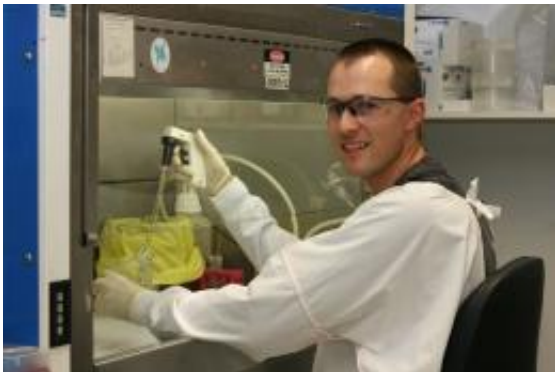


Understanding the link between HIV and dementia

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(Medical Xpress) -- HIV can hide out in the brain, protected from the immune system and antiviral drugs, Dr. Lachlan Gray and his colleagues at Monash University and the Burnet Institute have found.

Their discovery is an important step in understanding the link between [HIV infection](#) and [HIV](#) dementia, and is important for the eradication of HIV in general.

“The persistence of the virus in the [brain](#) compromises the brain’s normal function, and leads to the death of neurons and to clinical dementia,” Lachlan says.

In fact, about one in five of those infected by HIV ends up with

dementia.

“We believe our findings will aid the development of novel drugs that will prevent HIV using the brain as a sanctuary, and help to shape future eradication strategies.”

Lachlan’s work is being presented for the first time in public through Fresh Science, a communication boot camp for early career scientists held at the Melbourne Museum. He was one of 16 winners from across Australia.

Lachlan has been examining the life cycle of the virus to understand better how it survives within the brain.

“We’ve identified changes in the way the virus reproduces, which allows it to keep a low profile and persist undetected in the brain.”

At present, people living with HIV must rely on the continued use of [antiviral drugs](#) to control their infection.

“Viral persistence is a major barrier to the cure of AIDS. Modern drugs are very good at controlling the virus, but they are unable to eradicate it from ‘sanctuary’ sites like the brain,” Lachlan’s supervisor, Associate Professor Melissa Churchill says.

“Unfortunately, brain infection often leads to dementia which can be very debilitating. Somewhat more concerning, HIV is now the commonest cause of [dementia](#) in people under the age of 40, and is placing an extra burden on our mental health services.”

Lachlan’s research is part of a larger project aiming to trial new drugs that could potentially eradicate or even cure HIV.

Lachlan Gray is one of 16 early-career scientists unveiling their research to the public for the first time thanks to Fresh Science, a national program sponsored by the Australian Government.

Provided by Fresh Science

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