



Connecting you to content on EBSCOhost^{COVENANT UNIVERSITY}

No exact match - try 'Search EBSCOhost'

We were not able to find an exact match to this item available through your institution using the information provided. Click 'Search EBSCOhost' and we will try to find it by title; alternatively, you can sign in under another institution.

Title

Antibacterial Activity of Cell-Free Supernatants of Probiotic *Lactobacillus* against Bacterial Pathogens Associated with Vaginal Infections.

Authors

[Elughi, Gift Nzubechi](#); [Oniha, Margaret Ikiwili](#); [Obafemi, Yemisi Dorcas](#); [Akinyosoye, Abimbola David](#); [Ahuekwe, Eze Frank](#); [Akinduti, Paul Akinniyi](#)

Abstract

Vaginal infections are common female disease conditions that account for the prevalence of gynecological disorders which facilitate the increasing antimicrobial resistance and failure of prevalent treatment choices. In this study, the antibacterial activity of cell free supernatants (CFS) of probiotic *Lactobacillus* obtained from ogi (fermented maize) was evaluated against bacterial pathogens associated with vaginal infections. Bacterial pathogens isolated from high vaginal (n=22) and endocervical swabs (n=18) were bio-typed and assayed for hemolytic activity, biofilm production, antibacterial susceptibility pattern, and the CFS antagonistic activity. The occurrence of the vaginal bacterial pathogens was 33.0% for *Streptococcus* spp. and 31.0% for *Staphylococcus aureus*, with more than 70% resistance rates to amoxicillin, cefotaxime, imipenem/cilastatin, nalidixic acid, nitrofurantoin, cefuroxime, ceftriaxone sulbactam, ampiclox, cefixime and levofloxacin. More than 30% of the isolates produced biofilms. Of the four identified probiotic strains, only CFS from *L. plantarum* and *L. acidophilus* exhibited observable antagonistic reaction, with *L. plantarum* showing higher antibacterial activity against *Staphylococcus condimentii*, and *L. acidophilus* against *Klebsiella pneumoniae*. With the results of this study revealing the antibacterial activity of probiotic *Lactobacillus* CFS against vaginal bacterial pathogens, probiotic *Lactobacillus* can be suggested for use as prophylactic and bioprotective agents in the therapeutic management of vaginal bacterial infections and preservation of the vaginal microbiota.

Publication

[Journal of Pure & Applied Microbiology, 2024, Vol 18, Issue 1, p451](#)

ISSN

0973-7510

Publication type

Academic Journal

DOI

10.22207/JPAM.18.1.28



Ways to locate this item

See if EBSCO has this or similar items to continue your research.

[Search EBSCOhost](#)

Another library may have access to this item. Sign in to find out!

Find your institution

Not finding what you're looking for?

[Explore EBSCO Open Research](#)

Your source for trusted research content

[EBSCO Connect](#) | [Privacy policy](#) | [Terms of use](#) | [Copyright](#) | [Manage my cookies](#)

[Journals](#) | [Subjects](#) | [Sitemap](#)

© 2024 EBSCO Industries, Inc. All rights reserved

Antibacterial Activity of Cell-Free Supernatants of Probiotic Lactobacillus against Bacterial Pathogens Associated with Vaginal Infections.