

Abigail A. Salyers



Antimicrobial Resistance Steward...

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Abigail A. Salyers was an American microbiologist who dedicated her career to advancing scientific understanding of antibiotic resistance mechanisms within bacteria.

After receiving her undergraduate degree in Mathematics in 1963 and a Ph.D. in Nuclear Physics in 1969, Salyers went on to refocus her research on the field of microbiology during her post-doctoral work at Virginia Polytech Institute.(1)



Figure 1:Abigail A. Salyers in lab.

As a professor at the University of Illinois at Urbana-Champaign, Salyers conducted groundbreaking research that illuminated the complex dynamics of antibiotic resistance. Her teaching emphasized the importance of microbiology to her medical students, their future patients, and the world, for decades to come.

Salyers' microbiome research model depended primarily upon the anaerobic bacterium *Bacteroides*, its carbohydrate metabolism, and its ability to harbor mobile antibiotic resistance genes. Her lab discovered conjugative transposons, which allow for the transfer of antibiotic resistance genes between different microbial populations in the human gut.

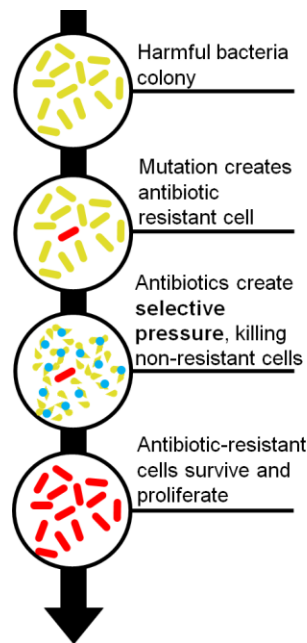


Figure 2: Antimicrobial resistance poses a major threat to global human health. Salyer's work was instrumental in drawing attention to the issue.

Salyers' work extended beyond the laboratory; she was a vocal advocate for responsible antibiotic use. Her research highlighted the urgency of addressing antibiotic resistance as a pressing global health concern. By emphasizing the intricate relationship between antibiotic exposure, bacterial communities,

and the emergence of resistance, Salyers underscored the importance of implementing judicious antibiotic stewardship practices to mitigate the proliferation of resistant strains.



Figure 3: Salyers' speaking at a forum about the relationship between humans and microbes in 2006.

Her legacy persists through her numerous scholarly contributions, over 220 publications, and numerous mentorships, inspiring future generations of scientists to combat antibiotic resistance.(1) Abigail Salyers' research continues to guide efforts aimed at understanding and addressing the escalating threat posed by antibiotic-resistant infections to this day.

In 2014 after her death, the Salyers Symposium was held at the University of Illinois at Urbana-Champaign to commemorate her life and work. She was cited as the inspiration for the ASM book [*Women in Microbiology*](#).

References:

1. https://en.wikipedia.org/wiki/Abigail_A._Salyers