



The International doc.funds PhD Program

FWF

Der Wissenschaftsfonds.

***Molecular & Cellular Control of Tissue
Homeostasis in Health & Disease - TissueHome***

www.tissuehome.org

**Information about the PhD Program
&
Guide for Applicants**

Interuniversity PhD Program - 10-12 PhD Positions in Vienna, Austria

Program Information

Tissue barriers rely on complex immune surveillance mechanisms to sense external signals, including pathogenic damages or barrier-specific commensal microbiota. A disturbed communication among immune cells within barrier microenvironments can trigger aberrant inflammatory signals, ultimately promoting malignant transformation, autoimmune diseases or increased susceptibility to life-threatening fungal infections. **TissueHome** shall address three major scientific questions: (i) *How does the cross-talk of innate and adaptive immunity at tissue barriers operate in homeostasis and disease?* (ii) *What are the mechanisms specialized cells exploit to communicate within microenvironments to ensure barrier integrity?* (iii) *How do microbes shape the immune surveillance, and how does skin or gut microbiome dysbiosis contribute to infections and autoimmune diseases?*

The Faculty

The scientific expertise of the TissueHome faculty members ranges from host-pathogen interactions, systems biology, signaling pathways, microbial infections, RNA regulation, epigenetics, transcription, chromatin biology, innate/adaptive immunity, cancer biology, pharmacology, inflammation, translational medicine, animal genetics, multidrug resistance mechanisms, microbiome & functional genomics and bioinformatics to Darwinian medicine. TissueHome researchers have published numerous papers in leading journals. **TissueHome faculty members** offering PhD positions include **Karl Kuchler, Arndt von Haeseler** (Max F Perutz Laboratories, MedUni Wien, Campus Vienna Biocenter), **Wilfried Ellmeier, Maria Sibilja, Michael Jantsch, Christian Seiser** (MedUni Wien), **Veronika Sexl** and **Birgit Strobl** (vetmeduni Vienna). Further detailed information about PhD projects offered by faculty members are available on the *TissueHome* homepage at <http://www.tissuehome.org>

Funding and Working Language

PhD positions are fully funded for up to 4 years. Successful candidates will be employed by the MedUni Vienna or the vetmeduni Vienna through employment contracts that include social benefits and pension plans (accident coverage, comprehensive health insurance, pension, paid vacation). The salaries offered to PhD students are among the highest for University PhD Programs in Europe, amounting to around € 29000 (gross) per year (i.e. € 21,500 after tax), with a net salary of €1,520 after tax, paid in 14 monthly salaries per year.

The official **working language** of the PhD-program and in the host research laboratories is English – this includes all discussions and seminars, interactions with other scientists both formal and informal.

Access to state-of-the technologies at MedUni Wien & Vetmeduni

Max F Perutz Laboratories research groups and all PhDst have access to high-end equipment, including confocal-laser-scanning microscopes for live-cell imaging, spinning-disk and PALM/TIRF microscopes in the bio-optics facility, 600, 800 MHz NMRs, life-cell imaging with FRET, FRAP and microinjection systems. MFPL also houses a MoAb facility, and a dedicated infection room for mouse models of microbial pathogenesis. The **Vienna Biocenter Campus Facility** (<http://www.vbcf.ac.at/>) located on the Vienna Biocenter Campus (VBC) is a state-of-the-art core facility funded by the City of Vienna and the Ministry of Science & Research. The VBCF offers non-profit services including biooptics, high-end HTS robotics, genome-wide siRNA screening, mouse phenotyping, Illumina IIGx, PacBio, Hi-Seq2000 and all other NGS techniques (RNA-Seq, Chip-

Seq, Cletc.), cutting-edge EM, proteomics (ESI-LTQ, ESI-Q-STAR Elite, MALDI-TOF/TOF, iTRAQ quantifications, SILAC, SRM, ESI FT-ICRLTQ, Q-trap4000, OrbiTrap Velos with ETD, LTQ compatible with ETD for PTMs). Importantly, VBCF and MedUniWien provide subsidized and affordable child-care accessible to PhDst. Both facilities accept toddlers at 6 (MFPL) and 12 (MedUniWien) months respectively. Flexible opening hours enable the integration and coordination of research and family. The **Center for Integrated Bioinformatics** (CIBIV) satisfies all needs in high-end bioinformatics for NGS and high-end biocomputing, including open-source programming (www.cibiv.at/software) and database design (www.cibiv.at/databases).

TissueHome will also provide access to state-of-the-art technologies at the main **MedUni Wien** campus and the vetmeduni. The MedUni Wien (www.meduniwien.ac.at) with its associated General Hospital of Vienna on the main campus is one of the largest Medical Universities in Europe (>7500 students; >1800 researchers) with excellent basic, translational and clinical research teams. The Anna Spiegel Service Facility (www.meduniwien.ac.at/annaspiegel) offers high-speed cell sorting, genomic analysis, and biomedical imaging. The **Biomedical Sequencing Facility** (BSF) (<http://biomedical-sequencing.at>) is jointly operated by the Center for Molecular Medicine (Austrian Academy of Sciences) and MedUni Wien. BSF has Illumina HiSeq2000-4000, one Illumina MiSeq, PerkinElmer Sciclone (pre-PCR), Zephyr (post-PCR), Silicon Biosystems DEPArray and a Fluidigm C1 for single-cell sequencing.

The **Vetmeduni** hosts the **Biomodels Austria**, a state-of-the-art academic non-profit transgenic animal facility of about 1000m² space, all facilities for handling infectious pathogens, including mouse and tissue culture facility at biosafety levels 2/3 according to international safety guidelines (Biological Safety-Principles & Practices, 2006, Eds. Fleming, Hunt, ASM Press).

Living in Vienna – perfect work-life balance with world's highest quality of living

For the 7th time in a row, Vienna has been ranked among the most livable cities in the world (<https://www.wien.info/en/lifestyle-scene/most-livable-city>). This means you not only get to work in a world-class environment to perform top science, you also get to live in the city with the world's highest quality of living to enjoy the time outside of the lab.

Eligibility

PhD positions are open to applicants holding a **Master's degree** or equivalent (four years BSc Honors with a **written thesis**) in molecular biosciences, biochemistry, medicine, computational biology/bioinformatics or related fields. The working language is English, so excellent written and oral communication skills in English are required. Previous research experience in immunology and infection biology is desired but not essential. Any further information is available by e-mail from info@tissuehome.org

Applicants have to demonstrate a **convincing motivation** to engage in this comprehensive interdisciplinary training program. Students who wish to apply must complete their Master's studies **by September 2018**.

Applicants who hold a degree from a **non-European university** are requested to submit a GRE[®] (**Graduate Record Examination**) score. When applying, please submit a copy of your official record. Find out more about the GRE[®] here: www.ets.org/gre

“**European countries**” include those from the European Union (28 countries; http://europa.eu/abc/european_countries/index_en.htm), Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Georgia, Iceland, Israel, Liechtenstein, Moldova, Monaco, Montenegro, Norway, Russia, San Marino, Serbia, Switzerland, Turkey and Ukraine.

Application Information & Timelines

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|---------------------------|--|
| July 3, 2018 | Call opens for applications through the electronic online tool |
| August 1, 2018 | Application deadline |
| August, 2018 | Pre-selection of applicants by SKYPE interviews |
| End of August 2018 | Invitation of candidates for personal interviews in Vienna |
| September 2018, | Hearing and interviews in Vienna |
| October 1, 2018 | Start of TissueHome |

Online Application

Online applications include the following steps (further details / instructions on the website)

- Register through the online tool at the www.tissuehome.org website
- Complete the entire online application fields (CV, motivation letter, scientific sketch)
- **Master's M.Sc. certificates** - if not yet available, upload transcripts of records or mark sheets as PDF, as well as other supporting documents if necessary
- **Two written recommendations** must be obtained through the online system by the application deadline. Note that **you must contact** your referees of choice and make sure that they submit a reference through the online system. We **will not contact** your referees; it is your responsibility to ensure that references reach us by the application deadline

Your **completed application** needs to be submitted by **August 1, 2018, 23:59 CET** (GMT + 1hour). Please note that applications are only possible via the online system within the announced application period. Late or incomplete applications will not be considered.

Eligibility of **submitted applications** will be verified at the time the call closes. Applications missing required documents or fail to provide two reference letters will not be further considered.

Evaluation

Eligible applications will be evaluated by at least three *TissueHome* faculty members. After a pre-selection, applicants will be engaged in SKYPE interviews with one or more faculty members. Based on SKYPE interviews, a **shortlist of applicants** will be **invited** for personal interviews to take place in Vienna in **September, 2018**.

During 1-hour interviews, applicants will have to give **blackboard chalks talks** about a (i) scientific publication, (ii) their master's thesis work and (iii) about their scientific interests in general (NO ppt presentations). Importantly, applicants must engage in intense interactions with the *TissueHome* faculty and group members to facilitate the match-making process. Successful candidates entering the PhD program will be offered a PhD position within a few days after the interviews.