

Synthetic protein halts bacterial infection

Between vaccine refusal, drug resistant strains of bacteria, and the growing ranks of the immuno-compromised, it sometimes seems that we humans are losing our brief moment of superiority in the unending arms race against pathogens. But a new technique has shown remarkable promise in mice infected with deadly forms of meningitis and pneumonia, and may point the way to regaining the upper hand against a wide range of infections.

A genetically reengineered version of an immune system protein called properdin appears to activate a robust immune response against invading pathogens, according to a study published Monday in the journal PNAS. The researchers were led by immunologists at the University of Leicester, England, but hailed from universities in Egypt, Pakistan, Saudi Arabia and Toledo, Ohio.

The recombinant properdin appears to act on a little-understood component of the immune system called the complement system, in which blood-borne proteins such as properdin respond to the presence of pathogens by dispatching phagocytes to neutralize the microbes. The genetically engineered version of the protein used in these experiments enhanced the activity of the phagocytes, resulting in what appeared to be a turbocharged immune response to the bacteria that cause meningitis and pneumonia.

Read the full, original article: [Can an artificial protein defeat infection by supercharging immunity?](#)