



NxC

NAD+ EXO COLLA

EXOSOME (GINSENG, CICA, CAMELLIA) + NAD

NAD+ EXO COLLA

EXOSOME (GINSENG, CICA, CAMELLIA) + NAD





Exosomes

Red Panax Ginseng Callus
Centella Asiatica Callus
Camellia Japonica Callus

NAD⁺

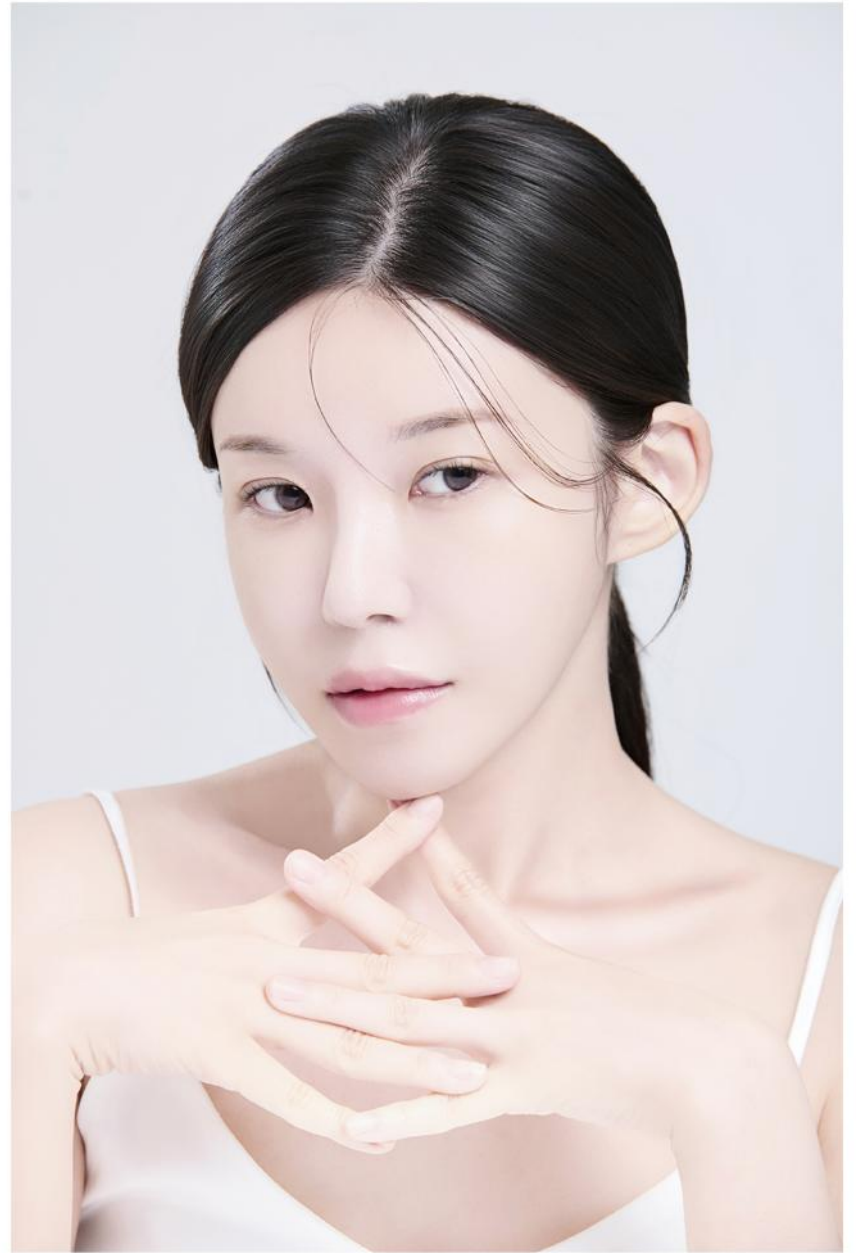
Nicotinamide Adenine Dinucleotide
High-purity 98% NAD⁺
Increase absorption rate, cell function activation
antioxidant effect compared to regular NAD⁺

PDRN

Made by a French
From Wild Alaskan salmon
High-purity PDRN 30,000 ppm
High-purity PN 10,000 ppm

Collagen & Peptides

Atelocollagen
Hydrolyzed Collagen
8 Amino Acid Peptides
Glutathione





No. 1 EXOSOME, Freeze-Dried Ampoule : 100mg
No. 2 PDRN + Collagen + Peptides, Solvent Ampoule : 6ml

PRODUCT NAME | NAD+ EXO COLLA

EXOSOME (Ginseng, Cica, Camellia)

- Panax Ginseng Callus Extracellular Vesicles
- Centella Asiatica Callus Extracellular Vesicles
- Camellia Japonica Callus Extracellular Vesicles

NAD

- Nicotinamide Adenine Dinucleotide

PDRN

- Made by a French manufacturer derived from wild Alaskan salmon.
- Authorized by European Health Authorities (USA and Canada).

Collagen & Peptides

- Atelocollagen, Hydrolyzed Collagen
- 8 Peptides

Exosome + NAD⁺

NAD EXO COLLA is a product that extracts exosomes, a key active ingredient, from three plant stem cell cultures beneficial to the skin. Synthesizes and nanonizes NAD⁺ and exosomes to increase skin absorption of various cell-active ingredients.



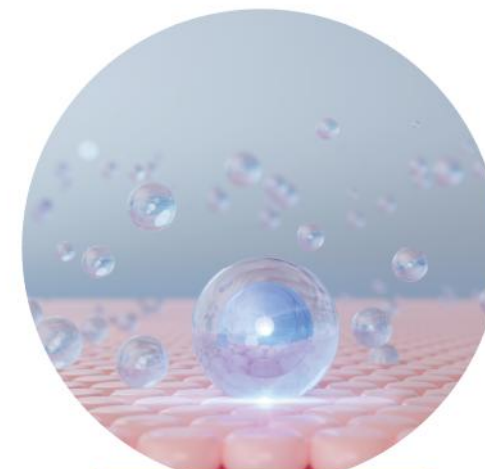
3 Exosomes

Red Ginseng,
Cica,
Camellia



Exosome + NAD⁺

Extract exosome components within
0.5% of stem cell culture extract,
synthesize and nanoize NAD and exosomes
High absorption rate as it is 184 ~ 462
times smaller than the size of skin pores

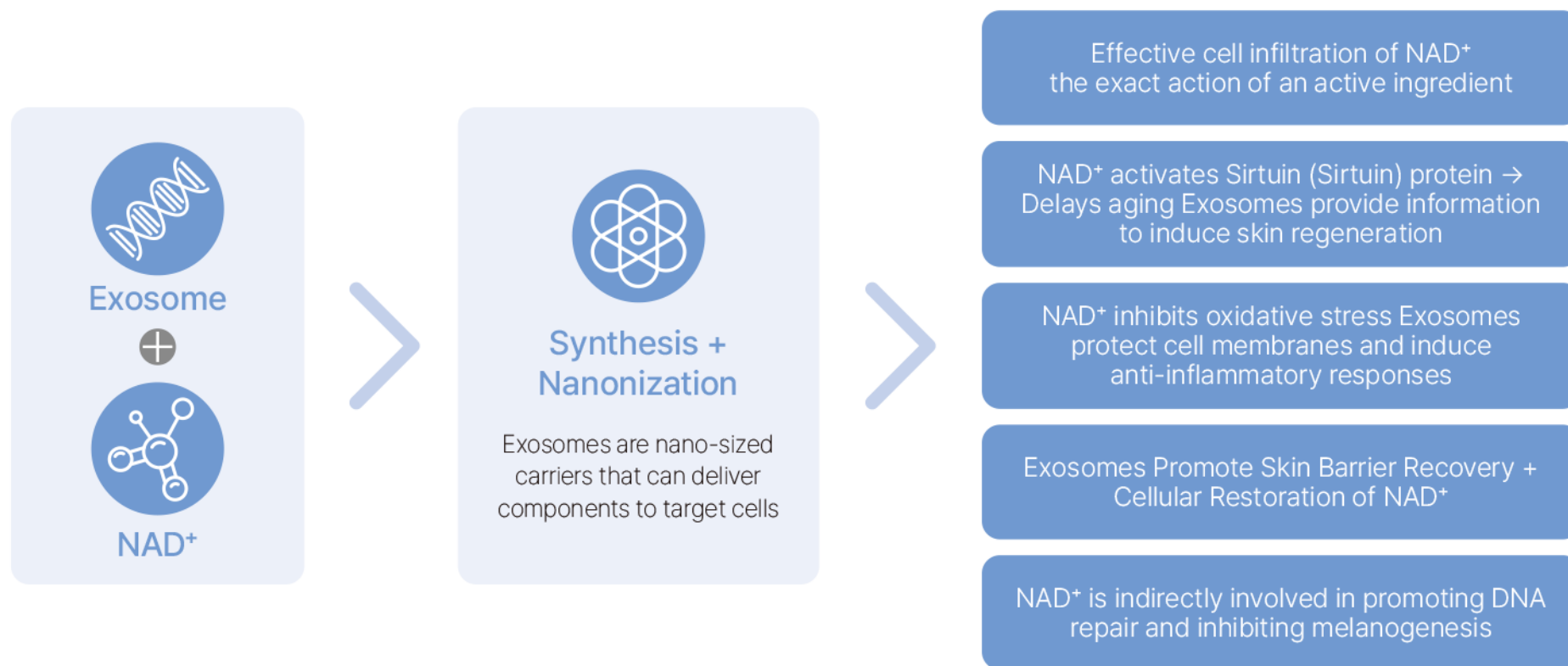


Skin/issue
Regeneration

Contains various active ingredients
such as protein DNA, mRNA, and lipids
that help with skin cell
regeneration and activation.

Exosome + NAD⁺

Exosomes induce skin regeneration by delivering nanoparticles containing intercellular signaling substances → necessary "information on skin regeneration induction" to other cells As if putting NAD⁺ in exosomes and injecting them directly into cells, it delivers → It has a much higher synergy effect than regular NAD⁺



»»»» NAD⁺ (Nicotinamide Adenine Dinucleotide)

Nicotinamide adenine dinucleotide (NAD) is an essential coenzyme for cell energy metabolism and is a key component that activates cell function and provides antioxidant and anti-aging effects.

In particular, it has excellent skin elasticity, wrinkle improvement, and antioxidant effects, so it is used in high-function skin care.

Activation of cell energy

NAD⁺ is essential for ATP (Adenosine Triphosphate: Energy source of Cellular respiration) production in mitochondria → Restoring cell vitality and revitalizing skin

Antioxidant action

Suppressing free oxygen (ROS) → Prevention of aging due to oxidative stress

Anti-aging effect

Suppressing cell aging, enabling Sirtuins → Maintaining skin elasticity and improving wrinkles

Anti-inflammatory effect

Decreased inflammatory cytokines → Sensitive skin calms down, barrier recovery

Skin tone improvement

Improving skin cell resilience → inducing clear and even skin tone

Promote DNA Recovery

Participation in activation of PARP (Poly (ADP-Ribose) polymerase : Proteins that regulate various processes in the cell, such as DNA repair, within the cell) enzymes → Support for recovery of DNA damage caused by external stimuli such as ultraviolet rays

»»»» 3 Exosome + NAD⁺ + PDRN + Collagen & Peptides**3 Exosomes**

Technology extracts exosomes, a key active ingredient, from 3 plant stem cell (callus) culture medium, from skin improvement and skin cell growth and exosome nanoparticles increase the absorption rate of the active ingredient.

High-purity exosomes are directly isolated and purified from 3 plant stem cell (callus) culture.



No. 1 EXOSOME
Freeze-Dried Ampoule



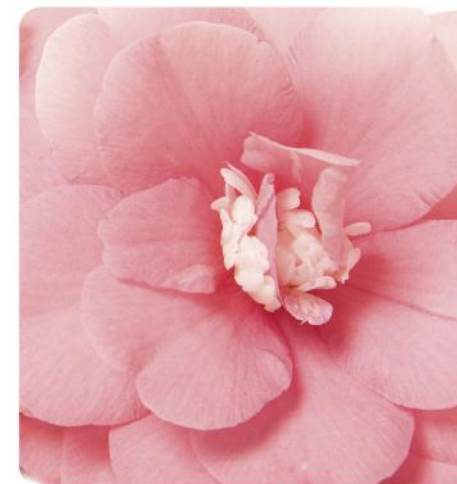
Red Ginseng



Centella Asiatica



Camellia Japonica



3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

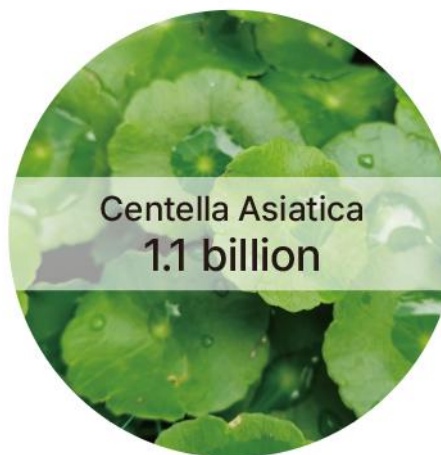
3 Exosomes Particles

The ultra-nano particles contain of about 14 billion/ml of purified high-purity exosomes alone.

- Red Ginseng : 11 billion, CICA : 1.1 billion, Camellia : 1.0 billion



Red Ginseng
11 billion



Centella Asiatica
1.1 billion



Camellia Japonica
1.0 billion



No. 1 EXOSOME
Freeze-Dried Ampoule



3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

3 Plant-derived Exosomes

Purified high-purity exosomes isolated from only the core active ingredients plant stem cell (callus) culture medium.



Ginsenoside (Saponin) helps regenerate aging skin cells, promotes the synthesis of hyaluronic acid, a natural moisturizing factor in the dermis of the skin, and provides skin elasticity. It also inhibits the activity of Tyrosinase, which regulates melanogenesis, preventing excessive pigmentation, which helps maintain bright skin tones.



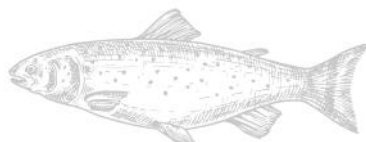
Phytosterol, Glycoside Tannin ingredient promote skin cell regeneration, antibacterial skin inflammation and wound healing action.
Madecassic Acid, Asiaticoside ingredient helps skin collagen synthesis, giving skin elasticity and preventing aging.



Rich in flavonoid, polyphenol, catechin, methionine, etc. and have excellent antioxidant properties, which help protect the skin from irritation inside and outside the skin. They also have moisturizing effects, inhibiting inflammation, shrinking pores, and inhibiting excessive sebum secretion.

3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

» PDRN



- High-purity PDRN 30,000 ppm
- High-purity PN 10,000 ppm
- PDRN is made by a French manufacturer derived from wild Alaskan salmon.
- PDRN is authorized by European Health Authorities (USA and Canada)
- Promotes and increases skin hydration
- OH ° free radical scavenger
- Reconstruction of damage skin
- Anti UV light
- Reinforces the antioxidant barrier of the skin

No. 2 PDRN + Collagen + Peptides
Solvent Ampoule



3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

Collagen & Peptides

- EGF, FGF, IGF : Collagen & Elastin regeneration growth factors
- **Atelocollagen, Hydrolyzed Collagen** : Promote the synthesis of collagen and elastin, Doubles the moisturizing effect compared to hyaluronic acid Provides elasticity to the skin and prevents sagging
- **Glutathione** : Excellent whitening effect due to melanin suppression effect. Helps delay skin aging with powerful antioxidant effect.

➤ 8 (Amino Acid) Peptides : made from 99% high purity powder raw materials

Galloyl Pentapeptide-74(SEATIDE)	Effective for Anti-wrinkle with high collagen mRNA expression
Nicotinoyl Tripeptide-1	Effective for powerful antioxidant, soothing and anti-inflammatory
Nonapeptide-1	Helps improve bright clean skin tone by reducing multi-pigmentation
Acetyl Hexapeptide-8	Effective for Anti-wrinkle by inhibiting skin muscle contraction
Palmitoyl Pentapeptide-4	Increasing collagen and preventing elastin decomposition
Palmitoyl Tetrapeptide-7	Increasing collagen and preventing elastin decomposition
Biotinoyl Tripeptide-1	Preventing melanin production in the skin for whitening effect
Glycine Soja (Soybean) Peptide	Promotes collagen synthesis and adds elasticity to the dermis

NxC NAD+ EXO COLLA

Clinic Report on Efficacy &
Rate of change by test item



3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

Clinic Report on Efficacy

KDRI-2025-936		Assessment of Anti-aging Effect		
Summary of Test Result				
TITLE	Anti-Aging Clinical Evaluation of "NAD EXO COLLA"			
INSTITUTE	Korea Dermatology Research Institute	PERIOD	Jan. 02. 2025 ~ May. 23. 2025	
TEST METHOD	Sample Form	White solid & clear liquid	Test Period	Jan. 02. 2025 ~ May. 23. 2025
	Number of Sample	2 EA (Test Sample, Placebo Sample)	Number of Subjects	16
	Treatment	Self-application by subjects		
	Detail on Test Method	1. Subject Selection : 16 subjects who met the selection criteria and did not meet the exclusion criteria were selected 2. Application Method : Mix the NAD-Exo and Skin solvent evenly and use them twice a day in the morning and evening 3. Evaluation Method a. Assessment of using Antera 3D b. Assessment of using Corneometer® c. Assessment of using Cutometer® d. Assessment of using Ultrasound e. Assessment of using Mexameter f. Cutaneous irritation evaluation by dermatologist		
TEST RESULT	As a result of the testing on 16 subjects during the 4 weeks test period, the test area using the "NAD EXO COLLA" sample showed a statistically significant ($p<0.05$) improvement in the eye wrinkles, skin moisturizing, skin elasticity, dermal density and melanin index (M-value) after sample application compared to before sample application and showed a statistically significant difference ($p<0.05$) even in comparison with the placebo area using the placebo sample. Therefore, it is judged that the test sample can help anti-aging. In addition, no special adverse reaction was observed during the testing period, therefore the sample is considered to be safety. (There may be temporary changes and individual differences.)			
ATTACHED DATA	Data of test result			

KDRI-2025-936

Assessment of Anti-aging Effect

12. Discussion and Conclusions

This clinical study was designed to evaluate "NAD EXO COLLA" focuses on the efficacy of anti-aging for the 4 weeks. The test was done for total 16 subjects and all the subjects completed the study without any dropouts.

The results of the experiment are as follows.

- 1) The eye wrinkle index of the test area decreased to 9.20% after 2 weeks of sample application and 17.89% after 4 weeks of the test compared to before the test. And the eye wrinkle index of the placebo area increased 0.51% after 2 weeks and decreased 0.46% after 4 weeks.
- 2) The skin water content of the test area increased to 11.79% after 2 weeks of sample application and 22.40% after 4 weeks of the test compared to before the test. And the skin water content of the placebo area increased 1.35% after 2 weeks and increased 0.99% after 4 weeks.
- 3) The epidermis elasticity of the test area increased to 15.77% after 2 weeks of sample application and 28.56% after 4 weeks of the test compared to before the test. And the epidermis elasticity of the placebo area decreased 2.06% after 2 weeks and decreased 1.60% after 4 weeks.
- 4) The dermal density of the test area increased to 22.32% after 2 weeks of sample application and 39.78% after 4 weeks of the test compared to before the test. And the dermal density of the placebo area increased 8.13% after 2 weeks and increased 15.19% after 4 weeks.
- 5) The melanin value of the test area decreased to 3.97% after 2 weeks of sample application and 10.30% after 4 weeks of the test compared to before the test. And the melanin value of the placebo area decreased 0.005% after 2 weeks and increased 0.99% after 4 weeks.
- 6) As a result of the expert visual evaluation, the pigmentation grade of the test area decreased to 0.03 after 2 weeks of sample application and 0.03 after 4 weeks of the test compared to before the test. and no change according to the sample use period was observed in the placebo area.

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Papers related to Exosome and NAD

NIH National Library of Medicine
National Center for Biotechnology Information

Review > J Drugs Dermatol. 2025 Jan 1;24(1):12-18. doi: 10.36849/JDD.8872.

Exosomes in Cosmetic Dermatology: A Review of Benefits and Challenges

Diala Haykal, Saranya Wyles, Lilil Garibyan, Hugues Cartier, Michael Gold

NIH National Library of Medicine
National Center for Biotechnology Information

> Front Pharmacol. 2021 Oct 4;12:716248. doi: 10.3389/fphar.2021.716248. eCollection 2021.

Anti-Photoaging and Anti-Inflammatory Effects of Ginsenoside Rk3 During Exposure to UV Irradiation

Shichao Wan^{1,2,3}, Yannan Liu^{1,2,3}, Jingjing Shi^{1,2,3}, Daidi Fan^{1,2,3}, Binglin Li⁴

Affiliations + expand

MDPI

Multifaceted Therapeutic Potential of Plant-Derived Exosomes: Immunomodulation, Anticancer, Anti-Aging, Anti-Melanogenesis, Detoxification, and Drug Delivery

by Arzu Zeynep Karabay¹, Jaleh Barar², Yalda Hekmatshoar³ and Yalda Rahbar Saadat^{4,*}

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pharmaceutics **MDPI**

Article
Dermal Delivery of Korean Red Ginseng Extract: Impact on Storage Stability of Different Carrier Systems and Evaluation of Rg1 and Rb1 Skin Permeation Ex Vivo

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National Center for Biotechnology Information

> J Ginseng Res. 2020 Sep;44(5):738-746. doi: 10.1016/j.jgr.2019.08.004. Epub 2019 Aug 21.

Effects of red ginseng on the elastic properties of human skin

Moonyoung Park¹, Se Jik Han^{1,2}, Donggerami Moon³, Sangwoo Kwon¹, Jin-Woo Lee³, Kyung Sook Kim¹

Affiliations + expand

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> BMC Complement Altern Med. 2019 Jan 28;19(1):30. doi: 10.1186/s12906-018-2405-4.

Protective effects of Camellia japonica flower extract against urban air pollutants

Minkyung Kim¹, Dahee Son¹, Seoungwoo Shin¹, Deokhoon Park¹, Sangyo Byun², Eunsun Jung³

Affiliations + expand

Journal of Ginseng Research 48 (2024) 211–219

Contents lists available at ScienceDirect
Journal of Ginseng Research
journal homepage: www.sciencedirect.com/journal/journal-of-ginseng-research

Research Article
Ginseng root-derived exosome-like nanoparticles protect skin from UV irradiation and oxidative stress by suppressing activator protein-1 signaling and limiting the generation of reactive oxygen species

Wooram Choi^{1,*}, Jeong Hun Cho^{1,2}, Sang Hee Park^{1,2}, Dong Seon Kim², Hwa Pyoung Lee², Donghyun Kim², Hyun Soo Kim¹, Ji Hye Kim^{1,2}, Jae Youl Cho^{1,2}

¹ Department of Integrative Biotechnology, Sanggyeongsan University, Seoul, Republic of Korea

NIH National Library of Medicine
National Center for Biotechnology Information

> Biomed Pharmacother. 2024 Jul;176:116855. doi: 10.1016/j.biopha.2024.116855. Epub 2024 Jun 7.

Investigating the proliferative inhibition of HepG2 cells by exosome-like nanovesicles derived from Centella asiatica extract through metabolomics

Jingyi Huang¹, Xiaoyu Cao¹, WenFeng Wu², Liang Han³, FengYun Wang⁴

NIH National Library of Medicine
National Center for Biotechnology Information

Review > J Cell Mol Med. 2023 Mar;27(5):593-608. doi: 10.1111/jcmm.17635. Epub 2023 Feb 8.

Therapeutic properties and pharmacological activities of asiaticoside and madecassoside: A review

Shinjini Bandoopadhyay¹, Sujata Mandal², Mimosa Ghorai², Niraj Kumar Jha^{3,4,5}

3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

NAD EXO-COLA is a product that extracts exosomes, a key active ingredient, from three plant stem cell cultures beneficial to the skin and synthesizes and nanonizes NAD and exosomes to increase skin absorption of various cell-active ingredients.

Papers related to Exosome and NAD

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Randomized Controlled Trial > Exp Dermatol. 2007 Jun;16(6):490-9.
doi: 10.1111/j.1600-0625.2007.00553.x.

A topical lipophilic niacin derivative increases NAD, epidermal differentiation and barrier function in photodamaged skin

NIH National Library of Medicine
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> Cells. 2024 Oct 30;13(21):1799. doi: 10.3390/cells13211799.

Novel Approach to Skin Anti-Aging: Boosting Pharmacological Effects of Exogenous Nicotinamide Adenine Dinucleotide (NAD⁺) by Synergistic Inhibition of CD38 Expression

life

MDPI

Communication

Supplementation of Nicotinic Acid and Its Derivatives Up-Regulates Cellular NAD⁺ Level Rather than Nicotinamide Derivatives in Cultured Normal Human Epidermal Keratinocytes

Takahiro Oyama ^{1,2,*}, Takumi Yamamoto ¹, Takeshi Kameda ¹, Takanori Kamiya ¹, Hideaki Abe ¹, Takehiko Abe ¹ and Sei-ichi Tanuma ²

NIH National Library of Medicine
National Center for Biotechnology Information

> Plast Reconstr Surg. 2022 Oct 1;150(4 Suppl):41S-48S. doi: 10.1097/PRS.0000000000009673.
Epub 2021 Sep 28.

The Role of NAD⁺ in Regenerative Medicine

Nichola J Conlon ¹

Affiliations + expand

PMID: 36170435 PMCID: PMC9512238 DOI: 10.1097/PRS.0000000000009673

Abstract

The understanding of the molecular and cellular basis of aging has grown exponentially over recent years, and it is now accepted within the scientific community that aging is a malleable process; just as it can be accelerated, it can also be slowed and even reversed. This has far-reaching implications for our attitude and approach toward aging, presenting the opportunity to enter a new era of cellular regenerative medicine to not only manage the external signs of aging but also to develop therapies that support the body to repair and restore itself back to a state of internal well-being. A wealth of evidence now demonstrates that a decline in cellular nicotinamide adenine dinucleotide (NAD⁺) is a feature of aging and may play a role in the process. NAD⁺ plays a pivotal role in cellular metabolism and is a co-substrate for enzymes that play key roles in pathways that modify aging. Thus, interventions that increase NAD⁺ may slow aspects of the aging trajectory, and there is great interest in methods for cellular NAD⁺ restoration. Given these recent advancements in understanding the cellular aging process, it is important that there is an integration between the basic scientists who are investigating the underlying mechanisms of cellular aging and the surgeons and aesthetic practitioners who are providing antiaging therapies. This will allow the effective translation of this vastly complex area of biology into clinical practice so that people can continue to not only stay looking younger for longer but also experience improved health and wellness.

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3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

Thesis Papers on Clinical Trials

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Journal of Ginseng Research

journal homepage: www.sciencedirect.com/journal/journal-of-ginseng-research




Review Article

Ginseng and ginseng byproducts for skincare and skin health

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ARTICLE INFO

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Lysophosphatidic acid
Cosmetic ingredients
Cosmetics

ABSTRACT

Ginseng is a traditional herbal medicine with a long history of use for the prevention and/or treatment of various diseases. Ginseng is used worldwide as a functional food to maintain human health. In addition, ginseng has been used as a raw ingredient in cosmetics with various applications, ranging from skin toning to anti-aging. Some cosmetic products contain ginseng extracts from Korea and other countries, as it is thought that ginseng can also exert beneficial effects on human skin. However, it remains unclear which ginseng component(s) could be the main active compound that directly contributes to skin health and/or prevents skin aging. It is also important to understand the mechanisms by which the ginseng component(s) exert their effects on the skin and skin health. This review describes recent *in vitro* and *in vivo* studies involving ginseng extracts, ginseng ingredients, and ginseng byproducts for skincare and skin health and discusses emerging evidence that ginsenosides, gintonin, and ginseng byproducts could be novel candidates for skincare and skin health applications ranging from anti-aging to the treatment of skin diseases such as atopic dermatitis and hypertrophic scars and keloids. The mechanisms underlying the beneficial effects of ginseng components and byproducts on skin health are discussed. In addition, this review shows how ginseng components, such as gintonin, a newly identified ginseng component, might contribute to skin health and skin disease when used as a supplementary ingredient in cosmetics and further proposes a novel combination in cosmetic products containing both ginsenosides and gintonin.

7. Conclusion

Recent *in vitro* and *in vivo* studies, as described above, suggest that ginseng ingredients can be used in functional and medicinal cosmetics because they exhibit anti-skin aging and anti-wrinkle effects, facilitate wound healing and whitening, stimulate hair growth, and even inhibit hypertrophic scars and keloids [28,42–47] (Table 1). Developing target-oriented functional or medical cosmetics with enhanced levels of ginseng ingredients matching those in functional foods containing ginseng may be necessary. However, it might not be easy to enhance ginseng ingredients in cosmetics, as ginseng root itself is an expensive herb, and individual ginsenosides are even more expensive. An alternative for lowering the cost of ginseng ingredients is to utilize ginseng byproducts produced during the cultivation and processing of red ginseng products. This could be a way to upcycle ginseng byproducts and increase their added value [99].

In addition, if different ginseng components or fractions are combined as cosmetic ingredients, they can complement each other, leading to additive or synergistic effects for skincare and skin health. For example, although target membrane receptors for ginsenosides do not exist, they have been proven to exert beneficial effects through non-receptor-mediated mechanisms, such as non-specific antioxidative and anti-inflammatory effects within the skin system [100]. In contrast, ginseng-derived gintonin or KRGM gintonin-containing LPAs have a high affinity for membrane LPA receptor subtypes in skin cells and exert specific cascade effects through these receptors using [Ca²⁺]_i transients [64]. Thus, by adding both ginsenosides and gintonin, the non-receptor-mediated anti-oxidative stress effects and anti-inflammatory effects, respectively, can be combined in a single cosmetics product, as the effects of gintonin, which are achieved through LPA receptor regulation, distinguish it from those of ginsenosides and ginseng polysaccharides.

In conclusion, ginseng is a traditional herbal medicine used to improve physical and mental health in Asian and Western countries. Recently, ginseng utilization has rapidly expanded into cosmetic field for skincare and skin health for various purposes, including whiten

3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

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J Ginseng Res 44 (2020) 115–122

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journal homepage: <http://www.ginsengres.org>



Research Article

Effect of red ginseng NaturalGEL on skin aging

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ARTICLE INFO

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Matrix metalloproteinase
Red ginseng NaturalGEL
Skin hydration

ABSTRACT

Background: In aged skin, degradation of collagen fibers, which occupy the majority of the extracellular matrix in the dermis, and changes of aquaporin 3 (AQP3) and skin constituents, such as hyaluronic acid and ceramide, cause wrinkles and decrease skin moisturization to contribute to dryness and lower elasticity skin. Red ginseng (RG) is used as a cosmetic and food material and is known to protect from UVB-induced cell death, increase skin hydration, prevent wrinkles, and have an antioxidative effect. But, in general, RG used as a material is the soluble liquid portion in the solvent, and the part that is not soluble in the solvent is discarded. Thus, we made the whole RG into microgranulation and dispersed in water to produce gel form for using entire RG, and it was named red ginseng NaturalGEL (RG NGEL).

Methods: RG NGEL was investigated for matrix metalloproteinases inhibitory activity, induction of Type I collagen, AQP3, hyaluronan synthetase 2, serine palmitoyl transferase, ceramide synthase 3, and filaggrin expression and compared with RG water extract.

Results: RG NGEL reduced the levels of UV-induced matrix metalloproteinases and increased Type I collagen in human fibroblast cells and upregulated AQP3, hyaluronan synthetase 2, serine palmitoyl transferase, ceramide synthase 3, and filaggrin expressions in human keratinocytes compared with RG water extract.

Conclusion: RG NGEL has the potential as an effective reagent for antiaging cosmetics to improve wrinkle formation and skin hydration.

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4. Discussion

Most RGs are extracted or concentrated using a solvent such as water or ethanol and then used as a material for the product [20]. Because RG is only used by dissolving in solvents, a portion that is not soluble in water is abandoned in large quantities, which causes environmental pollution. However, the discarded part is known to have antioxidant and antiwrinkle effects. To utilize the whole RG, we made the entire RG into microgranulation and dispersed in water to make gel form. It has been reported that ginsenosides contained in RG were effective in collagen production, inhibition of MMP-1 activity, protection against UVB-induced cell death, improvement of skin hydration, and antioxidation [15–19]. We focused on the effect of RG NGEL on skin aging in this study by using measurement of wrinkle formation-related factors, Col-I, and MMPs in human fibroblast cells and investigating to maintain skin moisture. UV irradiation increases MMPs, MMP-1, MMP-2, and MMP-9, followed by degradation of collagen [4,23]. RG NGEL increased the mRNA level of Col-I, but not RG WE (Fig. 2), and significantly inhibited UV-induced MMP-1, MMP-2, and MMP-9 expression compared with RG WE (Fig. 3). In addition, RG NGEL suppressed the activity of MMP-2 and MMP-9 compared with UV irradiation (Fig. 4).

In the present study, the active compounds showing the effect of RG NGEL could not be identified. However, we found that RG NGEL showed wrinkle and elasticity improvement and moisturizing effect even without ginsenosides. Therefore, further investigations are required to clarify components structure and active ingredients contained in RG NGEL.

In conclusion, RG NGEL reduced wrinkle formation by increasing Col-I, a main form in human skin and a predominant constituent of ECM proteins, and suppression of MMP-1, MMP-2 and MMP-9 expression to cause collagen or elastin degradation. And, further RG NGEL increased the levels of AQP3 and HAS2 associated with skin hydration. In addition, RG NGEL promoted the expression of SPT, CERS3, and FLG, which are important for skin moisturization, thereby enhancing skin barrier and preventing water loss compared with RG WE. Therefore, we suggest that RG NGEL can be used as a cosmetic reagent to help prevent skin aging effectively.

3 Exosome + NAD⁺ + PDRN + Collagen & Peptides

➤ Thesis Papers on Clinical Trials

RESEARCH ARTICLE

Kor. J. Aesthet. Cosmetol.,
Vol. 11 No. 5, 877-882, October 2013

홍삼에 함유된 프로토파낙사트리올계 전환사포닌의 피부주름 개선효과

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Anti-wrinkle Effects of Converted Protopanaxatriol Prepared from Korean Red Ginseng

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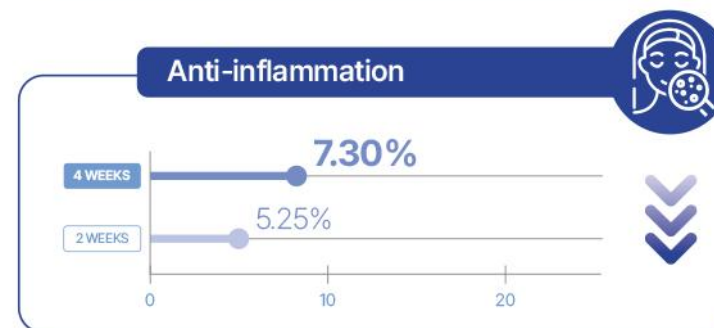
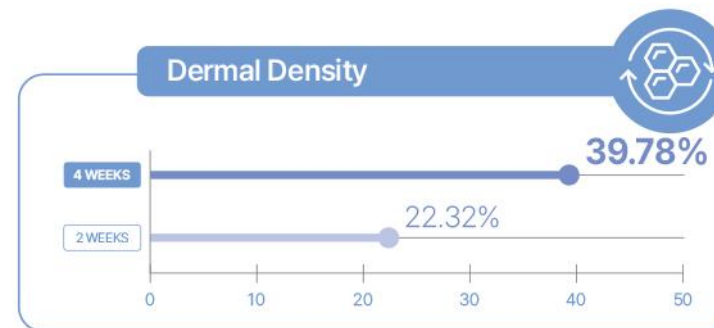
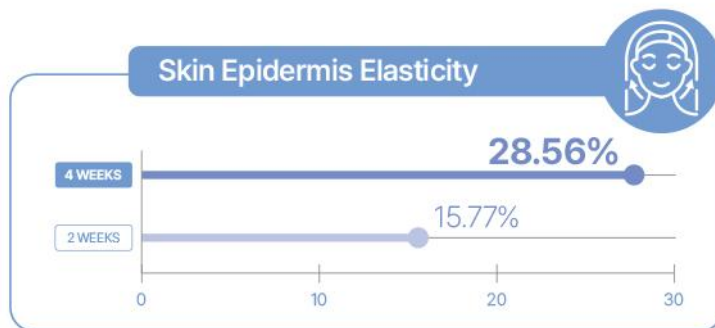
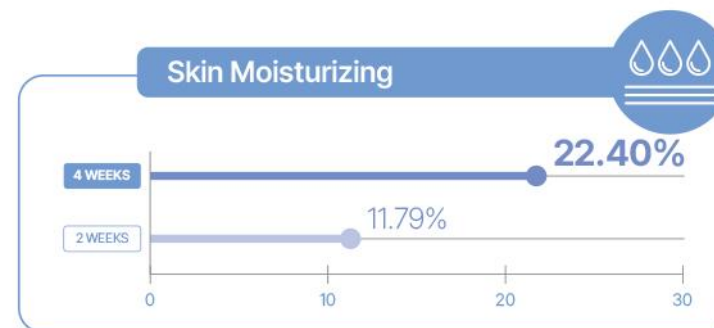
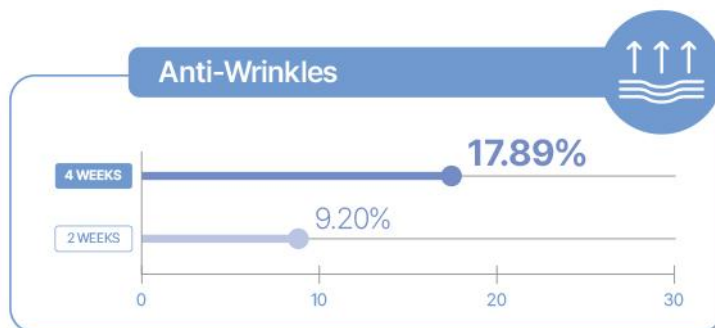
Abstract In order to study about human skin anti-wrinkle effect of red ginseng, red ginseng extracts and the fractions were tested to inhibition effect against MMP-2, -9, and -1 expression in human fibroblast cells by gelatin zymography and RT-PCR methods. The red ginseng samples are red ginseng extract extracted with hot water, crude saponin as butanol soluble fraction, major ginsenosides, protopanaxatriol conversions, protopanaxadiol conversions as the fractions fractionated by C₁₈ reverse phase resin and various proportions of aqueous acetonitrile. We found that propanaxatriol conversions fraction one of the red ginseng samples inhibited in a concentration-dependent manner against MMP-2, and -9 expression levels in human fibroblast cells irradiated by UV light. By HPLC analysis, protopanaxatriol conversions fraction consisted on ginsenosides Rk₃, F₄, Rg₆, and Rh₄. These results suggest that dehydrates of protopanaxatriol ginsenoside from red ginseng have an anti-wrinkle activity through inhibition of MMP-2, and -9 expression in skin.

Keywords: Panax ginseng, Protopanaxatriol, MMPs, Anti-wrinkle



Rate of change by test item

Evaluation Improvement Rate



»»»»» How to use

How to use_NAD+ EXO COLLA

Only for topical application. Daily use at home.

1. Clean the skin.
2. Open the aluminum cap and remove the rubber stopper from both ampoules.
3. Pour the "PDRN Solvent Ampoule 2" into "EXOSOME Ampoule 1".
4. Shake well to completely dissolve the freeze-dried exosome in Ampoule 1.
5. Apply the serum to the face and neck, allowing it to be absorbed.
6. Once absorbed, apply a moisturizing cream.

* Rubber cones are enclosed in the box.





NxC

NAD+ EXO COLLA
EXOSOME (GINSENG, CICA, CAMELLIA) + NAD

