

Master of Laboratory Animal Science

FUNDING OPPORTUNITIES

We frequently receive questions from applicants about financing possibilities that may be available to them. Frequently, it is the applicant's own employer who provides the best financial support with the aim of gaining a motivated, highly qualified employee. Upon request we can provide employers with an overview of the study goals and workload to aid their decision making process.

For applicant's seeking third party financing or scholarships we try to keep up with relevant offerings. For German applicants the study fees may be tax deductible or they may qualify for government issued "education cheques". The "Erasmus+" program provides support for EU citizens, as well as for citizens of some non-EU States, and is particularly relevant for an extra-occupational master such as MLAS.

We recommend applying for funding as soon as possible as the application procedures can be lengthy and competition strong. Please visit our website or contact us directly to see whether we can identify a relevant provider:

<http://www.msc-lab-animal.com/links-0>



STATE-OF-THE-ART FACILITIES: TRANSGENIC SERVICE

The human genome contains about 30,000 genes which have now been fully mapped. However, the individual functions of many genes and genetic mutations leading to diseases remain unclear. The decoding of the mouse genome shows that there is a high correlation between the murine and human genome. This genetic similarity has established the mouse as the most important animal model in research. By generating of transgenic mice it is possible to modify or knockout genes of interest in the genome of the mouse.

Since the methods for the production of transgenic and knockout mice are very complex and expensive, the IZKF Aachen (Interdisciplinary Center for Clinical Research) has established the „Transgenic Service“ to support researchers in the production of genetically modified mice.

Genetically modified (transgenic or knockout) mouse strains are generated in which cloned DNA sequences are transferred into the genome of the animals. The inserted DNA sequence is translated into a biologically active protein or a certain gene of the recipient animal is modified or knocked out. For the generation of genetically modified mice (e. g. as model systems for human diseases) predominantly two methods, pronucleus injection and homolog recombination, are used.



DNA injection into the pronucleus of a C57/BL76 egg

In addition to the generation of new mouse lines, the Transgenic Service is also responsible for the cryo-preservation of mouse embryos and mouse sperms. The cryo-preservation of mice strains strongly minimizes the health risk for animal facilities and reduces the animal housing costs for the users. Furthermore, instead of living animals, frozen embryos and sperms can be shipped to other institutes on demand. This way of import or export is less expensive, avoids a cost-intensive rederivation and follows the guidelines of the animal welfare 3-R principles (Reduce, Refine, Replace). Moreover, the Transgenic Service is certificated according to DIN ISO 9001:2008.

For further information regarding the transgenic services available please contact:

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COURSE LECTURERS

PD Dr. Julia Steitz is the Scientific Co-Director of the M.Sc. Laboratory Animal Science program. From the outset PD Dr. Steitz has contributed to the development of the course concept and content, and coordinated the involvement of key lecturers. During the admissions process PD Dr. Steitz is available to perspective students in an advisory role, regarding scientific course content and the suitability of candidates based on their prior experience.



PD Dr. Steitz is Director of the Central Laboratories, including Hematology, Clinical Chemistry, Microbiology, and Histopathology, at the Institute for Laboratory Animal Science, RWTH Aachen University. Her current research projects focus on the development of tumor models for the analysis of novel immunotherapeutic agents as well as the analysis of efficacy, safety and toxicity of medical products and tumor therapeutics in vitro and in different in vivo animal models.

During the MLAS course, PD Dr. Steitz will be instrumental in teaching aspects of regulatory affairs; design and evaluation of animal experiments; alternatives to animal experiments; and biochemistry, hematology and molecular biology.