



Specific Priorities

2023 Request for Proposals

Date of Issue: **March 27, 2023**
Submission Deadline: **June 26, 2023, 4:00 pm PDT**

Notes

- Late or incomplete applications will not be accepted.
- All standard terms and conditions, set out in Schedules A-E of the [Research Grant Agreement](#), shall apply to projects funded through Research Services.
- All documents are available on the Specific Priorities/Systematic Reviews [webpage](#).

If you have any questions or would like assistance, please contact Research Services:

- Email: resquery@worksafebc.com

Thank you for your interest in WorkSafeBC's research program.

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SPECIFIC PRIORITIES

Request for Proposals (“RFP”)

I. Purpose

Specific Priorities grants support research of relevance to WorkSafeBC, workers and workplaces to address key questions in occupational health and safety and recovery and return-to work of injured workers.

The purpose of this RFP is to solicit research proposals relating to analytical sampling methods for substances with an American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV).

WorkSafeBC released RFPs on the subject in 2019, 2020, 2021, and 2022¹. The current RFP is a separate competition requesting proposals for updated priority sampling methods and substances.

II. Overview

WorkSafeBC is committed to creating a province free from workplace injury or illness, and to providing service driven by our core values of integrity, accountability, and innovation. We serve approximately 2.49 million workers and 263,000 employers throughout the province of British Columbia (B.C.) by promoting workplace health and safety, supporting injured workers, providing compensation, and operating a sustainable no-fault insurance system.

WorkSafeBC’s Research Services funds research projects that provide insight and solutions for real issues faced by workplaces and WorkSafeBC. We support scientific research and knowledge sharing that contributes to:

- Improving health and safety in B.C. workplaces;
- Fostering successful rehabilitation and return to work of injured workers; and
- Ensuring fair compensation for workers suffering injury or illness on the job.

Research Services has an annual budget of \$2.75 million for research grants. Funding is offered through four specialized funding streams, for projects that align with our [mandate](#) and [research priorities](#).

Consult our [website](#) for more information about the program, application materials and funding conditions.

Funding and Duration

Grant amounts are determined by WorkSafeBC, based on the proposed project methodology, timeline, workplan and budget. Multi-year projects with reporting and annual deliverables will be considered to a maximum of three years.

Eligibility Criteria

To be eligible for this Specific Priorities grant, the Principal Applicant must be:

- A qualified researcher based in, or formally affiliated with, a university or other research institution. Researchers worldwide are invited to apply.

¹ A list of research projects funded by WorkSafeBC relating to analytical sampling methods for substances with an ACGIH TLV can be found under the “Guidance to researchers” section on page 5 of the RFP.

For-profit enterprises, commercial laboratories, and full-time employees of WorkSafeBC are not eligible to be Principal Applicants; however, they may participate as team members or co-applicants.

III. Research Issue and Questions

The research issue and questions are outlined below. Applicants may further refine the questions in their proposal. It is anticipated that successful applicants will collaborate with WorkSafeBC to refine and enhance research questions and objectives as appropriate.

Issue: Analytical sampling methods for substances with an ACGIH TLV

Section 5.48 of the *Occupational Health and Safety Regulation* provides established exposure limits (ELs) for a worker's exposure to hazardous chemical substances. Generally, these ELs are established according to the TLVs adopted by the ACGIH. Prior to the adoption of new or revised TLVs, WorkSafeBC reviews and consults with stakeholders on potential implementation challenges, including access to validated sampling methods for these substances.

WorkSafeBC is seeking research projects to develop, implement, and/or validate analytical sampling methods for the substances with ACGIH TLVs for which:

- **Validated substance-specific sampling methods currently do not exist**, and require:
 - New analytical methodologies; and/or
 - New "Proof-of-Concept" sampling techniques and/or sampling devices.
- **Existing methods are not adequate**, and require:
 - Enhanced analytical sensitivity to improve upon existing analytical detection (e.g. Limit of Quantification (LOQ) issues); and/or
 - Modifications to enable reliable sampling and lab analysis of ACGIH assigned size-selective criteria, such as:
 - Inhalable, thoracic and respirable fractions; and
 - Inhalable Fraction & Vapour (IFV) substances².

Priority substances and interests:

- Substances with Inhalable Fraction & Vapour (IFV) TLVs.
- Substances with inhalable TLVs used in B.C. (e.g., metals, ethylene glycol, hexylene glycol, selected pesticides).
- TLVs in which there are analytical sampling methods but cannot be reliably quantified down to 10% of the TLVs.

Guidance to researchers:

- All substances selected for method development, validation and implementation must be known to be used in B.C. workplaces and have evidence of potential worker exposures.
- The development, implementation and validation of sampling devices and sampling methodologies should align with recognized national and international standards (e.g.,

² A substance with the ACGIH notation for "Inhalable Fraction and Vapour" (or "IFV") means that the chemical substance exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contribution a significant portion of the dose at the TLV-TWA concentration.

WorkSafeBC's Method Validation Template; NIOSH / OSHA Validation Criteria / Guidelines, ISO standards, etc.).

- IFV substance projects may consider validation of the IFV sampling devices that are commercially available.
- Applicants can consult with WorkSafeBC subject matter experts for help to determine which substances' TLVs and research questions they should focus on for their submitted proposals and/or to view a list of IFV substances and their TLVs used in B.C. Please reach out by email to resquery@worksafebc.com for more information.

When determining substances and research questions of focus for a proposal, please note WorkSafeBC has previously funded the following research projects on the subject of analytical sampling methods for substances with an ACGIH TLV:

- Validating the use of a multi-fraction sampler for recovering inhalable and respirable dust mass and metals
- Method development and validation for the evaluation of airborne toluene diisocyanate (TDI) according to IFV notation
- Wearable sensors for detection of industrially important gases and substances with TLVs
- Development and validation of a portable real-time gas sensor for the detection of hazardous gases
- Developing a sequential analytical procedure for evaluating chromium (III) and chromium (VI) speciation and their differential solubilities from air samples
- Development of a standardized sampling protocol to quantify o-phthalaldehyde (OPA) contaminants on surfaces
- Performance of commonly used aerosol samplers for measuring workplace metals to meet occupational exposure limits

For more information on projects funded through Specific Priorities, please see the "Recently funded projects" section of the Specific Priorities [webpage](#).

IV. How to Apply

Application Package

Ensure your application package includes:

- The "Grant Application Form" and relevant supporting documents.
- A signed "Applicant Consent Form for Use and Disclosure of Personal Information" for each project team member.

All forms and application materials are available for download on our [website](#). Applicants should refer to the "Guide to the Grant Application Form" for instructions on how to prepare an application package.

Submission Instructions

Please complete your application electronically and save in Word document format (i.e., do not send PDFs). Electronic signatures (scanned copies of handwritten signatures) are accepted.

Upload your completed application package to OneDrive by clicking on the following link: [2023 Specific Priorities Application Packages](#). Please note that once you click "Upload" you will not be able to modify your submission. Please ensure you use the following format to name your file: **lastname_SP2023** (e.g., Smith_SP2023).

Please submit your complete application by the deadline. Late applications received after the deadline will not be accepted. The only materials that will be accepted after the deadline are ethics and biosafety certificates.

Contact Information:

Research Services

Email: resquery@worksafebc.com