METHOD FOR TREATING NON-COMPACTION CARDIOMYOPATHY

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Experience:

1. Postdoc., Cardiovascular Research Center, Massachusetts General Hospital, Harvard University, Boston, MA, USA. (2009-2010).
2. Assistant professor, Department of Pharmacology, NTU.
3. Director, Laboratory Animal Center of Medical School, NTU.

Market Needs:

The state-of-the-art therapy for NCC with heart failure includes anti-congestive and antiplatelet medications for symptom relief. The unmet medical need is the precision medicine targeting to the pathogenic signaling molecule induced by the mutant genes.

Our Technology:

Using human cardiomyocytes derived from LVNC patients's iPSC (LVNC-hCM) and the mutant gene knock-in mice for mechanistic study and the effective dose titration, we found some statins could improve cardiometabolism and heart failure progression in both LVNC-hCM and LVNC mice through recovering the functional gene expression via correcting the abnormal epigenetics in NCC myocytes.

Strength:

1. First class of the precision medicine for NCC therapy.
2. It is the repurposed drug with the approval of safety and can quickly enter into phase 2 clinical trial.
3. Part of the LVNC patients met at NTUH already enrolled into the ongoing pilot clinical trial.

Competing Products:

No available product with the same action mechanism for clinical use on the market.

Intellectual Properties:

1. US Provisional patent (No. 62/679,968; file date: 2018/6/3)
2. PCT (No. PCT/CN2019/088156; file date: 2019/5/23)
3. Taiwan patent (No. 108119253; file date: 2019/5/31)

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