 University of Zurich <small>UZH</small> Institute of Laboratory Animal Sciences	Standard Operating Procedure SOP	Page 1 of 3
Date: 18.02.2021	Subcutaneous injection of mice s.c. Injection	LTK-TRT-11-EN Version: D

This SOP replaces:	Date: 22.01.2021 Version: C
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Reason for Change:	Commission comments
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Next Revision	18.02.2024
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Related SOPs:	
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Indication of Use:	Bringing cells or substances in solution under the skin of mice
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Aim of SOP:	This protocol describes how cells or solutions are injected subcutaneously (s.c.) through the skin of mice, usually for slow and sustained release of the substance into the vascular system.
Distribution:	<ol style="list-style-type: none"> 1. Original: Thorsten Buch 2. Copy: Animal facilities 3. Intranet
Attachments:	


Generated at: 18.02.2021	Checked and approved at: 19.02.2021
by: Thorsten Buch	by: Dr. Vanhecke

Responsible Persons: Researcher with Modul 1 after registration on animal license
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Method: Injection

Min/Max amount: Maximum injection volume is 10 µl/g mouse = 200 µl/20 g.
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File: SOP-LTK-TRT-11-D-EN sc injection
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Machine:

1. Laminar flow/changing station

Material:

1. 1 ml syringe/insulin syringe
2. 25-27 gauge needle


Safety:
 Rules for the respective animal room have to be followed

Method Description:

1. Place cage with animal and second cage (if more than one mouse is injected) under laminar flow/changing station
2. Immobilize the mouse on the cage grid with one hand, allowing it to grasp the grid with its paws.
 Optional: anesthetize the mouse using isoflurane (e.g. if researcher has small hands), only when included in permit
3. While restraining the mouse with the hand (by pressing it down moderately) use the fore-finger and thumb to lift the skin on the back of the mouse. Injection can be performed on the back of the mouse above the shoulder blades (scapular injection) or on the flank of the mice.
4. Inject into the lifted skin but well below your fingers holding the skin and parallel to the body of the mouse to avoid damage to underlying structures.
5. Inject the liquid slowly.
6. Withdraw the needle and check that no liquid is running out of the skin.
7. Depending on the injected volume a bleb on the skin can be seen or felt.
8. Place the mouse back into the cage.

Criteria for approving outcome:
 All liquid injected without complications

Documentation:
 The experiment has to be recorded as required by the respective animal permit. Also, an entry in the lab book has to be made.

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Problem management:
In case liquid has run out from the injection site, animals have to be taken out of experiment.
In case of unforeseen events, contact supervisor, lab head or vet.