Core Facilities – Technologies, equipment and expertise for ambitious research goals

The IZKF provides valuable resources for a cost effective and high-quality research environment by operating:

- Brain Imaging Facility
- Genomics Facility
- Immunohistochemistry Facility and Confocal Microscopy Facility
- Proteomics Facility
- Transgenic Service
- Two-Photon Imaging Facility
- Flow Cytometry Facility

Multiple technologies and state-of-the-art equipment are available for all researchers of the Faculty of Medicine. Experienced technology experts provide services at any stage of the research process, including experimental design, method development, sample work-up and data interpretation on a partly cost recovery basis.

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Why use Transgenic Service and how to use it to your advantage?

The core facility “Transgenic Service” (TGS) supports all members of the Faculty of Medicine at the University Hospital of the RWTH Aachen as well as the RWTH Aachen University and external partners with the generation of mouse lines, the organization and securing of existing mouse lines. The TGS supports the scientists in breeding management with their research projects and organizes the imports and exports of mouse lines and animal products (for example: embryonic stem cells, mouse sperms, mouse embryos, organs).

To ensure the quality of our services and the claims of external users, the core facility “Transgenic Service” is certified according to DIN: ISO 9001:2015.

What services do we offer?

- Generation of knockout or transgenic mice
- Rederivation of imported mouse lines (spf or non-spf)
- Cryopreservation of mouse embryos and mouse sperms
- Rederivation of mouse embryos and mouse sperms
- In-vitro fertilization (IVF)
- Intra cytoplasmatic sperm injection (ICSI)
- Cell culture of embryonic stem cells
- Import and export management
- Breeding management and consulting service for experiments in accordance to the 3R-Principle by Russel & Burch 1959 (Refinement, Replacement and Reduction of Animal Experiments)
- Organization of our animal database “Tierbase”
- Organization of animal capacity in our animal facilities

<table>
<thead>
<tr>
<th>Services</th>
<th>Price internal</th>
<th>Price External</th>
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<tbody>
<tr>
<td>Rederivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>by In vitro Fertilization</td>
<td>250 €</td>
<td>1500 €</td>
</tr>
<tr>
<td>by breeding with animals</td>
<td>350 €</td>
<td>1500 €</td>
</tr>
<tr>
<td>Revitalization of cryopreserved</td>
<td>215 €</td>
<td>450 €</td>
</tr>
<tr>
<td>mouse embryos or sperms</td>
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<td></td>
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<tr>
<td>Cryopreservation of mouse embryos</td>
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<td></td>
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<tr>
<td>by In vitro fertilization</td>
<td>425 €</td>
<td>2250 €</td>
</tr>
<tr>
<td>by breeding with animals</td>
<td>425 €</td>
<td>2250 €</td>
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<tr>
<td>Cryopreservation of mouse sperms</td>
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<tr>
<td></td>
<td>200 €</td>
<td>1150 €</td>
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<tr>
<td>Generation of knock-out mouse</td>
<td>3000 €</td>
<td>7000 €</td>
</tr>
<tr>
<td>Generation of transgenic mouse</td>
<td>2000 €</td>
<td>5000 €</td>
</tr>
</tbody>
</table>

Equipment

- Two Zeiss Injection microscopes with Paralabs laser systems and an Eppendorf PiezoXpert
- Paralabs Spermanalyser
- Labotect Freezing unit for the Cryopreservation