



**Job Title:** Director of Downstream R&D  
**Reports to:** Sr. VP of Technology Operations  
**Employment Type:** Full-time, Onsite  
**Location:** Philadelphia, PA

### **About BlueWhale Bio**

BlueWhale is a clinical-stage, revenue-generating biotechnology company committed to expediting the expansion and acceptance of cell-based therapies. Given the demand for cell therapy products that outstrip the available supply, BlueWhale Bio is addressing crucial deficiencies within the existing manufacturing framework. BlueWhale Bio's founding scientific team is led by Dr. Carl June and Dr. James Riley (University of Pennsylvania). Our team of scientists draws from a wealth of expertise, and it is developing an innovative platform and groundbreaking product portfolio to address critical shortcomings in the current process of cell therapies. Our technology holds the promise of bringing the full benefits of cell therapy to a broader spectrum of patients, doing so more rapidly and at a reduced cost.

### **About the Role**

The Director of Downstream R&D will define and execute the next-generation strategy for downstream purification of BlueWhale Bio's CDNP platform. This role will lead efforts to fractionate product components, elucidate the mode of action, and implement scalable purification processes (e.g., SEC, IEX) to improve product quality and manufacturability.

This individual will combine strong technical leadership with hands-on scientific expertise and mentorship of junior staff, while collaborating cross-functionally to address key bottlenecks in purification and biological activity.

### **Key Responsibilities**

#### **Scientific Leadership & Strategy**

- Define and drive the downstream purification strategy for CDNP-based products
- Lead fractionation efforts to isolate and characterize active components
- Develop and refine hypotheses around the mechanism of action and immune activation
- Identify and resolve bottlenecks related to purification, yield, and product consistency

### **Experimental Design & Execution**

- Design, oversee, and interpret complex experiments related to purification and characterization
- Implement and optimize chromatographic methods (e.g., SEC, IEX)
- Integrate analytical and functional assay data to guide decision-making

### **Process Development & Manufacturing Readiness**

- Translate R&D findings into scalable downstream manufacturing processes
- Establish reproducible purification workflows to support product development and scale-up
- Collaborate cross-functionally with upstream, analytical, and process development teams

### **Team Leadership & Mentorship**

- Mentor and develop a team of research associates and scientists
- Foster a culture of scientific rigor, accountability, and innovation

### **Documentation & Communication**

- Ensure thorough and compliant documentation of experimental work
- Present findings clearly to stakeholders and partners
- Author patents, papers, and grants to support advancing our strategy
- Interface effectively with cross-functional teams and clients

### **Education and Experience**

- Ph.D. in Biochemistry, Chemical Engineering, Molecular Biology, Immunology, or related field preferred
- Master's degree with significant experience considered
- Expertise in SEC, IEX, and chromatographic purification methods
- Experience in biomolecule purification, fractionation, and characterization
- Familiarity with HPLC, FPLC, mass spectrometry, and biophysical assays
- Understanding of immune activation and biologics development preferred
- 8+ years in downstream process development or related field
- Proven leadership and track record in solving complex purification challenges
- Experience scaling processes from R&D to manufacturing
- Strong analytical and problem-solving skills
- Mechanistic scientific thinking
- Excellent communication and collaboration abilities
- Experience working with cross-functional teams and clients



BlueWhale Bio is an equal opportunity employer. We offer an inspiring and innovative environment for talented professionals to contribute to groundbreaking research and advancements in the biotech industry. Join us as we shape the future of cell therapy and improve human lives through scientific excellence.

**Contact us:** [careers@bluewhale.bio](mailto:careers@bluewhale.bio)