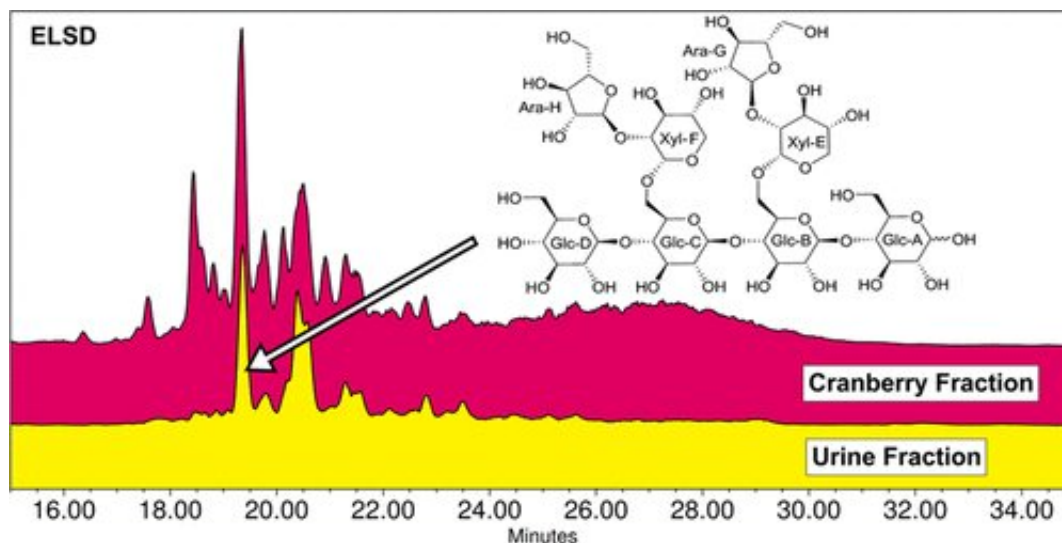


Cranberry oligosaccharides might help prevent UTIs

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Credit: American Chemical Society

Many people have heard that drinking cranberry juice can help prevent urinary tract infections (UTIs). Although clinical trials of this popular folk remedy have produced mixed results, some studies have shown that drinking cranberry juice can keep bacteria that cause UTIs from sticking to cells lining the urinary tract. Now, researchers reporting in ACS' *Journal of Natural Products* have identified cranberry oligosaccharides in the urine of cranberry-fed pigs that could be responsible for this activity.

According to the U.S. Department of Health and Human Services, about

half of all U.S. women will have a UTI sometime during their lives. Doctors usually prescribe antibiotics to treat the painful condition, but this could contribute to the rise of antibiotic-resistant bacteria. To enable better UTI prevention strategies, Christina Coleman, Daneel Ferreira and colleagues from several institutions wanted to identify active compounds from cranberries that end up in urine and potentially keep bacteria from adhering to [human cells](#).

The researchers fed female pigs dried cranberry powder, collected their urine and used chromatography to separate it into fractions of differently sized molecules. Then, they screened the samples for anti-adhesion activity against the E. coli bacteria that cause UTIs. To the researchers' surprise, proanthocyanidins, the compounds previously proposed to be responsible for cranberry's apparent UTI prevention properties, were absent from the active urine fractions. Instead, the researchers detected oligosaccharides called arabinoxyloglucans in those samples. These [complex carbohydrates](#), related to cellulose, are difficult to detect and isolate, which could explain why they hadn't previously been identified as anti-adhesive components of cranberry, the researchers say.

More information: Christina M. Coleman et al. Arabinoxyloglucan Oligosaccharides May Contribute to the Antiadhesive Properties of Porcine Urine after Cranberry Consumption, *Journal of Natural Products* (2019). [DOI: 10.1021/acs.jnatprod.8b01043](https://doi.org/10.1021/acs.jnatprod.8b01043)

Provided by American Chemical Society

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