

# CRISPR IMMUNITY IN PYROCOCOCCUS FURIOSUS



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## ABSTRACT:

CRISPR-Cas systems are small RNA-based immune systems that control invasions of viruses and other mobile genetic elements in archaea and bacteria. To achieve adaptive and heritable immunity, CRISPR-Cas systems must capture and store short DNA fragments (spacers) from these foreign elements into host genomic CRISPR arrays. I will describe recent work aimed at understanding the mechanisms by which the hyperthermophilic archaeon, *Pyrococcus furiosus*, selects and integrates new spacers into CRISPR arrays.

## RESEARCH AREAS:

MOLECULAR GENETICS  
BIOTECHNOLOGY

## RESEARCH INTERESTS:

Non-coding RNA function, cancer, and genome defense: biogenesis, trafficking, and function of non-coding RNA-protein complexes; goal to improve understanding and treatment of human disease



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