

SOP: **LARC-06**

Title: **Eradication of Helicobacter Through Cross-Fostering**

SOP Last Revision Date:
03MAR10

PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to describe the process by which Helicobacter is eradicated from infected mice through the transferring of neonates from infected dams to uninfected foster dams. This procedure applies to cross fostering performed in the Laboratory Animal Research Core's Animal Facilities on the campus of the University of Missouri-Kansas City.

POLICY

It is LARC policy to meet or exceed all federal, state, and local regulations and guidelines and to comply with all institutional policies and procedures as they apply to the use of animals in research. Personnel must attend any applicable training in mice care and use, occupational health and safety, equipment operation, and Standard Operating Procedures prior to performing activities outlined in this SOP or work under the direct supervision of a trained LARC staff member.

REFERNCES

A. Laboratory Mice Research Core Personnel

PROCEDURES

A. Cross Fostering Basics – The Process

- a. The PI gives the LARC Helicobacter suspect females and males less than 8 weeks of age or proven successful breeders that are NOT currently breeding for cross fostering purposes (*note: the PI will no longer have access to these mice until successful cross fostering*).
- b. Two rooms are used: one room considered “dirty” containing the PI’s Helicobacter positive (HP) mice and the other room considered “clean” containing Helicobacter negative (HN) mice ordered by the LARC from an approved vendor.
- c. HP breeder pairs are set-up in the “dirty” room. At the same time, HN breeder pairs are set-up in the “clean” room.
- d. Assuming both females birth offspring at the same time (~18-21 days later), some of the HN offspring in the “clean” room within 24 hours of birth are euthanized and replaced with the HP offspring that have been rubbed with the HN Dam’s bedding to transfer the foster mothers scent. The expectation is the HN female will successfully foster the new offspring.
- e. Approximately 21 days later the offspring are weaned and the first of two fecal samples are taken for Helicobacter testing (*note: the weaned offspring remain in the “clean” room and at this time tail clipping and animal identification is performed*).
- f. First Helicobacter Test:
 - i. If tests show Helicobacter positive, the PI is notified that they may use the positive offspring for research or for additional breeding for cross-fostering or euthanize them. The HN female is euthanized.
 - ii. If tests show Helicobacter negative, they are transferred to another “clean” room for holding until the second test (3 weeks later).

- g. Second Helicobacter Test:
 - i. If tests show Helicobacter positive, the PI is notified that they may use the positive offspring for research or for additional breeding for cross-fostering or euthanize them. The HN female is euthanized.
 - ii. If tests show Helicobacter negative, the mice are considered Helicobacter free and will be allowed to be housed in the HPB mice facility among general population. Cross fostering is now complete.

B. Tips for PI's to Aid in Successful Cross Fostering

- a. Mice to be breed for cross foster breeding should be no older than 8 weeks old.
- b. The mice to be set-up for cross foster breeding should either have never breed or are proven successful breeders.
- c. Note: If the breeder pairs the LARC receives from the PI are currently breeding, they will have to be separated to determine if female is pregnant, this can delay cross fostering.
- d. Females and males are not to be housed in the same cage. E.g. all males should be housed separate from females in individual cages.
- e. PI's MUST specify which breeder pars they want placed together.
- f. Cage cards are to be completely filled out (DOB, strain, ID and the correct sex) are vital.

C. Communication

- a. During the cross fostering process, PI's may contact Andrea Commons, x6338, commonsa@umkc.edu or Sonny Cherrito at x6338, cherritoc@umkc.edu for updates regarding their lines. Otherwise, there will be a designated location on the LARC's website that will allow researchers to track the cross fostering status of their lines. The webpage can be found at http://www.umkc.edu/ors/larc/f_login.cfm. Use your normal UMKC Single Sign On to access the site; otherwise you may create one following the instructions on the webpage.