

# COLISTIN-RESISTANT “SUPERBUGS” IN U.S.

## A Summary

When common infections become untreatable with antibiotics, prevention of transmission will be of utmost importance. Microchem remains committed to speeding the development of technologies used to disinfect environmental surfaces and medical devices in order to break the chain of infection. It is more important now than ever.

So-called “superbugs,” bacteria that are resistant to multiple antibiotics, are a serious and growing problem in healthcare. Several years ago, a class of problematic bacteria referred to as ESBLs emerged as a source of infections in the United States. ESBL stands for Extended-Spectrum Beta-Lactamase, referring to an enzyme that confers resistance to third-generation cephalosporins and monobactams, but does not affect carbapenems. ESBL enzymes are most often seen in Enterobacteriaceae, a family that includes E. coli and Klebsiella.

An especially problematic subgroup of ESBLs is Carbapenem-Resistant Enterobacteriaceae (CRE), which is resistant to all antibiotics except the last-resort antibiotic colistin. Colistin resistance was first seen in China in 2015. In May 2016, Walter Reed Medical Center detected a colistin-resistant strain of ESBL E. coli from a urinary tract infection. On May 23, 2016 microbiologists confirmed that the colistin-resistance gene was present on a plasmid, which dramatically increases the odds of transmission to other ESBLs in the future. When that happens, it will herald an era of infections caused by Enterobacteriaceae that are truly untreatable.

“Bold leaders willing to choose innovation over the status quo are going to be the ones who prevent the consequences of deadly superbugs.”

**Rayne Guest**

*Health and Safety Specialist*

## DID YOU KNOW?

The CDC recommends: ‘Ideally, product users should consider and **use products that have a shortened contact time.**’

Regarding **products with a 10 minute contact time**, the CDC states: ‘**Such a long contact time is not practical for disinfection of environmental surfaces in a health-care setting** because most health-care facilities apply a disinfectant and allow it to dry (~1 minute).’

