

Lentiviral Vector Reference Material (LVV-RM) Request for Proposal – RFP-2.0

Thawing, Sterile Filtering, and Vial Filling

1.0: Overview

- The LVV-RM project involves several Requests for Proposal (RFPs) including those for production and purification, consumables, sterile filtration, vialing, repository services, characterization, and long-term stability testing.
- The LVV-RM project is being managed by the LVV-RM Working Group (WG) that has been established for this purpose. Anyone with a legitimate interest may join this WG, but only one individual from each organization can vote on critical decisions. The Executive Committee (EC) members of the WG (see below) will draft and manage documents, call meetings, issue reports, and help develop manuscripts.
- **This RFP (RFP-2.0) is for receiving frozen bags of LVV-RM material, and for thawing, sterile filtering, and filling/closing vials.** This document is being distributed to individuals who have chosen to serve on the WG, whose names and affiliations can be found on the International Society for BioProcess Technology (ISBioTech) website at <http://www.isbiotech.org/ReferenceMaterials/lentivirus-home.html>. We may also distribute this document to others we know may be interested in participating.
- The LVV-RM is a third-generation HIV-1-based VSV-G pseudotyped LVV that contains a transgene whose product is easily detected by FACS (GFP or equivalent). The LVV-RM will be supplied to you from NRC-Canada in Montreal, which is the organization that will produce and purify the material. You will be given testing data and suggested handling instructions. The vector will be frozen to a temperature below minus 60° C and will already be in the final formulation buffer. It will most likely be provided in 3 x 500 mL bags that are suitable for storage and shipping. We plan to provide enough LVV-RM to fill approximately 3,000 vials with 0.5 mL of material at an LVV concentration of 0.5E8 to 1.0E8 infectious genomes (Ig)/mL.
- While the use of cGMP is **not required**, all steps in the process must be disclosed and **“well-documented.”**
- The Working Group EC must approve the wording to be used on the vial labels.
- The EC will have approximately 6,000 vials and closers shipped to the organization that will do this work. If possible, the EC will also arrange for other consumable materials to be donated.

2.0: Proposal Requirements

- Please do not designate any information as “confidential” or “proprietary”, as we cannot honor such requests. LVV-RM project data and methods will be stored on the ISBioTech website where any interested party can access them, and this data will be compiled for the purposes of publishing papers and preparing oral presentations. But most importantly, the processes will be used again if we must make more material in the future.
- Please provide detailed instructions on how you will receive the material from the production organization (NRC). Also, once the LVV-RM has been received, you must inform the production organization (NRC-Canada) by email and phone.
- Please provide the estimated time required from when you receive the bulk LVV-RM to when filled vials will be available for shipment to ATCC, which will provide repository services.
- Please describe your procedure for vialing, as well as the maximum number of vials that can be filled per lot, if not the full 3,000 vials needed. Please note that one lot is desired because characterization and stability testing must be performed on each lot.
- Please provide data from a media fill study demonstrating that the proposed filling process can be accomplished without contamination risks.
- Please provide information on the experience of your facility and personnel to thaw, sterile filter, vial, and store purified LVV, or similar biologics. Please include the procedures to ensure product segregation and the prevention of cross-contamination.
- Please describe your plan for cold chain logistics to ensure integrity of the vialled LVV-RM, as well as the training your personnel have been given for receiving and shipping similar biologics.

3.0: Scope of Work

- You will receive the frozen LVV-RM from the production organization, NRC-Canada. Note that the LVV-RM will be tested for RCL, mycoplasma, *in vitro* adventitious agents, and sterility, and the testing results will be supplied to you before the material is shipped.
- Please thaw the LVV-RM using a technique lasting no more than 3 to 5 minutes.
- Please sterile filter the LVV with a 0.2 or 0.22 µm filter that has been integrity tested *in situ*, and then fill and close the vials with the procedure specified in the media fill study.
- You must test and provide data on particle count and infectious genomes per mL (Ig/mL) after thawing, after sterile filtration, and from a representative number of vials. You will be given the assay procedures used by NRC-Canada.
- Please label the vials with wording that has been approved by the EC of the Working Group (see below).
- Please store the filled vials so they are kept at or below minus 80° C.

- Please ship the vials of frozen material to ATCC for storage.
- Please document all steps in the process and provide documentation in your final report.

4.0: Proposal Submission

Via electronic means, please submit all documentation for receipt by **May 31, 2021** to the email address shown below. As an option for requested documents, you can set up and share a **Dropbox** folder. Final decisions will be communicated on or about June 30, 2021. All information submitted will be made available to the members of the LVV-RM WG, as well as those who access the information on the corresponding RM webpages (see below).

5.0: Project Management

Current Executive Committee Members:

- Mercedes Segura Gally, PhD – AVROBIO
- Otto-Wilhelm Merten, PhD – Miltenyi Biotech
- Vladimir Slepushkin, MD, PhD – Autolus Therapeutics
- Jakob Reiser, PhD – FDA CBER
- Keith L. Carson, ChE, MBA – ISBioTech

LVV-RM Contact Information

Attn: **Keith L. Carson - LVV-RM Executive Committee Coordinator**

Email: lvwg@isbiotech.org

Website: <https://isbiotech.org/ReferenceMaterials/lentivirus-home.html>