## Master position available

## New antifungal strategy against invasive Candida infections

## Julien Orts' group "BioNMR and Drug Discovery by Advanced NMR Methods"

## University of Vienna

Join our dynamic and innovative team in the "BioNMR and Drug Discovery by Advanced NMR Methods" group at the Department of Pharmaceutical Sciences! We are seeking an enthusiastic student to work on an exciting project aimed at exploring the inhibition of bromodomains as a novel antifungal strategy against invasive Candida infections. This is a unique opportunity to make a significant contribution to the field of antifungal drug discovery.

Bromodomains are highly druggable proteins that are found in humans and fungi. While human bromodomains have been extensively studied, bromodomain targets in fungal infections are largely unexplored. Recent studies have shown that some fungal bromodomains are viable anti-fungal targets, and we believe that specific fungal bromodomains are critical for the viability and virulence of pathogenic Candida species. Small molecules that selectively target these proteins represent a promising new class of antifungal drug – and that is precisely what you will be studying.

As an intern, you will have the opportunity to learn current Molecular Biology methods by expressing and purifying Candida BET proteins. You will also be taught how to screen multiple compound libraries against these bromodomains using NMR spectroscopy. The hits you found will be further validated using complementary methods such as ITC or SPR. Finally, for the most promising fragments a structure-activity relationship will be established by NMR. We offer an extensive training in all these methods (Molecular Biology, Biochemistry and NMR spectroscopy), as well as a highly collaborative research environment that encourages creativity and innovation.

We are looking for a candidate who is curious and willing to learn about Pharmaceutical Sciences and advanced Biophysical and Spectroscopic technics. No previous experience is needed, only the basic work you performed during your Praktikum, since we will provide all the needed training. This project is planned to be completed in a 6 month period.

If you are interested in this position, please send your CV and motivation letter:

Nicolas Coudevylle

Department of Pharmaceutical Chemistry

Email: nicolas.coudevylle@univie.ac.at

**References:**

Bromodomains: a new target class for drug development.
Cochran AG *et al*. Nat Rev Drug Discov. **2019** Aug;18(8):609-628.

Selective BET bromodomain inhibition as an antifungal therapeutic strategy.
Mietton F et al. Nat Commun. **2017** May 18;8:15482.

**Website of the group:**
https://bionmr.univie.ac.at