

Master thesis projects fall 2024 at Gyros Protein Technologies

About Gyros Protein Technologies Gyros Protein Technologies provides enabling peptide synthesis and bioanalytical solutions, helping scientists in research through bioprocess applications. Our peptide synthesizers and chemistries deliver uncompromising purity, flexibility and quality in less time. Sensitive, accurate and robust nanoliter-scale immunoassays for pharmacokinetics/pharmacodynamics, immunogenicity and quantitating bioprocess impurities and viral titer are performed on our proprietary platforms [Gyrolab™ xPand and Gyrolab xPlore™]. Peptide synthesis and bioanalytical solutions: accelerate your discovery, development and manufacturing of safer biotherapeutics. Gyros Protein Technologies is a division of Mesa Laboratories. www.gyrosproteintechnologies.com

Background

Gyrolab technology offers fully automated miniaturized immunoassays simplifying the workflow with increased performance. Immunoassay techniques are widely used for determination of the concentration of biomolecules in wide range of applications in life science. It has been used in established areas like drug and vaccine development and in vitro diagnostics for decades, but also it is also used in new emerging fields including cell and gene therapy. The ELISA technique has been the gold-standard but new more efficient techniques with improved performance are replacing this methodology.

Master thesis projects

1. Development and optimization of solid phases for microfluidic flow-through immunoassays

The Gyrolab platform is based nanoliter sized affinity columns for flow-through immunoassays. One critical component are the functionalized particles forming the affinity column. To further improve the performance of the immunoassay system particles with different characteristics will be produced. The work will include both surface functionalization of particles and evaluation of them in immunoassay applications.

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