

Boston Children's Hospital receives grant to study TB/HIV co-infection

Aug 28, 2014, 1:33pm EDT



[Jessica Bartlett](#)

Reporter- *Boston Business Journal*

The Campbell Foundation in Florida is helping progress research into treatment for patients co-infected with tuberculosis and HIV, granting \$85,000 to researchers at Boston Children's Hospital.

Funding will contribute to ongoing work at the Program in Cellular and Molecular Medicine and the Immune Disease Institute at Children's, where researchers have been studying how human proteins and other host factors contribute to both diseases.

According to a release, the grant will be used to investigate how tuberculosis manipulates HIV replication and disease progression.

"Co-infection of HIV by TB is particularly problematic because TB causes increased levels of HIV in the blood, while HIV causes the depletion of T cells that keep TB latent in healthy people," said Dr. Shahin Ranjbar at Children's. "So, as HIV disease progresses and patients develop AIDS, they become more susceptible to reactivation of TB that is already in their bodies and to new infection by TB, which in turn, damages their immune systems further."

To prevent the one-two punch of both diseases, Ranjbar and colleagues are trying to identify things that inhibit both infections as a way to develop new therapeutics.

Scientists said the goal is to have therapeutic targets for drugs in the next five to seven years, using RNAi technology, which is used to regulate gene activity, to manipulate factors that determine HIV latency and can contribute to an HIV/AIDS cure.

"If successful, this team may find novel treatments aimed at improving current TB/HIV treatment regimens with the ultimate goal of eradicating the HIV reservoirs," said The Campbell Foundation's Program Officer Ken Rapkin, in a release.

According to the World Health Organization, there are estimated to be more than 1 million people worldwide living with both tuberculosis and HIV. Of the 22 million AIDS deaths that have occurred so far, one-third to one-half of them can be directly attributed to TB.