

## RenalToolBox – Project Description

<b>ESR Number:</b>	ESR14	<b>Host:</b>	UHEI
<b>Project Title:</b>	Determine the characteristics of ABCB5+ S-MSCs and A-MSCs and assess their safety and efficacy in an IRI kidney injury model.		
<b>Research Field:</b>	Biological Sciences		
<b>Contact Person:</b>	Prof. Dr. Karen Bieback, Institute of Transfusion Medicine and Immunology, Core Facility for Flow Cytometry		
<b>Academic Supervisor(s):</b>	Prof Dr. Karen Bieback Prof Dr. Norbert Gretz		
<b>Research Group / Department:</b>	Stem Cell lab		
<b>Group's website:</b>	<a href="https://www.umm.uni-heidelberg.de/transfusionsmedizin-und-immunologie/forschung/ag-bieback">https://www.umm.uni-heidelberg.de/transfusionsmedizin-und-immunologie/forschung/ag-bieback</a> <a href="https://www.umm.uni-heidelberg.de/medical-faculty-mannheim/research/core-facilities/flowcore-mannheim/">https://www.umm.uni-heidelberg.de/medical-faculty-mannheim/research/core-facilities/flowcore-mannheim/</a>		
<b>Full Address:</b>	Institute of Transfusion Medicine and Immunology FlowCore Mannheim Medical Faculty Mannheim Heidelberg University Friedrich-Ebert Str. 107 68167 Mannheim, Germany		
<b>Expected Start Date:</b>	01 April 2019		
<b>Description:</b>			
<p>The RenalToolBox is an EU-funded ITN that aims to develop novel tools and technologies to assess the safety and efficacy of cell-based regenerative medicine therapies for kidney disease. You will join a team of 15 Early Career Researchers (ESR) working across 10 different institutions towards this goal.</p> <p>The successful applicant will be enrolled as a PhD student at the Heidelberg University (D), the oldest university in Germany. Specifically, you will be joining our Cell Therapy Lab at the Institute of Transfusion Medicine and Immunology, associated to the German Red Cross Blood Donor Services Baden-Württemberg – Hessen.</p> <p>The role of the successful applicant in this project is to contribute towards understanding the therapeutic efficacy (mechanisms of action, MoA) of MSC in kidney diseases. The project will be conducted in collaboration with the other 3 ESRs at Heidelberg University and TICEBA, using their proprietary ABCB5 selected skin-derived MSCs.</p> <p>The specific tasks in the project are:</p> <ul style="list-style-type: none"> <li>- Assess the safety and efficacy of S-and A-MSCs and their secretome (secreted factors and extracellular vesicles) in a mouse IRI model and investigate MoA in histological sections and optically cleared organs (with other ESR at UHEI).</li> <li>- Use lentiviral transduction to introduce reporter genes or perform genetic engineering to verify MoA mechanistically.</li> <li>- Apply OMICs (next generation sequencing and proteomics) to compare MSCs and assess their renoprotective effects.</li> </ul>			

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The post holder will be employed on a fixed term (36-month contract) and enrolled as a PhD student at the Heidelberg University. The candidate will be expected to spend periods of time with other partners in the consortium.

More information about this consortium and the project can be found in [www.renaltoolbox.org](http://www.renaltoolbox.org).

### Required Skills / Qualifications:

Essential:

- BSc and Master's degree in a relevant subject (biomedical sciences, bioengineering, molecular biology or other related subjects).
- Excellent oral and written communication skills with well-developed interpersonal skills.
- Ability to work effectively and collaboratively within a multidisciplinary team.
- Enthusiastic, self-motivated individual, willing to take part in personal skills training, international travel and public outreach activities.
- Demonstrated commitment to high-quality research.
- At least basic knowledge in stem cell biology.
- At least basic knowledge in immunology and immunological assays.

Desirable

Research experience involving renal biology, animal experimentation, imaging, -OMICS, mesenchymal stem/stromal cells, cloning or immunology.

FELASA qualification or equal to conduct animal experiments.

The candidate is also required to fulfil the research experience and transnational mobility requirements outlined in <https://renaltoolbox.org/job-positions/>

### Other requirements:

Good to very good English skills.

Able to stay at partner institutions for secondments.