

Development, regeneration, and repair of blood vessels in the heart

A. Professor Kristy Red-Horse

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Abstract

Developing organisms create tissues de novo, and the underlying instructions could inform organ regeneration. With this mindset, we study coronary arteries—which bring blood flow to heart muscle—in hopes of eventually treating coronary artery disease, the number one killer worldwide. We have discovered how mouse coronary arteries are built, and reinstated developmental pathways in adults to aid recovery following cardiac injury.

Bio

Kristy Red-Horse is an Associate Professor at Stanford University's Department of Biology and Institute for Stem Cell Biology & Regenerative Medicine. She is also an Investigator with the Howard Hughes Medical Institute. Her PhD research explored how the vasculature of the placenta incorporates within the uterine arterial network. Her work provided information about how the placenta targets arteries rather than veins and discovered that the uterus usually lacks a lymphatic vasculature until pregnancy when uterine lymphatics expand dramatically. As a postdoc at Stanford, Dr. Red-Horse identified the progenitors of coronary arteries in mouse hearts. In her own lab, she and her team went on to explore many different aspects of how coronary arteries develop from these progenitors. The Red-Horse group also studies how coronaries regenerate and respond to injury, and devises methods for increasing their growth to enhance cardiac recovery. Dr. Red-Horse has received awards such as the NIH Pathway to Independence Award (K99/R00) and the Searle Scholar's Award. She was also a New York Stem Cell Foundation—Robertson Investigator and received the Judah Folkman Award in vascular biology. In 2021, Dr. Red-Horse was named a Howard Hughes Investigator.



EVENT DETAILS

DATE:

December 13, 2022

TIME:

11.00am – 1.00pm AEST

VENUE:

Zoom details to be circulated via email on December 13 morning

Please register via the [online form](#) to receive Zoom details

HOST: Dr. Gonzalo del Monte Nieto

