The Wang Laboratory at the University of Hong Kong: Lcn2-deficiency in mice improves recovery from myocardial reperfusion injuries

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Content

A recent publication by the Wang Laboratory was highlighted in a TIS case report [1]. The research contained evidence that neutrophil gelatinase-associated lipocalin (also known as lipocalin-2 [Lcn2]) is a potential novel target for myocardial reperfusion injuries [2]. TIS therefore contacted Yu Wang to obtain information about ongoing work of potential interest to pharmaceutical industry researchers.

The Wang Laboratory is investigating Lcn2’s potential role in driving obesity-related cardiovascular dysfunction. They are also characterizing the role of SIRT1 in metabolic and vascular diseases in addition to screening drugs with the potential to treat obesity-related carcinogenesis. In their recent publication they demonstrate that Lcn2 knockout (KO) mice show an improvement in recovery and reduced infarct size following cardiac ischemia-reperfusion (I/R) injury compared with wild-type animals [2]; Lcn2-deficiency enhances cardiac mitochondrial function under baseline conditions. Acute or chronic administration of Lcn2 impedes the functional recovery from cardiac I/R, effects which are associated with modification of intracellular phospholipid acyl chains. The group concludes that Lcn2-deficiency improves the recovery of cardiac function following I/R. Wang states that her groups results suggest that Lcn2 is a potential therapeutic target for obesity related metabolic and cardiovascular disorders.

Further Information

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Number of publications in the past 2 years: 5-10
Patents: Unknown
Current Collaborations: None

References

1. Improved functional recovery to I/R injury in hearts from lipocalin-2 deficiency mice: restoration of mitochondrial function and phospholipids remodeling. Protein Disease case report - 28 Feb 2012