Genomic analysis of E coli shows multiple steps to evolve new trait

Several years ago researchers at Michigan State University (MSU) reported discovering a novel, evolutionary trait in a long-studied population of Escherichia coli, a rod-shaped bacterium commonly found in the lower intestine of mammals. The E. coli added a helping of citrate to its traditional diet of glucose, even though other E. coli can’t consume citrate in the presence of oxygen.

These same biologists have now analyzed this new trait’s genetic origins and found that in multiple cases, the evolving E. coli population needed more than one mutational step before the key innovation took hold. Complex traits, like using a new food source, are thought to be difficult and arise rarely, making the research of broad interest to both evolutionary biologists and public health scientists.

View the original article here: Genomic Analysis of E coli Shows Multiple Steps to Evolve New Trait