

Transgenic Mouse Core Facility

Microinjection of DNA into the pronucleus of fertilized FVB mouse oocytes

The Transgenic Mouse Core Facility at MUSC is dedicated to assist you in the development of a transgenic mouse model for your research needs. To increase the probability of success, carefully adhere to the following steps:

- 1) Fill out the application COMPLETELY and return by FAX, e-mail or campus mail. An MNA, an approved ARC protocol, and an approved IBC protocol are required for processing your application.** We will review your application, notify you upon approval of your application and set your position in the injection queue. At this time you can prepare the DNA for injection. Please contact us prior to starting your purification so we are prepared for receipt of the DNA sample. **A minimum of 1 microgram of DNA at a concentration of greater than 50 ng / microliter is required.** Several quality control steps are performed by the facility and the DNA needs to be handled and stored properly in order to maintain integrity. We will store your DNA for 6 months.
- 2) Adhere with great detail to the injection DNA purification protocol.** The quality of the construct DNA is crucial for successful integration and thus the production of a transgenic mouse. Construct DNA should be free of all vector sequences. Two DNA purification protocols are included with this package.
- 3) Provide an original photograph of a gel showing the purified DNA with the appropriate molecular weight markers.**
- 4) Design a proven screening assay for the transgene.** This should be in place prior to submitting DNA for injection as this can be a time consuming process in itself. The animals will be transferred to your ARC# and room at weaning.
- 5) Provide the UDAK number and location where animals will be housed for the DLAR Animal Transfer Form.** This facilitates the quick transfer of animals to your animal rooms.
- 6) The cost is currently \$2500 for MUSC investigators. Submit an IIT for this fee to Ann Donaldson Division of Rheumatology MSC 637 once the application is reviewed and accepted. If you need to speak with Ann her extension is 2-2009.** The fee covers the application review, DNA quality control review, storage of the DNA for 6 months and three injections sessions. The current average transgenesis rate for the facility is 20%. This percentage is dependent on the quality of the injection DNA and the nature of the gene construct. In the event that no pups are born or there are no transgene carriers among the pups, then we will be happy to review the project with you in detail. After this review, if you wish to proceed then the request will be viewed as a new request. If such a situation arises, we will be in close contact with you since it will require a new DNA preparation and an additional fee. **If you require the procedure be performed on a C57/B16 background, we are happy to accommodate you and the fee for this service is \$4000.**

If you have any questions, please contact:

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