

Standard operating procedure for harvesting of mesenteric adipose tissue from rodents

For further information please contact
Robert Caesar l.e.r.caesar@medisin.uio.no
Or Christian A. Drevon c.a.drevon@medisin.uio.no
Oslo Univerity, Department of Nutrition

When citing this SOP you should acknowledge both NuGO and the appropriate NuGO partner institution that has made the SOP available. Please use a form of words such as:

We used the NuGO Standard Operating Procedure (SOP) number 95 produced by the University of Oslo. Details of the SOP are available via the web link:

<http://www.nugo.org/frames.asp?actionID=39664&action=loginFromPP>

Adipose tissue is often closely associated with other tissues and it may be difficult to harvest completely pure samples. Because of the high content of triglycerides, the concentration of RNA, DNA, and protein in adipose tissue is generally low. This makes adipose tissue samples vulnerable to infiltration with other tissues, because even minor contaminations may represent a high proportion of foreign molecules. We have investigated the problems associated with pancreatic contamination of mesenteric adipose tissue and found that the proximal section of the mesenteric fat depot is impossible to separate from the pancreas without performing the dissection under magnification (1).

We estimate that approximately 30–40% (w/w) of the fat attached to the small intestines should be removed to avoid contaminating samples with pancreatic tissue. In practice, this represents the fat situated under the first loop of the small intestine extending from the stomach. This area can easily be identified by lifting the intestines as illustrated in Fig. 1

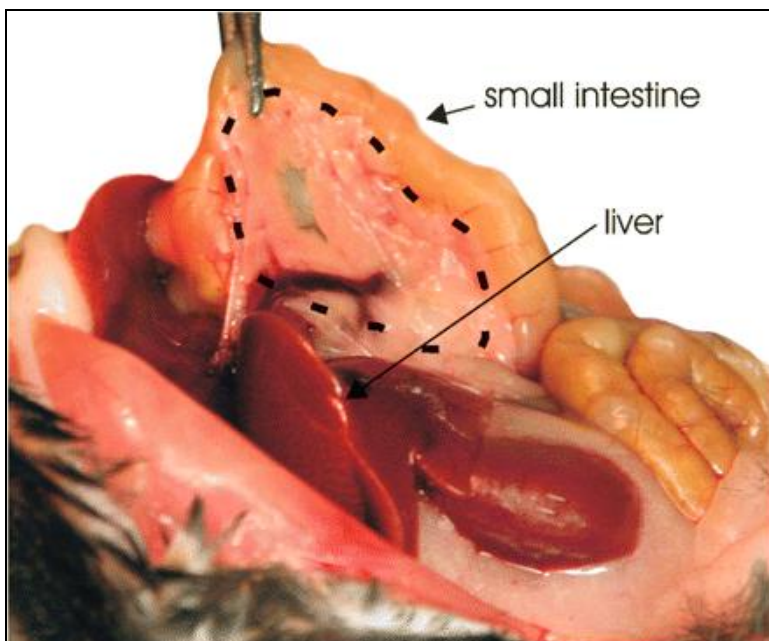


Figure 1. Proximal section of mesenteric adipose tissue in mouse. The dashed line indicates the area of the mesenteric adipose tissue depot in which pancreatic tissue is detected.

1. Caesar, R. & Drevon, C. A. (2008) *J. Lipid Res.* **49**, 1588-1594.