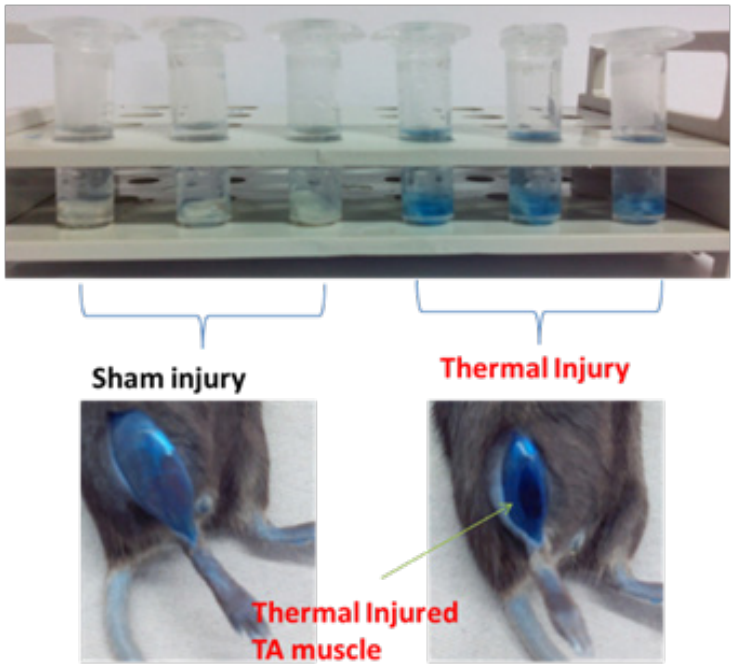
AURIGENE
PHARMACEUTICAL SERVICES

Case Study

Development of quick quantification method for muscle injury recovery evaluation in thermal injury mice model.

Challenges:

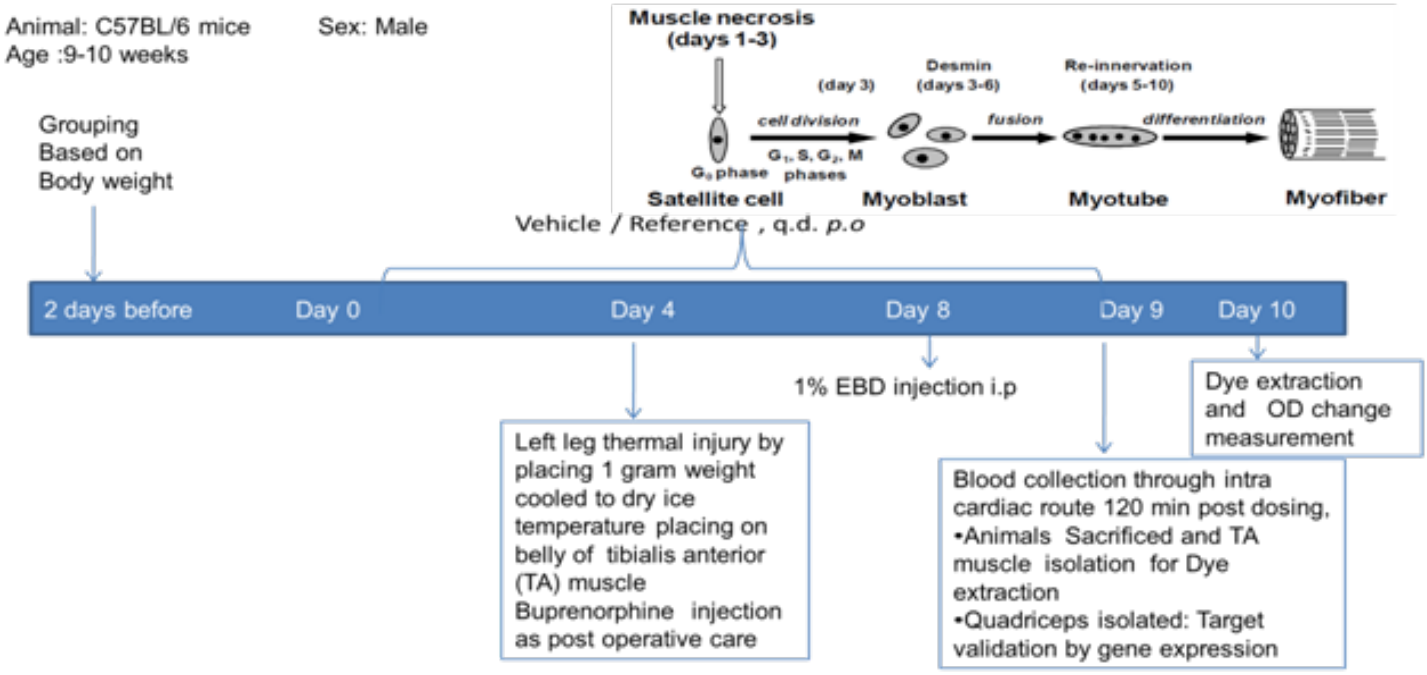
- The evaluation of Evans Blue Dye (EBD) by fluorescence measurements of cryosections of individual muscle sections, and its quantification by auto fluorescence is a laborious and time-consuming process.



Study design:

- Both sham and thermal injury techniques were followed.
- The evaluation of EBD was done to assess the effectiveness of two compounds in the process of muscle regeneration.

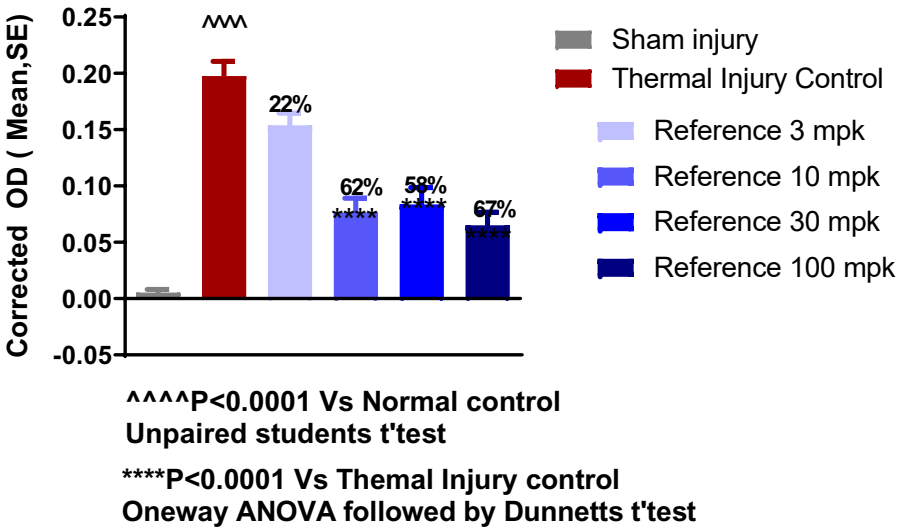
Aurigene solution & protocol:



An alternate methodology was developed; which involved evaluation of EBD through dye extraction; resulting in fast delivery. TA muscle from both the hind limbs were dissected and immediately placed in sodium sulphate. Acetone was added and kept aside for overnight to extract the dye. After overnight extraction, centrifugation was done and supernatant was separated. Optical density was measured in duplicate using micro plate reader. Optical density of right leg dye extraction was subtracted from left leg for each animal.

Outcome:

The reference compound profiled in this model demonstrated dose dependent reduction in muscle injury and regeneration up to 10 mpk and there afterwards saturable effect with maximal efficacy of ~60%. Based on this model, several compounds were profiled in short frame of time to identify the lead molecule currently in clinical development.



^^^^P<0.0001 Vs Normal control
Unpaired students t'test

******P<0.0001 Vs Themal Injury control**
Oneway ANOVA followed by Dunnetts t'test

Thank You

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