

## Multi-platform based quantification approach to patient sample stratification for an early onset diabetes sample cohort

PhD position in analytical glycobiology

### Network description

**GlySign** is a **Marie Curie Innovative Training Network** composed of 3 leading European partners in the fields of glycobiology, glyco-immunology and biomarker research. As a European Industrial Doctorate (EID), it exploits the key translational synergies between excellent academic and non-academic partners to the fullest extent. The **main scientific focus** of the network is **glycomic clinical markers** as well as assay development for **Precision Medicine (PM)**. We aim to **bring known glycomics markers to the clinic**.

### Project description

Research will be carried out at Ludger Ltd. (UK). A substantial part of the training (approx. 1 year) will be also carried out at the Center for Proteomics and Metabolomics (CPM) at the Leiden University Medical Center (LUMC) in Leiden, the Netherlands.

The aim of the project is the early product development of a prototype kit based on ethyl esterification MALDI-MS glycan analysis, applied to patient stratification in early-onset diabetes. Early-onset diabetes samples will be analysed using two orthogonal techniques: plate-based enzymatic glycoassay, as well as LC-MS-based glycan analysis. The same samples will be analysed using MALDI-MS based techniques, and the results will be compared to LC-MS and plate-based enzymatic analysis. The MALDI-MS thus validated will be developed into a prototype kit.

The candidate will receive training in high throughput sample preparation; enzyme use in glycoanalysis; plate based fluorescence measurements of samples; sample preparation using liquid handling robot; LC-MS familiarity; analysis of data using Proteinscape; GMP / ISO9001 type work practices; MALDI-MS acquisition, analysis and comparison of large datasets; sample modification strategies; early product development; biomarker as well as prototype evaluation; scientific writing as well as non-academic reporting; Teaching and mentoring a Bachelor's/Master's student is also part of the experience the candidate will gain.

This is a multidisciplinary project comprising several European laboratories with different expertise. The successful candidate will participate in the network's training activities and work placements at the laboratories of the participating academic and industrial teams. Regular meetings and workshops within the EU-funded GlySign will supplement the training and support provided at the LUMC in Leiden, The Netherlands. Marie-Curie projects are embedded in a comprehensive program of courses and Exchange visits between the partner institutions.

**The candidate, at the end of the project, will have broad as well as detailed experience in cohort sample analysis using orthogonal LC-MS, MALDI and plate based enzymatic approaches. Patient stratification to identify subtypes of early onset diabetes disease patients and transfer of technique lab-developed test into a commercial kit.**

### Appointment details

The candidate will be employed by Ludger Ltd (UK) for the duration of 36 months, with substantial time spent at the Leiden University Medical Centre (LUMC) in Leiden, the Netherlands, where the candidate will be enrolled in the local PhD program.

### Requirements

The candidate should hold a Master's degree in life sciences (e.g. biochemistry or biology) or analytical chemistry. Experiences in protein chemistry and mass spectrometry are highly desired. A good level of English (spoken and written) is mandatory. The candidate should be a good communicator with the ability to develop work relationships and have strong analytical skills particularly with an attention to detail. They should be an independent thinker with a proven ability to project-manage their work and meet deadlines. They should be able to work efficiently as part of a team and to build upon our collaborations.

### Eligibility according to EU regulations

Please be aware that candidates should comply with the general mobility criteria for Marie Curie early-stage researchers. In particular, the fellows to be appointed must not have resided or carried out their main activity in the host organization's country for more than 12 months in the 3 years immediately prior to the appointment date. Short stays such as holidays are not taken into account. Early-Stage Researchers (ESRs) shall, at the time of recruitment by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.

### How to apply

Application should include a CV and a cover letter stating motivation and expectations from participation in GlySign, and listing the names of two referees. Applications sent via email will not be taken into consideration. To apply, click [here](#).

### For questions contact

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