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Anglo Saxon remedy kills hospital superbug MRSA

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Take cropleek and garlic, of both equal quantities, pound them well together... take wine and bullocks gall, mix with the leek... let it stand nine days in the brass vessel...

So goes a thousand-year-old Anglo Saxon recipe to vanquish a stye, an infected eyelash follicle.

The medieval medics might have been on to something. A modern-day recreation of this remedy seems to alleviate infections caused by the bacteria that are usually responsible for styes. The work might ultimately help create drugs for hard-to-treat skin infections.



The thousand-year-old Anglo Saxon recipe that kills MRSA (Image: [The British Library Board \(Royal 12 D xvii\)](#))

The project was born when a microbiologist at the University of Nottingham, UK, got talking to an Anglo Saxon scholar. They decided to test a recipe from an Old English medical compendium called *Bald's Leechbook*, housed in the British Library.

Some of the ingredients, such as copper from the brass vessel, kill bacteria grown in a dish – but it was unknown if they would work on a real infection or how they would combine.

Careful collection

Sourcing authentic ingredients was a major challenge, says Freya Harrison, the microbiologist. They had to hope for the best with the leeks and garlic because modern crop varieties are likely to be quite different to ancient ones – even those branded as heritage. For the wine they used an organic vintage from a historic English vineyard.

As "brass vessels" would be hard to sterilise – and expensive – they used glass bottles with squares of brass sheet immersed in the mixture. Bullocks gall was easy, though, as cow's bile salts are sold as a supplement for people who have had their gall bladders removed.

After nine days of stewing, the potion had killed all the soil bacteria introduced by the leek and garlic. "It was self-sterilising," says Harrison. "That was the first inkling that this crazy idea just might have some use."

A side effect was that it made the lab smell of garlic. "It was not unpleasant," says Harrison. "It's all edible stuff. Everyone thought we were making lunch."

The potion was tested on scraps of skin taken from mice infected with methicillin-resistant *Staphylococcus aureus*. This is an antibiotic-resistant version of the bacteria that causes styes, more commonly known as the hospital superbug MRSA. The potion killed 90 per cent of the bacteria. Vancomycin, the antibiotic generally used for MRSA, killed about the same proportion when it was added to the skin scraps.

A loathsome slime

Unexpectedly, the ingredients had little effect unless they were all brought together. "The big challenge is trying to find out why that combination works," says [Steve Diggle](#), another of the researchers. Do the components work in synergy or do they trigger the formation of new potent compounds?

Using exactly the right method also seems to be crucial, says Harrison, as another group tried to recreate the remedy in 2005 and found that their potion failed to kill bacteria grown in a dish. "With the nine-day waiting period, the preparation turned into a kind of loathsome, odorous slime," says [Michael Drouot](#) of Wheaton College in Norton, Massachusetts.

If the 9th Century recipe does lead to new drugs, they might be useful against MRSA skin infections such as those that cause [foot ulcers in people with diabetes](#). "These are usually antibiotic-resistant," says Diggle. However, he doesn't recommend people try this at home.

It wouldn't be the first modern drug to be derived from ancient manuscripts – the widely used antimalarial drug artemisinin was discovered [by scouring historical Chinese medical texts](#).

Harrison is due to present the research at the [Society for General Microbiology conference](#) in Birmingham, UK, this week.