
Job Description

Scientist / Associate Scientist — Protein Purification

NAME:		DATE:	
JOB TITLE:	Specialist Scientist / Associate Scientist	DEPARTMENT:	Research & Development
REPORTING TO:	Sr Director, Assay Dev.	COMP. RANGE:	\$72,000 – \$74,000 / yr

About BoundlessDx:

BoundlessDx is a diagnostics technology company developing next-generation platforms that deliver rapid, actionable insight in real-world environments. Focused on rethinking how diagnostic information is generated, interpreted, and applied, we are building systems that enable faster, more confident decision-making across a range of use cases.

As we move toward commercialization, BoundlessDx is bringing together science, engineering, and data to solve complex problems at the intersection of technology and practical application. We are building a team that thrives on innovation, cross-disciplinary collaboration, and the opportunity to shape both the product and the company during a pivotal stage of growth.

Role Profile

As a Scientist / Associate Scientist on the Protein Purification team, you will work within BoundlessDx's research and development group to purify, concentrate, and characterize the antibodies and protein antigens that form the core of BoundlessDx's diagnostic product range. You will independently execute purification workflows on FPLC/AKTA platforms, develop and pack chromatography columns, immobilize proteins onto solid matrices, and process moderate volumes of material while supporting scale-up for commercial production. Working under the guidance of senior scientists, you will own your assigned purification tasks end-to-end, document results to quality standards, and present your data in project update meetings.

Key Roles and Responsibilities

- **Purify antibodies from blood-derived materials** (e.g. serum, plasma, ascites, and other blood fractions) as well as recombinant antibodies and protein antigens, using established and newly developed methods.
- **Operate, maintain, and troubleshoot FPLC/AKTA chromatography platforms** (e.g. ÄKTA pure/avant/start), including method building, run execution, and data analysis.
- **Apply a broad range of purification and concentration methodology**, including affinity chromatography, ion exchange (CEX/AEX), hydrophobic interaction chromatography (HIC), and size exclusion chromatography (SEC), alongside ultrafiltration/diafiltration (TFF), buffer exchange, and precipitation.
- **Prepare, pack, and qualify chromatography columns**, select and screen resins, and verify column performance (e.g. HETP/asymmetry) prior to use.
- **Cross-link and immobilize proteins onto solid matrices and resins** to generate custom affinity supports and conjugates, optimizing coupling chemistry, ligand density, and yield.
- **Process moderate volumes and support scale-up and tech transfer** of purification processes from bench through to reproducible, cost-effective commercial production, potentially including support of contract manufacturing partners.
- **Develop concentration, formulation, and stabilization methods**, assessing protein solubility, aggregation, and stability across buffer/formulation conditions to maximize performance and shelf life.

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- **Characterize and QC purified materials**, evaluating antibody behavior and performance and running binding/functional assays such as Octet (BLI), ELISA, and lateral flow, together with purity and identity testing (e.g. SDS-PAGE, SEC-HPLC, A280, endotoxin).
 - Plan and execute experiments in a logical, well-controlled manner, perform rapid troubleshooting, and analyze data to inform purification strategy and process improvements.
 - Maintain accurate, timely documentation in accordance with BoundlessDx's Design Control process and quality management system, including batch/lot records, method protocols, and laboratory notebooks.
 - Perform quality-control activities on purified lots, including incoming raw material checks, lot-to-lot comparison, and escalation of out-of-specification results.
 - Manage materials and inventory and support reagent and supplier coordination.
 - Contribute to lateral flow assay development and the integration of purified reagents into point-of-care products
 - Report and summarize results in project update meetings, communicating progress, risks, and timelines to the team and senior stakeholders.

Key Competencies

- Strong hands-on laboratory skills with sound understanding of protein chemistry, chromatography principles, and antibody/antigen behavior.
- Good communication, listening, and presentation skills, with the ability to explain technical results clearly to colleagues and stakeholders.
- Ability to understand the scientific rationale and technical issues of a project and to connect purification outcomes to product and commercial requirements.
- Ability to work in a small team and across multiple projects as required, while reliably executing assigned purification activities.
- Effective time management and the ability to plan tasks, prioritize urgent work, and maximize efficiency and reproducibility at the bench.
- Effective use of IT skills; MS Office suite including Excel and PowerPoint, instrument software (e.g. UNICORN), and compliance with cybersecurity and data-protection policies.
- Meticulous, thorough attention to detail and accurate record keeping.

Key Behaviors

Innovation / Improvement / Problem Solving: Everyone at BoundlessDx is encouraged to create new and valuable ideas and use these ideas to solve problems and develop improved processes and methods. Scientists / Associate Scientists are also expected to:

- Respond to recurring problems by investigating the underlying causes and taking steps to eliminate them.
- Anticipate possible problems and develop contingency plans to avoid or work around them.
- Experiment and use creativity, as appropriate, to find better, faster, less expensive, or more efficient ways to do things.
- Take responsibility for, and deal effectively with, complex or difficult problems within their area of work.

Education and Experience Usually Required for Role

- **A degree (BS, MSc, or equivalent experience)** in Biochemistry, Chemistry, Biological Sciences, Immunology, or an allied scientific field, with a minimum of 1–3 years relevant, hands-on laboratory experience (preferably in a commercial or industry environment in the field of immunodiagnosics or protein production).

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- **Demonstrated hands-on protein purification experience**, including direct experience operating FPLC/AKTA platforms.
 - **Practical experience across multiple chromatography modes** — affinity, CEX/AEX, HIC, and SEC — and with concentration/buffer-exchange techniques such as TFF/UF-DF.
 - **Experience purifying antibodies from blood-derived materials** and/or protein antigens, including column packing and protein-to-matrix coupling/cross-linking.
 - **Knowledge of QC and characterization of antibody behavior and performance**, including binding assays (Octet/BLI, ELISA, lateral flow) and protein solubility/formulation assessment.
 - Sound scientific and technical problem-solving and troubleshooting skills, with the ability to work through purification challenges methodically.
 - Good communication and team-working skills and the ability to work openly in a collaborative, multidisciplinary environment.
 - Experience with lateral flow technology and assay development, and with point-of-care diagnostic assays or systems, is a plus.

Work Environment

- Development laboratory and office environment, including work in cold rooms and routine handling of human blood-derived materials under appropriate biosafety (e.g. BSL-2) and PPE controls.
- Possible occasional travel.
- Must possess a valid driver's license and provide reliable personal transportation to various job sites as required.
- Ability to regularly lift, carry, and move objects weighing up to 50 pounds.
- Capable of standing, walking, bending, stooping, kneeling, and reaching for extended periods.
- Ability to perform physical laboratory duties for full shifts as required.

Contact: jobs@boundlessdx.com to apply