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U Mass - Surgery – tail vein injection

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<https://mmpc.org/shared/document.aspx?id=157&docType=Protocol>

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

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20357

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

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☒ Heat Lamp **Contributed by users**

☒ 1 ml syringes **Contributed by users** **Catalog #309659**

☒ 1 ml syringes (or U-100 Insulin Syringe) **BD Biosciences** **Catalog #329461**

☒ 27G needles **Contributed by users** **Catalog #305109**

☒ 0.9% Saline **Hospira(Pfizer)** **Catalog #0409-4888-10**

☒ 70% Ethanol **Contributed by users**

Note:

Hospira, [RRID:SCR_003985](https://pubchem.ncbi.nlm.nih.gov/compound/SCR_003985)

BD Biosciences, [RRID:SCR_013311](https://pubchem.ncbi.nlm.nih.gov/compound/SCR_013311)

Keywords: tail vein injection,
mice

- 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° 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.