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### Adipokines in the pathogenesis of heart failure: Good, Bad and Ugly

The mechanisms of obesity- and diabetes-induced heart disease are multifaceted and remain to be clearly defined. There is currently great research and clinical interest in the effects of adipokines on myocardium. This lecture will discuss the potential significance of adipokines in the pathogenesis of heart failure via their ability to regulate cardiac remodeling events including metabolism, hypertrophy, fibrosis, and cell death. As an example of a 'good' adipokine, the focus will first be on adiponectin which is known to confer numerous cardioprotective effects. Subsequently, lipocalin-2 is an example of an adipokine which mediates pro-inflammatory and pro-apoptotic effects. It is important to study the actions of adipokines to integrate cellular and mechanistic analyses and translate these to physiologically relevant *in vivo* models and clinical studies. However, assimilating studies on numerous cardiac remodeling events which ultimately dictate cardiac dysfunction into a unifying conclusion is challenging. Nevertheless, there is undoubted potential for the use of adipokines as robust biomarkers and appropriate therapeutic targets in heart failure.

### Biography

Gary Sweeney has obtained his BSc and PhD in Pharmacology from the University of Glasgow, UK. He has done his Post-doctoral fellowship and has treated many ill children at various hospitals of Toronto. He is now a Professor in the Department of Biology at York University. He has also served as the Chief Scientific Officer and Diabetes Group Leader at Institut Pasteur Korea, a world-leading translational research institute. His research is funded by Canadian Institutes of Health Research, Canadian Diabetes Association and Heart and Stroke Foundation of Canada. He has publications in leading journals including *Diabetes*, *Nature Reviews Cardiology*, *Proc Natl Acad Sci USA*, *Journal of Clinical Endocrinology & Metabolism*, *Endocrinology and Cell Metabolism*. These studies focus mainly on diabetes and cardiovascular disease, in particular the mechanisms linking obesity with diabetes and heart failure.

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