Docket #: S13-417

Agonism of hypocretin receptor 2 (HCRTR2) for the treatment of heart failure

Heart failure has a prognosis worse than most cancers and affects over five million people in the United States alone. Although some medications for heart failure exist, many patients develop side effects or do not respond favorably to existing medications. Stanford researchers have identified a gene (HCRTR2) that is associated with improvement of heart function in patients with heart failure. Mice with knockouts of this gene develop heart failure. It has also been shown that treatment with an endogenous agonist of this gene protects mice from isoproterenol and angiotensin II-induced heart failure. Treatment with a nasal spray formulation of the endogenous HCRTR2 agonist, orexin A, or a synthetic peptide agonist of HCRTR2 could be used to treat patients with heart failure to improve heart function or to protect them from further worsening.

Applications

- Treatment for patients with heart failure

Advantages

- Newly-identified pathway
- Novel therapies targeting this receptor could result in additive/synergistic benefit to existing therapy
- Provide an additional option of therapy for those with intolerance to existing therapies

Patents

- Published Application: 20160271214
- Issued: 10,172,916 (USA)

Innovators

- Marco Perez
- Euan Ashley

Licensing Contact

Imelda Oropeza

Senior Licensing Manager, Physical Sciences

Email