

Shocker: `Villain' Nicotine Slays Tb

A Ucf Researcher Said That Less Nicotine Than Is In A Single Cigarette Works.

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Nicotine might be a surprising alternative someday for treating stubborn forms of tuberculosis, a University of Central Florida researcher said Monday.

The compound stopped the growth of tuberculosis in laboratory tests, even when used in small quantities, said Saleh Naser, an associate professor of microbiology and molecular biology at UCF.

Naser said nicotine worked better than about 10 other substances also tested. If it proves itself in further study, people might swallow capsules of nicotine or get intravenous doses to stave off their TB in the future.

It could be a potentially white-hat role for one of medicine's great villains. Most scientists agree that nicotine is the substance that causes people to become addicted to cigarettes and other tobacco products.

"Can you imagine if we can get something useful out of it?" said Naser, who presented his study to members of the American Society for Microbiology, which is meeting this week at the Orange County Convention Center in Orlando. "It's the best thing I've seen to date. It shows there is some hope that this substance we've hated for so long might be formulated in one way or another to fight infectious diseases."

Naser's research team uses naturally occurring substances taken from the jungles of Vietnam to the swamps of Florida in search of ones that might fight disease. He was working with tobacco plants when Naser noticed they were showing some effectiveness in quashing TB.

Unsure what specific component was at work, he decided to test nicotine because it is the most-studied compound in the tobacco plant. He got lucky. First nicotine killed regular tuberculosis, and then harder, drug-resistant strains that will not succumb to the usual medicines.

It worked even when used in doses smaller than what's found in a single cigarette. Naser said such small quantities are not likely to cause addiction. But no one is suggesting that people with TB take up the potentially deadly habit of smoking.

Tuberculosis is highly treatable in most cases but still requires at least six months of antibiotics. When people fail to finish their medications, they can develop dangerous forms of the disease that no longer respond to the standard drugs.

There were no cases of drug-resistant TB in Orange County last year, but statewide, the troublesome forms amount to about 1 percent of all cases, said Graydon Sheperd, chief of the bureau of TB and refugee health at the Florida Department of Health in Tallahassee.

The contagious disease is caused by a bacteria that is spread through the air when an infected person coughs. There were 1,281 cases of newly diagnosed TB in the state in 1999. Doctors say they welcome the search for more tools to treat the ailment.

"The biggest problem we have with TB is compliance. People don't want to take their medications, and we can end up with something that takes even longer to treat," said Dr. Boubker Naouri, TB program manager for the Orange County Health Department. "If we can have better drugs that work faster, it would be a big help."

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