

Application of humanized mice models in exploring novel therapy strategies against human diseases



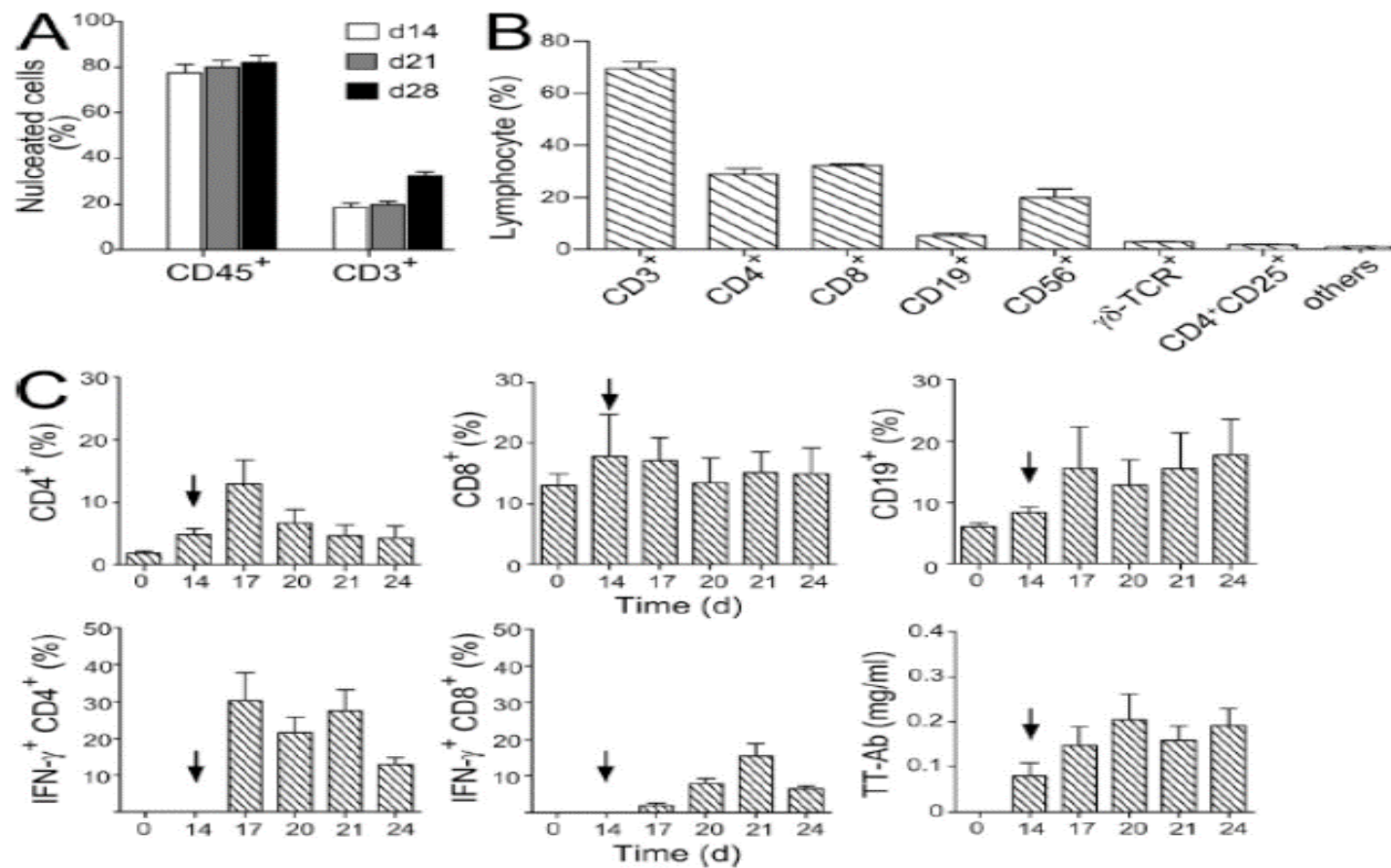
Dr. Jian Zheng
Prof. Stanley Perlman Lab
University of Iowa



2017.05

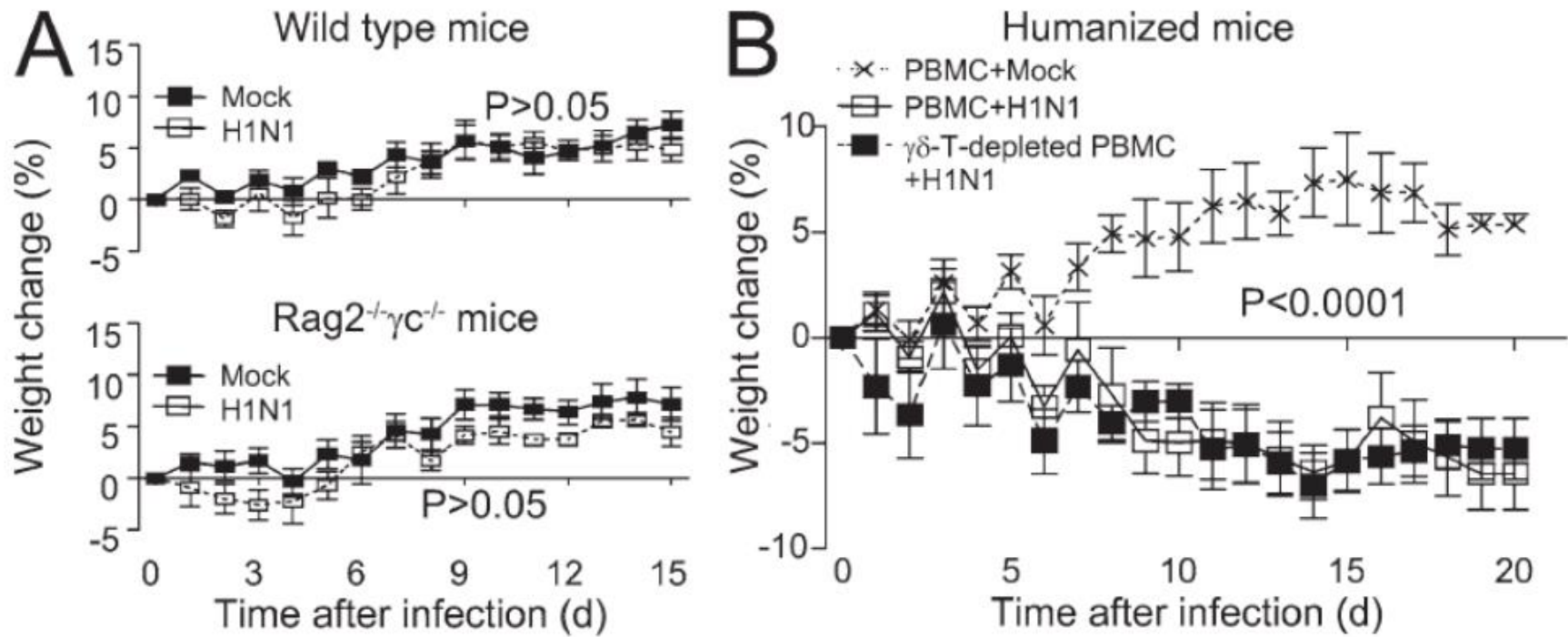
The aminobisphosphonate pamidronate controls influenza pathogenesis by expanding a $\gamma\delta$ T cell population in humanized mice

HUMANIZED RAG2^{-/-} γ C^{-/-} MICE



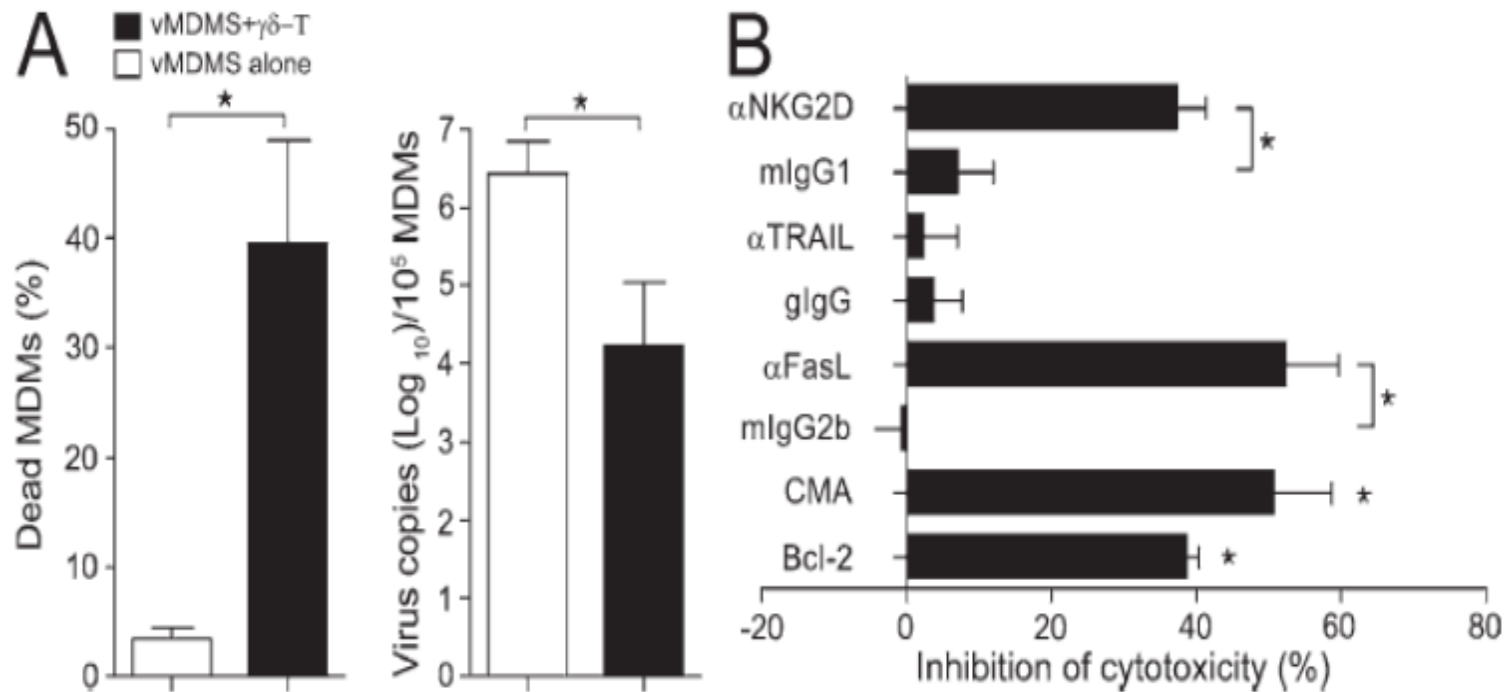
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INFECTION OF HUMANIZED MICE



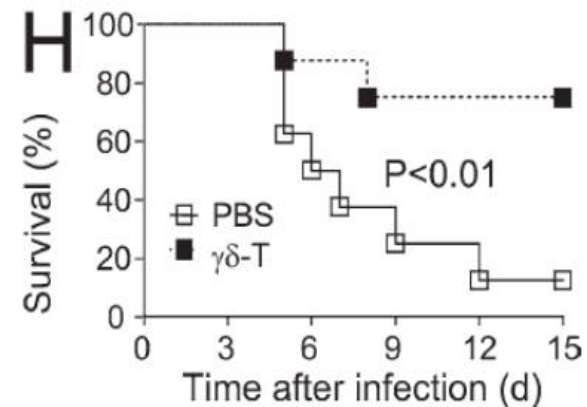
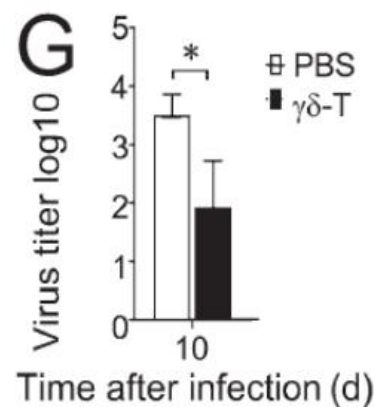
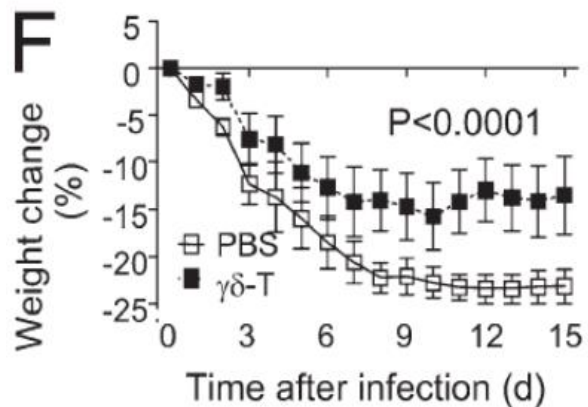
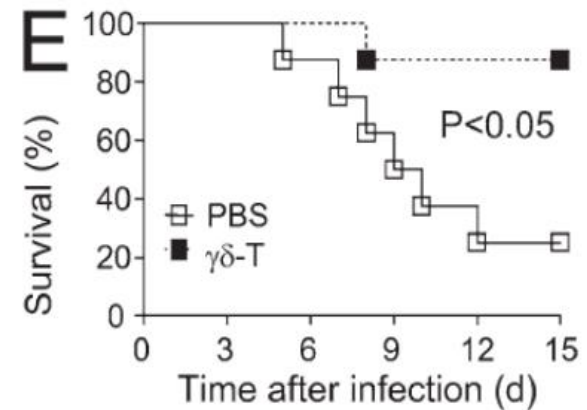
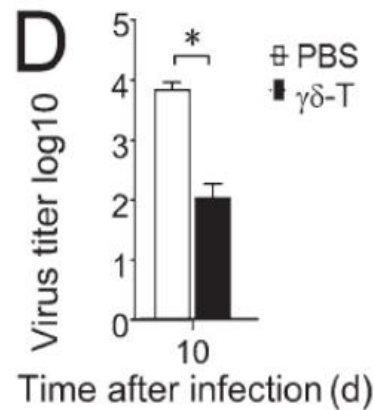
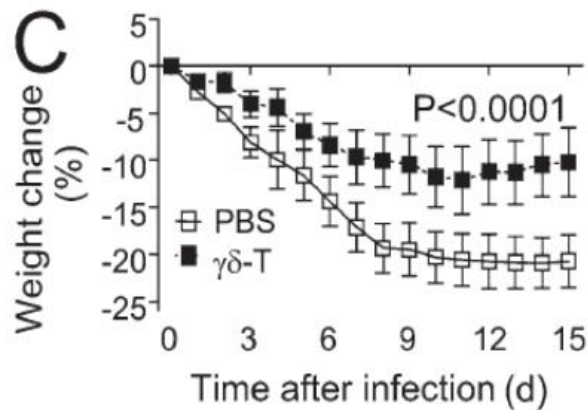
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$\gamma\delta$ -T-BASED ANTIVIRAL THERAPY



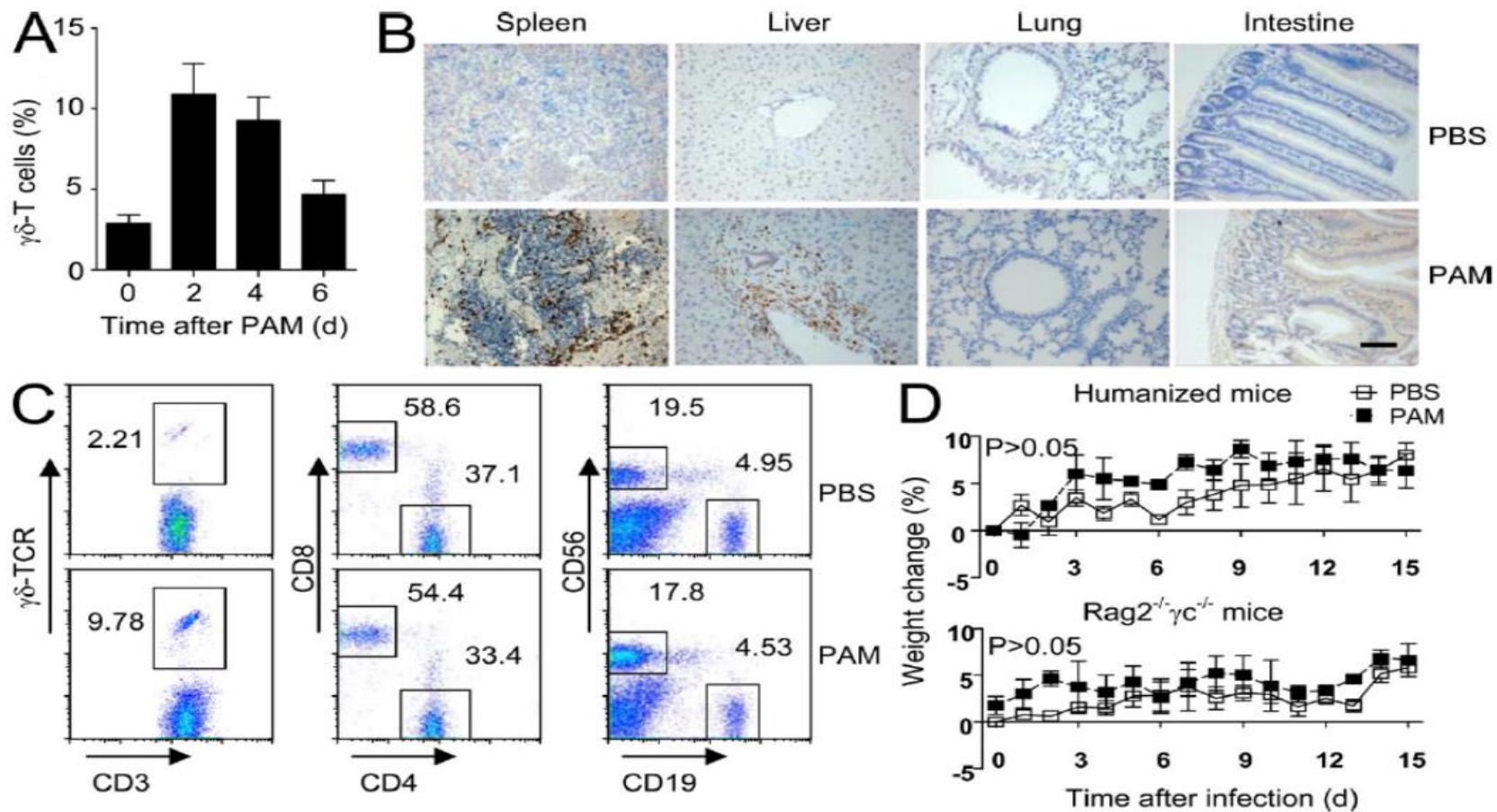
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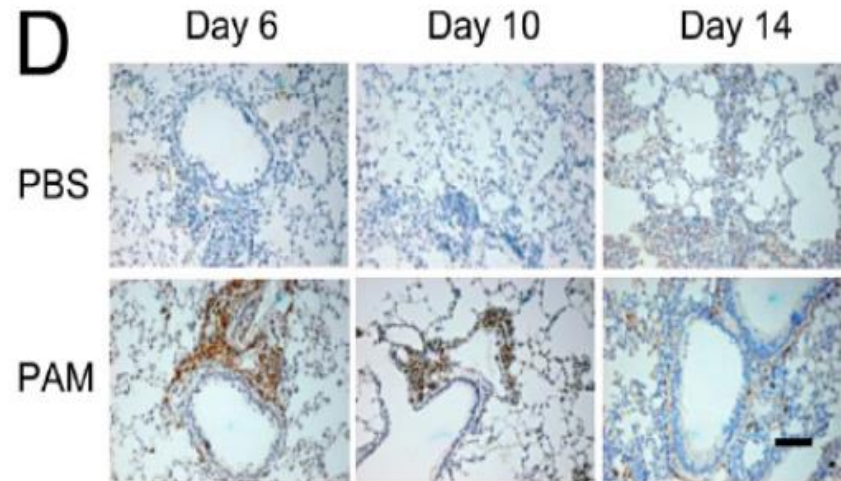
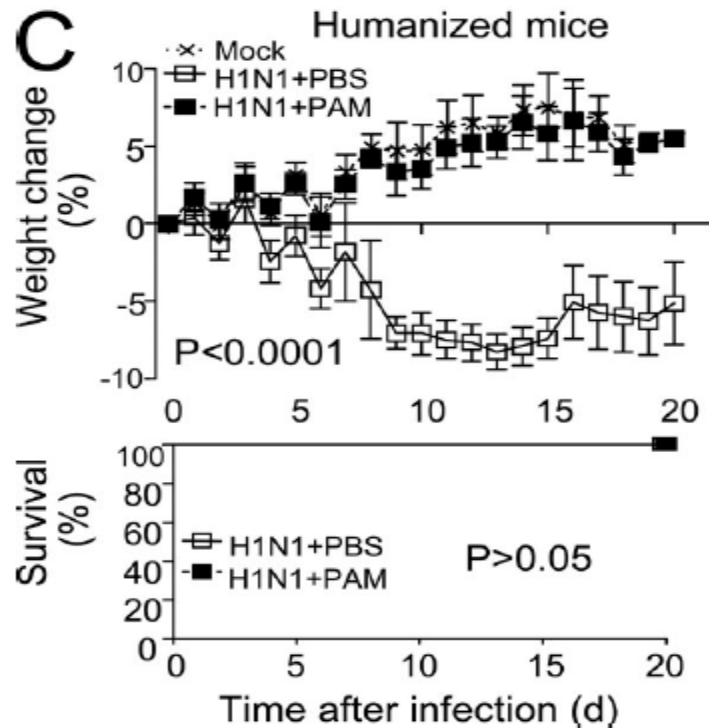
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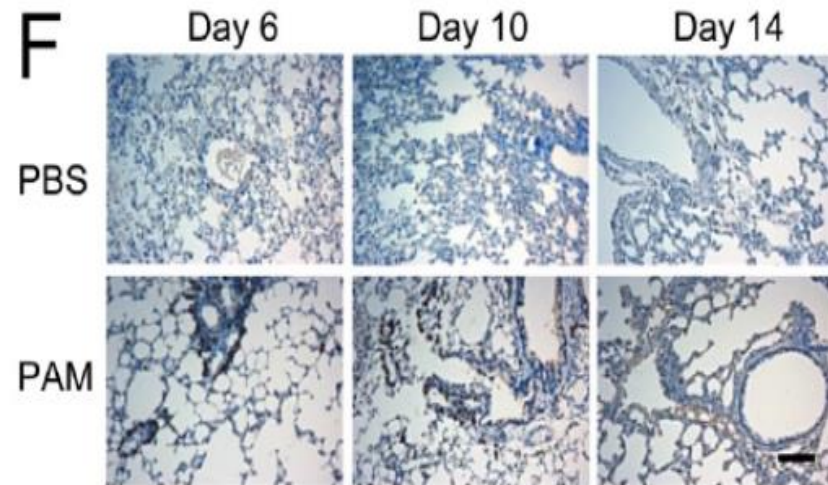
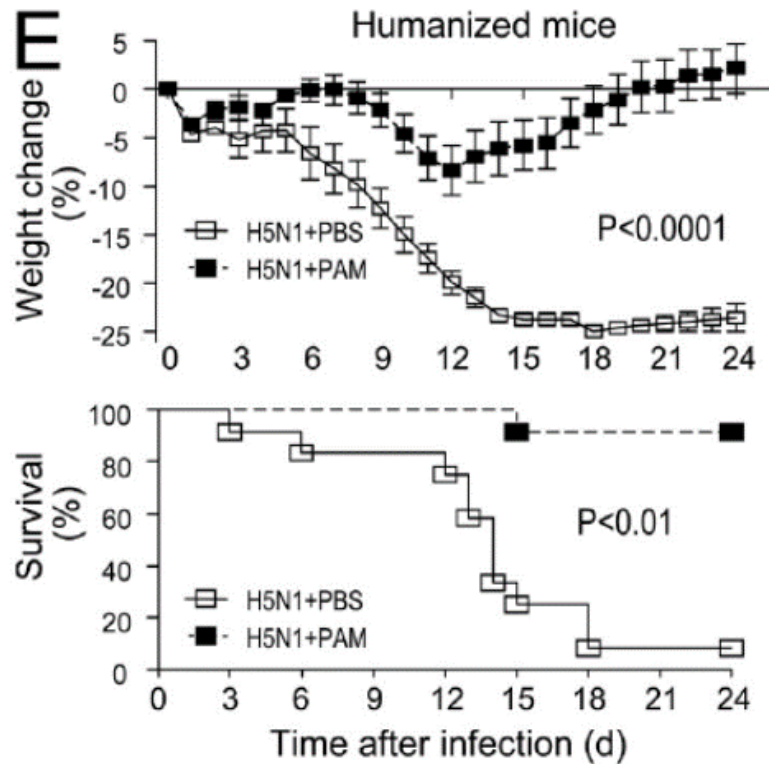
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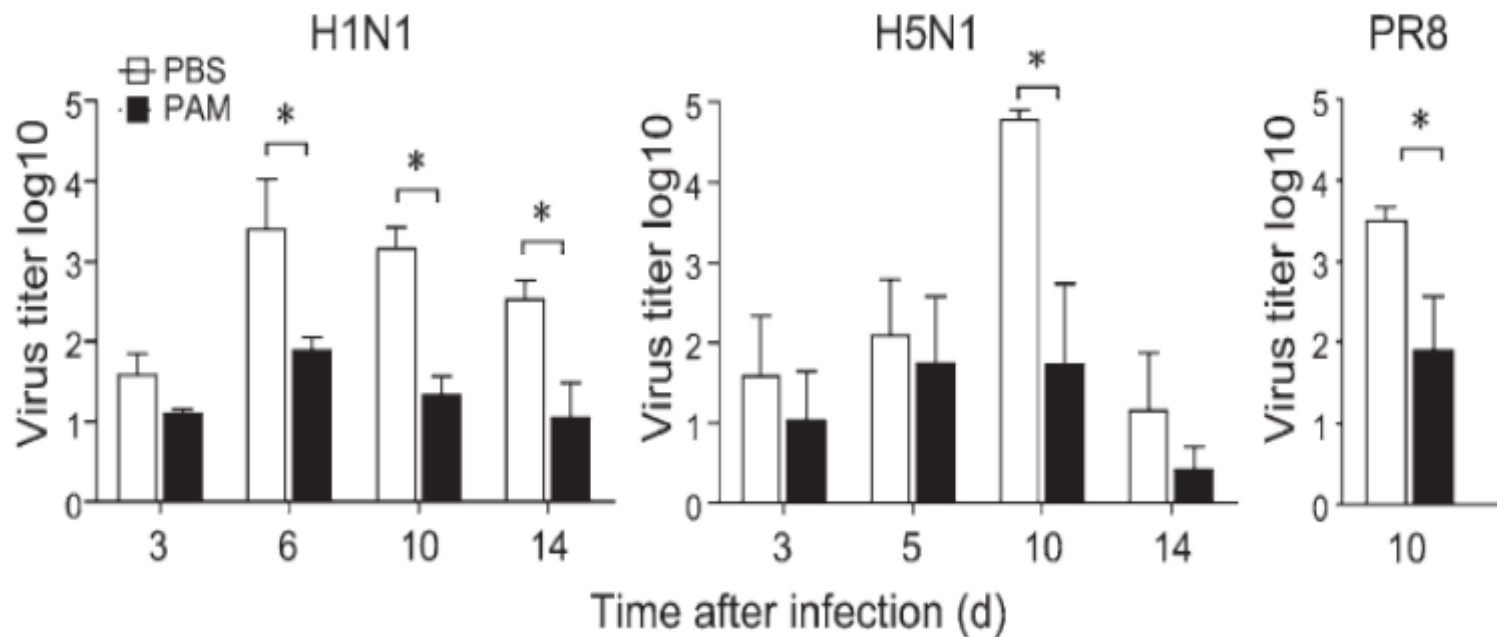
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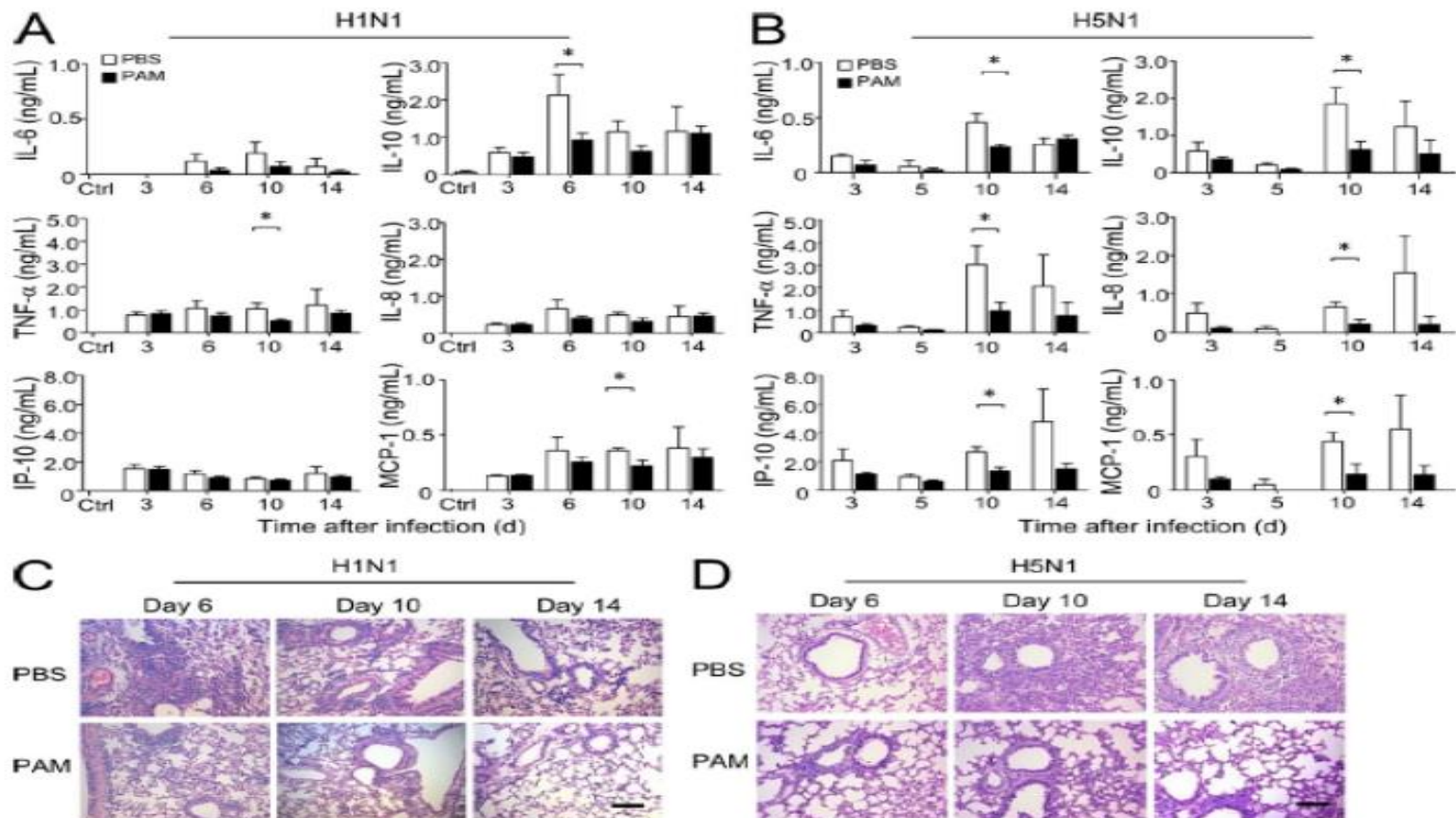
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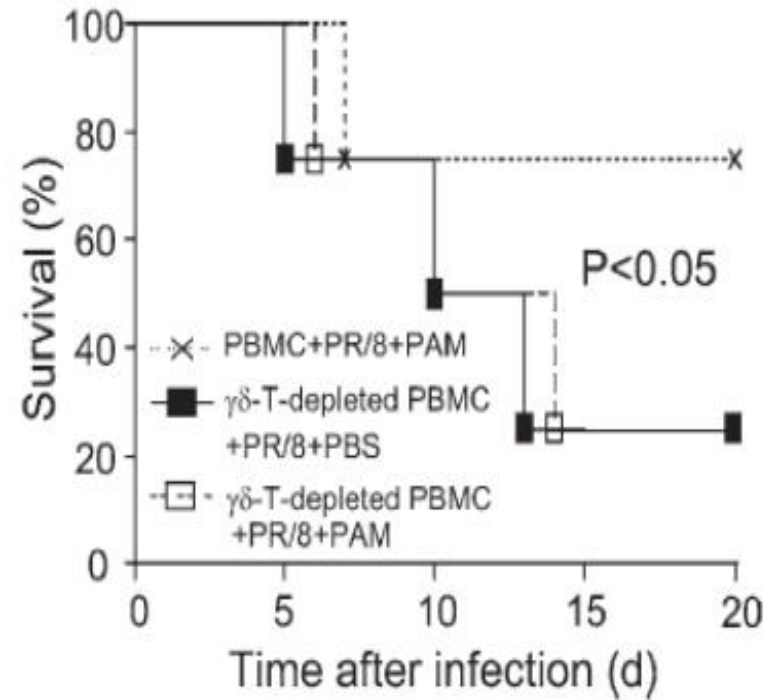
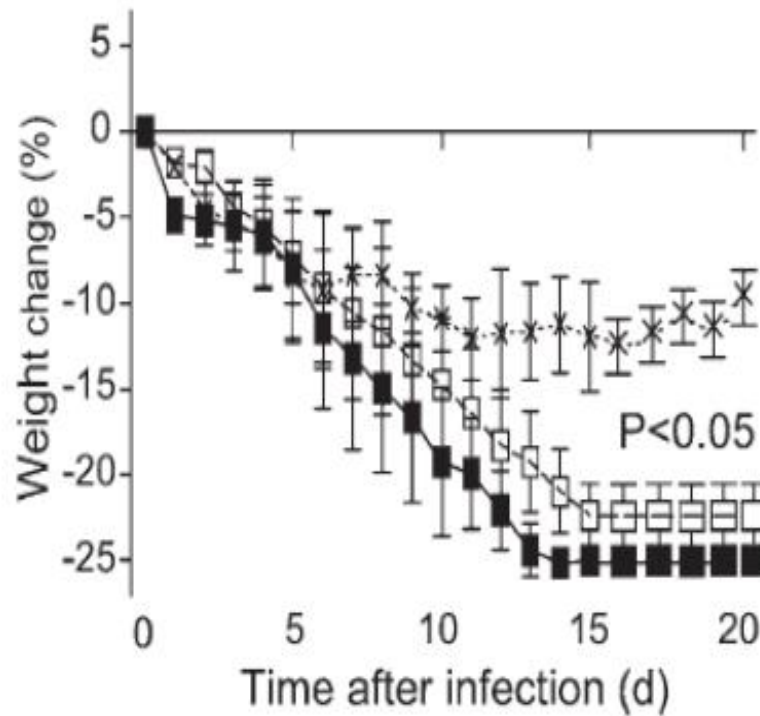
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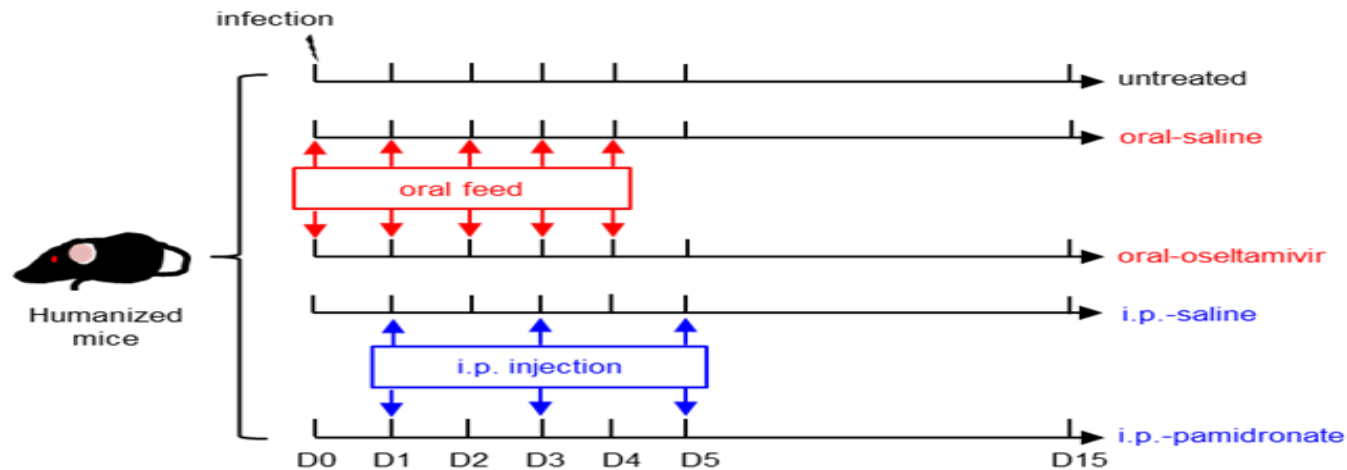
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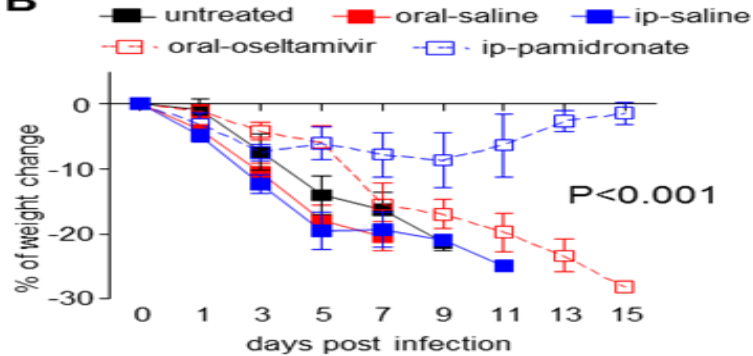


$\gamma\delta$ -T-BASED ANTI-H7N9 STUDY

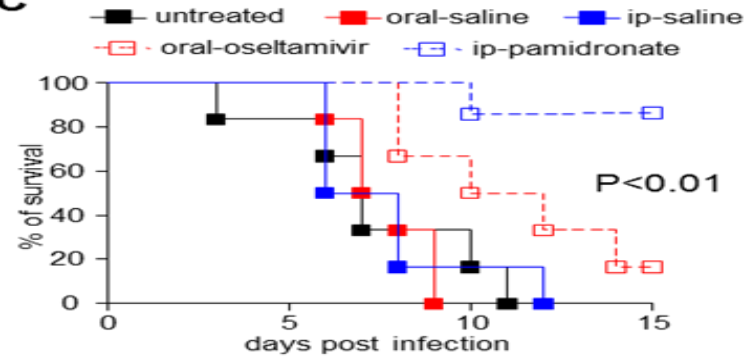
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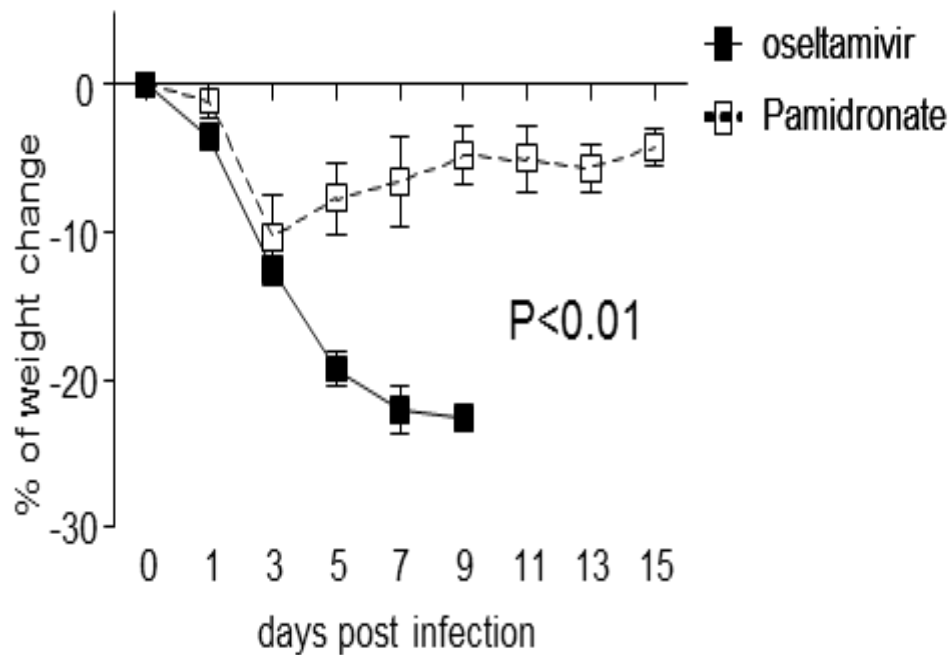
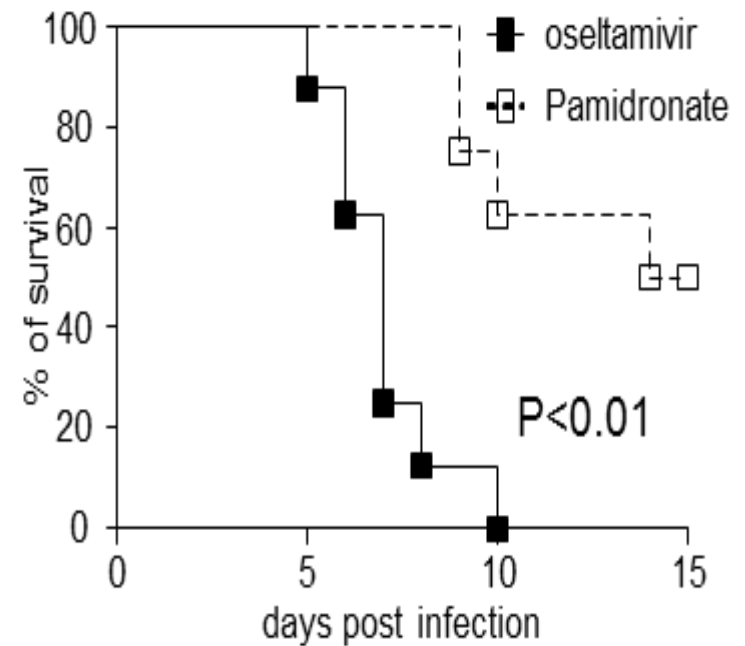
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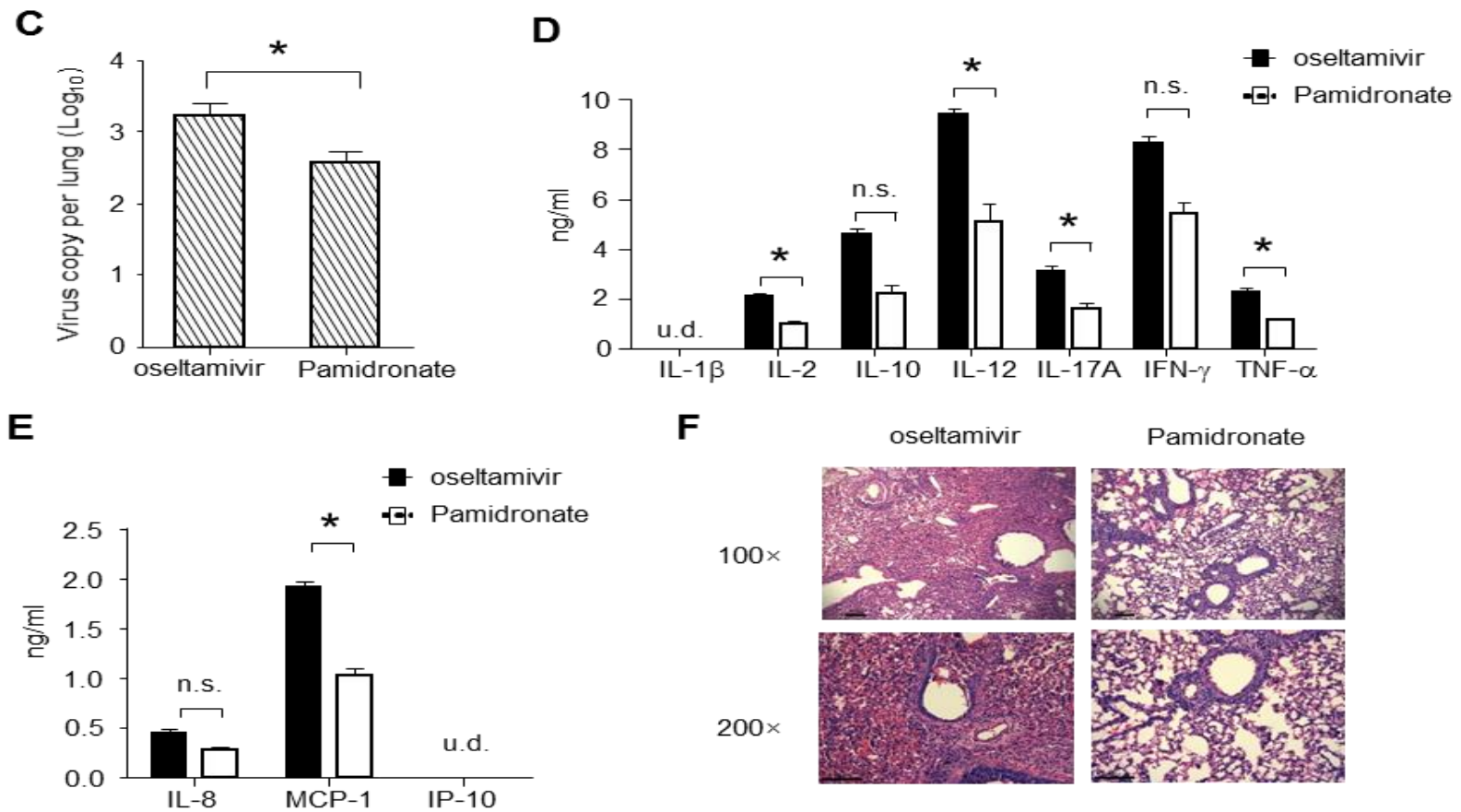
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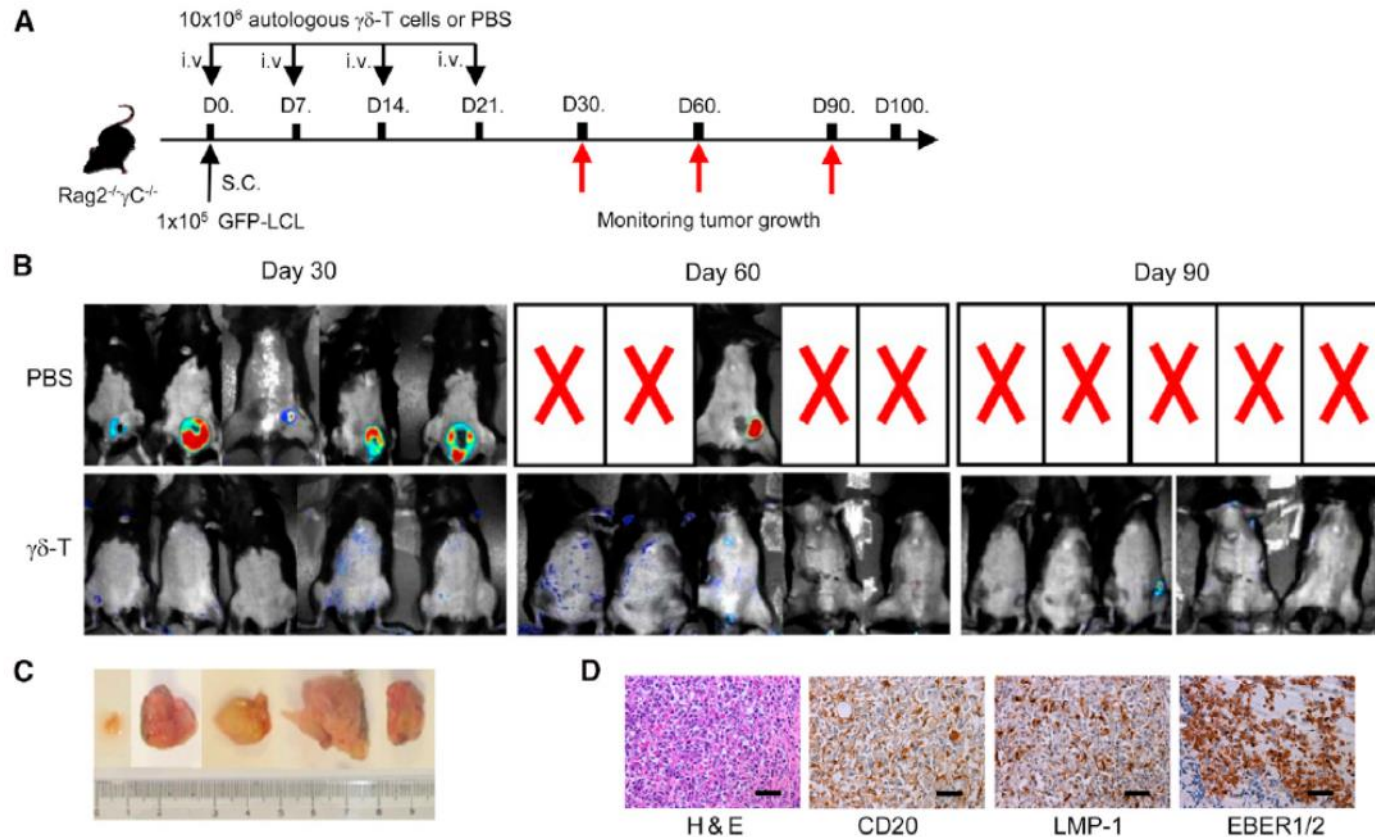
$\gamma\delta$ -T-BASED ANTI-H7N9 STUDY

A**B**

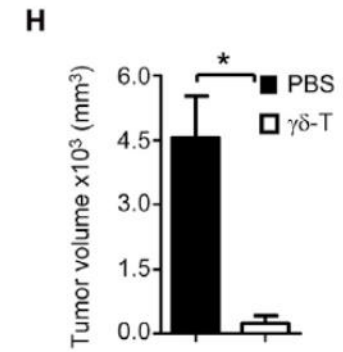
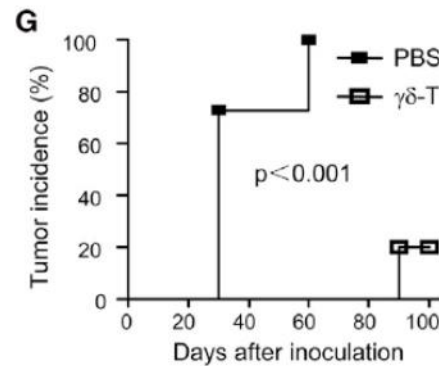
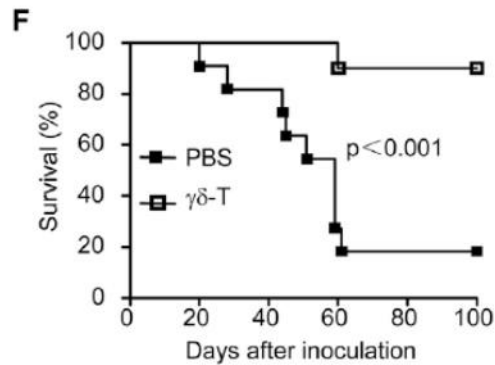
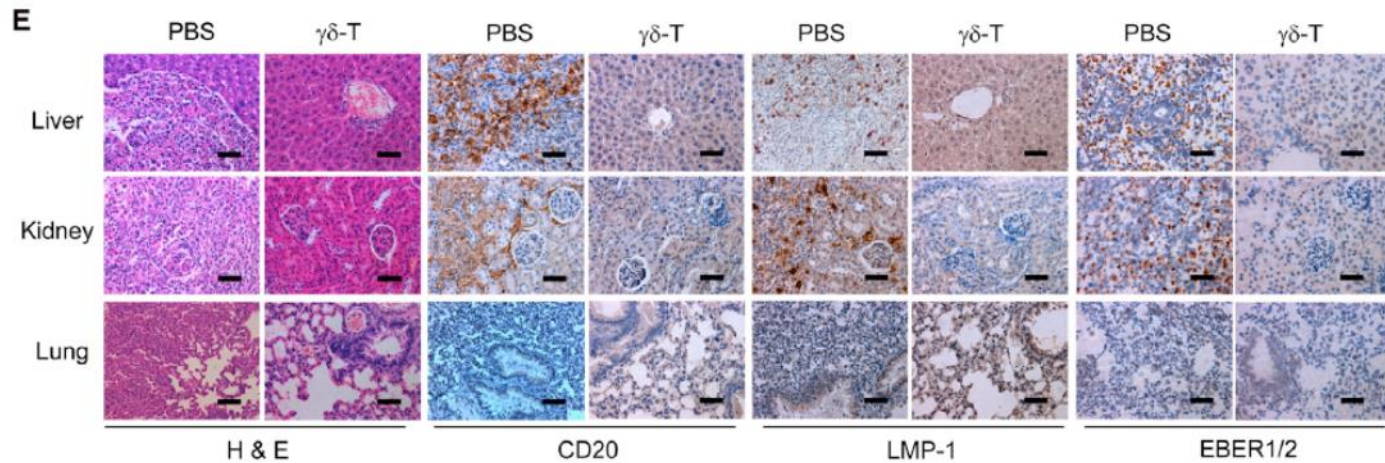
$\gamma\delta$ -T-BASED ANTI-H7N9 STUDY



$\gamma\delta$ -T-BASED ANTI-EBV STUDY

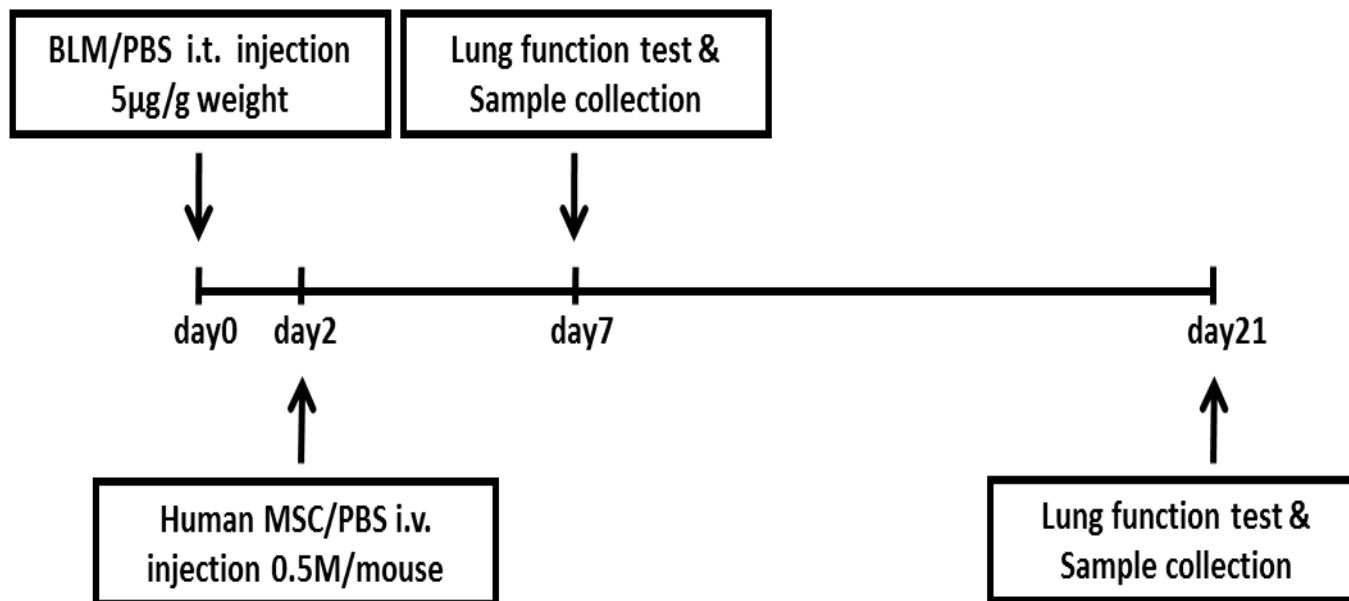


$\gamma\delta$ -T-BASED ANTI-EBV STUDY



HUMANIZED LUNG FIBROSIS MODEL

A

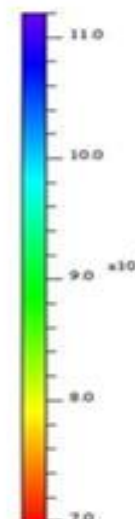
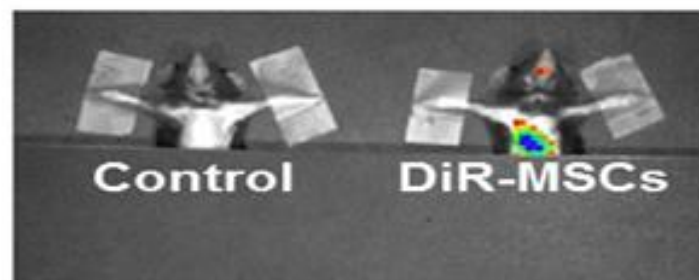


MSC-BASED THERAPY

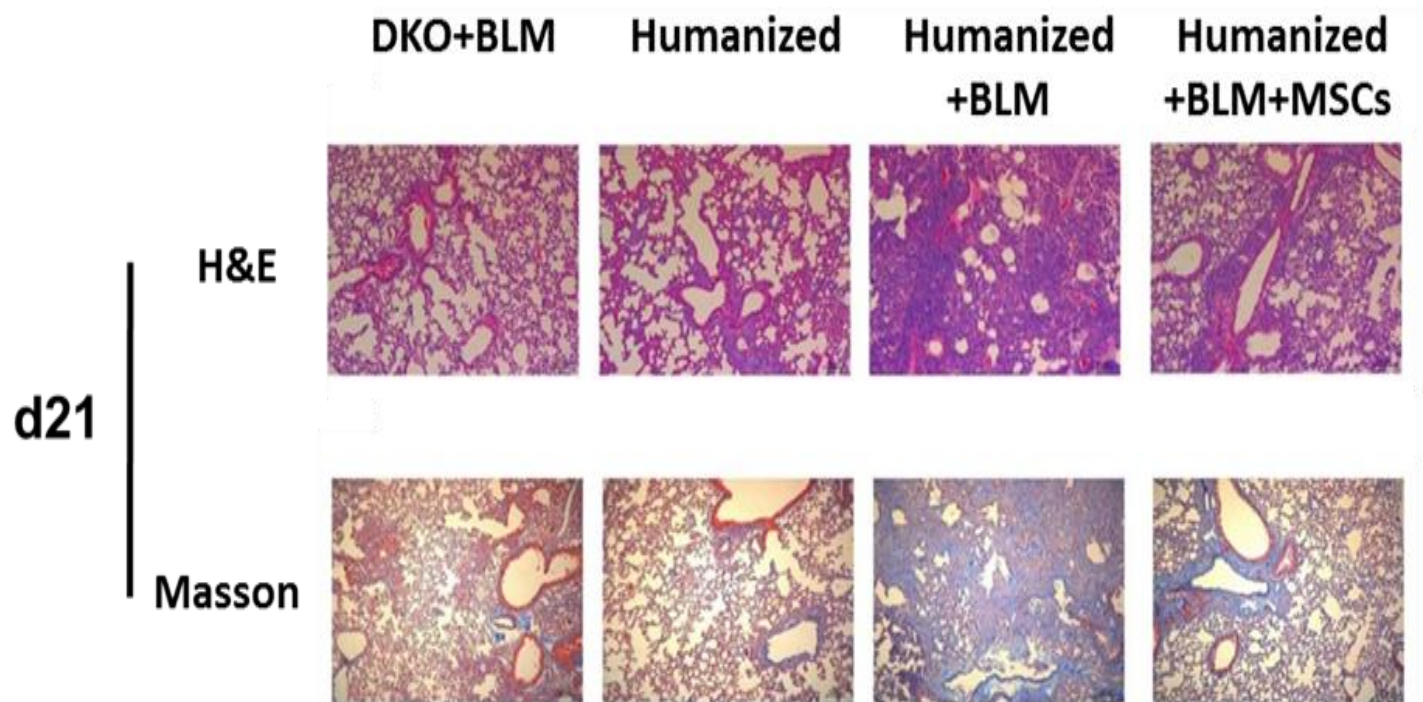
B

d1

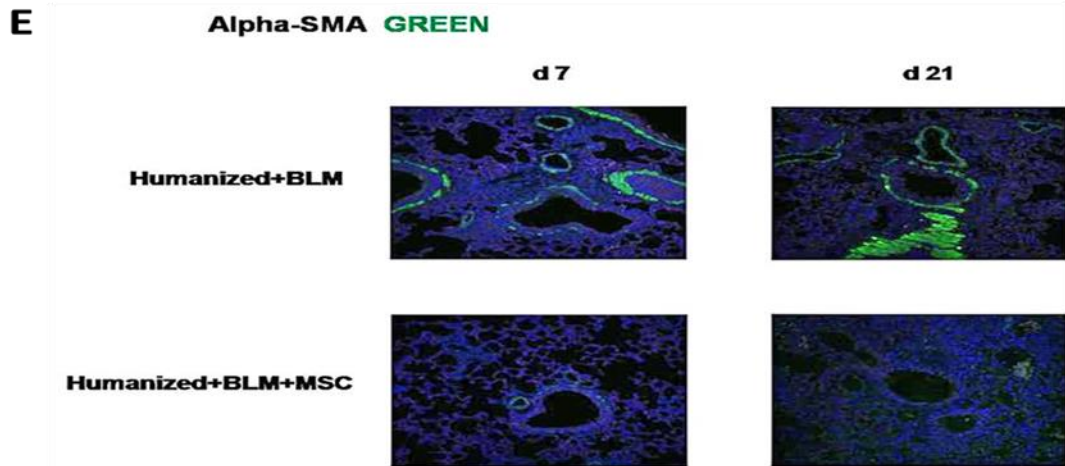
d7



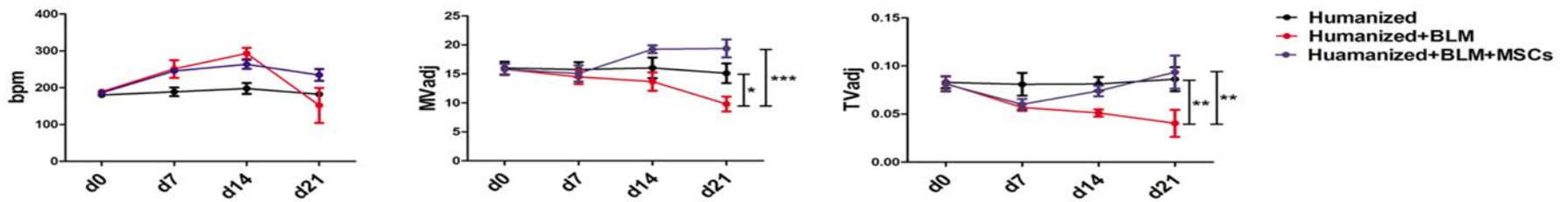
MSC-BASED THERAPY



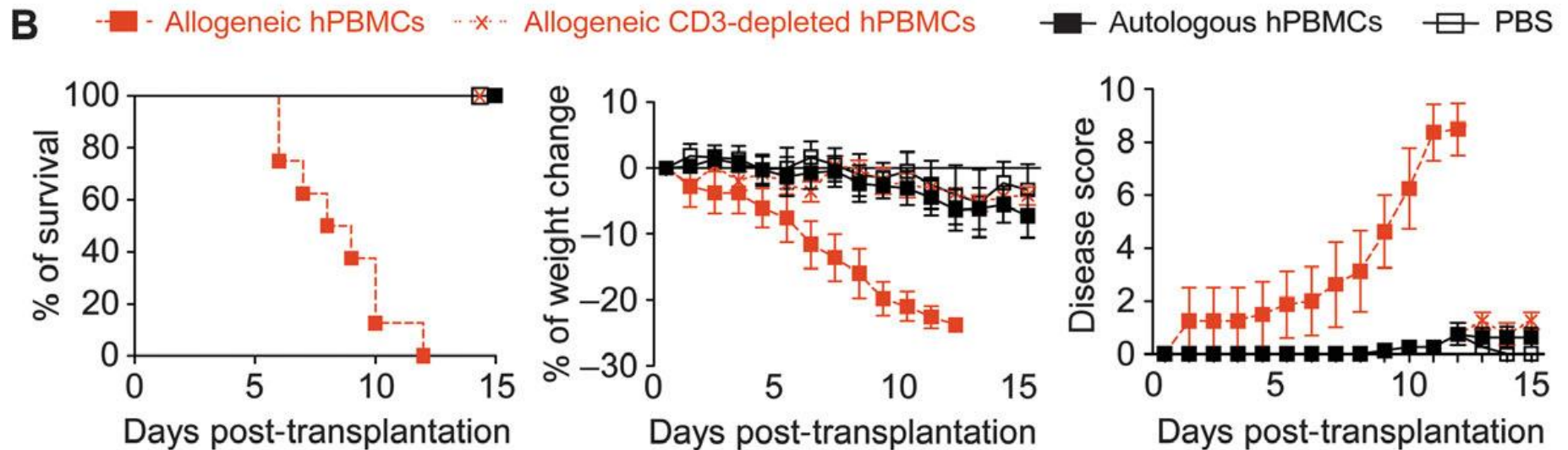
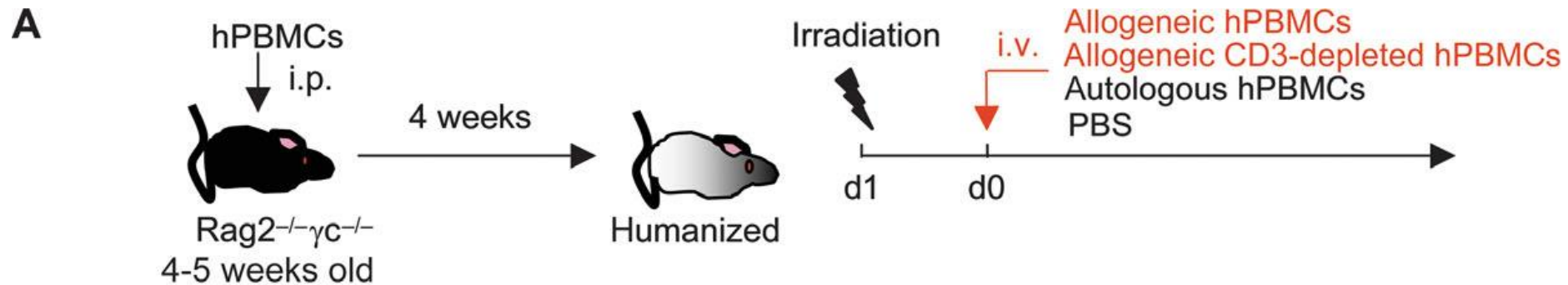
MSC-BASED THERAPY



F N=4-5 mice (3 donors)

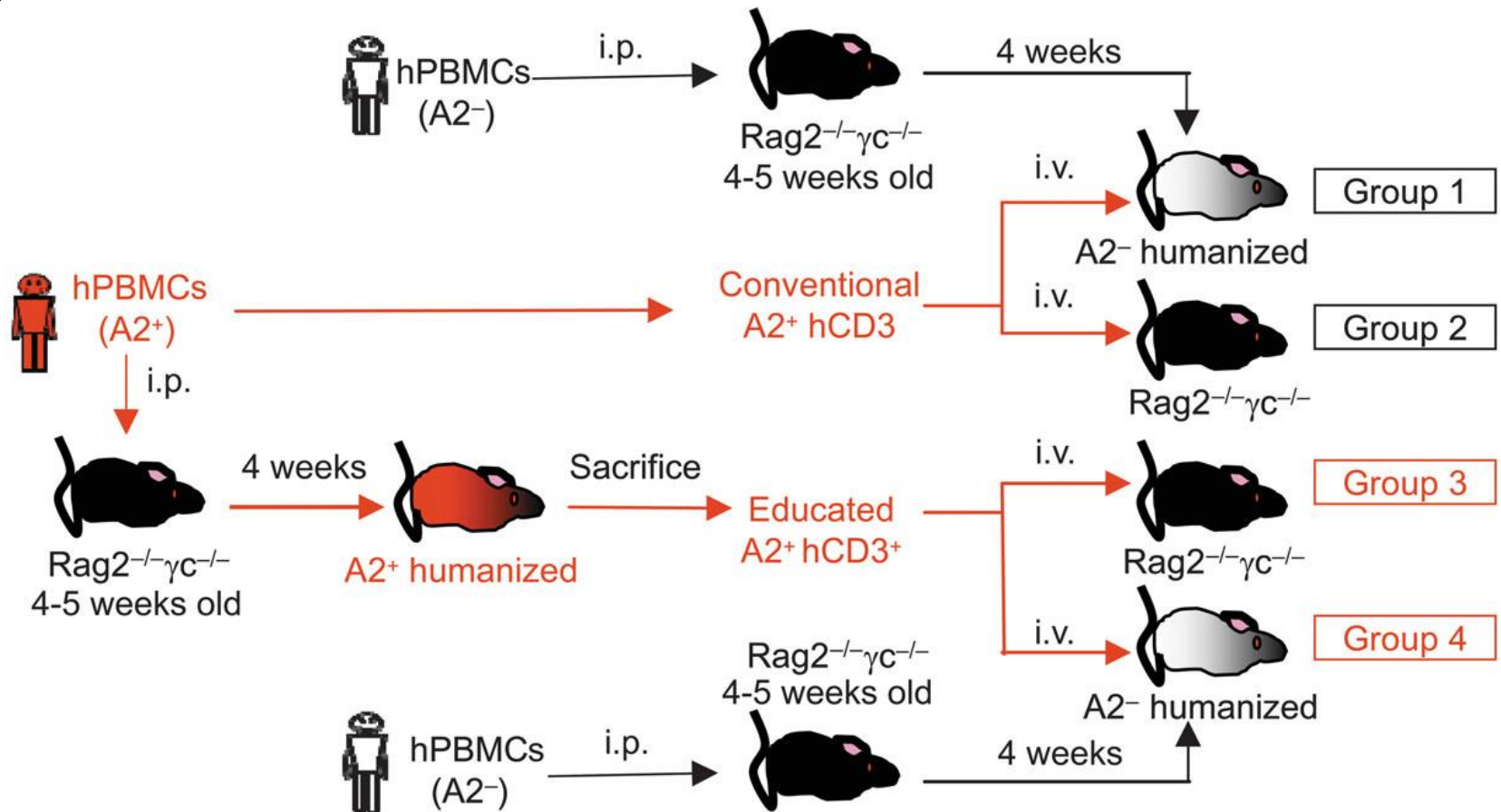


HUMANIZED GVHD MODEL

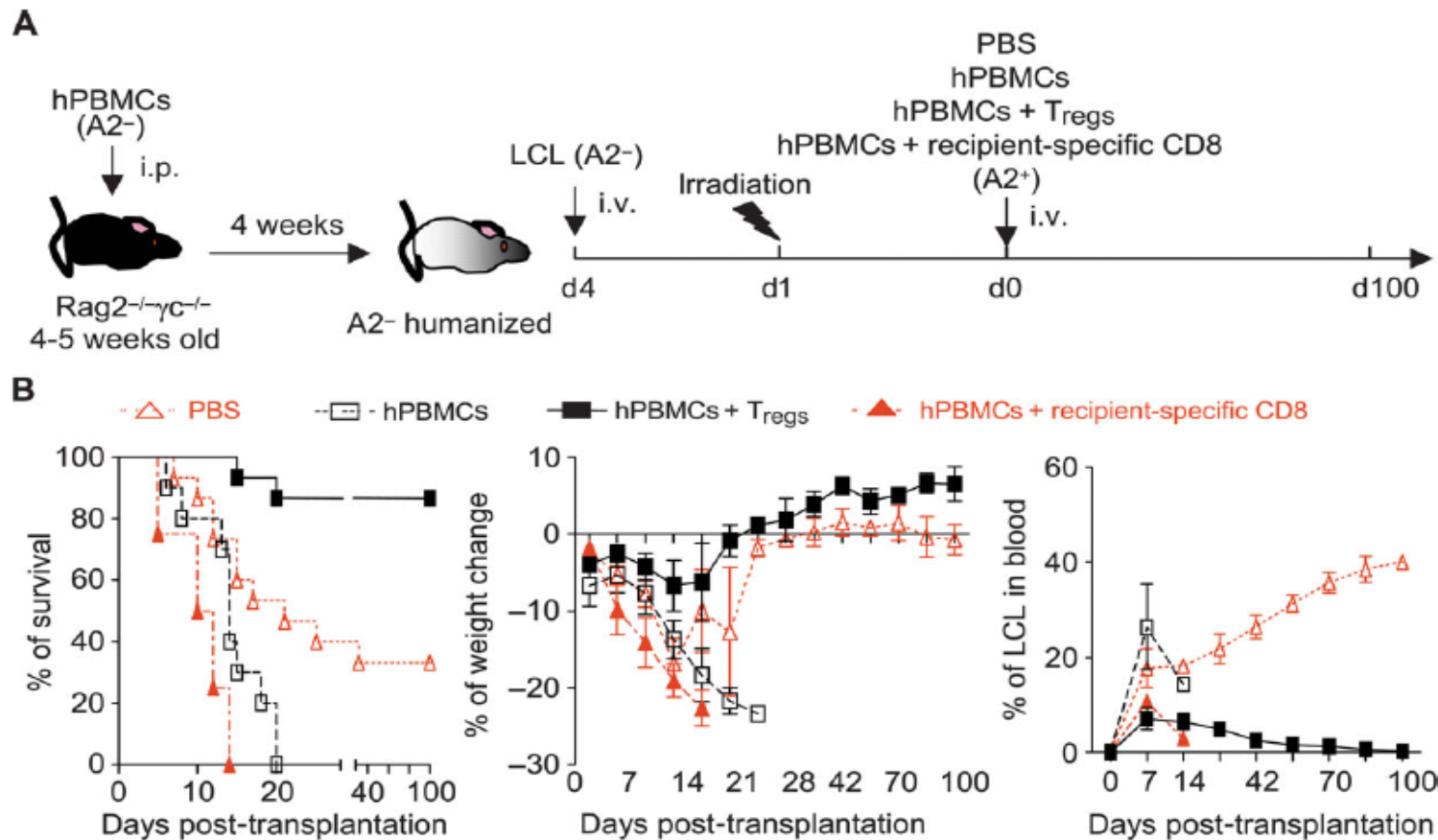


HUMANIZED GVHD MODEL

A

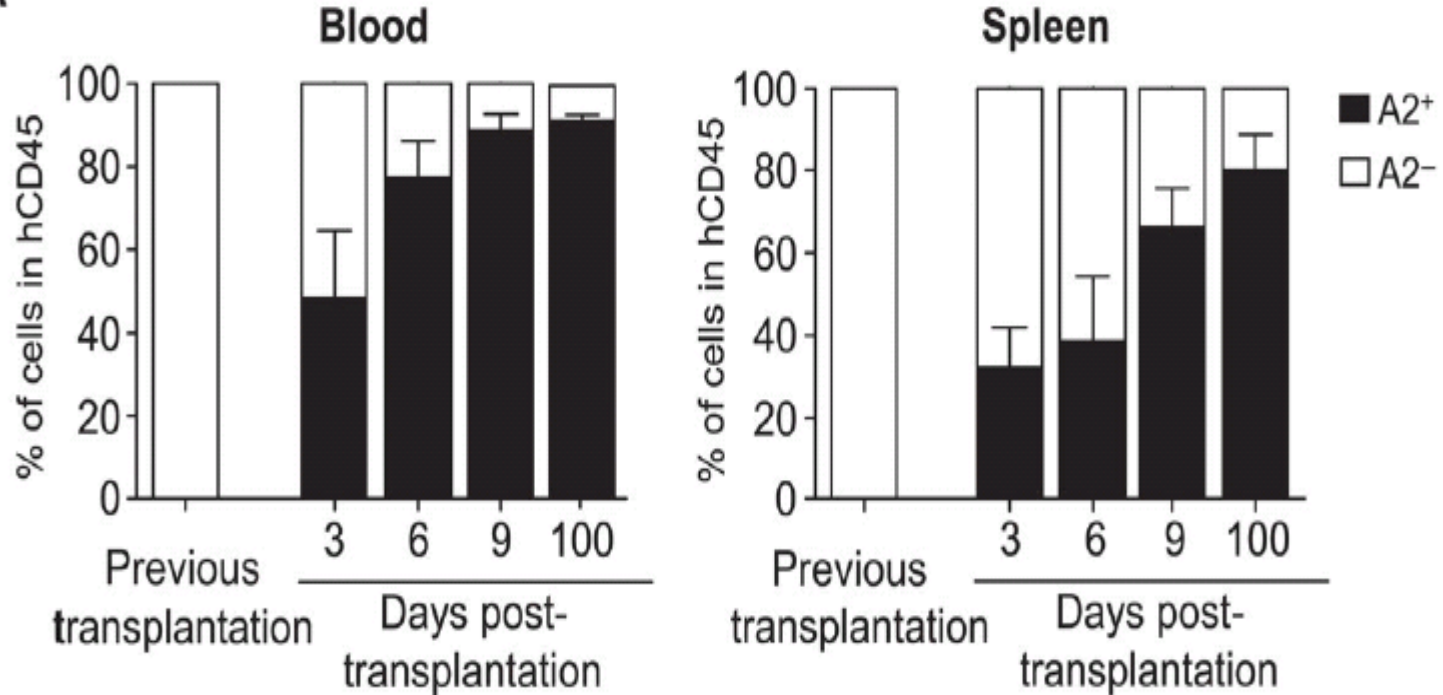


CD8⁺ TREG-BASED THERAPY



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A



Acknowledgement

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