



## SAHLGRENKA AKADEMIN INSTITUTIONEN FÖR BIOMEDICIN

### Utlysning

**Project Title:** New molecular diagnostics to analyze therapeutic oligonucleotides

**Project duration and dates:** 9 June 2025 to 23 Dec 2025

**Application deadline:** 30 april, 2025

**Amount:** Stipend of 16 000 SEK /month

#### **Project summary:**

Therapeutic oligonucleotides offer a promising modality for treatments of patients with various diseases and conditions. The use development and use of therapeutic oligonucleotides is a rapidly growing research field, where the first approved treatments are clinically used. However, there are several challenges when developing therapeutic oligonucleotides, including evaluating different oligonucleotide sequences and their specificity. One issue is to detect and quantify therapeutic oligonucleotides reliable. Therapeutic oligonucleotides are short molecules with a range of different modifications, which make them challenging to analyze with traditional analytical methods, such as PCR and sequencing. The goal of this project is therefore to develop a sensitive and specific method that enable the quantification of different types of therapeutic oligonucleotides. We will develop and evaluate several enzymatic approaches combined with PCR-based techniques to analyze short and modified oligonucleotides. If feasible, we will also test the approach in an experimental model system with in vitro cultured cell lines, with applications related to cancers.

The aim is to develop an analytical approach that enable specific and sensitive analysis of different types of therapeutic oligonucleotides and test the strategy in vitro.

#### **Applicant:**

We are looking for a highly motivated person, who wants to develop their expertise in tumor biology and molecular techniques. The candidate should have a MSc or be close to finish their MSc in a relevant area. Preference will be given to candidates who already have prior experience in molecular techniques related to therapeutic oligonucleotides.

#### **Application:**

Applications should be emailed to Anders Ståhlberg: [anders.stahlberg@gu.se](mailto:anders.stahlberg@gu.se) The application should include; Motivation letter, CV including contact info.