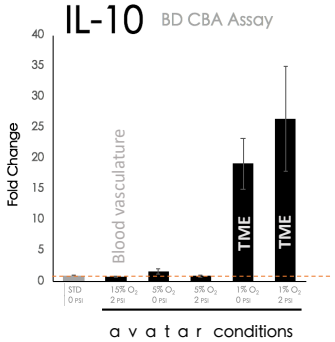
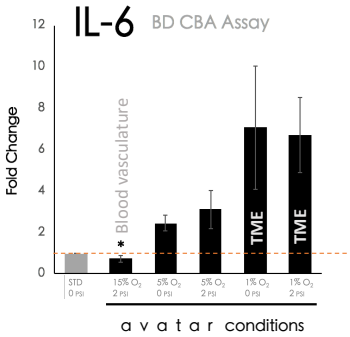
Recreate the tumor microenvironment

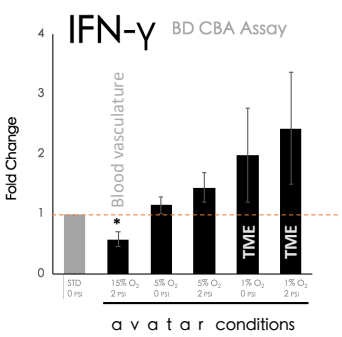
Optimized for immunotherapy research

avatar™
cell control system

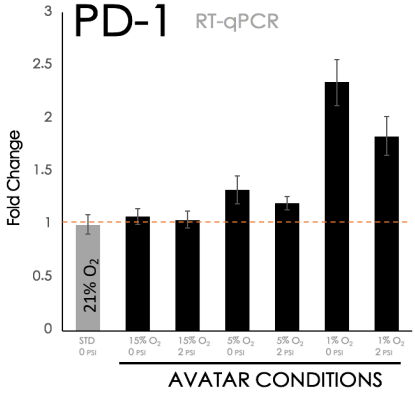
The avatar system can promote the expression of markers associated with the immunosuppressive tumor microenvironment

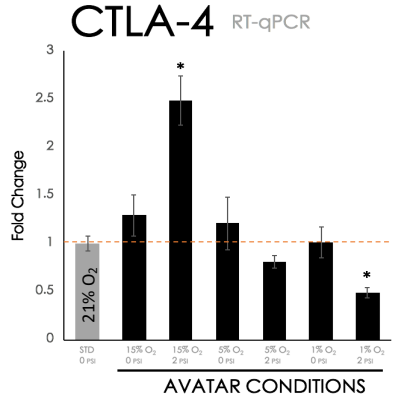


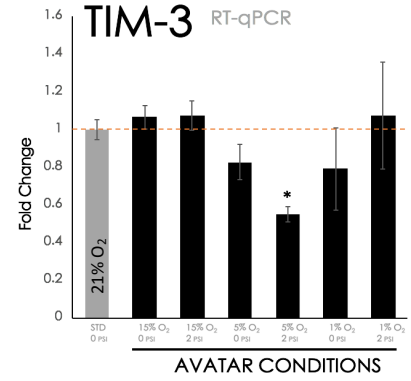


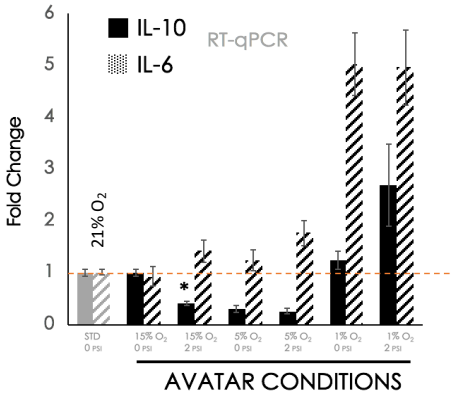


- Data was generated from healthy donor PBMCs obtained from freshly collected buffy coats via Ficoll gradient centrifugation
- Pan-T cell isolation was performed from PBMCs using Miltenyi Pan-T isolation kit (cat#: 130-096-535) and stored for 1 month at -80°C prior to culturing exercise
- Pan-T cells were thawed and cultured for 7 days in ImmunoCult-XF media, and supplemented with IL-2 (10ng/mL) every 3 days
- Cytokines in the supernatant were analyzed by BD CBA assay on day 7
- Initial cell seeding density was 500K/500uL and cultured in 24-well plates
- Error bars denote S.E.M.
- n = 3 donors









The avatar system can promote the expression of markers associated with the immunosuppressive tumor microenvironment

PD-1 checkpoint inhibitor exhibits increased expression under tumor microenvironment conditions, 1% oxygen +/- 2PSI

CTLA-4 checkpoint inhibitor exhibits increased expression under vasculature conditions,15% oxygen + 2PSI

TIM-3 checkpoint inhibitor exhibits decreased expression under bone marrow conditions, 5% oxygen + 2PSI

IL-10 expression is decreased under vasculature and bone marrow conditions, while **IL-6** is increased under tumor microenvironment conditions

- Data was generated from PBMCs obtained from freshly collected buffy coats via Ficoll from healthy donors.
- Pan-T cell isolation was performed from PBMCs using Miltenyi Pan-T isolation kit (cat#: 130-096-535) and stored for 1 month at -80°C prior to culturing exercise
- Pan-T cells were thawed and cultured for 3 days in ImmunoCult-XF media, and supplemented with IL-2 (10ng/mL)
- RT-qPCR was performed on day 3 of culture
- Initial cell seeding density was 500K/500uL and cultured in 24-well plates
- Error bars denote S.E.M.
- n = 3 donors