

Haynes: Protein Production Facility

OVERVIEW

The Protein Production Facility at the Duke Human Vaccine Institute (DHVI) is equipped to produce HIV-1 Env proteins, HIV-1 Env SOSIP trimers, Fc-gamma receptors, and antibodies for the field to study, as standardized, quality in vitro reagents. The hope is that these reagents will both optimize clinical trial immune monitoring, as well as facilitate Env immunogen discovery. The proteins and antibodies produced in the Protein Production Facility are not intended for use in humans or clinical trials. All proteins and antibodies are produced under standardized conditions in that procedures, equipment, operator training, and documentation are governed by Standard Operating Procedures with oversight by Duke's Quality Assurance for Duke Vaccine Immunogenicity Programs (QADVIP) unit. Documentation of all procedures is retained, and the facility is monitored for compliance to ensure that consistent, reproducible, auditable, and reliable results and products are delivered.

Quality control is performed on the proteins produced in the PPF. This includes testing for bioburden (endotoxin, sterility, and mycoplasma) as well as sequence confirmation analysis by LC/MS (for proteins only). SDS-PAGE under reduced and non-reduced conditions is also performed. Size Exclusion Chromatography by FPLC may be performed as a secondary purification step if required. All protein characterization, bioburden, and QC results are reported on the certificate of analysis upon delivery. QC for SOSIP trimers also includes negative stain scanning electron microscopy and binding analysis (BLI).

The facility currently has resources provided by the Foundation to produce recombinant proteins and antibodies for CAVD members on a first-come, first-serve basis. Application for protein production requires the approval of the CAVD member's program officer and the approval of the PPF's program officer. Please submit protein order requests through the [Protein Production Facility website on the CAVD Portal](#).

For any questions or inquiries, please contact Jamie Peacock (james.peacock@duke.edu).

Grant at a Glance

Principal Investigator

Barton Haynes, MD

Frederick Porter, PhD Senior Director of Product Development



James Peacock, PhD, Director of Protein Production Facility

Grantee Institution

Duke University, Durham, USA

Project Title

Protein Production Facility

OPPID

1154951

Grant Award

Up to \$2.4 Million, awarded July 2016