

## Scrubbing your scrubs: Finding ways to re-use COVID-19 protective gear

Updated Information

Changes to the following headings:

- **Indirect Costs:** 15%
- **Changed Internal Deadline:** From June 9th to June 12th
- **New Internal Contact:** Angela Vuk ([avuk@uoguelph.ca](mailto:avuk@uoguelph.ca) [1])
- **How to Apply:** Applications must be submitted through Canada Post's eConnect system which is a 2-stage process with DND and can require several days. Researchers are encouraged to complete **the registration process as early as possible** to ensure your application can be submitted by the internal deadline. Please contact the Office of Research if you require assistance with this process.

### Sponsor

Defence Research and Development Canada (DRDC)

### Program

COVID-19 Challenges (Phase 1)

### For More Information

For more information visit the [Covid-19 Challenges website](#) [2].

### Description

Defence Research and Development Canada (DRDC) in collaboration with Canada's defence, security and public safety communities is looking for innovative material and design solutions, as well as rapid and effective decontamination strategies and solutions, for Personal Protective Equipment (PPE), operational clothing and equipment for personnel responding to events involving biological hazards.

### Background and Context

The current COVID-19 pandemic has revealed shortcomings in the availability and type of PPE to protect against biological agents used by military personnel and First Responders as well as the ability of PPE and operational clothing and equipment to sustain repeated and rapid

disinfection.

Most PPE is made to be disposable after a single-use however, during the current crisis, the personnel involved in responding to events must continuously wear their protective equipment and supply pressures are such that reuse of PPE is highly desirable. For example, current disposable medical PPE are typically designed for hospital settings, and do not have the appropriate attributes (e.g. strength, material, design) to guarantee protection for First Responders and military personnel operating in austere and remote operational environments (e.g. fighting fires, combating floods, conducting search and rescue operations, piloting aircraft, operating maritime platforms with the associated dust, dirt and varying climactic conditions). A single-use strategy also creates a significant logistical burden. Organizations must maintain adequate stockpiles and secure resupply to meet a high operational demand, which is all the more challenging when First Responders and military personnel are operating in remote or austere environments.

Additionally, the current pandemic has exposed the need to be able to disinfect specialized operational gear and equipment used by First Responders and CAF personnel. Whereas some current rapid decontamination methodologies have been shown to be effective, repeated application of disinfectants associated with rapid decontamination have been shown to degrade some materials used in specialized operational equipment reducing durability and functional performance. For example, polymers and some metals can be incompatible with the chemicals that are commonly considered to provide rapid and effective sporicidal, bacterial and virucidal disinfection. Exposure to UV light has been put forward as an alternative to washing and chemical decontamination, but again, degradation of materials (e.g. some polymers) is a concern. Exposure to intense UV requires an enclosed treatment area to protect the operator from negative health impacts due to exposure.

There are two objectives of the innovation challenge. The first involves the development of innovative material and design solutions for medical PPE, operational clothing and equipment that meets or exceeds all current functional and performance requirements while being adapted to frequent and rapid decontamination procedures and reuse. Additionally, consideration must be given to employment of these items by personnel who are sleep deprived and under stress and conducting highly dynamic tasks in austere and remote environments.

The second, are solutions for rapid and effective decontamination of PPE and operational clothing and equipment that will not degrade the performance of these items and the protection they afford to biological hazards.

## Eligibility

This CFP is open to **individuals, academia, not-for-profit organizations, for-profit organizations, and provincial/territorial/municipal governments.**

Applicants with joint ventures may also apply. [See section 1.6 of the IDEaS Program Applicant Guide](#) [3] for more information.

## Funding Availability

Phase 1 – award up to \$200,000

## Maximum Project Value

See 'Funding Availability'.

## Indirect Costs

15%

## Project Duration

Phase 1 is up to 6 months in duration

## Special Notes

Please refer to the [Office of Research COVID 19 web-page](#) [4] for directives related to research activities at the University of Guelph.

## Deadlines

**If College-level review is required, your College will communicate its earlier internal deadlines.**

Type	Date	Notes
<b>Internal Deadline</b>	Friday, June 12, 2020 - 4:30pm	Please submit your proposal, along with an OR-5 Form to <a href="mailto:research.services@uoguelph.ca">research.services@uoguelph.ca</a> [5].
<b>External Deadline</b>	Tuesday, June 23, 2020 - 2:00pm	

## How to Apply

Applications must be submitted through Canada Post's eConnect system which is a 2-stage process with DND and can require several days. Researchers are encouraged to complete **the registration process as early as possible** to ensure your application can be submitted by the internal deadline. Please contact the Office of Research if you require assistance with this

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process.

Stage 1: Proposal Submission

The Applicant is to complete the following:

- Read the Applicant Guide and determine eligibility.
- Review the S&T Challenges [and determine if they can address any of them with an innovation.](#) [6]
- Complete the [Proposal Form](#) [7] and submit on or before the closing date for the CFP.

For Questions, please contact

Send any questions to the IDEaS Program mailbox ([DND.IDEaS-IDEeS.MDN@forces.gc.ca](mailto:DND.IDEaS-IDEeS.MDN@forces.gc.ca) [8]). We try to turn around any responses within 48 hours. Please note that questions received less than five (5) calendar days before the application deadline may not be answered.

[Register to the information session on June 11, 2020](#) [9] to answer questions about the application process, as well as any technical questions.

### Office of Research

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Alert Classifications **Category:**

Funding Opportunities and Sponsor News

### Disciplines:

Health and Life Sciences

Physical Sciences and Engineering

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### Source

**URL:** <https://www.uoguelph.ca/research/alerts/content/scrubbing-your-scrubs-finding-ways-re-use-covid-19-protective-gear>

### Links

[1] <mailto:avuk@uoguelph.ca>

[2] <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/understanding-ideas/sandbox/covid19-challenges.html>

[3] <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/understanding-ideas/sandbox/covid19-challenges/applicant-guide.html#one-six>

[4] <https://www.uoguelph.ca/research/article/2019-novel-coronavirus-information>

[5] <mailto:research.services@uoguelph.ca>

[6] <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/understanding-ideas/sandbox/covid19-challenges.html#sec-1>

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[7] [https://www.canada.ca/content/dam/dnd-mdn/documents/ideas/covid-19/cfp\\_en.pdf](https://www.canada.ca/content/dam/dnd-mdn/documents/ideas/covid-19/cfp_en.pdf)

[8] <mailto:DND.IDEaS-IDEeS.MDN@forces.gc.ca>

[9] <http://www.ideasreg.com/>