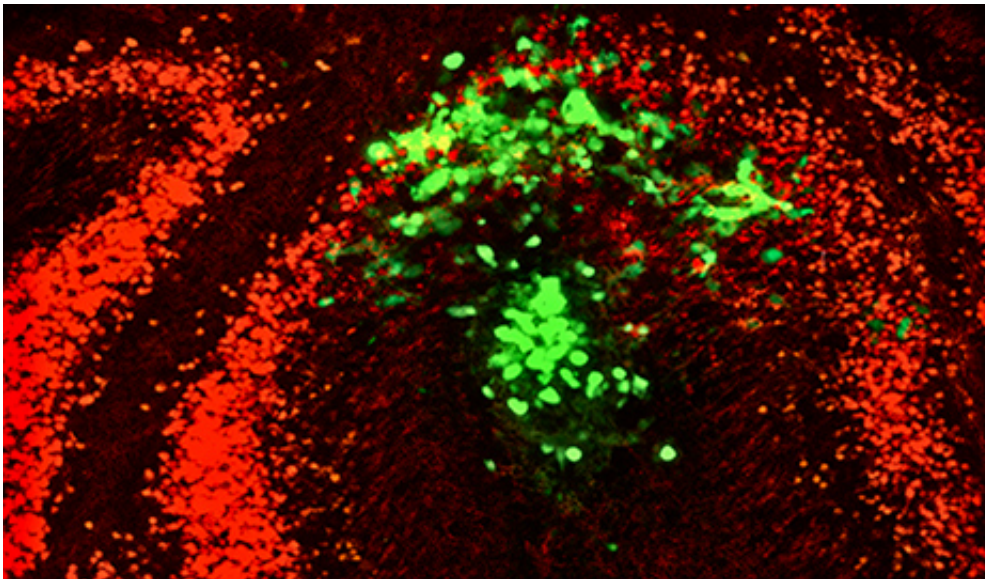


Sedative combats virus that can cause birth defects

June 20 2017, by Bill Hathaway



Cytomegalovirus entered the brain and targeted developing neurons, seen in green. Credit: Yale University

A common sedative may help combat common viral infections that can cause birth defects in developing babies, Yale researchers report June 19 in the *Journal of Neuroscience*.

The drug valnoctamide, used for decades in Europe as a mood stabilizer, prevented baby mice from developing [neurological problems](#) associated with infection with cytomegalovirus (CMV), carried by about half of adult humans.

A member of the family of Herpes viruses, CMV can remain latent for a lifetime and seldom causes adults harm unless they are immune-compromised. However, if a mother has an active infection during pregnancy, the virus can invade the developing fetus and cause a number of substantial problems, including vision and hearing loss, epilepsy, small brain size, and intellectual disability. CMV has also been linked to some cases of [autism spectrum disorders](#).

The researchers gave CMV-infected newborn mice—the developmental equivalent of a second trimester fetus in humans—injections of valnoctamide and discovered that the drug-treated mice did not develop the neurological and behavioral problems that were caused by CMV in the absence of the drug.

"The drug gets into the brain and blocks CMV and reduces many of the negative behavioral and neurological effects of the virus," said Anthony van den Pol, professor of neurosurgery at Yale and senior author of the study.

The next step on the clinical side may be testing the drug in immunocompromised adults with CMV [problems](#), where [drug](#) side effects may be less problematic than in the developing fetus, and continuing to test safety and efficacy in animals models of the early developing brain before consideration of initiating clinical trials in early human brain development, said the researchers.

Provided by Yale University

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