# Article information:

Crystal structure of a Staphylococcus aureus protein A domain complexed with the Fab fragment of a human IgM antibody: Structural basis for recognition of B-cell receptors and superantigen activity | PNAS
<https://www.pnas.org/doi/10.1073/pnas.97.10.5399>

# Article summary:

1. Staphylococcus aureus produces a virulence factor, protein A (SpA), which contains five homologous Ig-binding domains.

2. The interactions of SpA with the Fab region of membrane-anchored Ig can stimulate a large fraction of B cells, contributing to lymphocyte clonal selection.

3. The crystal structure of the complex between domain D of SpA and the Fab fragment of a human IgM antibody was solved to 2.7-Å resolution, providing insight into the molecular basis for recognition of B-cell receptors and superantigen activity.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article provides an in-depth analysis of the crystal structure of a Staphylococcus aureus protein A domain complexed with the Fab fragment of a human IgM antibody, and its implications for recognition of B-cell receptors and superantigen activity. The authors provide detailed information on their methods and results, as well as comparisons to other studies on similar topics. The article is well written and easy to understand, making it accessible to readers from various backgrounds.

The article appears to be unbiased in its reporting, presenting both sides equally without any promotional content or partiality towards one side or another. All claims are supported by evidence from experiments conducted by the authors or referenced from other studies, making them reliable and trustworthy. Furthermore, all potential risks associated with this research are noted in the article, ensuring that readers are aware of any potential dangers associated with this work.

The only potential issue with this article is that some counterarguments may have been unexplored or not presented equally alongside other arguments made in the paper. However, overall this does not detract from the quality or reliability of the article itself.

# Topics for further research:

* Staphylococcus aureus protein A domain
* B-cell receptor recognition
* Superantigen activity
* Human IgM antibody
* Fab fragment structure
* Antibody-antigen interactions

# Report location:

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