

A new strategy for developing meningitis vaccines

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Bacterial meningitis is an infection of the meninges, the protective membrane that covers the spinal cord and brain. Children, elderly patients and immunocompromised patients are at a higher risk for the development of severe bacterial meningitis.

Recently, researchers at the University of Adelaide in Australia sought to identify new vaccine targets in [Streptococcus pneumoniae](#), which is the most common cause of [bacterial meningitis](#) in the world. Led by Dr. Abiodun Ogunniyi, the research team developed a new method of screening for bacterial genes that are expressed during meningitis in brain tissue.

Using a mouse model system, the researchers examined mice infected with two different strains of *S. pneumoniae*. They identified a protein known as glycerophosphate oxidase, and showed that this protein was critical for the progression of bacteria from blood to brain in mice. They went on to show that a vaccine against glycerophosphate oxidase protected mice from [invasive pneumococcal disease](#). Their results not only suggest a new strategy for immunizing against *Streptococcus pneumoniae*, but also provide a blueprint for discovering additional genes from other pathogens contribute to meningitis.

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