Research Scientist (f/m/d) - Membrane Proteins & Automated Purification

To strengthen our lab, we are looking for a **Research Scientist (f/m/d) - Membrane Proteins & Automated Purification** who wants to grow into a key role at the interface of **biochemistry**, **biophysics**, and **high-throughput process development**. From cell pellet to structure and beyond!

At **Cube Biotech**, we specialize in **high-quality protein purification and stabilization technologies**. Our customers range from leading **pharmaceutical and biotech companies** to **academic research labs** worldwide.

We are a place for people who think for themselves, question dogma, and enjoy building smarter workflows than "what everyone else is doing". If you are curious, hands-on, and determined to learn as much as possible about membrane proteins, biophysics, and automated purification, you will feel at home here.

Your Mission

You will start from cell pellets and turn them into **high-quality, well-understood membrane protein samples,** ready for structural partners or downstream assays. The core of this role is **biophysical and -chemical characterization** combined with **smart, automated purification workflows.**

- Develop and run **purification and polishing workflows** for challenging membrane proteins (e.g. receptors, ion channels, transporters), using both classical chromatography and **robot-assisted purification setups.**
- Design and execute **systematic purification and formulation screens** – different detergents and/or detergent-free systems, buffer compositions, tags, elution and wash strategies, ligands/cofactors, and additives.
- Leverage our **automation platform** (liquid-handling and purification robots) to:
  Scale from small exploratory screens to robust, semi-automated workflows
  Increase reproducibility and throughput of purification campaigns
  Capture process data that can be reused and refined across projects
- Perform in-depth **biophysical characterization** of membrane proteins, including:
  SEC and analytical SEC to assess homogeneity, aggregation state, and stability
  SDS-PAGE & Western blotting for purity and identity
  MST (MicroScale Thermophoresis) for binding affinities, ligand interactions, and conformational changes
  GCI (Grating-Coupled Interferometry) for kinetics and interaction analysis (on- and off-rates, complex formation)
  Thermal/chemical stability and aggregation readouts (e.g. nanoDSF or related methods)
  Additional functional or binding assays, depending on the target
- Define and document **"handover criteria"**: what a sample must look like (purity, homogeneity, stability, activity) to be ready for structural teams (cryo-EM, X-ray, etc.), and ensure these criteria are met.
- Take responsibility for the **operation, basic maintenance,** and **thoughtful use** of key instruments in your area (MST, GCI, chromatography systems, robots) and help optimize how we use them across projects.
- Record your work in a clear, structured way and contribute to **internal knowledge bases** (solubilization and purification databases, protocol libraries, best-practice documents).

Your work largely ends when the sample is handed over: your success is measured by how stable, clean, and well-characterized your membrane protein preparations are – and by how much they help our partners generate high-quality structural and functional data.

Your Profile

We are not chasing a perfect list of buzzwords – we are looking for a free thinker with genuine curiosity and the will to learn fast. You will be a strong fit if most of the following applies to you:

- You hold a Master's or PhD in Biology, Biochemistry, Biophysics, Structural Biology, Chemistry, or a closely related field.
- You have robust, hands-on experience in protein purification, ideally with membrane proteins or other challenging targets.
- You enjoy biophysical data: you think about what SEC traces, MST binding curves, or GCI sensorgrams tell you about folding, stability, oligomeric state, and mechanism.
- Experience with MST and/or GCI is a strong plus; alternatively, you bring solid experience with other quantitative binding/interaction methods and are highly motivated to master MST/GCI quickly.
- You are curious about automation: using robots to make workflows more systematic, reproducible, and scalable is something you see as an opportunity, not a threat.
- You like to set up structured screens (multiple conditions/constructs/ligands in parallel) and are comfortable drawing clear, data-driven conclusions from complex data sets.
- You are motivated by innovation: you question protocols, refine them, and want to understand what is happening at the molecular level, not just follow a checklist.
- You enjoy working in a collaborative, multidisciplinary team, discussing data openly, and bringing your own ideas to the table.
- You can manage several projects in parallel without compromising on documentation or scientific rigor.
- You are fluent in English (written & spoken); B1-level German or the willingness to reach it is expected.

What we Offer

- A permanent **full-time position (40h/week)** in **Monheim am Rhein**. Start Date is 01 April 2026.
- **Flexible working hours** for a great work-life balance.
- A scientifically driven, innovative environment where your ideas matter and where you can shape new workflows and methods
- Access to modern biophysical instrumentation (MST, GCI, chromatography systems, robots for automated workflows) and challenging real-world targets
- Close collaboration with experts in membrane protein biochemistry, biophysics, chemistry, and structural biology
- The opportunity to work on high-value membrane protein targets with direct impact on drug discovery and fundamental research
- Flat hierarchies, short decision paths, and room to grow with your responsibilities
- Subsidized meals and free refreshments

At Cube Biotech, we believe in **fairness, inclusion, and creativity**. We're committed to fostering an **open, respectful workplace** where every voice is valued. No matter your background—we want your **ideas, talent, and passion for science**!

Ready to Make an Impact?

Send your CV, Cover Letter and Reference letters with your salary expectation and your earliest start date to **karriere@cube-biotech.com**—we can't wait to meet you!

Contact Person: Frau Cao / Human Resources