Scientist – Bioanalysis of Antibody-Drug Conjugates (ADCs) using Mass Spectrometry, R&D

Location: Lyon, France (on-site)

Position Type: Full-time, 12 months, starting end 2026

Company and context

Lilly Research Labs Lyon (ex Mablink Bioscience) is specialized in the development of next-generation Antibody-Drug Conjugates (ADCs). Mablink/Lilly has developed a proprietary hydrophilic linker technology, PSARlink™, that improves the pharmacokinetics and therapeutic index of ADCs, enabling better tumor penetration and reduced off-target toxicity. ADCs are complex biopharmaceuticals composed of monoclonal antibodies linked to cytotoxic drugs. Their development requires advanced analytical techniques to characterize their structure, stability, and biological activity.

The BIOConjugation and Analytical Development team (BIOCAD) focuses on the bioconjugation and complete characterization of innovative ADCs, using state-of-the-art LC/MS systems as well as various stability indicating assays.

Project Overview

We are seeking a highly motivated scientist to join our BIOCAD team to participate in the mass spectrometry analysis of ADCs, using advanced bioanalytical strategies. The project will focus on the use of mass spectrometry to study:

- Free-payload release, small molecule quantification.
- Peptide mapping and site-specific conjugation analysis.
- Lysosomal degradation assays, study of linker-payload metabolism.
- Drug-to-Antibody Ratio (DAR) profiling (native and reduced).
- DAR plasma / media / blood stability.

Key responsibilities

- Perform sample preparation in 96-well plates for free-payload quantification and total mAb analysis using the strategies developed within the laboratory.
- Prepare and conduct bioanalysis experiments using mass spectrometry in collaboration with other team members: quantification, stability studies.
- Contribute to the daily maintenance and operational readiness of laboratory instruments (e.g., HPLC, QTOF, Triple Quad, Orbitrap).
- Participate to daily laboratory organization: consumables and reagent stocks, workspace management.
- Maintain thorough documentation of experimental procedures in electronic notebook, writing of reports and technical documents.
- Deepen technical expertise through familiarity with scientific literature.
- Collaborate with multidisciplinary project teams to present and discuss experimental results.

- Participate and present periodic updates and reports to the manager.
- Maintain a safe, pleasant, and efficient working environment.

Profile

- Bachelor's degree (Bac +3) in Chemistry / Biochemistry, technician / assistant engineer level.
- Experience with biomolecule characterization: mass spectrometry (Orbitrap / QTOF / Triple Quad), HPLC.
- Experience in biomolecule analysis strategies: bottom-up, middle-down and top-down.
- Experience with ADC characterization methods including UV-Vis, SEC, HIC, IEX, icIEF, SPR and LC-MS is a plus.
- Familiarity with data analysis tools (e.g., MassHunter, SCIEX OS, Chromeleon).
- Good level of written and spoken English.
- Team-oriented, autonomous, and scientifically curious.

What We Offer

- A dynamic and science-driven environment with opportunities to impact early oncology drug development.
- Competitive compensation and benefits.
- Opportunities for scientific growth, cross-disciplinary learning, and career advancement.

To Apply

Please send your CV and a brief cover letter to Pierrick BRUYAT at pierrick.bruyat@lilly.com.