Dr. Winterberg's project "Role of T Cells in Uremic Cardiomyopathy," aims to

and drug testing. Here, we report that LGR5, a leucine-rich repeat-containing G-proteincoupled receptor, plays a critical role in hPSC differentiation into cardiomyocytes and endothelial cells. LGR5 expression was transiently upregulated during the early stage of cardiomyocyte differentiation, and knockdown of LGR5 resulted in reduced expression of cardiomyocyte-associated markers and poor cardiac differentiation. [Click here](#) to read the full article.

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better understand what causes the thick and stiff heart during CKD and to find new ways of treating and preventing death from this type of heart failure. Her research focuses on how a particular type of immune cell, called the T cell, is affecting the health of the heart during CKD. [Read more.](#)



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### **Cardiac Fiber Imaging Using Ultrasound and DTI - Baowei Fei, Ph.D.**

Cardiac fibers directly affect the mechanical, physiological and pathological properties of the heart. Heart failure (HF) is a leading cause of hospitalization, death, and disability in most developed countries, creating a significant social and economic burden for patients, families, and health care systems. [Click here](#) to continue reading.

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**Have news?**

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