Ingredient In Soap Points Toward New Drugs For Infection That Affects 2 Billion

EurekAlert

The antibacterial ingredient in some soaps, toothpastes, odor-fighting socks, and even computer keyboards is pointing scientists toward a long-sought new treatment for a parasitic disease that affects almost two billion people. Their report on how triclosan became the guiding light for future development of drugs for toxoplasmosis appears in ACS' monthly *Journal of Medicinal Chemistry*.

In the study, Rima McLeod and colleagues point out that toxoplasmosis is one of the world's most common parasitic infections, affecting about one-third of the world population, including 80 percent of the population of Brazil. People can catch the infection, spread by the parasite Toxoplasma gondii (T. gondii), from contact with feces from infected cats, eating raw or undercooked meat, and in other ways. Many have no symptoms because their immune systems keep the infection under control and the parasite remains inactive. But it can cause eye damage and other problems, even becoming life threatening in individuals with immune systems weakened by certain medications and diseases like HIV infection, which allow the parasite to become active again, and in some persons without immune compromise. Most current treatments have some potentially harmful side effects and none of them attack the parasite in its inactive stage.

The scientists knew from past research that triclosan has a powerful effect in blocking the action of a key enzyme that T. gondii uses to live. Triclosan, however, cannot be used as a medication because it does not dissolve in the blood. The scientists describe using triclosan's molecular structure as the model for developing other potential medications, including some that show promise as more effective treatments for the disease.

SOURCE [1]

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