



## **Team**

Dr. Ming Xu

Dr. Xiaoyang Wu

Ryan Meyers

## **Executive Summary**

AddGraft Therapeutics has developed a therapeutic platform that, through a onetime and first of its kind treatment, will effectively cure someone of their cocaine addiction. Their treatment is long lasting, highly compliant, and minimally invasive. Unlike other treatments in development (there are currently no FDA approved treatments for cocaine abuse) AddGraft's solution has very low potential for negative side effects and is easily reversable if needed.

This is done through utilizing skin epidermal progenitor cells to deliver one or more therapeutic agents. First, AddGraft harvests skin stem cells from an addict and genetically modifies this harvested sample using a precise molecular scissor CRISPR. This process introduces genes that can produce molecules which will increase the speed of cocaine breakdown into a harmless substance and reduce the motivation to take or seek drugs. After culturing the sample, AddGraft reimplants these skin cells into the original host through a skin graft. After the graft has been reimplanted, the skin graft is able to produce these molecules as a bio engine throughout the lifetime of the graft.

This is the first and only skin-based genome editing platform built to treat addiction and has the potential to change the way we treat multiple categories of diseases. This platform is highly flexible and can be utilized to treat multiple abuses such as cocaine, nicotine, alcohol, opioids, and poly drug use.