Identification of senescent cell surface markers as immunotherapeutic targets

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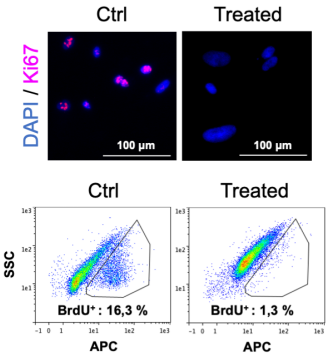
What we do? Since senescence is linked to aging and the occurrence of age-related pathologies, we aim to identify potential markers of senescent cells that can be specifically targeted by immunotherapy.

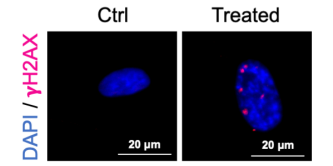
How we do? We combine omics and cell-based approaches to define cell surface senescence markers for immunotherapy development.

What we got? We identified novel markers that are highly expressed at the cell surface of a genotoxic stress-induced premature senescence model of human fibroblasts.

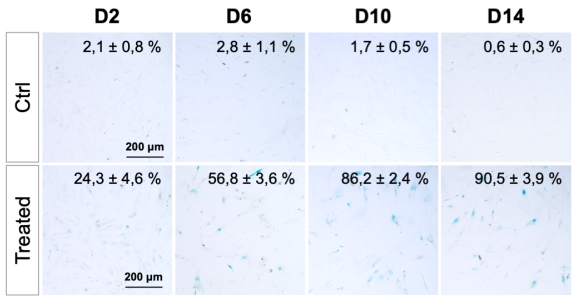
1. Inhibition of proliferation

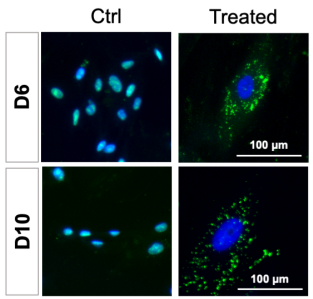


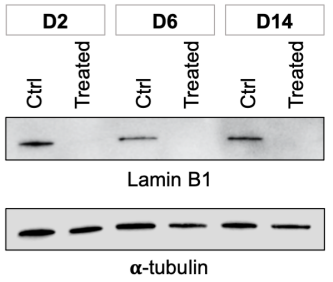
2. Induction of DNA damage

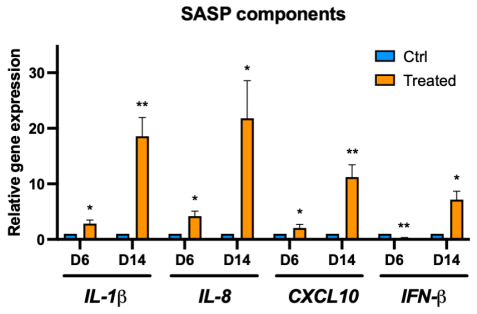


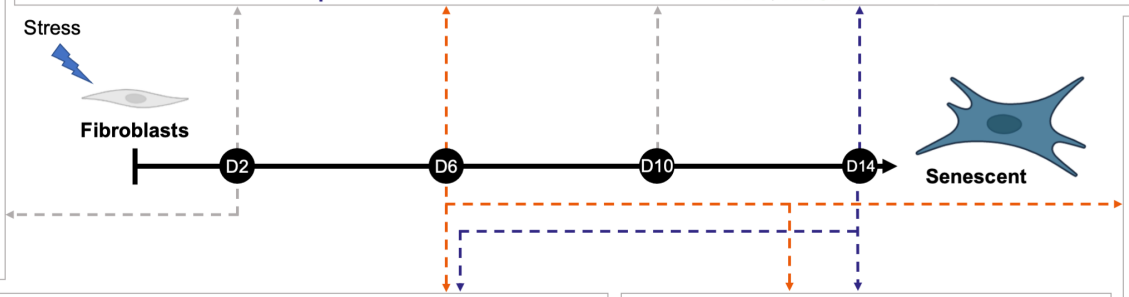
3. Appearance of senescence phenotype



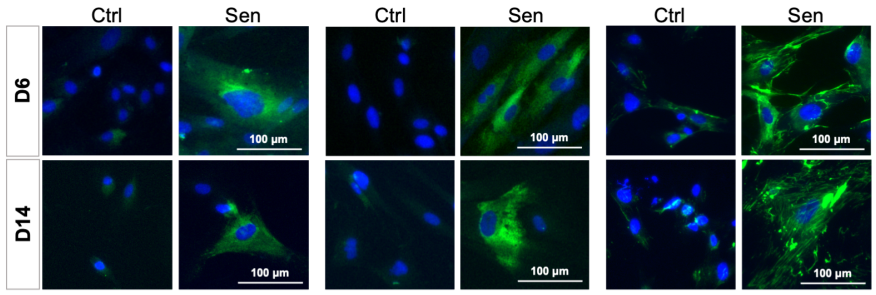


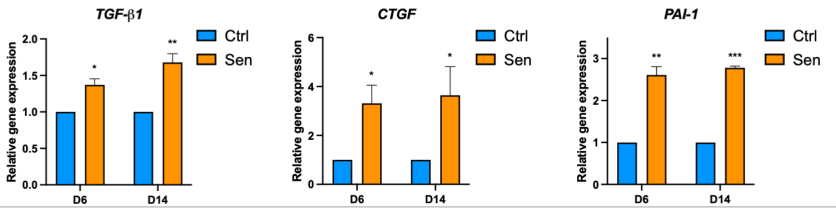






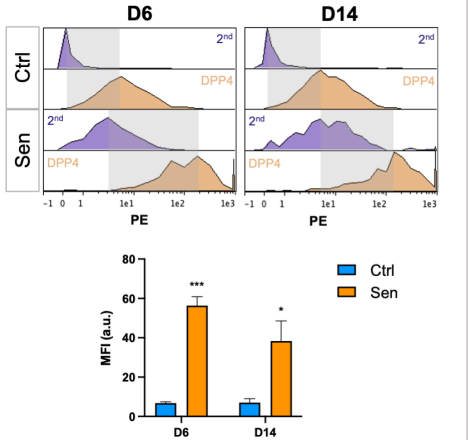
4. Upregulation of central mediators of tissue remodeling and fibrosis





5. Expression of cell surface markers

DPP4: Dipeptidyl peptidase-4

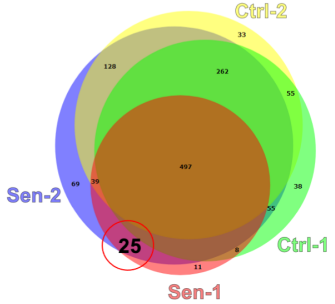


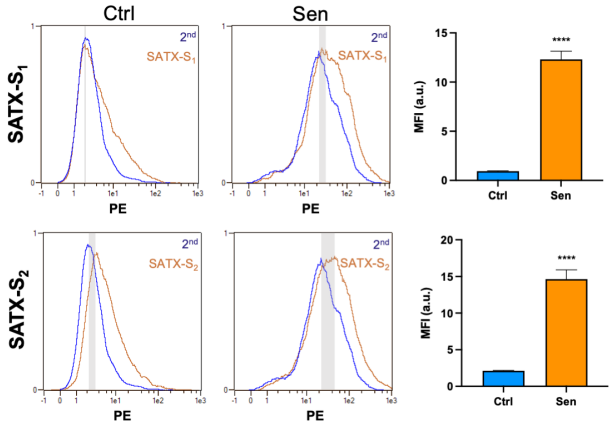
6. Identification of novel cell surface markers

Surfaceome

25 proteins (**SATX-S$_x$**)

Target validation





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