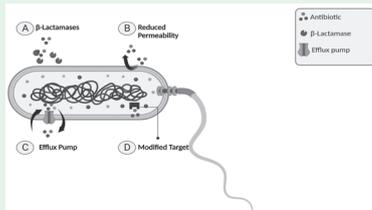


## REVIEW ARTICLE

### Bacteriophage treatment as an alternative therapy for multidrug-resistant bacteria



Mechanisms of antibiotic resistance in *Acinetobacter*.

Alqahtani discusses the most critical multidrug-resistant (MDR) organisms, including *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and methicillin-resistant *Staphylococcus aureus*. The efficacy of phage therapy against MDR bacteria is also discussed. The existing knowledge indicates that phage therapy is a potential therapeutic strategy against MDR bacteria. However, the adverse effects of phage therapy, such as toxicity, and the emergence of phage resistance have not yet been resolved.

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## ORIGINAL ARTICLES

### Single nucleotide polymorphisms in cytokine genes and their association with primary Sjögren's syndrome in Saudi patients. A cross-sectional study

Alqahtani et al determine the allelic frequencies and effects of genotypic variations in cytokine gene polymorphisms in a Saudi Arabian population. Methods: This cross-sectional study involved 41 patients with primary Sjögren's syndrome (pSS) and 71 healthy controls between October 2018 and May 2019. The C allele in rs10488631 in the interferon regulatory factor 5 (IRF5) gene and the A allele in rs12583006 in the B-cell activating factor (BAFF) gene were associated with an increased risk of pSS development in the patient group. The CT genotype at -31 (rs1143627) in the IL-1 $\beta$  gene was not associated with a high risk of pSS development in the Saudi population, in contrast to what has been verified in other ethnicities.

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### Causes of sleep disturbance in human immunodeficiency virus-infected individuals. Is it depression or obstructive sleep apnea?

Mete et al examine 117 male and female Saudi volunteers aged 18–77 years between October 2018 and May 2019 with possible association of obstructive sleep apnea (OSA) and depression on sleep quality in people living with human immunodeficiency virus (PWLHIV). Demographic data, including patient age, gender, occupation, and past and current comorbidities of the patients, were collected from participants' personal records and hospital records were reviewed. More participants in the patient group had poor sleep quality (57% versus [vs.] 47.5%). The sleep quality score was significantly higher in the patient group (6.32 vs 5.23;  $p=0.032$ ). Daytime dysfunction was significantly higher in the patient group ( $p=0.004$ ). The results suggest that depression may be the most likely cause of sleep disorders in PWLHIV, regardless of OSA.

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### Developing and evaluating the usability of a web-based Diabetic Retinopathy Health Education Program for patients with type 2 diabetes mellitus

Maya Isa et describe the development of a webpage based on the Intervention Mapping (IM) protocol and usability testing of the Diabetic Retinopathy Health Education Programme (DRHEP) of 16 patients carried out between April and September 2021. The average SUS score by the experts was 88. The patients gave a higher score of 85 for SUS, with 58 as the lowest. The average SUS score was 72. The findings indicate that the webpage is acceptable, good, and highly usable for users. The information on the DRHEP webpage is valuable to the end-users, such as patients with T2DM. The results of this study highlight the association between effective health application and how their design might hamper their effectiveness in changing patients' behavior.

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