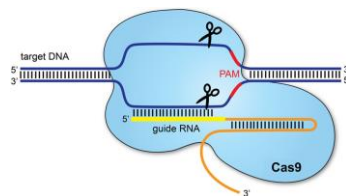


Master Student Positions

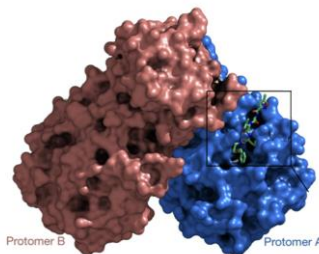
The Elling Lab at IMBA Vienna is searching for Master students. Our group is specialized on various modalities of genetic screening, foremost CRISPR/Cas9 screens. As experts in high throughput genetic analysis we also provide sequencing of SARS-CoV-2 positive samples for Austria. We can currently offer two Master projects:

In vivo CRISPR screening:



CRISPR screening has revolutionized interrogation of gene function in various assays. However, genome wide screens at high resolution remain limited to simple 2D cell culture models, as in some scenarios with bottlenecks high-throughput screening is still challenging. These bottlenecks are generated by low infection efficiency, cell availability, engraftment efficiency and differentiation bias. We have recently developed methods that empower screening also in systems with these kinds of bottlenecks, foremost in vivo. We are seeking for a student who is motivated to work with different model systems to further develop this new CRISPR-screening modality.

A Prognostic screen for therapy resistance of SARS-CoV-2:



Pharmacological inhibition of SARS-CoV-2 via protease inhibitors has proven to be a powerful means of inhibiting viral replication. However broad utilization of such inhibitors generates a selective pressure for resistance mutations to occur. This project utilizes our screening expertise and aims to anticipate all mutations leading to partial or complete drug resistance by a saturated genetic reporter-based screen. Results of these experiments will thus inform prioritization of future variants of SARS-CoV-2 surveillance.

If you wish to apply for one of these positions, please contact me by mail and attach a **motivation letter and CV highlighting your relevant theoretical and practical background, e.g. cell culture experience.** Looking forward to hearing from you!

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