Novel small molecule activators and inhibitors offer promising therapy potential in cardiac and cancer indications

The steroid receptor coactivator-3 (SRC-3) is a protein that is required for normal growth in animal cells. Upregulating and downregulating the production of this protein with small molecules can have different effects throughout the body. SRC-3 has been implicated in several diseases such as cancer, metabolic disorders, HIV, neurodegenerative disorders, heart disease, and/or inflammatory diseases.

- **Cardiac**: Studies have shown increased production or activation of SRC-3 promotes healing, and restoration of cardiac tissue after a heart attack. Upregulation of SRC-3 stimulates regenerative activities in heart tissues, increases cardioprotective metabolites, and prevents thickening of the heart muscle.
- **Cancer**: SRC-3 has been shown to be overexpressed and can modulate other signaling pathways resulting in increasing cell size and growth. As would be expected, targeting and decreasing or inhibiting SRC-3 expression has resulted in smaller cell sizes and is a novel approach in cancer therapeutics.

**Small Molecule ACTIVATOR**

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Potent, selective, small molecule activator of steroid receptor co-activators (SRC) as potential therapeutics for preservation, healing, and restoration of cardiac tissue after a heart attack

Our proprietary MCB-613 compound is simpler to manufacture and shown improved outcomes post heart attack in mouse models

- Low toxicity in mouse cells and whole animal
- Compound ideally suited for oral administration
- Encourages tissue regeneration through microvasculature growth

**INDICATIONS: Heart failure**

- **$22.1 Billion**
  - Market estimates for heart disease and failure sector by 2028
- **655,000**
  - People die from heart disease in United States per year and is the #1 killer

Current treatment options for heart failure are surgery, vasodilators, water pills, heart transplant, or implantable devices. There is a scarcity of assets in the heart failure drug market with heightened interest due to COVID.

**Small Molecule INHIBITOR**

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Potent, selective, small molecule inhibitors of steroid receptor co-activators (SRC) as potential therapeutics for different types of cancers

Our proprietary SI-12 compound is simpler and less costly to manufacture, distribute, store, and administer to patients

- Selectively toxic to cancer cells
- Efficacy in multiple in vivo cancer models
- Targeted approach of inhibiting SRC than chemotherapy

**INDICATIONS: Breast/pancreatic**

- **$125 Billion**
  - Market for oncology small molecule drugs by 2026
- **57,600**
  - People will be diagnosed with pancreatic cancer in US per year

Current treatment options for pancreatic and breast cancer are surgery, radiation therapy, chemotherapy, targeted therapy, and immunotherapy. There is a large unmet need for cancer therapies which have tolerable side effects and good efficacy.