**Technology:** Mouse model of chronic heart failure and coronary atherosclerosis regression

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The VA has a joint interest with The Regents of the University of California and The J. David Gladstone Institutes

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**Abstract** An animal model has been developed where the animals can survive myocardial infarctions caused by diet-induced coronary atherosclerosis, and live with chronic heart failure. This animal model is a result of reduced activity of scavenger receptor class BI (SR-BI) and ApoE and the inducible activity of the Mx1-Cre gene. In a preferred embodiment, the model is a result of crossbreeding two transgenic mouse lines: a knockout of SR-BI (SRBI.sup.-/-) and an impaired ApoE expressor (ApoE.sup.h/h) to generate a strain referred to as Apoe.sup.h/hSRB1.sup.-/- mice, which is then crossbred to mice that carry the inducible Mx1-Cre transgene. The Apoe.sup.h/hSRB1.sup.-/- mouse model is genetically modified, enabling the offspring to rapidly and permanently lower their high blood cholesterol levels caused by dietary challenge. The ability to rapidly and permanently lower blood cholesterol levels in these mice stops and may cause the regression of occlusive coronary atherosclerosis restoring blood flow to the heart, allowing the mice to survive from myocardial infarction and live with chronic heart failure.