Specific Delivery of Rifampin to Sites of Tuberculosis Infection

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BACKGROUND

Treatment for tuberculosis infection involves multiple drug therapy using combinations of rifampin, isoniazid, pyrazinamide, and ethambutol. However, rifampin is a highly toxic antibiotic that induces hepatitis, thrombocytopenia, bullous skin rashes and other injury. Drug toxicity is caused by free rifampin in the blood stream that failed to bind human serum albumin (HSA) to which it binds non-specifically .

INNOVATION

Researchers at UCLA have engineered proteins those bind rifampin specifically and dissociate from the drug when arriving at the site of tuberculosis infection. The present invention therefore ensures targeted delivery while reducing drug toxicity, achieving a higher therapeutic profile with respect to existing rifampin therapy.

RELATED MATERIALS

- Tear lipocalin: potential for selective delivery of rifampin. *Biochim Biophys Acta.* (2004)

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OTHER INFORMATION

KEYWORDS

therapeutics, drug delivery, rifampin, tuberculosis, TB

CATEGORIZED AS

- **Medical**
  - Delivery Systems
  - Disease: Respiratory and Pulmonary System

RELATED CASES

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