Tulane researchers awarded new grant to continue progress on TB vaccine

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Carolyn Scofield c scofield@tulane.edu

Deepak Kaushal, director of the Tulane Center for Tuberculosis Research, led the team that won a $4 million grant. (Photo by Paula Burch-Celentano)

Researchers at Tulane National Primate Research Center received a new grant totaling more than $4 million over the next five years to continue their work on a vaccine against tuberculosis. The grant from the National Institute of Allergy and Infectious Diseases will fund research led by Deepak Kaushal, director of the Tulane Center for Tuberculosis Research.

Kaushal’s team previously used a modified strain of TB to show that monkeys could generate better protective immunity than when vaccinated with BCG, a common TB vaccine. The Tulane researchers used Mycobacterium tuberculosis (Mtb) — a strain modified to lose a stress response gene called SigmaH. Monkeys that received aerosols of the modified strain resisted infection with Mtb better than the similarly delivered BCG and showed glimpses of protective immune response in their lungs.

The Geneva Consensus for the development of TB vaccines states that any live TB based vaccine must have at least two independent mutations for safety reasons, because dependent or related mutations can more easily revert back to the original virus.

Tulane University | New Orleans | 504-865-5210 | pr@tulane.edu
Deepak Kaushal, director of the Tulane Center for Tuberculosis Research.