

No hiding place for infecting bacteria

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Scientists in Colorado have discovered a new approach to prevent bacterial infections from taking hold. Writing in the *Journal of Medical Microbiology*, Dr Quinn Parks and colleagues describe how they used enzymes against products of the body's own defence cells to prevent *Pseudomonas aeruginosa* bacteria from building a protective biofilm which enables them to avoid both the body's immune mechanisms and antibiotics.

When the body's defence [cells](#), called neutrophils, attack *P. aeruginosa*, the cell contents - including a protein called F-actin and the cell's DNA - are released. *P. aeruginosa* uses these cell proteins as a scaffold to build a protective biofilm making these infections very difficult to treat. *P. aeruginosa* biofilms cause disease in burns, wounds, contact lens infections and are particularly prevalent in the lungs of [cystic fibrosis](#) patients.

"We specifically targeted the F-actin protein with a negatively charged peptide, and the DNA with the enzyme DNase, which both prevented and disrupted the formation of *P. aeruginosa* biofilms in the presence of human neutrophils." said Dr Parks. "These results suggest a new combined therapeutic strategy for the treatment of *P. aeruginosa* infections.

Source: Society for General Microbiology

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