

## **SFU Press Releases Collection**

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## Welcome home space worms

Contact: Carol Thorbes, PAMR, [Phone removed], cthorbes@sfu.ca

Websites: [http://www.sfu.ca/mbb/mbb/faculty/baillie/html/Click on Worms in Space](http://www.sfu.ca/mbb/mbb/faculty/baillie/html/Click%20on%20Worms%20in%20Space) for information; right click on Space Video for

visuals <http://bioserve.colorado.edu/sts117/CHab1-F-o3-02.avi> (15 sec. clip of worms in space)

June 26, 2007

Simon Fraser University scientists Bob Johnsen and David Baillie will hold a news conference to welcome home 25 generations of a *C. elegans* family bred aboard an international space station orbiting the Earth. The conference is at 1:30 p.m. at the Burnaby Mountain campus.

Fortunately, worms known as *C. elegans* are so small that they're not visible to the naked eye. Otherwise, staging a welcome home event for several generations of a space worm family consisting of 100,000 members would be an onerous task.

This is the largest number of generations of an animal studied in space over the longest period of time, six months. The study will provide the first evidence of the biological, multigenerational effects of long-term exposure to radiation on animals.

*C. elegans* are the perfect organism for this kind of study because they reproduce quickly, take up little space and are multi-cellular organisms with a genetic makeup similar to the human genome.

Scientists are anxious to figure out how to mitigate the impact of lengthy exposure to radiation in space because they hope to send a manned crew to the moon by 2020 and to Mars by 2035. Current research indicates that one in eight travellers taking a round trip to Mars could die from radiation poisoning and the rest would likely be very ill.

It will be four to six months before Johnsen and Baillie have an in-depth understanding of how long-term exposure to an environment with higher radiation than on Earth has affected the worms. In addition to sharing video of the space worms taken at the space station and views of the worms under high-powered microscopes, the scientists will show and talk about the following:

- cell culture devices in which the worms were housed and fed
- the growth rate of the worms

- how a device called eT1, developed by Johnsen as a doctoral project under Baillie's supervision, has enabled the worms to retain radiation-induced genetic mutations but still appear normal

- why the genetic mutations and biological effect of radiation on worms in space will be compared to the impact of similar experiments on the ground

- why scientists want to be able to mimic the impact of space radiation on the ground

- why worm studies provide a good measure of the impact of accumulative radiation combined with individual doses on humans

News conference time and location:

Time: 1:30 p.m. assemble in South Science Building, Undergraduate Lounge, for 2 p.m. news conference.

Place: South Science Building, SFU's Burnaby campus. (building #27 on the campus map at <http://www.sfu.ca/about/maps.html>)

Parking: U-pay visitor parking in B-Lot (#41 on the map) or in the parkade (#15 on the map). Either means a walk to the South Science Building; we suggest you allow 10 minutes from B-lot, five minutes from the parkade.

PLEASE RSVP Carol Thorbes, SFU Public Affairs and Media Relations: [Phone removed] or e-mail: cthorbes@sfu.ca. Space is limited.

The Undergraduate Lounge is an open area next to the main staircase on the 8000 level. (Depending on where you park, you might find you've entered the building on the 7000 level or

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the 9000 level.)

Set up in seminar room 8114, next to the lounge. Room 8114 is of modest size and has limited power outlets but should be manageable.

After the news conference, you can take cameras down one floor into the worms' 'home lab', a tight space for shots there.

Visuals at the conference:

A dissecting microscope will be set up with regular *C. elegans* worms in room B 8114, the location of the news conference. There'll also be a monitor set up to see a video of the worms in space at the space station. And there'll be a projector set up showing regular worms under a microscope. The video and pictures can be downloaded at the website indicated above. Another dissecting microscope will be set up in David Baillie's lab near the news conference room. The worms from space will be visible under that microscope. Media can bring a special eyepiece to connect to the microscope. Otherwise, David will have yet another dissecting microscope, camera and monitor set up in an adjacent room where media can shoot the space worms off a monitor.