

Vancouver Island has one of the highest rates of *Cryptococcus* infection in the world

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Cryptococcus disease is a rare but serious infection resulting from inhaling a toxic fungus often found in fir trees. Approximately 250 people have been infected with the disease in British Columbia since its emergence in 1999. The disease can cause meningitis, pneumonia and in 10 per cent of cases it can lead to death.

Little is known about how the fungus leaves the [bloodstream](#) and enters the brain; however, researchers at the University of Calgary's Faculty of Medicine have made a key observation. Using a [mouse model](#), Drs. Meiqing Shi and Christopher Mody and their team noticed that a class of [therapeutic drugs](#) already approved for other medical uses could stop the fungus from crossing the brain blood barrier and therefore reduce brain infection. The finding was published this week in the May edition of the [Journal of Clinical Investigation](#).

"We would love to partner with someone and study this further," says Mody, a member of the Snyder Institute of Infection, Immunity and Inflammation and senior author on the study "While the therapy was tested in mice we do think it could ultimately transition to humans. The class of drugs we used in the study is already approved for use in humans for other conditions."

If this new treatment is approved for *Cryptococcus* infection for humans it could prevent further spread to the brain but it would not replace current therapies, which include an [aggressive treatment](#) of two-drugs taken for a period of many months.

Cryptococcus first appeared on Vancouver Island in 1999, and has spread into the B.C. lower mainland as well as down the Pacific coast into Washington and Oregon. It can take several months for respiratory symptoms to appear and fortunately not many people exposed to the fungus become ill.

"The type of *Cryptococcus* on Vancouver Island comes from warm climates such as Northern Australia and is particularly dangerous even in healthy people so it is very important to study the emergence of this infectious disease," says Paul Kubes, PhD, a co-author on this study and Director of the Snyder Institute for Infection, Immunity and Inflammation .

There are 37 different species of *Cryptococcus* and various strains have been affecting people in Africa and Australia. Vancouver Island has only recently been infected with the [fungus](#) and has one of the highest rates of [infection](#) in the world.

Provided by University of Calgary

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