

The University of Vienna is a public university located in Vienna, Austria. It was founded in 1365 and is one of the oldest universities in the German-speaking world. With its long and rich history, the University of Vienna has developed into one of the biggest universities in Europe, is associated with 15 Nobel prize winners and has been the academic home of a large number of figures both of historical and academic importance.

The University of Vienna and Symrise AG, Holzminden, Germany seeks to fill a

## PhD position at the Department of Nutritional and Physiological Chemistry as of September 15<sup>th</sup>, 2016

### Research group:

The Department of Nutritional and Physiological Chemistry, chaired by V. Somoza, is one of the leading institutions in the area of bioactive aroma compounds, with interdisciplinary research covering topics from molecular biology, human physiology and chemical analysis. Currently, a Christian Doppler Laboratory for Bioactive Aroma Compounds is hosted in collaboration with Symrise AG to identify satiating aroma compounds in foods and their mechanisms of action.

### Project description, duties and responsibilities:

The proposed project aims to assess the novel possibilities of genetic editing in mammalian cells targeting taste receptors and their physiologic functions beyond taste sensation. The PhD student will study stem cell biology, novel gene modification tools, and will apply state-of-the-art techniques of molecular biology (e.g. imaging, qRT-PCR, dd-PCR), analytical chemistry (e.g. LC-MS/MS, GC-MS), and *in vivo* administration of aroma compounds. The primary goal is to evaluate the possibilities and efficiency of genetic knock-out by establishing specific phenotypes in mammalian cells expressing taste receptors, and to link these results to physiological outcome measures. The laboratory methods the PhD student will use will mainly include stem cell culturing, gene editing (CRISPR-Cas9), confocal and fluorescence microscopy, modified mRNA, along with more traditional biochemical, cell and molecular biology techniques. The PhD student will devote most of the time to laboratory studies. In addition, the student will be expected to analyse data, present results, and write scientific papers. Coursework pertaining to the PhD teaching will also be required within the PhD-studies at the University of Vienna.

As part of the project, short-term stays at the Symrise site in Holzminden/Germany are envisioned, where results obtained in the *in vitro* and *in vivo* experiments conducted in Vienna will be validated by sensory experiments.

Entry requirements for doctoral education

### A candidate is eligible for doctoral education if the following requirements are met:

- master qualification (i.e. master degree) or
- completion of courses comprising at least 240 credits of which at least 60 credits were awarded in the second-cycle/master level
- proficiency in English equivalent to the course English B/English 6 (Proficiency in the English language can be documented by an internationally recognized test such as TOEFL or IELTS)  
basic knowledge in German is mandatory to fulfil teaching obligations of two semester hours per week

**Skills and personal qualities:**

We are looking for a highly motivated, talented individual who has the maturity and desire to study hard and independently as well as in a group setting. The day-to-day studies are very much laboratory based and requires self-motivation. On the other hand, the research group has multiple on-going collaborative projects and as such the applicant must have strong communication skills. A background in biochemistry, molecular and cell biology is a requirement. The ideal applicant should have previous experience with murine embryonic stem cell cultures and confocal imaging technique. Documented experience in CRISPR-Cas9 mediated genetic editing is highly meriting. Documented skills in oral and written German and English are required. The candidate's personal skills will be highly valued.

**Assessment criteria:**

A selection will be made among qualified applicants on the basis of the ability to benefit from doctoral education. The University of Vienna uses the following bases of assessment:

- Documented subject knowledge of relevance to the area of research
- Analytical skills
- Other documented knowledge or experience that may be relevant to doctoral studies in the subject

The qualifications of the applicants will be evaluated on an overall basis.

**Terms and conditions:**

The most common way of financial support for doctoral students at the University of Vienna is a doctoral grant for three years

**Application process:**

An application must contain the following documents in English:

- A personal letter of motivation and curriculum vitae
- A copy of degree certificates and associated certificates
- A copy of degree projects and any previous publications

The application is to be submitted to [npc@univie.ac.at](mailto:npc@univie.ac.at)