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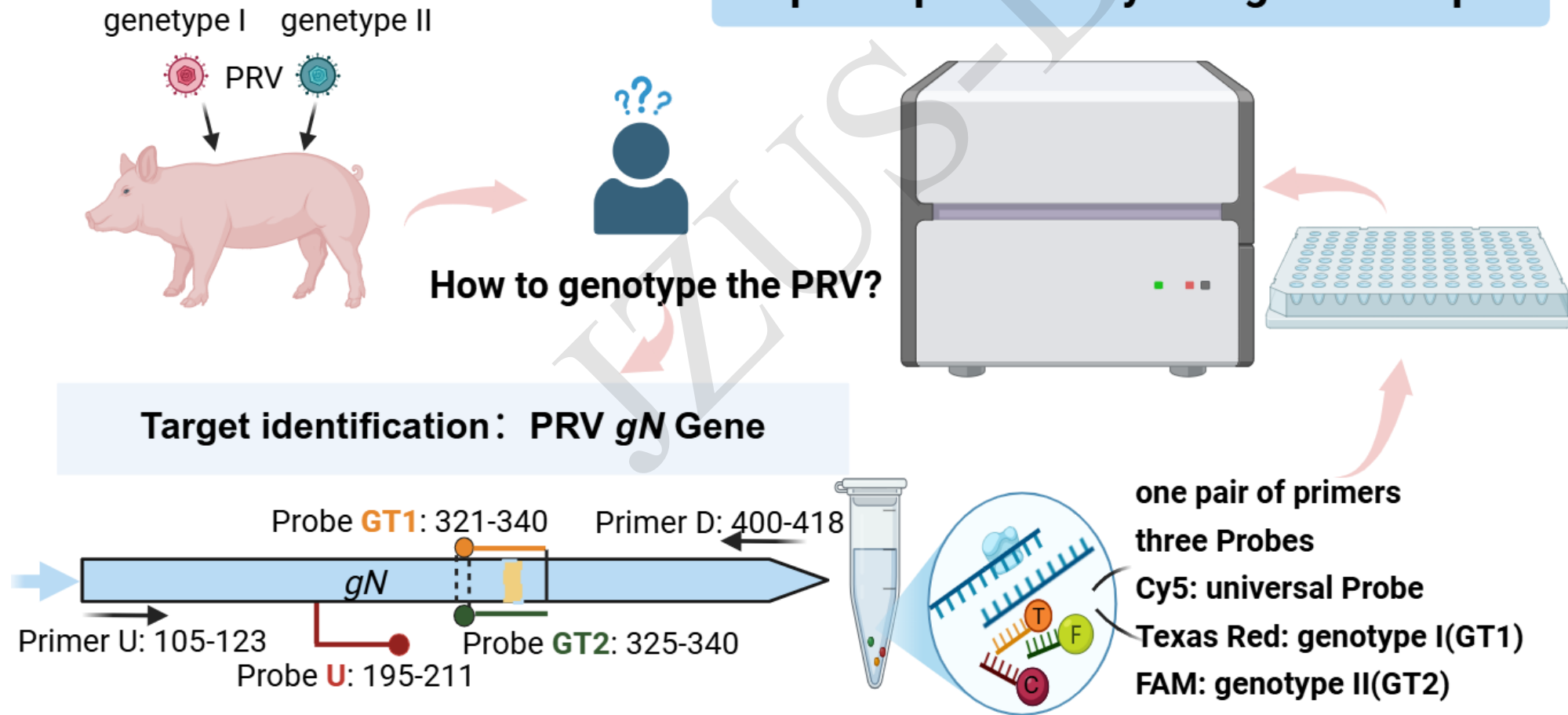
# Development and application of a novel TaqMan qPCR assay targeting the *gN* gene for genotyping pseudorabies virus

**Key words:** Pseudorabies virus; Glycoprotein N; Taqman qPCR; Genotyping; Detection methods

# Research Summary

In this study, we developed a triplex TaqMan qPCR assay for the simultaneous detection and genotyping of PRV.

## Taqman qPCR Assay Design & Principle



# Innovation points

- **Introduction:** PRV genotyping is critical for understanding its epidemiological dynamics and managing the pathogenic potential of different strains.
- **Summary:** The established triplex qPCR assay is characterized by high specificity, sensitivity, reproducibility, and operational simplicity.
- **Conclusion:** This method enables simultaneous PRV identification and genotyping in a single reaction, markedly improving detection efficiency for clinical and epidemiological applications.

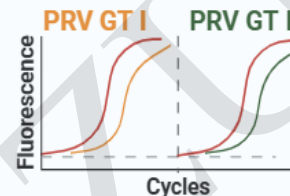
## 1.Sensitivity

LOD:  $2 \times 10^1$  copies/ $\mu$ L

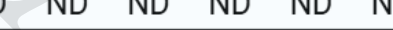


## 2. Specificity

No cross-reactivity



ND ND ND ND ND ND ND



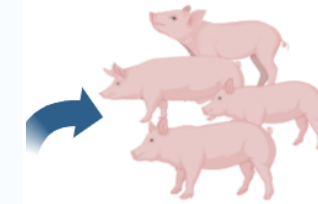
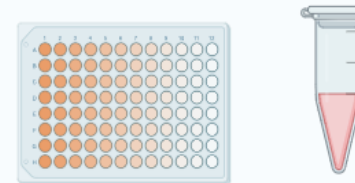
PRRSV CSFV PEDV PDCoV PCV2 PCV3 PCV4



### 3.Reproducibility

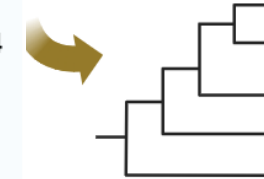
Intra-assay CV<2.8%

Intra-assay CV<3.0%



Effective  
vaccination  
control

## Precision epidemiological surveillance



## Eradication strategy