

The **EB House Austria** is an EU Reference Center of Excellence for the rare genetic skin disease Epidermolysis bullosa (EB), affiliated with the University Hospital Salzburg and the Paracelsus Medical University. We consist of four units – an outpatient unit, academy, research unit, and clinical study center – and adopt a holistic approach to developing and delivering outstanding multi-disciplinary care to patients with EB.

The group of Dr. Ulrich Koller is looking for postdoctoral candidates interested in developing gene therapies for EB. EB is a devastating disease characterised by diminished skin integrity due to mutations in genes encoding structural proteins necessary for maintaining proper adherence of the different skin layers to each other. Children with EB are also known as “butterfly children”, a reference to the fragile nature of their skin, similar to a butterfly’s wings.

Project

The project involves establishment of *in vivo* application methods for efficient CRISPR/Cas9-based repair of gene defects in the *COL7A1* gene which lead to the most severe form of the disease. Using established mouse models, two separate *in vivo* application methods will be investigated to deliver CRISPR/Cas9-therapeutic molecules directly into the skin. Our focus lies on the efficient delivery of our gene editing molecules into the basal keratinocytes and underlying fibroblasts, two main sources of type VII collagen production at basement membrane zone (BMZ) of the skin. Efficacy and safety of these methods will be the main readouts of the project, and will be assessed by next generation sequencing (NGS), immunofluorescence, and western blotting, in order to demonstrate specific correction of the mutation, proper processing of the translated protein and correct localization within the BMZ.

Project Start: September 2020

Candidate

The ideal candidate should be highly motivated, reliable, flexible, able to work both independently and as part of a team, and have strong time-management and communication skills. Other qualifications include:

- + PhD (or equivalent) in molecular or cell biology, genetics, biotechnology or similar

- + Technical/laboratory experience:
 - o PCR, cloning, immunofluorescence, western blotting
 - o cell culture (cultivation of different cell types, 3D skin equivalents)
 - o animal experimentation (optimal: FELASA certificate or equivalent)
 - o gene-editing (valuable but not required)
- + Track record of peer-reviewed publications
- + Fluent in written and spoken scientific English

Position

Full-time (40 hours/week) postdoc position, limited to a maximum of 2 years. Minimum salary according to FWF personnel cost unit rate: 54453 € brutto/year.

Working environment

The EB House Research unit consists of four collaborative groups dedicated to the development of life-enhancing therapies for patients. Our labs are well-equipped for the investigation of cells, genes, RNA, and proteins, including in-house and interdepartmental facilities for flow cytometry, NGS, quantitative real-time PCR, and microscopy. We have expertise in three-dimensional organotypic *in vitro* models, murine models, bioinformatics, and next generation sequencing platforms. The lab of Dr. Koller is located on the campus of the Paracelsus Medical University.

Application

Please send your application (CV, motivation letter, and contact info of 3 references) to: **Dr. Thomas Kocher**, t.kocher@salk.at.

Deadline: 15/06/2020