

Golden age of antibiotics comes to an end

By Melissa Healy, Los Angeles Times

On May 18, a team working at the Walter Reed Army Institute of Research here had its first look at a sample of the bacterium *Escherichia coli*, taken from a 49-year-old woman in Pennsylvania. She had a urinary tract infection with a disconcerting knack for surviving the assaults of antibiotic medications. Her sample was one of six from across the country delivered to the lab of microbiologist Patrick McGann.

Within hours, a preliminary analysis deepened concern at the lab. Over the next several days, more sophisticated genetic sleuthing confirmed McGann's worst fears.

More ominously, the gene's presence on a plasmid – a tiny mobile loop of DNA that can be readily snapped off and attached to other bacteria – suggested that it could readily jump to other *E. coli* bacteria, or to entirely different forms of disease-causing organisms. That would make them impervious to colistin as well.

It was a milestone public health officials have been anticipating for years. In a steady march, disease-causing microbes have evolved ways to evade the bulwark of medications used to treat bacterial infections. For a variety of those illnesses, only colistin continued to work every time. Now this last line of defense had been breached as well.

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