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**SEDS-Canada, the National Research Council of Canada (NRC), and the Canadian Space Agency (CSA) select four teams for CAN-RGX 2020.**

**February 10, 2020**

**Toronto, ON:** Students for the Exploration and Development of Space (SEDS-Canada) has selected the four finalist teams among a pool of applications for the 2020 [Canadian Reduced Gravity Experiment Design Challenge \(CAN-RGX\)](#). The competition challenged post-secondary students attending Canadian universities and colleges to submit a proposal for a small scientific payload to be tested onboard the [National Research Council of Canada's](#) (NRC) Falcon 20 research aircraft, capable of simulating reduced gravity environments, similar to those found in the International Space Station.

Two students per finalist team will get to fly onboard the aircraft as Mission Specialists to operate their experiments. Each flight will consist of at least 12 parabolic maneuvers to allow students to run their experiments and collect all the necessary data for subsequent analysis on the ground. The Falcon 20 is one of the world's best microgravity planes; it provides the closest environment to that of real zero gravity. Each parabola will provide up to 20 seconds of near zero-G. With support from NRC and the [Canadian Space Agency](#) (CSA), CAN-RGX is the only competition of its kind in Canada.

"The National Research Council of Canada is proud to be part of this extraordinary opportunity working with the student teams to realize their project plans in microgravity flight. NRC's primary research aircraft, the Falcon 20, will help our next generation of researchers realize their future potential in the space sector" says Derek Gowanlock, Research Flight Test Engineer at the National Research Council of Canada.

The finalists include:

- **uO Rocketry** from the **University of Ottawa** is aiming to answer a seemingly basic question: does our medicine work in space? uO Rocketry will investigate if "last line of defence" antibiotics will be as effective in space as they are on Earth.

[Team media contact: [Andrew Zavorotny](#)]

- **Team Phi-Six** from **Thompson Rivers University** is doing basic-science research. They're investigating the forces between small but macroscopic salt particles in zero gravity by subjecting them to standing acoustic waves of varying frequencies and intensities.

[Team media contact: [Jonathan Gilchrist](#)]

- **UBC Rocketry** from the **University of British Columbia** will study the behaviour of microbial fuel cells in both micro- and hyper-gravity conditions as these cells are likely to play an important role in the future of space travel due to their ability to produce electricity while simultaneously doing useful work (such as waste-water treatment in extreme conditions or methane production).

[Team media contact: [Paul Juralowicz](#)]

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- **UAlberta Space Design Group (UASDG)** from the **University of Alberta** is investigating gene expression of bio-engineered cartilage tissue in micro-gravity for applications in both astronaut health and improvement of outcomes of knee osteoarthritis treatment on Earth.

[Team media contact: [Kirtan Dhunnoo](#)]

The four teams must now complete the next phase of their project, the Preliminary Design Review, which they will present to a panel of judges including experts in microgravity flight sciences from CAN-RGX's collaborating agencies, including the CSA and NRC. After finalizing their designs, the teams will have six weeks to build their experiments in order to submit the next milestone, the Critical Design Review. The experiments will then be integrated into NRC's Falcon 20 aircraft in preparation for the Flight Campaign scheduled for July 2020. This year's competition may see the Falcon 20 travel to Calgary, Alberta for the Flight Campaign (TBD).

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#### About SEDS-Canada

SEDS-Canada is a national, student-run, non-profit committed to supporting and empowering students interested in space, advancing the Canadian space sector, and advocating for peaceful exploration and development of space.

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