

Researchers discover novel colistin resistance gene *mcr-3* in *Escherichia coli*

June 27 2017



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

Researchers have now discovered a new mobile colistin resistance gene, *mcr-3*, in *E. coli* of pig origin. The novel *mcr-3* gene was discovered when a colistin-resistant *Escherichia coli* isolate tested negative for both

mcr-1 and mcr-2. This novel mobile colistin resistance gene may already be widely disseminated. Screening for the mcr-3 gene should be urgently included in the surveillance of colistin-resistant Gram-negative pathogens from animals, humans, and the environment.

The *E. coli* mcr-3 sequence is similar to sequences found in Enterobacteriaceae and Aeromonas, which are commonly found in the environment. Due to the potential transfer of mcr-3 between these [bacterial species](#), the prevalence of mcr-3 may be largely underestimated.

Because colistin is widely used in veterinary medicine, and is being used with increasing frequency in human medicine, it is essential to continually monitor the mobile colistin resistance determinants in order to tackle the dissemination of mcr [genes](#) in the agricultural and healthcare sectors. The study is published in *mBio*, an open access journal of the American Society for Microbiology on June 27, 2017.

Provided by American Society for Microbiology

Citation: Researchers discover novel colistin resistance gene mcr-3 in Escherichia coli (2017, June 27) retrieved 5 May 2024 from

<https://medicalxpress.com/news/2017-06-colistin-resistance-gene-mcr-escherichia.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--