

SEI Transgenics Core

Transgenics



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Key functional capabilities of this core are:

- (1) preparation of transgenic invertebrate and vertebrate animal models;
- (2) analysis of transgenic invertebrate (*Drosophila*) and vertebrate (*Xenopus*, rodent) animal models; and
- (3) analysis of rodent strains already under study in SEI laboratories.

All analyses can be performed in live preparations, as well as in the intact animal. This core also collects ocular tissue for analysis by the Imaging and Structural Analysis core, establishing an efficient pipeline for understanding both normal and pathological conditions. The Transgenic core coordinates the production of animals with investigators, and hosts these scientists during data acquisition as necessary. The technical staff provides expertise to perform experiments and to train PIs and associated research scientists as needed.

Instrumentation/Facilities in Core:

- Sufficient housing for *Xenopus* and mice exists in the Department of Lab Animal Resources at SUNY Upstate Medical University. Two specialized rooms dedicated to the production of *Xenopus* transgenics, injection of eggs and rearing of tadpoles until analysis (complete with temperature and light-regulated incubators) are in the Center for Vision Research on the 4th and 5th floors. Several fluorescence stereomicroscopes for transgene detection are dedicated to the *Xenopus* facilities.
- The *Drosophila* transgenic facility includes an embryo injection set up, Biocold fly incubator, and stereomicroscope with CO₂ gas supply located in the Pignoni laboratory. Additional space is available on the 5th floor WHA building and in the 18°C temperature-controlled room located on the same floor (5318).
- The mouse ERG facility and Optomotor visual analysis package are available in the Center for Vision Research.