TECHNOLOGY

CONTACT: **Nima Najand** • 403.775.1855 • nnajand@innovatecalgary.com

A Novel PCSK9 Inhibitor

TECH ID #: 965.1-5

Summary

Researchers at the University of Calgary have identified that administration of Heat Shock Protein 27 (HSP27) protein can lower PCSK9 levels. This new research builds on two issued patents that demonstrate that **HSP27 can be used therapeutically to lower serum cholesterol levels as well as reverse the size and cholesterol content of atherosclerotic plaques.**

This approach represents the first opportunities to inhibit PCSK9 using an endogenous human protein as opposed to exogenous antibodies or RNAi. Furthermore, new evidence produced in mice shows that the generation of auto-antibodies to the protein surprisingly increases the half-life of the protein in the serum. This poses an opportunity to co-inject HSP27 with adjuvants in order to boost the efficacy of the therapy.

Areas of Application

- Hyperlipidemia
- Atherosclerosis

Stage of Development

- Extensive *in vivo* and *in vitro* data in mice to demonstrate efficacy HSP27 treatment
- *In vivo* and *in vitro* data to demonstrate the utility of promoting auto-antibody generation

Intellectual Property Status and Publications

- US Patent #8,343,916: Issued January 2013
- US Patent #8,343,915: Issued January 2013
- Provisional patent application filed August 2015
- Circulation. 2014; 130: A12771