

Okogen, developer of pink eye treatment, raises \$10 million



Brian M. Strem, CEO of Okogen, a San Diego developer of eye drugs. (Nicholas Barrett /)



Bradley J. Fikes Contact Reporter

Encinitas-based Okogen [has raised \\$10 million](#) to test a drug originally developed for cancer to treat viral conjunctivitis, also known as pink eye.

Called OKG-0301, the drug is expected to enter a midstage or Phase 2 clinical trial before the end of this year, said Brian M. Strem, Okogen's CEO. The drug is expected to hasten recovery from the condition, allowing people to return to work or school more quickly.

The money came from Brandon Capital's Medical Research Commercialization Fund. It's a collaboration between Australian pension funds, the Australian and New Zealand governments, and research institutes.

Conjunctivitis causes itching, burning and tenderness in the eyelids and redness in the whites of the eye. Most of the 6 million cases each year in the U.S. are caused by viruses. While antibiotics treat bacterial conjunctivitis, they're useless against the viral kind.

Viral conjunctivitis usually clears up on its own in about two weeks or so. However, it's highly contagious. To prevent spreading it, people are advised to stay home until the eye is healed. The drug's antiviral activity should speed up that process, Strem said.

The drug is an eyedrop formation of ranpirnase, which has broad-spectrum antiviral activity. It will first be tested against adenovirus conjunctivitis. The most common form of viral conjunctivitis, it can result in more serious complications.

Ranpirnase was discovered in the northern leopard frog, scientifically named *Rana pipiens*. The drug was originally tested for anticancer activity by Tamir Biotechnology. It has also tested the drug to treat genital warts.

Tamir licensed the drug to Okogen for use in the eye, Strem said. Okogen saw a large need for treating viral conjunctivitis. The treatments today only alleviate symptoms.

The goal is to reduce the amount of virus present on the eye, along with reducing the amount of time that virus is detectable, Strem said. While bacteria may be normally present on the eye, viruses are not, he said.

“Even having a little bit of virus is not a good thing because it can continue to propagate incredibly rapidly and put you into full-blown viral conjunctivitis and infection,” Strem said.

Moreover, the symptoms appear to be related to the immune response to the viral infection, he said.

“So our, our working hypothesis is knocking down the amount of virus is critical and the immune response will follow suit,” Strem said.

”The really exciting part about this drug that we're developing is there's actually research showing that the drug itself can have a direct effect on reducing inflammation,” he said. “That will further help in terms of accelerating resolution of those symptoms.”