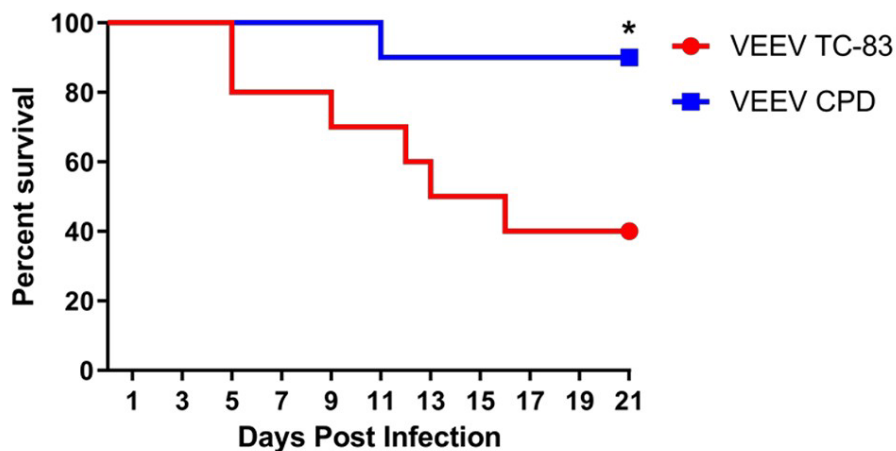


**HARNESSING CELLULAR PATHWAYS TO BLOCK VIRAL REPLICATION**

Mason’s cutting-edge technology identifies and manipulates the phosphorylation of viral capsid proteins, specifically focusing on the role of Protein Kinase C delta (PKCδ) in viral RNA binding and assembly. By targeting this interaction, researchers have opened new avenues for therapeutic interventions against viruses like Venezuelan equine encephalitis virus (VEEV), enhancing vaccine development and antiviral strategies to reduce viral pathogenesis.

**Key Features and Benefits**

- **Innovative Mechanism:** Leverages PKCδ to regulate capsid phosphorylation, influencing viral RNA binding and replication
- **Therapeutic Potential:** Targets capsid phosphorylation as a novel pathway for antiviral therapies
- **Vaccine Development:** Attenuates viral pathogenicity by reducing the release of non-infectious viral particles, offering a promising vaccine strategy
- **Broad Applicability:** Though focused on VEEV, this approach could be expanded to other RNA viruses by targeting similar phosphorylation mechanisms
- **Proven Efficacy:** Demonstrated *in vivo* attenuation of VEEV, showing increased survival and reduced symptoms in animal models



**VEEV CPD is attenuated in mice.** Kaplan-Meier survival plot of mice intranasally infected with 2 x 10<sup>7</sup> pfu/mouse of either VEEV TC-83 or VEEV CPD (Mutant Virus). N = 10 per group. \* = p<0.05.

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