

Table 1: Senotherapeutics reported to have positive effects on skin and skin-derived cell types.

Senotherapeutic	Mechanism	model	Outcomes	Reference
D+Q	Pan receptor tyrosine kinase inhibitor	radiation induce senescent human oral keratinocytes and skin fibroblasts and mouse oral ulcer and rat skin ulcer models	downregulate p16 ^{Ink4a} and SASP, upregulate proliferation marker Ki67 and mitigates radiation induced ulcers	doi:10.3389/fonc.2019.01576
	BCL-2, PI3K/AKT pathway, insulin/IGF-1, HIF-1 α and other SCAPs kinase inhibitor	patients with diabetic kidney disease	reduction in p16 ^{INK4A+} and p21 ^{CIP1+} skin epidermal cells as well as circulating SASP factors	doi:https://doi.org/10.1016/j.ebiom.2019.08.069
ABT-737	inhibitor of BCL-W, BCL-XL, and BCL-2	double-transgenic K5-rtTA/tet-p14 mice	decrease in SAbGal+ cells, Increased levels of apoptosis, and increase in proliferating hair-follicle stem cells in the bulge	doi:10.1038/ncomms11190
		melanoderms exposed to UVA+B	senescent cell clearance, reduced mitochondrial ROS and epidermal atrophy rescue	doi:10.15252/embj.2019101982
FOXO4-D-retoro-inverso	disrupts p53-FOXO4	XpdTTD/TTD mouse model of accelerated	alleviated aging skin phenotypes,	doi:10.18632/aging.102682

peptide (FOXO4-DRI)		aging and naturally aged mice	hair loss and discoloration	
Fisetin	Blocks PI3K/AKT/mTOR pathway and antioxidant	UVB irradiated hairless mice	reduced collagen degradation, wrinkling, trans epidermal water loss and inflammation	doi:10.3390/ijms18102118
Tamatinib	Syk inhibitor	replicatively-induced senescent human diploid dermal fibroblasts	Senolysis	doi:10.18632/aging.103135
Nav-Gal	BCL-2 family inhibitor	palbociclib induced senescent SK-Mel-103 melanoma cell	Senolysis and additive antitumor effects in combination with cisplatin	doi:10.1111/acellular.13142
Rapamycin	mTOR inhibitor	UVA induced senescent human dermal fibroblasts	reduction in senescence markers and SASP as well as oxidative and genotoxic stress. Increased autophagy and type I collagen expression	doi:10.3389/fcell.2021.633331
		doxorubicin induced senescent human dermal fibroblasts	reduced senescence phenotypes, SASP, and ROS while improving migration ability, cell proliferation	doi:10.1038/srep43299

		humans 40+ years of age with evidence of photoaging	improved clinical appearance of the skin, increased levels of collagen VII, and reduced expression of p16Ink4a and other histological markers of aging and senescence	doi:10.1007/s11357-019-00113-y
Metformin	Many targets	humans with skin diseases	reduces symptoms associated with hidradenitis suppurativa, acanthosis nigricans, hormonal acne, psoriasis, cutaneous malignancies, hirsutism and hyperpigmentary disorders	doi:10.4103/0253-7613.174388
		replicatively induced senescent human dermal fibroblasts and mesenchymal stem cells	reduced SA- β -gal activity, reduced expression of SASP and markers of senescence. Increased the percentage of Ki67+ cells	doi:10.1111/acellular.12765 (2018)
apigenin	inhibitor of NF- κ B p65 activity <i>via</i> the	bleomycin-induced senescent BJ fibroblasts	Potent inhibition of SASP	doi:10.1016/j.bcp.2015.06.013

	IRAK1/I κ B α signaling pathway			
kaempferol	inhibitor of NF- κ B p65 activity <i>via</i> the IRAK1/I κ B α signaling pathway	bleomycin-induced senescent BJ fibroblasts	Potent inhibition of SASP	doi:10.1016/j.bc p.2015.06.013
oleuropein aglycone	undetermined	Pre-senescent neonatal human dermal fibroblasts	reduced SA- β -gal+ cells, p16INK4a protein expression and SASP	doi:10.3390/ijm s18112275
hydroxytyrosol	undetermined	Pre-senescent neonatal human dermal fibroblasts	reduced SA- β -gal+ cells, p16INK4a protein expression and SASP	doi:10.3390/ijm s18112275