The Journal of Parasitology – Many people carry a single-celled parasite known as *Toxoplasma gondii* but never feel its effects. However, when an AIDS patient carries the parasite or a newborn is infected at birth, it can lead to devastating disease. Few drugs currently exist to treat such infections, but new research could soon change that fact.

It has been estimated that more than 15 percent of Americans ages 12 to 49 are infected with *T. gondii*. The *T. gondii* parasite frequently targets those with compromised or undeveloped immune systems. Newborns infected at birth rarely show symptoms, but toxoplasmosis can develop in later years. There are a few drugs that can treat the infection, but these often have serious side effects and researchers are exploring safer treatment options, particularly for pregnant women.

A study in the current issue of *The Journal of Parasitology* was conducted to determine whether certain compounds can fight the *T. gondii* parasite. The authors utilized a model in which toxoplasmosis existed at birth to assess the anti-*Toxoplasma* effects of two different compounds.

Using mice as subjects, the authors studied infections transmitted from mother to fetus during pregnancy. Mice were treated with either estragole or thymol, and then compared against both untreated and uninfected mice. Their study is the first report on how estragole and a particular strain of thymol behave in mice infected with *T. gondii*.

The researchers found that both compounds increased the survival rates of infected mice. It did not appear to matter whether the mice were treated by injection under the skin or orally. In most cases, the treated animals gained more weight as they developed than the untreated mice, an effect that could be significant for people when considering symptoms during

childhood.

The study also indicated that estragole and thymol can be used safely in animals. More mice with toxoplasmosis survived when treated with these compounds than mice that were not treated. More studies are needed to learn how the compounds change the way the parasite and its host interact, and to move closer to a new drug that can treat the devastating toxoplasmosis disease.

Full text of the article “Anti-*Toxoplasma* Activity of Estragole and Thymol in Murine Models of Congenital and Noncongenital Toxoplasmosis,” *The Journal of Parasitology*, Vol. 102, No. 3, 2016, is now available at http://www.journalofparasitology.org/doi/full/10.1645/15-848.

About *The Journal of Parasitology*

The Journal of Parasitology is the official journal of the American Society of Parasitologists (ASP). The journal reports on all aspects of animal and human parasites, and is widely recognized for publishing content that has a long-term impact on the field of parasitology. The journal is intended for all with interests in basic or applied aspects of general, veterinary, and medical parasitology, and epidemiology. For more information, visit http://www.journalofparasitology.org.