

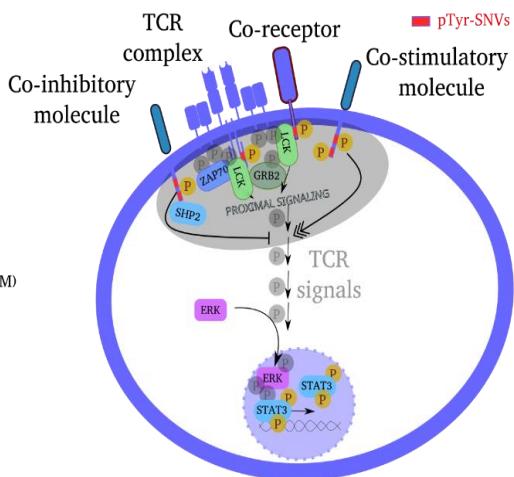
A

pTyr-motif altering SNPs
(pTyr-SNVs)

cSNV-1 ...YxxIxxxxxVxCxxI.
 cSNV-2 ...YxxQxxxxxVxCxxI.
STAT3-recruiting motif (SRM)
 cSNV-3 ...YxxIxxxxxVxYxxI.
Phosphatase-recruiting motif (ITIM)
 ...YxxIxxxxxAxYxxI
Kinase-recruiting motif (ITAM)

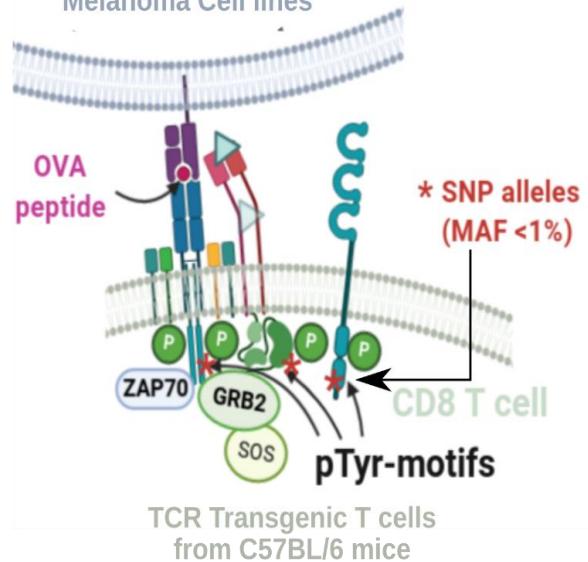
Patients

B

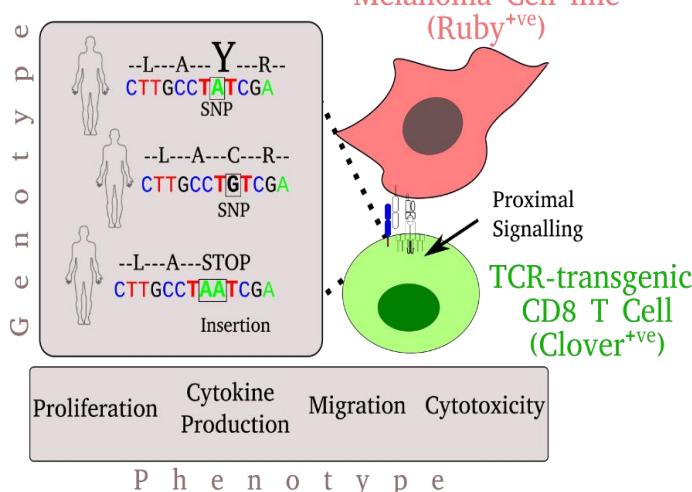


C

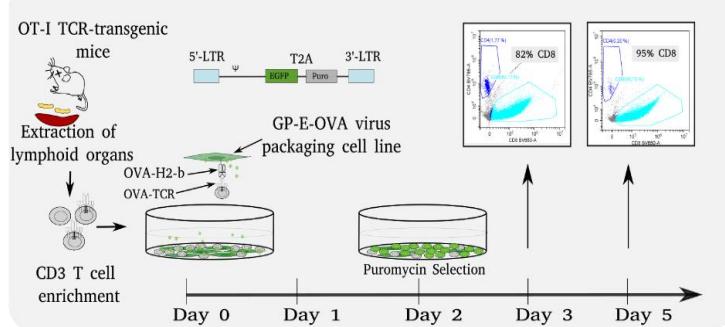
C57BL/6
Melanoma Cell lines



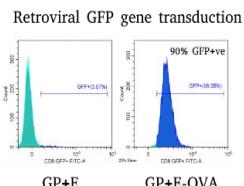
D



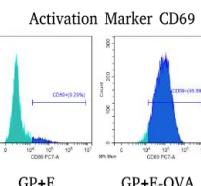
E



F



G



H

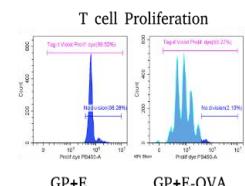


Figure-7. A new methodology to elucidate molecular functions of human pTyr-SNVs. (A) Rare germline pTyr-SNVs enriched in cancer cohorts are identified, (B) Example of rare coding region SNPs (cSNPs) and allelic variants which create proximal signalling motifs unique to an individual. Such cSNPs are referred to as pTyr-SNVs (C) TCR-induced proximal signalling pathways and pTyr-SNV sites either creating or destroying a pTyr-motif (D) Genotype-to-Phenotype study using murine HCC cell line and OT-I TCR transgenic CD8 T cells (E) Generation of pTyr-SNV expressing OT-I CD8 T cells within 5-days via co-cultivation of primary OT-I CD3 T cells and GP-E-OVA retrovirus producing packaging cell lines (F) Percentage of retroviral transduction (G & H) Selective activation of OT-I CD8 T cells (Ulaganathan VK et al., J. Genet Genomics, 2023, in press).