



**Anti
inflammatory**

Anti-aging

Anti-oxidant

Lightening

INCI: Glycerin (and) water (and) *Juniperus communis* callus extract

About

JuniCell is a *Juniperus communis* plant stem cell extract. Juniper stem cell line was established from young spring shoots that are especially rich in bioactive compounds but in nature are produced only for a limited period of time during season. Stem cells of juniper contain high concentrations of catechins, gallocatechins and procyanidins, that contribute to specific biological activities. JuniCell has strong anti-ageing and skin protecting activity.

Efficacy

- Promotes collagen production;
- Protects skin keratinocytes from negative effects caused by ultraviolet light induced damages;
- Alleviates skin inflammation caused by environmental stress;
- Reduces accumulation of senescence markers and reverses cellular ageing;
- Regulates skin pigmentation by reducing melanin synthesis activity.

The Plant

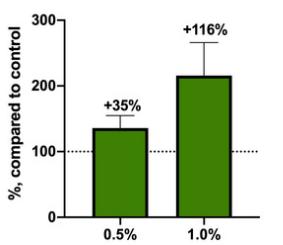


Juniperus communis

One of the Earth's ancient botanical treasures, thrives across the Northern Hemisphere. This plant is experiencing overexploitation, therefore we, by utilizing only its cells, have found its sustainable role in cosmetics. We align with environmental preservation, reducing the plant's burden while delivering the plant's time-tested benefits to skincare formulations.

In vitro data

Changes in expression of collagen I



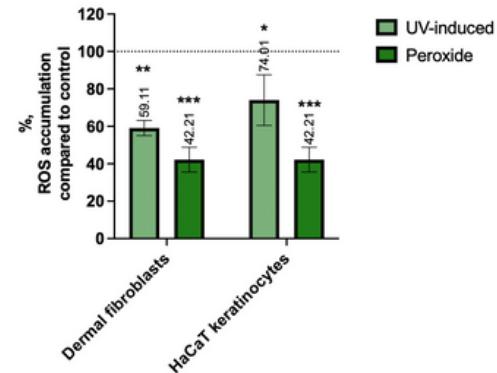
Even at concentrations as low as **0.5% JuniCell promotes collagen expression** in dermal fibroblasts.

Reversal of cellular senescence

Concentration	MFI (arbitrary units)
Control	~2600
0.5%	~1800 (-30%)
1%	~1800 (-27%)

Reduces accumulation of senescence marker beta-galactosidase in dermal fibroblasts after UV-induced ageing (senescence marker quantified by flow cytometry).

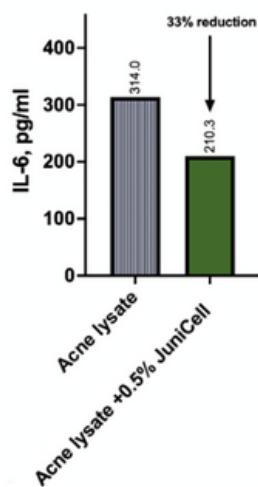
Reduction of intracellular reactive oxygen species (ROS)



JuniCell protects skin keratinocytes from negative effects caused by ultraviolet light. **0.5% (v/v) extract reduces UV and peroxide induced oxidative stress in skin cells** (ROS quantified by flow cytometry)

More Information:
www.alternativeplants.eu

Reduction of IL-6 production (4h)

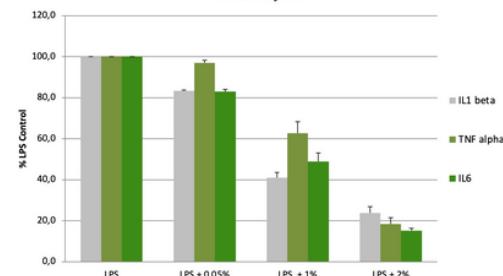


Anti-inflammatory activity: **33%**
reduction of IL-6 release from HaCaT keratinocytes stimulated by bacterial lysate.

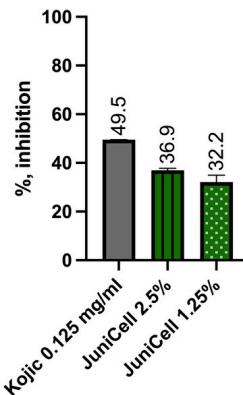
Reduces secretion of pro-inflammatory cytokine secretion under inflammatory conditions further substantiating strong anti-inflammatory activity.

New!

Anti-inflammatory activity in LPS-induced monocytes



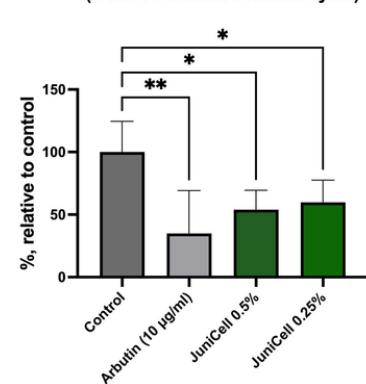
Tyrosinase inhibition



Pigmentation regulating activity

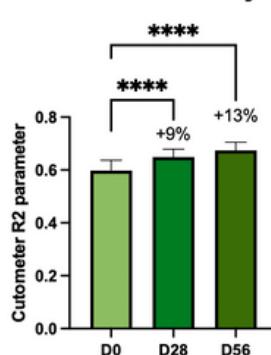
JuniCell acts on melanin synthesis in melanocytes. In melanocytes JuniCell reduced melanin synthesis by more than 40%. Moreover it also has the ability to inhibit tyrosinase, the key enzyme involved in melanin synthesis.

Melanin content (α -MSH stimulated melanocytes)



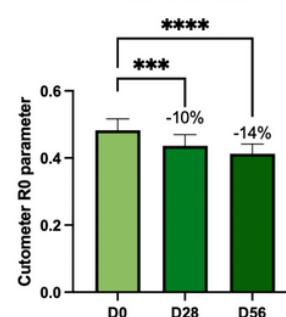
In vivo data

Skin elasticity



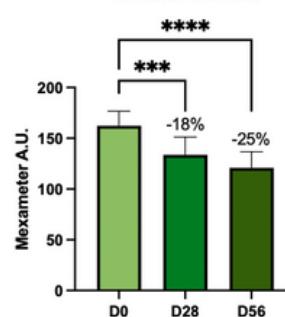
Parameter value increases = skin elasticity increases

Skin firmness



Parameter value decreases = skin firmness increases

Melanin content



Reduced pigmentation

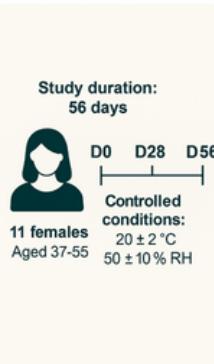
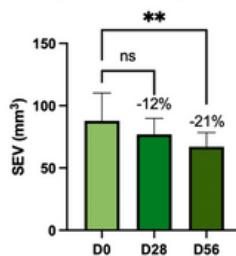
More Information:

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Contacts:

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Skin surface microtopography (volume/roughness)



Test methods	
	Cornometer® CM 825 Skin moisture
	Tewameter® TM 300 TEWL
	Cutometer® MPA 580 Firmness, elasticity
	Visoscan® VC 20 plus Skin surface volume
	Mexameter® MX 18 Melanin content

Summary of in vivo studies



Demonstrated Anti-Aging Efficacy

Improved skin firmness and elasticity over 56 days



Visible Skin Brightening Effects

Reduced melanin production



No adverse reactions



Ideal for Anti-Aging and Brightening Formulations

Suitable for creams, serums, and complexion-enhancing products

Technical specification - data sheet

Product	JuniCell /INCI: Glycerin (and) aqua (and) Juniperus communis callus extract
Appearance	Yellow to light brown/brown. Formation of small amounts of precipitate might be observed and does not affect product quality.
Odour	Characteristic
pH	6.0 ± 1 at room temperature (22... 25 °C)
Solubility	Water soluble
Density	1.10 – 1.20 g/cm² at room temperature (22... 25 °C)
Total phenolic content	> 400 µg/ml gallic acid equivalents (Folin-Ciocalteu method)
Microbiological quality (total plate count)	Aerobic mesophilic bacteria < 100 cfu/g (ISO 21149) Yeasts < 100 cfu/g (ISO 16212)
Recommended concentration for use in cosmetic products	0.25 – 0.75%
Shelf life and storage conditions	12 months Store in room temperature, protect from light.

More Information:
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