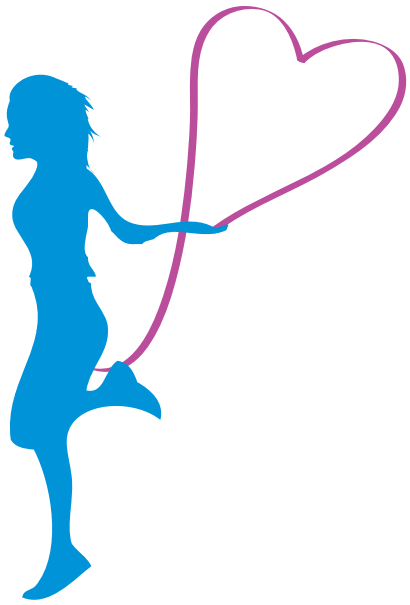
JUMP
START
YOUR
HEART



5K RUN & WALK

VALENTINE'S DAY FEB 19, 2017

Sponsorship Packet

SPONSORSHIP **LEVELS**

RED ROSE SPONSORSHIP — $5,000

- Prominent company logo on event T-shirt (top 1/2)
- Company logo prominently displayed on website home page with link
- One (1) dedicated email to all participants post event
- Promo/giveaway in registration bags
- Banner placement on race arch (event provides) and start/finish chute (sponsor provides)
- Unlimited free-standing sign(s) along race route (sponsor provides)
- Significant recognition made on event day
- Announcement in all press releases and advertisement
- Announcement on social media
- Free registration for ten (10) members
- 10x20 vendor space on event day

GOLDEN HEART SPONSORSHIP — $2,500

- Prominent company logo on event T-shirt
- Company logo prominently displayed on website home page with link
- Inclusion in post race email to all participants
- Promo/giveaway in registration bags
- Banner placement on race start/finish chute (sponsor provides)
- Unlimited free-standing sign(s) along race route (sponsor provides)
- Announcement in all press releases and advertisements
- Announcement on social media
- Free registration for eight (8) members
- 10x20 vendor space on event day

SPONSORSHIP **LEVELS** (CONT.)

PLATINUM SPONSORSHIP — $1,000

- Company logo on event T-shirt
- Company logo displayed on website home page with link
- Promo/giveaway in registration bags
- Three (3) free-standing signs along race route (sponsor provides)
- Announcement on social media
- Free registration for six (6) members
- 10x10 vendor space on event day

SILVER SPONSORSHIP — $500

- Company logo displayed on website with link
- Promo/giveaway in registration bags
- One (1) free-standing sign along race route (sponsor provides)
- Free registration for four (4) members
- 10x10 vendor space on event day

BRONZE SPONSORSHIP — $300

- Promo/giveaway in registration bags
- Free registration for two (2) members
- 10x10 vendor space on event day

PODIUM PARTNER SPONSORSHIP — $100

- Handout in registration bag
- Free registration for one (1) memeber

ABOUT **JSYH**

Due to the overwhelming support we've received from participants and generous local and national vendors we have raised over ***$60,000 to date.***

OUR CHARITY

"The Children's Heart Foundation is incredibly grateful to be the recipient of funds raised through Jump Start Your Heart. Proceeds of Jump Start Your Heart support the mission of CHF which is to fund the most promising research to advance the diagnosis, treatment & prevention of congenital heart defects. We thank the leadership of Jump Start Your Heart in addition to the volunteers, participants & donors for continuing to make a difference in the lives of children and their families impacted by this lifelong disease."

- BILL FOLEY, PRESIDENT OF CHF

The goal of The Children's Heart Foundation is to bring health, hope and happiness to children impacted by congenital heart defects, the number one birth defect in the United States. This goal is accomplished through the Foundation's funding towards the most promising research to advance the diagnosis, treatment and prevention of congenital heart defects.

FACTS

Most people are unaware that Congenital Heart Defects (CHD's) are the most common birth defect in America, affecting approximately one in one hundred, or 40,000 newborns each year.

CHD's are responsible for one third of all birth defect-related deaths and sadly 20 percent of children who make it through birth will not survive past their first birthday.

Although a child is born every 15 minutes with a CHD, research continues to be grossly under-funded in America. Of every dollar the government spends on medical funding, only a

ABOUT **JSYH (CONT.)**

fraction of a penny is directed toward congenital heart defect research.

As the country's leading organization solely committed to CHD research funding, The Children's Heart Foundation dedicates itself to bringing health, hope and happiness to children and families impacted by a CHD.

RESEARCH

Previous Research Conducted has help fund research such as the "Development of a Cell-based therapy for Congenital Complete Heart Block" (see next page)

All Checks may be payable to: **The Children's Heart Foundation**

P.O. Box 244
Lincolnshire, IL 60069 *(please include memo: Jump Start Your Heart 5k)*

Questions? Please contact:
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Douglas Cowan, B.Sc., M.Sc., Ph.D
(Children's Hospital Boston)

"Development of a Cell-based therapy for Congenital Complete Heart Block"

The function of the heart is to supply blood and nutrients to the body. Each heart beat is controlled by electrical impulses that travel through the heart's chambers (Figure 7). In a normal heart, these electrical impulses occur in regular intervals. When something is wrong with the electrical system, the heart does not beat regularly, resulting in a rhythm disorder or 'arrhythmia'. Complete heart block occurs when impulses can't pass between the atria (upper chambers) and ventricles (lower chambers).

Our goal is to engineer tissues to electrically connect the atria and ventricles in children with complete heart block. These patients are often treated by implanting a pacemaker device, which can result in serious complications. Compared to adults, children need multiple surgeries to account for growth and longevity. Complications that arise from these constraints include lead displacement and fracture (leads connect the pacemaker generator to the heart), ventricular dysfunction, infection, tissue perforation, and generator battery failure; all which can result in life-threatening arrhythmias. Although improvements in pacemaker devices has provided benefits beyond the treatment of arrhythmia, persistent shortcomings this technology warrant a search for alternatives, particularly pediatric patients.

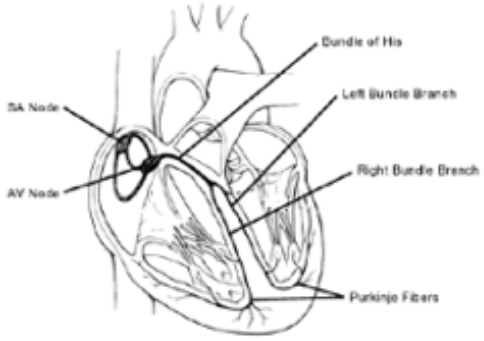

Figure 7: The electrical system of the heart. Coordinated contraction begins with an electrical impulse from the sinoatrial (SA) node that spreads through the upper cardiac chambers or atria. The impulses reach the atrioventricular (AV) node, where they are delayed, allowing the lower chambers or ventricles to fill with blood following atrial contraction. Ventricular excitation occurs when the impulses are transmitted sequentially to the His bundle, left and right bundle branches, and Purkinje fiber network. When the impulses reach the end of each Purkinje fiber, electrical excitation occurs throughout the heart resulting in the ejection of blood from the ventricles.

We have already engineered tissues capable of creating an electrical connection between the atria and ventricles of rats. To be clinically-relevant, we designed these tissues to be autologous (*i.e.* from the same patient), easy to make and implant, and safe. Ideally, our tissues will account for patient growth, function forever, and allow the spread of electrical impulses from upper to lower chambers of the heart. Here, we refine our approach by studying the following Aims:

Aim 1: Direct the differentiation of a novel, clinically-relevant population of cardiogenic skeletal muscle-derived progenitor (MDCP) cells toward an atrioventricular (AV) node-like conduction cell phenotype to provide electrophysiologically-appropriate impulse propagation through our engineered tissues.

Aim 2: Implant the improved engineered tissues containing a uniform population of progenitor cells committed to a cardiac lineage in an established Lewis rat model to thoroughly assess atrioventricular conduction through the implanted tissues and determine the fate of the cells contained therein *in situ*.

MDCP cells have considerable potential to yield therapeutically-relevant quantities of autologously-derived cardiac cells for use in the treatment of complete heart block; however, these cells have not been systematically characterized in the laboratory nor have they been assessed for their ability to survive, integrate, and function in the heart. In Aim 1, we will direct the fate of these cells to a cardiac phenotype using biochemical, electrical, and mechanical stimuli. Stimulated MDCPs will be evaluated for expression of established tissue- and progenitor-specific cell markers as well as for their electrical characteristics. In Aim 2, we will test implanted engineered tissues containing stimulated MDCPs in our rat model by assessing their ability to conduct impulses between the atria and ventricles using state-of-the-art equipment and technologies. Given the uncertainties associated with the use of stem cells in humans, establishing methods to expand and direct the fate of autologous progenitor cells isolated from a practical tissue has clear advantages over therapies that use cells containing foreign genes.