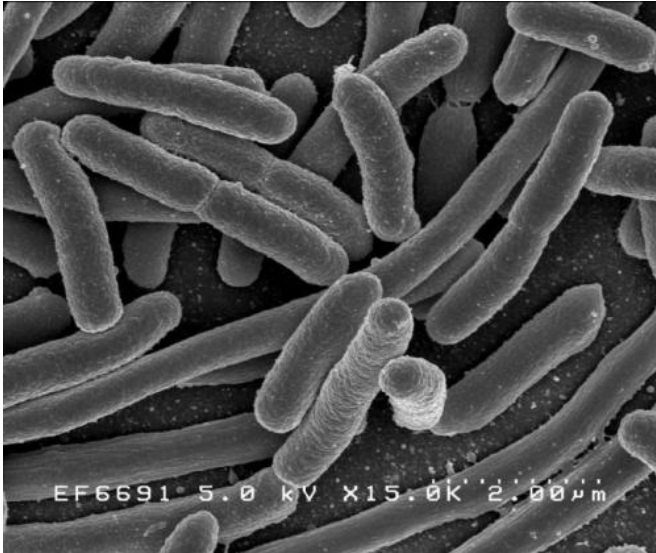


# Recurrent UTIs linked to hidden reservoir

10 July 2020, by Sarah Glass



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

bacteria and a reservoir for reestablishing infection. The vaginal niche constitutes a potential new avenue exploited by *E. coli* to cause recurrent urinary tract infection.

**More information:** John R. Brannon et al. Invasion of vaginal epithelial cells by uropathogenic *Escherichia coli*, *Nature Communications* (2020). DOI: [10.1038/s41467-020-16627-5](https://doi.org/10.1038/s41467-020-16627-5)

Provided by Vanderbilt University

Urinary tract infections (UTIs) frequently recur due to bacteria constructing safe havens within the host. While infection is frequently caused by uropathogenic *Escherichia coli* that originates in the gut, little is known regarding vaginal colonization leading to recurrent UTIs.

John Brannon, Ph.D., Maria Hadjifrangiskou, Ph.D., and colleagues demonstrated that UTI-causing bacteria not only invaded vaginal cells to create a reservoir and escape antibiotic assault, but also traversed from the reproductive tract to the urinary system.

The team also found that vaginal cell invasion occurs by a separate mechanism than bladder infection, requiring a different signaling pathway to remodel the [host cell](#) for bacterial uptake.

These findings, reported in *Nature Communications*, elucidate a new stage in UTI progression with a unique mode of vaginal cell invasion to create a protective niche for the

APA citation: Recurrent UTIs linked to hidden reservoir (2020, July 10) retrieved 28 September 2022 from <https://medicalxpress.com/news/2020-07-recurrent-utis-linked-hidden-reservoir.html>

*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.*