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IMP761 webcast slides

Date & Time: March 26, 2019, 7:45 am Australian Eastern Daylight Time
March 25, 2019, 4:45 pm US Eastern Daylight Time

Register: Interested parties can register via a link to the webcast on the Company's website or via the following link:
<https://fnn.webex.com/fnn/onstage/g.php?MTID=e3a09aba7876417a76f919285ab7b26bb>

A replay of the webcast will also be available at www.immutep.com from the day after the event.

Notice: Forward Looking Statements

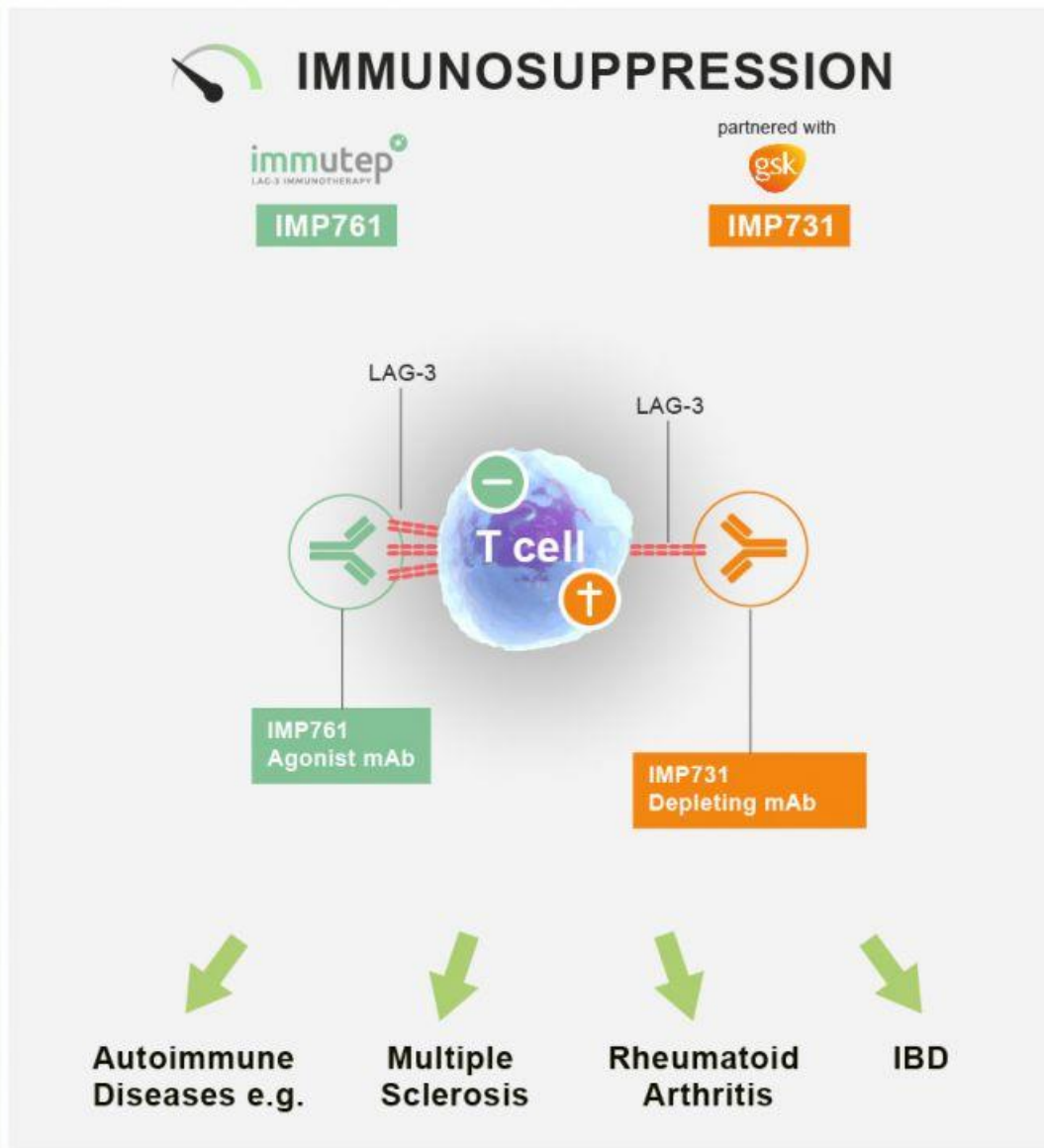
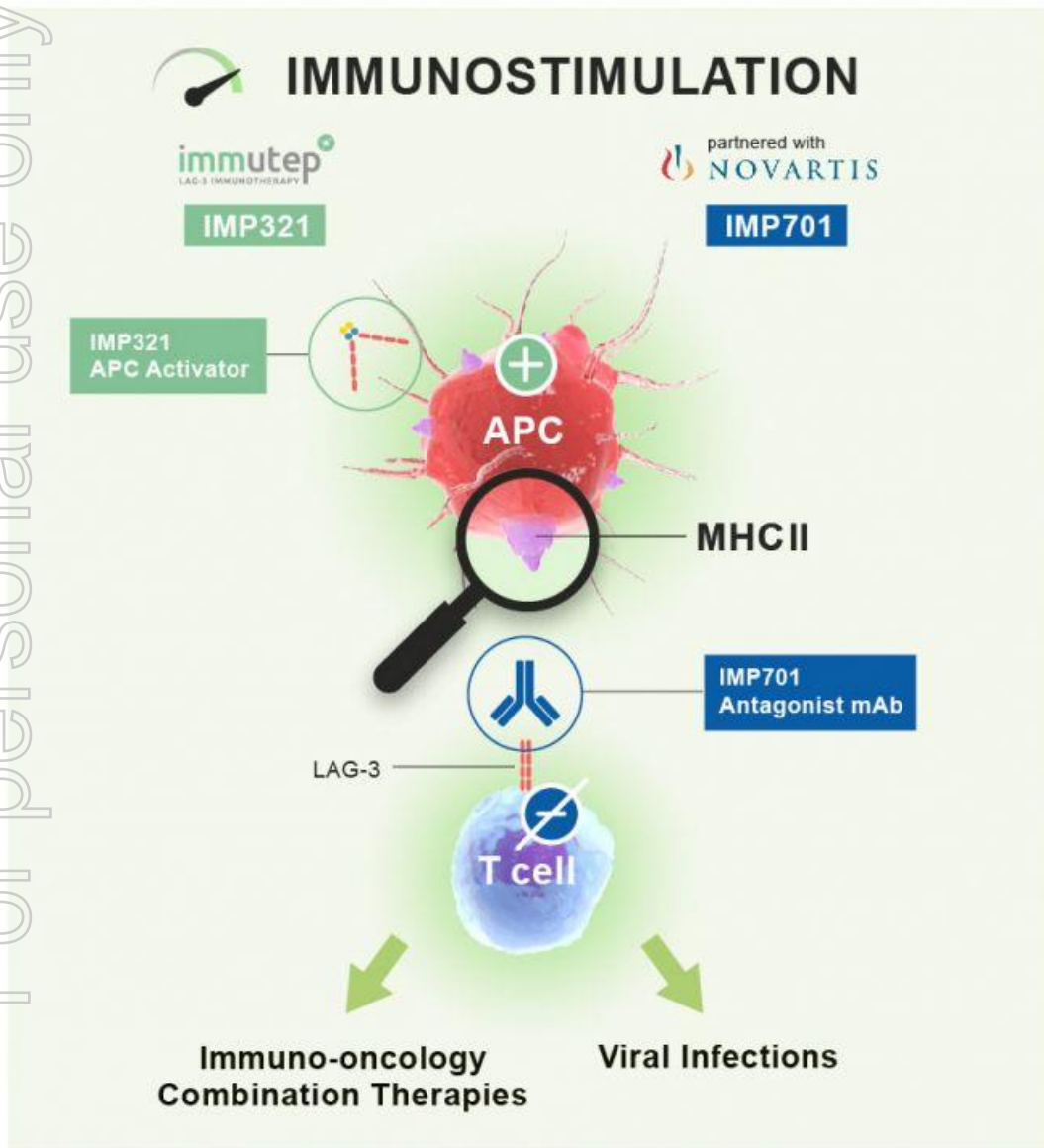
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Targeting: LAG-3/MHC II May Lead to Multiple Therapeutics in Numerous Indications

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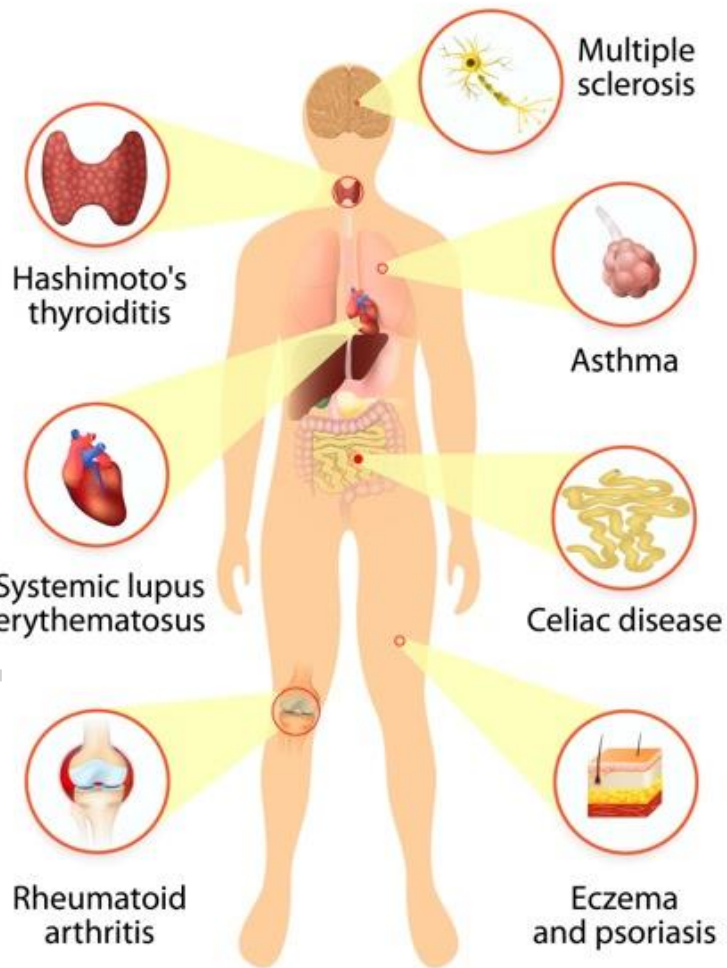


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The LAG-3 Agonist Concept

Targeting auto-reactive memory T cells in AID with IMP61

AUTOIMMUNE DISEASES



THE PRESENT: FIGHTING SYMPTOMS

Treating general inflammation:
corticoids, methotrexate,
anti-TNF- α , -IL-6, -IL-17, -IL-23 mAbs

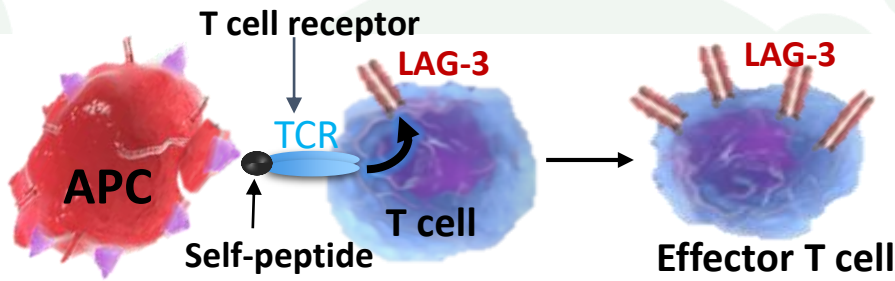
THE FUTURE: FIGHTING THE CAUSE OF AID

Treating the disease process:
silencing the few auto-immune memory
T cells accumulating at the disease site
with IMP761

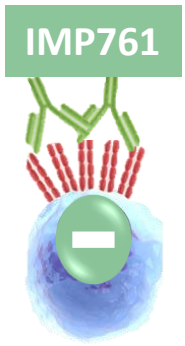
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IMP761 works upstream from current therapeutic interventions

Auto-immune memory T cells are chronically stimulated by the same self-peptide, acquiring an 'exhausted' phenotype and expressing LAG-3 which down-modulates specifically TCR signaling. IMP761 increases this physiological down-regulation.



IMP761: blocking the activation of self-reactive memory T cells



Epigenetic reprogramming
(DNA methylation, histone modifications, miRNAs)

Th1 (e.g. RA, T1D)

Th2 (e.g. allergic asthma)

Th17 (e.g. IBD)

IL-23 (e.g. psoriasis)

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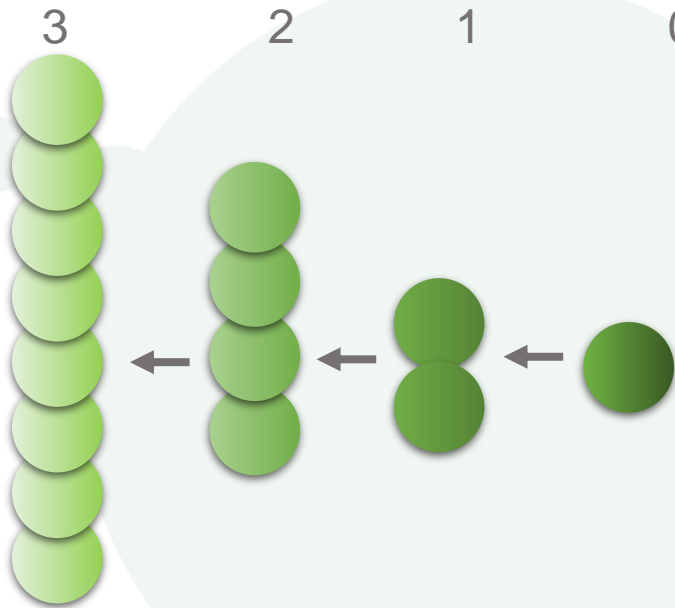
IMP761: In Vitro Testing

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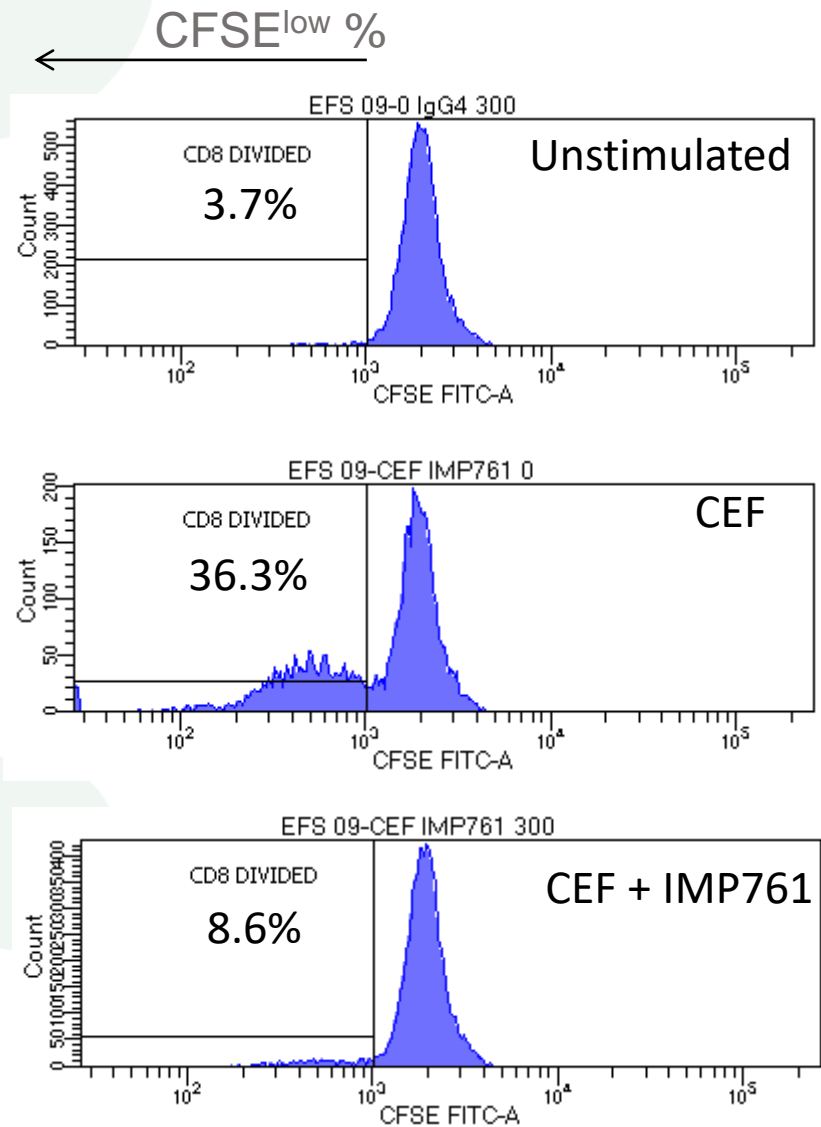
Inhibition of CD8 T cell proliferation

CFSE proliferation assay

Divisions:



CEF peptide pool
CMV – EBV – Influenza
Stimulates CD8 T cells in hPBMCs



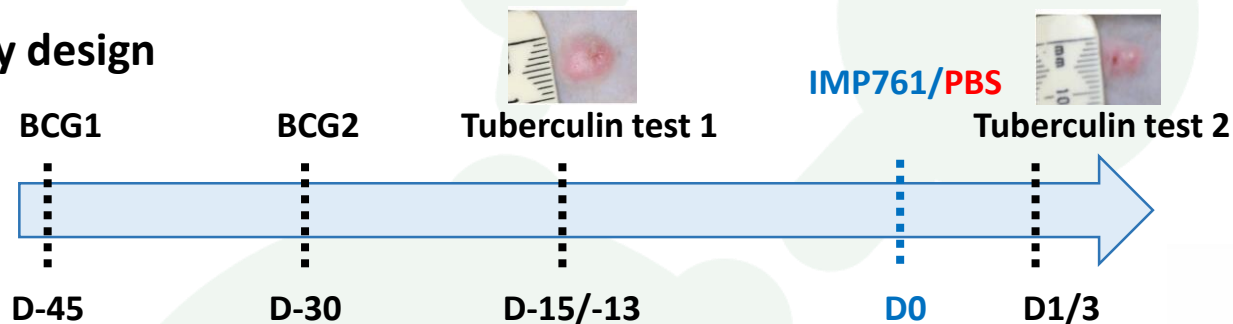
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IMP761: In Vivo Testing

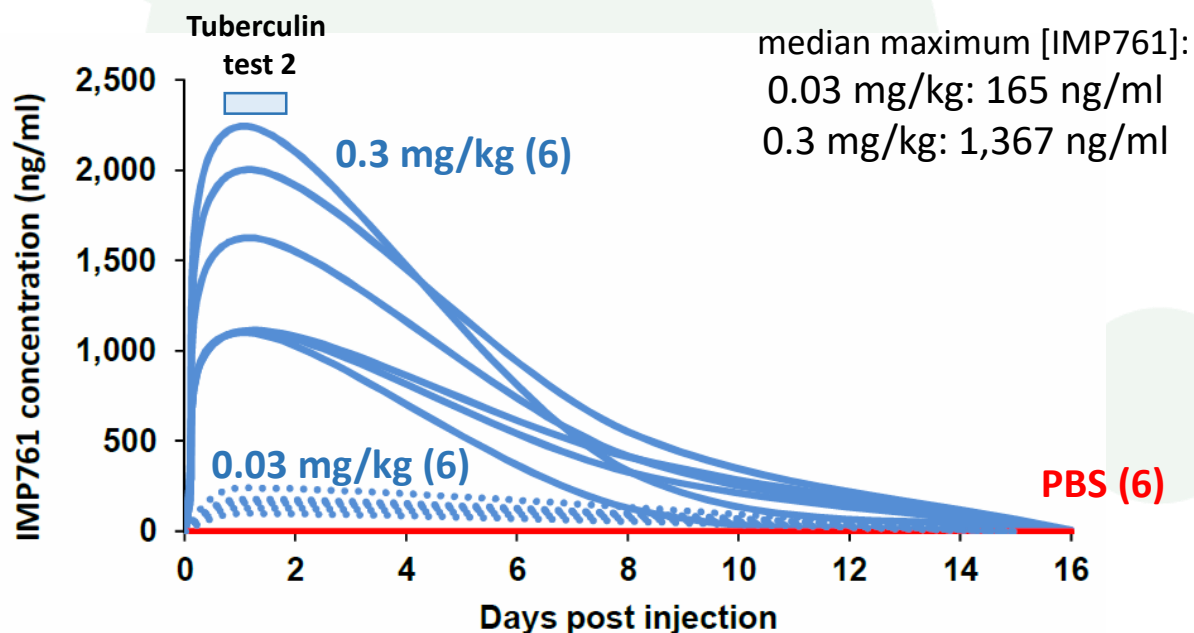
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Delayed-type hypersensitivity model in cynomolgus monkey

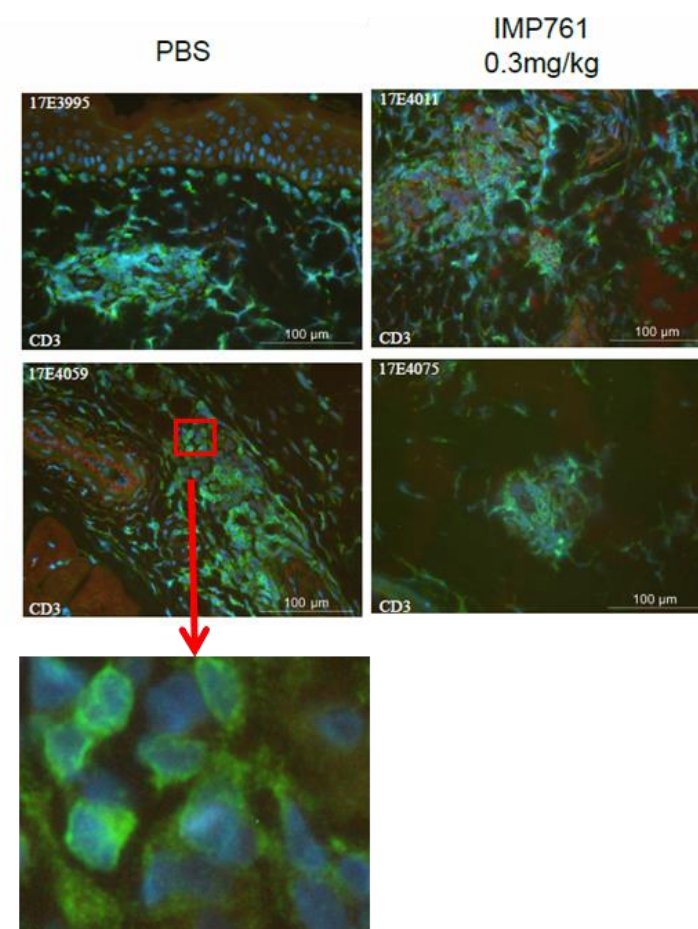
Study design



Pharmacokinetics



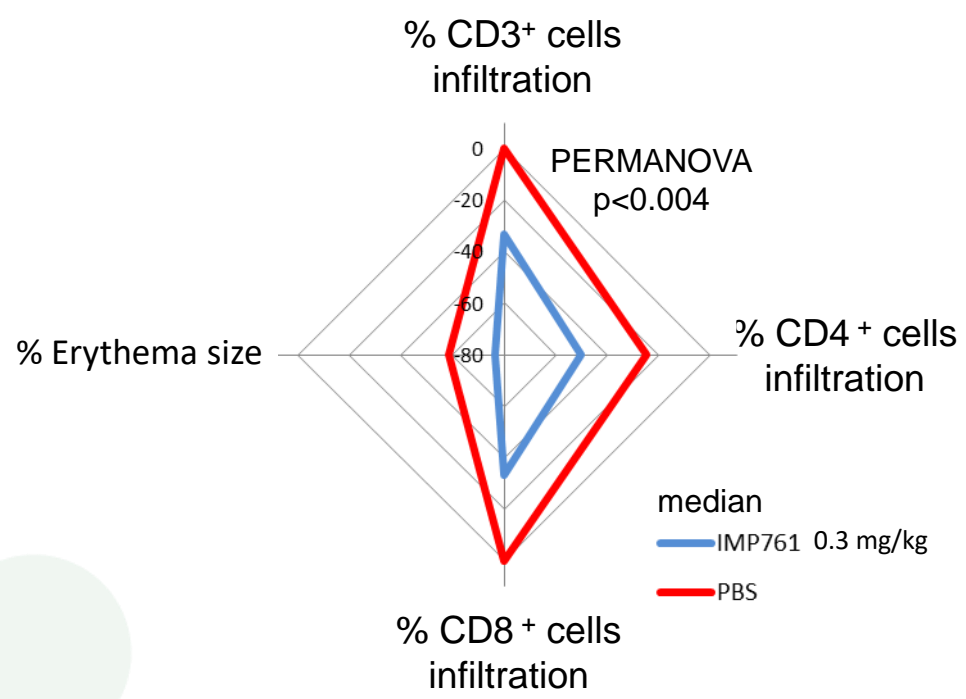
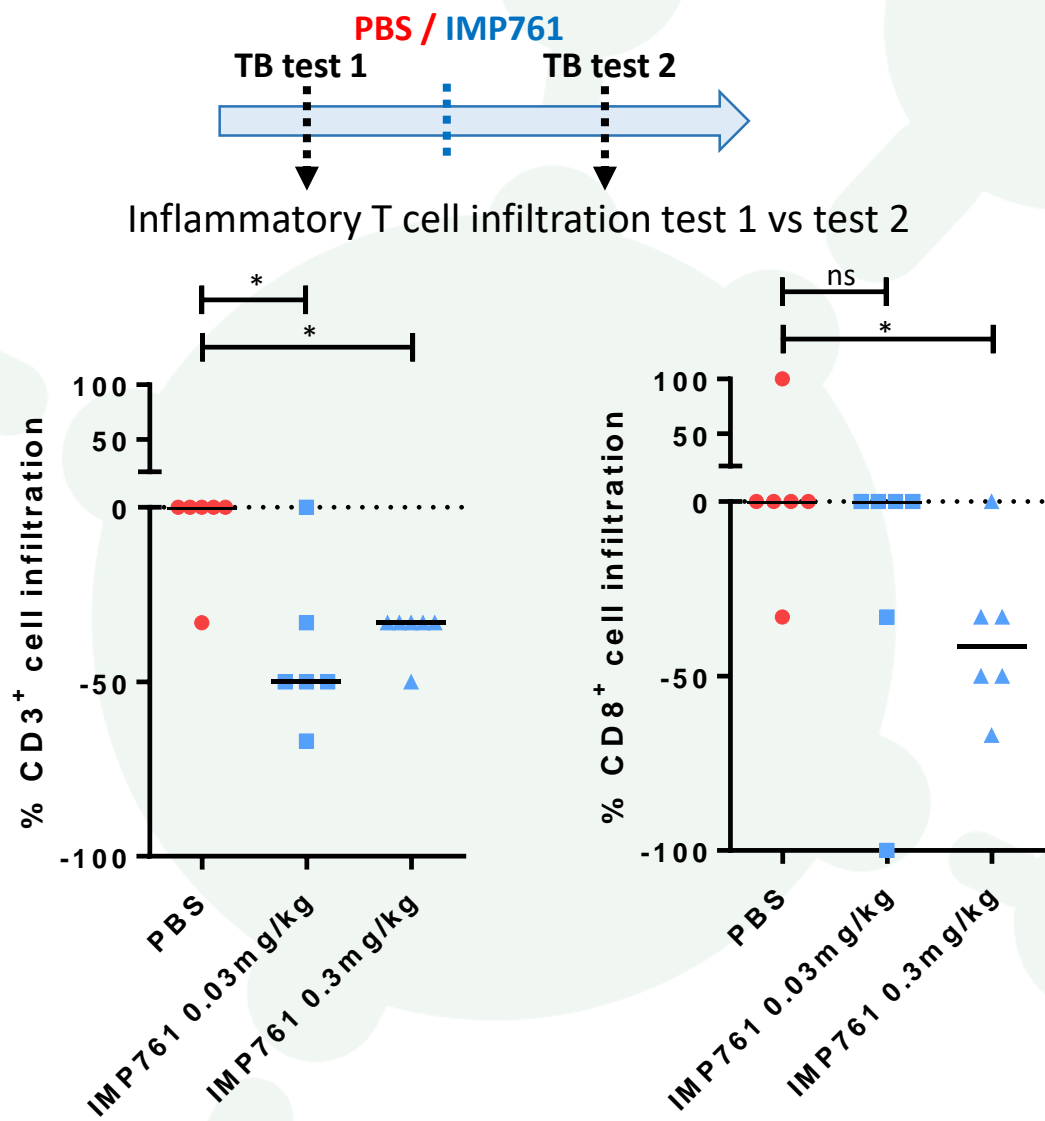
Immunofluorescence staining: inflammatory T cell infiltration at tuberculin test site before and after IMP761/PBS injection



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IMP761 inhibits inflammatory T cell infiltration *in vivo*

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IMP761 is able to inhibit significantly T cell infiltration of an antigen-specific intradermal reaction

Conclusion

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- **The Concept:** treating the cause of autoimmune diseases, not just the symptoms
- **The Target:** the self-peptide specific memory T cells harboring LAG-3
- **The Tool:** an agonistic LAG-3-specific mAb down-modulating self-peptide-induced TCR signaling
- **The Evidence (1):** *in vitro* down-modulation of peptide-induced human T cell proliferation and activation
- **The Evidence (2):** *in vivo* down-modulation of peptide-induced T cell infiltration/inflammation at the tissue site in a NHP model
- **The Status:** Cell line development ongoing and GMP manufacturing preparations underway in order to progress to clinical development.

Thank you!

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