

- **Heart Failure (HF)** is a chronic, progressive condition in which the heart muscle is unable to pump sufficient quantity of blood through the arterial system to meet the body's needs for blood and oxygen.
- There is an unmet **need** to develop **new antifibrotic therapies to treat HF** since fibrosis is present even in the heart of those HF patients treated according to the current clinical practice guidelines, and it is associated with a bad prognosis.
- A **novel target** to treat myocardial fibrosis in HF has been identified (from biobank and patients data).
 - It is over-stimulated in the myocardium of HF patients
 - There is a related biomarker measurable in blood
 - A proof of concept has been developed: siRNA and chemical probe.
- **Primary Indication:** Heart Failure.

Scope of the problem

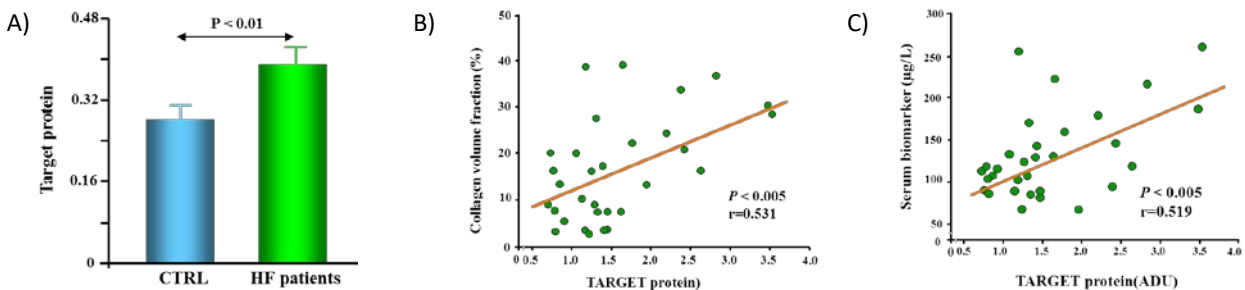
- In the US, over 5.7 million people are currently living with HF. An estimated 400,000 to 700,000 new cases of HF are diagnosed each year.
- About one in five people who have HF die within one year from diagnosis despite being treated in accordance with the standard guidelines.
- Global HF therapeutic market reached 4,068.5M USD in 2010 and it has been predicted to reach 5, 104.1M in 2018.
- HF is the cause for 12-15 million medical visits per year and 6.5-7 million days of hospitalization per year.

Patient need addressed

To prevent the development of myocardial fibrosis that is associated with a detrimental impact on cardiac function and on clinical outcome in HF patients.

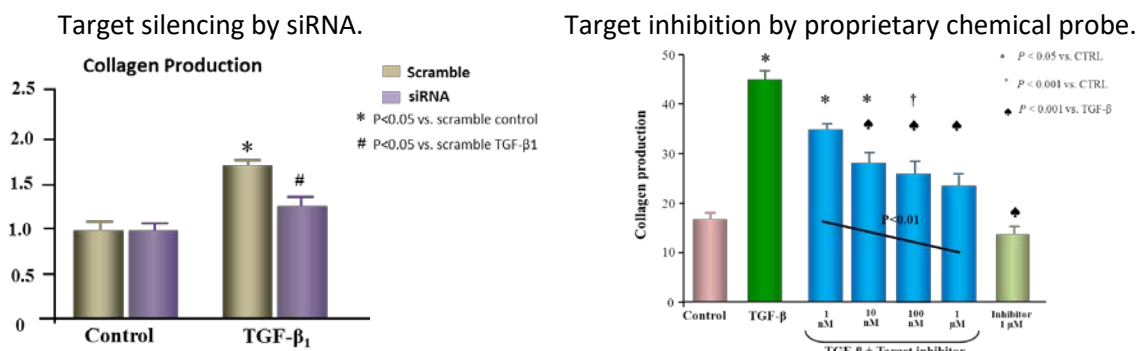
New target

- A new potential anti-fibrotic target over-stimulated in the myocardium of HF patients and associated with myocardial fibrosis (Figures A and B).
- Target activity correlates with a biomarker measurable in blood (Figure C).



Proof of Concept

In vitro. Target inhibition prevents TGF-β induced collagen production in human fibroblasts.



Safety

Homozygous constitutive knock-out mice are viable, with absence of gross abnormalities and no myocardial defects described.

Intellectual Property

Patent application to be filed.