



STANFORD UNIVERSITY SCHOOL OF MEDICINE

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FREQUENTLY ASKED QUESTIONS: Importing Special Rodent Strains to Stanford from a Noncommercial Source.

1) The strain I need is not available from a commercial vendor. Can I receive mice directly from another institution?

Yes, you certainly can. The Veterinary Service Center (VSC) assists Stanford investigators in obtaining well over 100 new and unique strains from other research institutions each year. These animals are extremely valuable for the ongoing research programs in nearly every department that uses animals at Stanford.

However, each shipment from an "atypical" source poses a health risk because it is possible to import *new diseases* along with the new mice. Since many transgenic and knockout strains have been licensed and obtained for production by commercial rodent vendors or centralized repositories (e.g., Jackson Laboratories), individuals attempting to transfer mice from an atypical source should first be sure that no commercial source exists. Commercially available mice might be more expensive than those available as a "gift" from other laboratories, but this savings is far outweighed by the potential costs to individual investigators and the university as a whole that would be associated with a disease outbreak in our main colony.

2) What types of facilities do we consider to be "noncommercial"?

A noncommercial source (or vendor) is a business or institution which may possess specific mouse strains but which is not primarily in the business of producing and selling large volumes of animals. Most universities, research foundations/institutes, biotechnology companies, pharmaceutical corporations, and some government-funded resources (e.g. most NIH colonies) do not have the high degree of health monitoring and quality assurance in place that is provided by our routine vendors. Commercial vendors take extremely strict precautions to assure that the production, packaging and delivery of rodents excludes opportunities for contamination of the mice that are delivered to us.

3) How do I order from a noncommercial source?

To initiate an incoming animal shipment from a noncommercial vendor, fill out an SU-45 form. This is the same multi-copy form that is used for other animal orders and is available via the campus-wide supply purchase agreement (see your departmental administrator). Fill out the accounting, protocol and contact information in the spaces provided at the top of the form. On the lines below, include the strain designation, number of animals to be acquired, name of the institution which has the animals, and the name and phone number (fax # also, if available) of the contact(s) on that end. We generally need to deal with two individuals: 1) a contact in the lab who is familiar with the strain that has been requested and 2) a contact within that institution's veterinary or animal husbandry group who will provide health status information and coordinate shipment on that end. If you can only provide a lab contact, we can follow up with that individual to get the other information. Turn in the form at the administrative office in RAF (you can retain the pink copy for your own reference) and our VSC animal procurement group will process your order.

It is important that you request animals, especially mice, that are as young as possible, since they will be in quarantine for at least 8 weeks. You should indicate the age of the animals on the SU-45 form (e.g. 4 weeks of age), and notify the source party as well.

Web users note: the online version of the SU-45 form available on the DCM website is NOT currently configured to be used for noncommercial vendors. Please continue to use the hardcopy form for these special orders.

4) I'll be visiting the outside lab I want animals from. Can't I just bring the mice back with me?

Transfer of animals from one institution to another must be very carefully coordinated for legal reasons and to minimize the potential transfer of disease. Disease outbreaks have been linked to "unofficial" transfers in cases where animals were hand-carried into our facilities without proper shipment and quarantine.

5) Who negotiates shipping dates, the transfer of health status information and the ultimate approval for the other institution to ship the animals?

The animal procurement group in the VSC will handle this negotiation. The individual at Stanford who requested the animals is often involved in the communication, but official approval MUST come from the VSC. This is very important because timing and approval of the transfer must be coordinated with availability of appropriate quarantine space. Animals that arrive without prior approval are considered "suspect" and may be subject to a longer quarantine period or other precautions that restrict their availability for use (including euthanasia in a worst case scenario). To eliminate the possibility of another institution shipping animals to Stanford prematurely, individuals who are requesting animals from a noncommercial source should NEVER give a shipping address or a verbal approval to ship. The VSC will provide that information when the time is right.

6) How can I find out the status of a noncommercial source order?

DeAnna Robinson coordinates all noncommercial shipments. She can be reached by phone (723-4009 or 723-3876) or e-mail dandreotti@stanford.edu.

7) What happens during the quarantine period? How long is quarantine?

In most cases, quarantine is finished and animals are transferred to an appropriate permanent housing area within 8 weeks of arrival. However, this schedule can vary since it is affected by holiday periods, the need to perform confirmatory tests on suspect results, and other factors. Additionally, quarantine release may be delayed if any testing performed on any animal in the quarantine room shows evidence of potential contamination.

During the quarantine period two or more sentinel mice (from a high-quality clean vendor) will be exposed to the incoming animals directly and/or via the transfer of soiled bedding. Noninvasive testing (fecal collection and sampling for external parasites) is sometimes performed directly on the incoming animals, but testing involving bleeding and dissection is only done on the sentinel mice which can be killed for comprehensive evaluation. If available, extra immunocompetent animals between 6 and 20 weeks of age that are from the same room as the other animals in the shipment can be used for terminal testing. You should notify the VSC if extra animals for testing are included.

In many cases quarantine isolation involves a group of incoming shipments that appear to be compatible.

8) The animals look fine and my collaborator says they are "clean". Why are all animals from other institutions quarantined?

Although health surveillance information from the sending institution is used in order to determine how much risk of contamination is associated with a noncommercial shipment, those animals will always be quarantined. There are three main reasons why quarantine is always needed:

- a) The monitoring profiles from noncommercial vendors are never able to guarantee the absence of disease contamination in the colony of origin.
- b) There is a potential that contamination can occur during packing and shipping even if the animals originated from a clean area.
- c) There is a wide variation in the specific agents each institution monitors during testing. We need to specifically verify the presence or absence of each agent that our facility has chosen to monitor and exclude.

On occasion, mice that have been shipped to Stanford from colonies stated to be clean have been found to be contaminated during quarantine and have had to be rederived to be free of disease. Conversely, some shipments from reportedly contaminated facilities have been found to be disease-free during our quarantine, and they have been released for research use with no further restrictions or delays.

9) Can any work start with mice while they are in quarantine? Can breeding be started?

It is important to strictly limit access to areas that may be contaminated. Users can make arrangements with the supervisor to be given access to the room to inspect the shipments after arrival in order to verify what was sent. All persons taking advantage of this limited access privilege should be aware of the potential risks of cross-contamination and should consult with the veterinary staff to plan entry accordingly.

PLEASE NOTE: No active experimental manipulations or sampling (e.g., for genotyping) should begin during quarantine, and animals must not be removed from the room for any reason other than euthanasia. The only exception is that in some very specific cases, animals can be removed from quarantine for nonsurvival studies if these terminal procedures can be performed in an isolated area without contaminating other animals. This type of use can only begin if a written plan describing the precautions used to minimize cross-contamination during transport, use, and disposal has been approved by the veterinary staff. The husbandry supervisor responsible for the area must also be notified of any terminal use of quarantined animals.

Breeding in quarantine cannot be accommodated in most cases because it greatly increases the space needed to contain quarantined mice, and more importantly, the introduction of naïve animals into this area via transfer or birth decreases the reliability of quarantine testing procedures and can unnecessarily amplify any infectious agent that is present.

10) What if my animals are found to be “dirty?”

If animals are presumed to be contaminated based on the health information provided by the institution sending the animals, or are found to be contaminated based on our own testing, they will be isolated in a separate quarantine room. The lab requesting the animals will need to work with the VSC to develop a plan for subsequent rederivation and further quarantine.

Additional questions about noncommercial orders can be direct to DeAnna Robinson (723-4009) or Reese Zasio (725-3882). Questions about quarantine can be directed to Dr. Manuel Garcia (498-4773).