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U Mass - Surgery – tail vein injection

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Protocol status: Working
We use this protocol and it's working

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Abstract

Summary:

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

Materials

MATERIALS

- Heat Lamp
- 1 ml syringes **Catalog #**309659
- 1 ml syringes (or U-100 Insulin Syringe) **Becton Dickinson (BD)** **Catalog #**329461
- 27G needles **Catalog #**305109
- 0.9% Saline **Pfizer (Hospira)** **Catalog #**0409-4888-10
- 70% Ethanol

Note:

Hospira, RRID:SCR_003985
BD Biosciences, RRID:SCR_013311

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 45º 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.