



**Karolinska
Institutet**

SciLifeLab



Engineering proteins with non-canonical amino acids

The Drug Discovery and Development (DDD) Platform and Elsässer lab are jointly offering a master thesis exploring new methods to engineer proteins.

Non-canonical amino acid mutagenesis, also called amber suppression is a promising technique to equip recombinant proteins with new chemical properties. It relies on expanding the standard genetic code by recoding the amber stop codon to incorporate an non-canonical amino acid. Non-canonical amino acids are particularly useful to site-specifically attach fluorescent molecules, drug molecules or any other small molecule to a protein. Therapeutic proteins, so called 'biologics' can benefit greatly from such bespoke modifications. We are striving to develop this technique into a robust and general tool for protein production in mammalian cells.

We are looking for a motivated student with knowledge and ideally experience in cell culture and molecular biology techniques.

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