Second US patient identified with super-resistant bacteria

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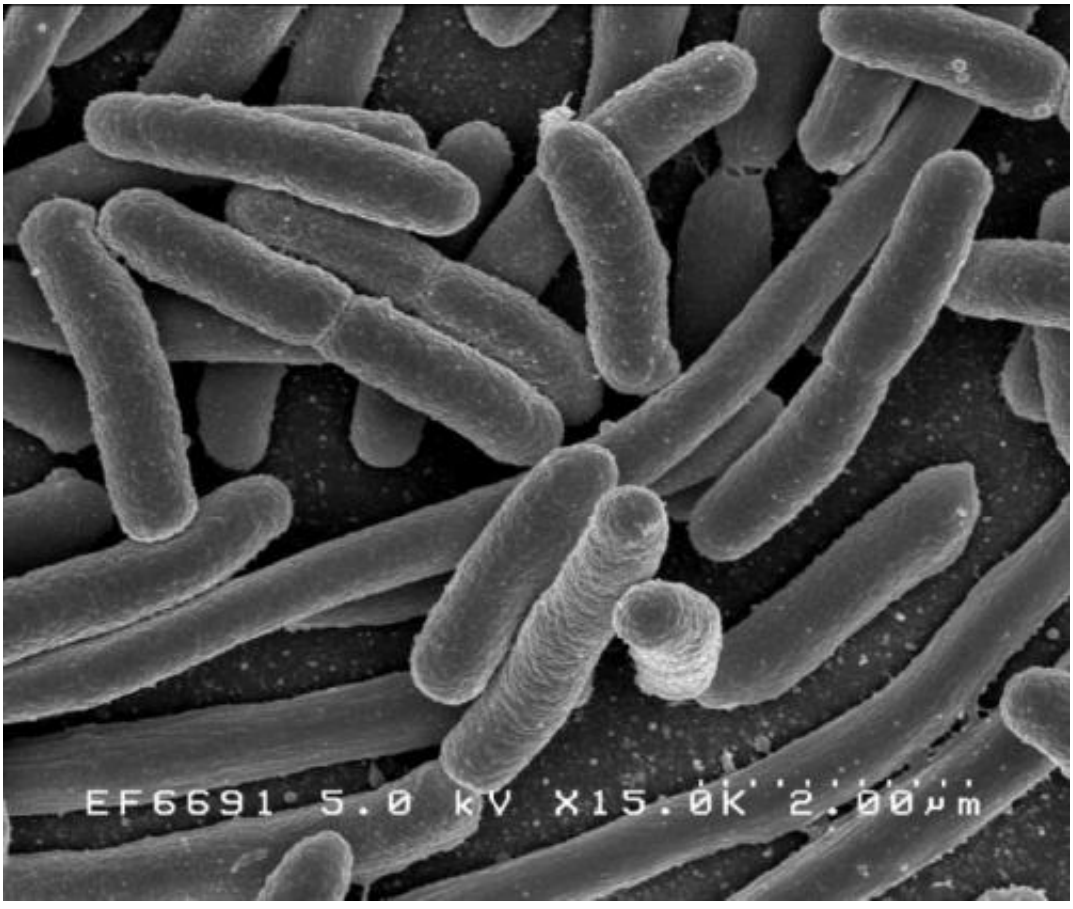

Escherichia coli. Credit: Rocky Mountain Laboratories, NIAID, NIH

A second US patient has been infected with a superbug that is highly resistant to last-resort antibiotics, scientists said Monday.

Virologists found the rare mrc-1 gene, which causes the resistance, in a

strain of E. coli from a patient in New York, according to findings published in the journal *Antimicrobial Agents and Chemotherapy*.

"We are very close to seeing the emergence of enterobacteria that will be impossible to treat with antibiotics," said Lance Price of George Washington University.

The first US case of human infection with the gene-carrying E. coli bacteria occurred in May, in a 49-year-old patient hospitalized in Pennsylvania with a urinary tract infection. She has since recovered.

The mrc-1 gene is especially dreaded because it makes bacteria resistant to colistin, the antibiotic of last resort for such infections.

The gene, located on a small fragment of microbial DNA, can move from one bacteria to another across several species, potentially spreading resistance to all antibiotics, which authorities see as a catastrophe scenario.

Scientists have been tracking the gene's movements around the globe since its discovery in humans, poultry and pigs in China in 2015.

Last month, the Centers for Disease Control and Prevention (CDC) announced the establishment of a network of labs that would respond quickly to antibiotic-resistant superbugs in the United States.

It is set to launch work in the fall.

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