Surgery – tail vein injection

Version: 1
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(note that the following list should be linked to the appropriate location.)

Summary: *(This area will include a brief description of what the protocol is used for and why someone would need to use it.)*

Intravenous administration via tail vein is used to acutely deliver drug, hormones, and adeno-associated virus in mice. A large fraction of injectate will be cleared by liver.

Reagents and Materials: *(This should be a comprehensive list of stock solutions and material. The reagent list for the stock solutions is included in the reagent preparation area that is included at the end of this SOP.)*

Reagent/Material	Vendor	Stock Number
Heat Lamp		
1 ml syringes		309659
(or U-100 Insulin Syringe)	Becton Dickinson	329461
27G needles		305109
0.9% Saline	Hospira	0409-4888-10
70% Ethanol		

Protocol:

1. Place mice in clean cages and keep warm with a heat lamp for ~5 min with constant monitoring to induce vasodilation.
2. Transfer mice to a restrainer with a hole for the tail.
3. Apply 70% Ethanol wipes to tail and turn 45^{o} for a visible presentation of tail vein.
4. Introduce a 27G syringe into tail vein to administer an injectate into mice. (For precise volume introduction, a U-100 insulin syringe can be used to avoid dead volumes.)
5. Apply light pressure over the injection site for ~30 sec to prevent backflow.
6. Return mice to housing cages and monitor for the next several days for any evidence of swelling or complications at the injection site.