

French Salmon DNA Extract Technology to Skin Treatments.
Promoting the Tissue Regeneration of the Damaged Skin Cell Structures.



RMDA- S

POLYDEOXYRIBONUCLEOTIDE SOLUTION LIPOLYTIQUE

Regulated Metabolism Via Deoxyribonucleotide Architecture - Slim

**USAGE PROFESSIONNEL SEULEMENT.
PROFESSIONAL USE ONLY.**



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*French injectable grade PDRN developed by research center with more than 40 years' experience
in specialized biomolecules from marine extraction.*

R&D IN ESTHERACTION

EstherAction is developed through the collaboration among the medical doctors and biomedical engineers worldwide.

Laboratory and manufacturing facilities located in France and South Korea comprise medical and chemical manufacturing experts and bring groundbreaking R&D programs to cater the most effective, safe and accessible clinical cosmetic solutions worldwide.

EstherAction formulations and ingredients are manufactured from certified facilities located in France and UK. The growth factors research and manufacturing led by facilities in South Korea have been sustained for more than 30 years to ensure the safety and efficacy of the products.

Through the development of effective regenerative treatments, the brand develops in collaboration of laboratory in France and laboratory in Korea to deliver products for both professional and mass consumers covering the wide spectrum of age group. The aesthetic sessions shall bring clinical skin treatments with long-lasting effects, rapid post-operation recovery, and daily care for anti-aging.



RMDA-S



**ESTHERACTION EXPERT'S
RMDA-S (Regulated Metabolism via Deoxyribonucleotide Architecture)**

injection is the professional dermal care that concentrates multi-functions to a one-stop treatment via the French-Made PDRN(Polydeoxyribonucleotide) mixed with lipolytic solution complex. The Carnitine-induced fatty acid metabolism promotes the fat burning. Hyaluronic Acid mixed PDRN stimulates adenosine A2 purinergic receptor to promote cell growth and neogenesis. The ascorbic acid and growth hormone factors complex are added as supplements to the regenerative cycle.



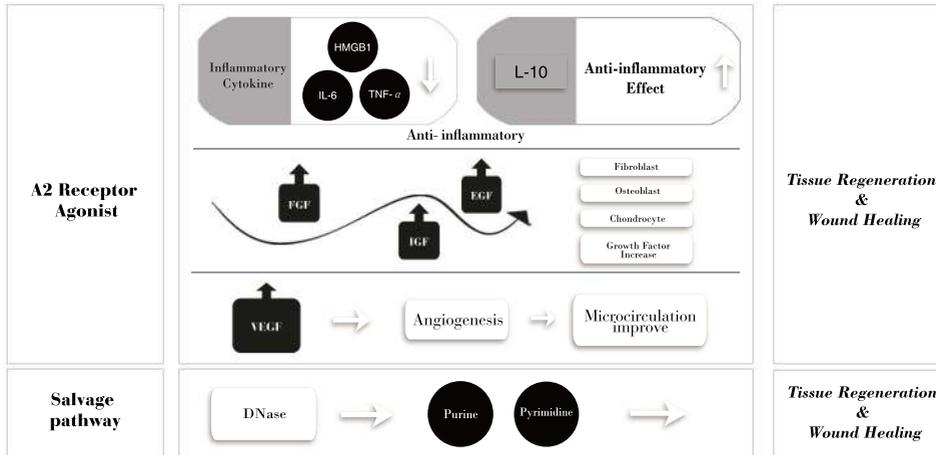
PDRN

Polydeoxyribonucleotide (PDRN) is a unique ingredient from salmon's sperm that possesses variegated therapeutic properties such as wound healing, tissue repairing, and anti-inflammatory. In fact, doctors have been using PDRN as an effective treatment for tissue repairment in peripheral artery occlusive diseases and diabetic foot ulcers. Other than providing health benefits, salmon DNA has several anti-aging benefits. Studies have shown that salmon DNA is an vital ingredient for repairing and rejuvenating the skin.

PDRN is well-known for its ability to stimulate cell growth that accelerate cell proliferation and regeneration of skin and tissue. Multiple studies support the findings that PDRN is beneficial for regeneration of skin and tissue. Further studies also suggested that PDRN accelerates the repair and growth of bone tissue and encourages the skin repair process in diabetic animals.



MECHANISM OF ACTION FOR PDRN



* PDRN works on Adenosine A2 receptor cells in four adenosine receptors to activate multiple growth factors and facilitate the proliferation of stem cells promoting regeneration through salvage pathway using pyrimine/pyrimidine. PDRN affects inflammatory reactions, cell proliferation.

MAIN BENEFITS OF PDRN UNDER REGENERATIVE MEDICINE

Encourage intense skin repair and wound healing to treat acne and scar.

Improve dark spots and promotes complexion brightening and general whitening.

Improve overall skin texture by reducing wrinkles and fine lines.

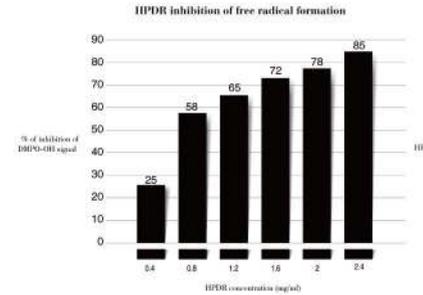
Rapid post-operation recovery of the damaged skin cells after the laser or other surgical cosmetic treatments such as thread lifting.

Reduce skin laxity by boosting cell renewal and new cell growth.

Hair growth stimulation.



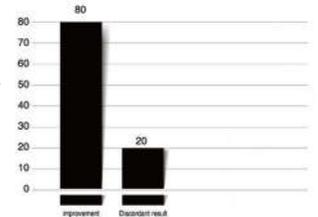
CLINICAL REFERENCES ON PDRN EXTRACT USED IN RMDA-S



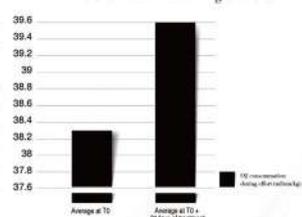
Anti-Oxidant Properties

It retards and diminishes the formation of dienes conjugates (joined paired), notably by its antiradical activity vis-à-vis the hydroxyl radical (OH⁻)

Effect on recuperation after exercise with 800 mg/day of HPDR + 2000 mg/day of vitamin C during 21 days



Effect on stamina during exercise



Effect on Physical Performance can Increase the Efficacy of Weight Losing Exercises

Study on men 30 athletes with an average age of 20 years old. HP DNA 800 mg/day + vitamin C 2000 mg/day during 21 days to investigate effect of association. Recuperation index significantly increased, calculated by the Ruffier-Dickson Test. The maximum oxygen intake is increased using the Cooper Test.

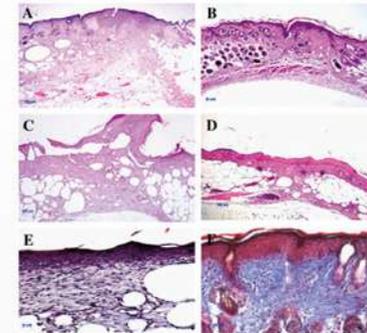
EFFECT ON IMMUNOSTIMULANT ACTIVITY I II

In mice without spleens 4 weeks before, when injected intra-peritoneal 0.03 to 0.3 g/kg with DNA for 10 days. Increase in resistance to vis-à-vis a parasitic infection (time augmented for surveying the animal traits with regard to the evidence) is shown. Increase in the capacity of the lymphocytes to divide and produce interleukin II is seen. Study with patients. 66 subjects with leucopenia (leucocytes < 3000) and a treatment with DNA (800-1200 mg/day for 3 weeks) was effective in 77% of the cases, and the majority just after the first week of treatment

REGENERATIVE ACTION VIS-À-VIS THE CIEATRICES -PROCESS

[Amelioration in Skin Repair in Diabetic Mice]

In mice, after the realization of experimental wounds, the administration of DNA accelerated the cicatrization by increasing proliferative activity and increasing the number of polyloid epidermal cells. In rats, one hour after the administration of 325 mg/kg of aspirin, the taking of DNA (10 to 50 mg/kg per os) prevented the apparition of gastric ulcers from aspirin

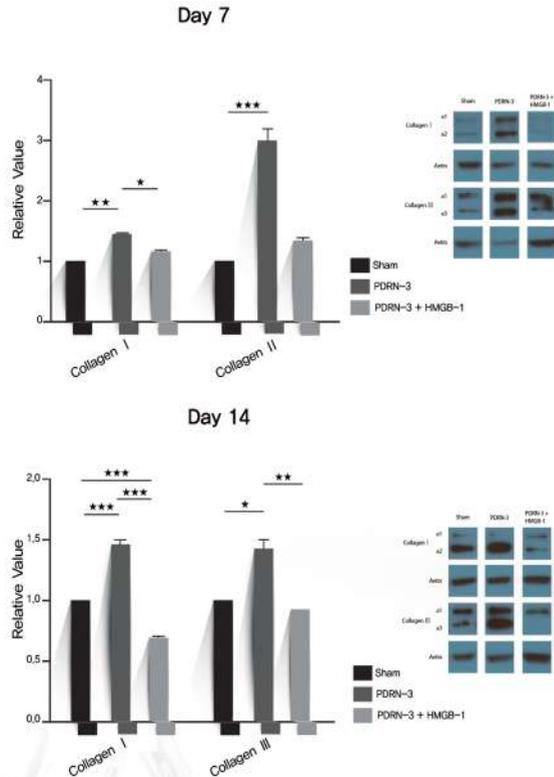


(A) High-power view light micrograph of skin wound from normoglycemic mice administered with vehicle at day 12.
 (B) High-power view light micrograph of skin wound from normoglycemic mice administered with polydeoxyribonucleotide (PDRN) at day 12.
 (C) High-power view light micrograph of skin wound from diabetic mice administered with at day 12.
 (D) High-power view light micrograph of skin wound from diabetic mice administered with PDRN at day 12.
 (E) High-power view light micrograph of skin wound from diabetic mice administered with vehicle at day 12.
 (F) High-power view light micrograph of skin wound from diabetic mice administered with PDRN at day 12.

► At Day 12, PDRN treated normoglycemic animals showed the complete repair of the skin. a complete re-epithelialization and well-formed granulation tissue rich in fibroblasts oriented parallel to the epidermal layer were observed in the diabetic wounds of mice treated with PDRN



● **COLLAGEN SYNTHESIS, PDRN-3 SIGNIFICANTLY INCREASED THE AMOUNT OF COLLAGEN**



● **TREATMENT AREA AND PROTOCOL**

Treatment Area : Midface, brow, and neck to improve wrinkles, soften the redness and wounds, and add definition. Furthermore, the body parts to reduce cellulite and accelerate wound healing in the areas with damages and or burns.

Protocol : Use injector, MTS, and other laser devices to deliver the solution at 1.5-2 weeks interval. Total 10 procedures delivered per box.

*The solution is a perfect add-on after Fraxel Light or SmartXite lasers for post-operation recovery.

● **POST OPERATION RESULTS**

It is important to note that PDRN treatment is not a facial augmentation treatment using dermal fillers. This means that you are unlikely to see any visible outcome in the immediately.

Some results can be seen 3 to 4 weeks after the initial treatment. The anti-aging effects are delayed because the cells require time to repair and regenerate. You should notice visible improvement in the skin texture with smaller pores. The treatment also encourages your skin to reduce signs of aging by eliminating wrinkles and fine lines. The elasticity of the skin should also improve over time, achieving tighter, firmer skin.

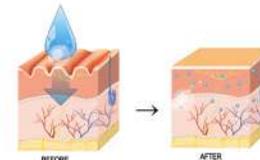
BEFORE & AFTER



● **KEY CHARACTERISTICS OF RMDA-S**

I. Strong Skin Restoration Effects Through Premium PDRN Extract (France)

PDRN extract provides effective treatments for tissue damage such as burn, acne, scar, and wounds. The formulation promotes cell proliferation, extracellular matrix formation, and restoration of blood vessels via proper receptor binding propagation. The treatments in regular basis shall provide brightening and depigmentation effects.

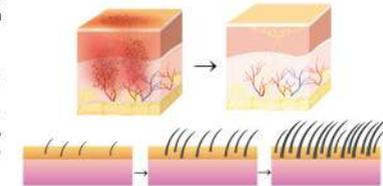


II. Hydration and Toning Effects Through Hyaluronic Acid and Ascorbic Acid (United Kingdom)

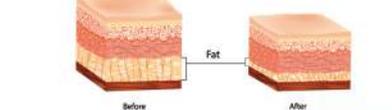
Hyaluronic Acid can contain and store up to 1,000 times more than its own weight in water and it has an incredible water-adhesion capacity. Ascorbic Acid, a well known form of Vitamin C in high concentration, supports the skin's surface defend itself from external stressors and works as a powerhouse when mixed with other antioxidants. The mixtures of hyaluronic acid and ascorbic acid effectively improves the uneven skin tone and dark spots.

III. Oligopeptide-1, Oligopeptide-3, Arginine, and other growth factors complex promotes elasticity, complexion brightening, hair growth. (South Korea)

The patented growth factors manufactured by CHA MEDITECH are activated and propagated through the DNA activation pathway. These special peptides stimulate the skin regeneration capabilities by helping formulate L-proline, a compound essential for the makeup of collagen. Plus, these peptides comprise anti-bacterial compounds that, along with anti-oxidizing agents, fix any damage and improve elasticity. Arginine is known to curb damaging factors on the hair follicles and promote hair growth.



IV. Safe and Prolonged Method to Fat Reduction Through L-Carnitine.



L-Carnitine suppresses the lipid accumulation and modulate lipid metabolism by stimulation of lipolysis and beta-oxidation. Also, for those under diabetes treatments, L-Carnitine is known to improve insulin sensitivity and nerve pain in people with type 2 diabetes.

MECHANISM OF ACTION FOR LIPOLYSIS

* L-carnitine induces metabolism of the fatty acids within the subcutaneous layers. L-carnitine relocates and transfers the fatty acids mitochondrial structures for beta-oxidation and burning. These fatty acids eventually are burned down for energy and evaporate.

● **FAQ**

- 1. How does RMDA-S work?**
RMDA-S contains French PDRN that stimulates the Adenosine A2 receptor to increase the beneficial cytokines while reducing the number of inflammatory cytokines. PDRN also effectively provokes fibroblast and osteoblast to accelerate the formation of skin tissues. PDRN and L-Carnitine can increase the efficacy of physical exercises to support the exercising program for weight losing.
- 2. How long does the effects last?**
The duration of RMDA-S differs according to the patient's skin condition. After being treated with a row of complete procedures, the patient can expect result to last 3 months. The adequate post-operational care is necessary for longer duration.
- 3. Why is RMDA-S effective for skin rejuvenation?**
There are various studies prove that polydeoxyribonucleotides can significantly improve skin elasticity, texture and reduce line lines. Polydeoxyribonucleotides can also enhance the skin barrier by increasing the activity of EGF, FGF, and other peptides. The patients can also expect skin normalization and equalizing skin tone.
- 4. How is RMDA-S different from other PDRN products?**
Polydeoxyribonucleotide extract included in RMDA-S is manufactured by the world leader in DNA extraction technology and has devoted more than 40 years in DNA research. Furthermore, RMDA-S contains L-Carnitine which is well-known for delivering the effective and safe method to induce metabolism and fat burning.
- 5. Is there any side effect?**
Inflammatory reaction as temporary rash, mild redness, swelling or bruising can occur immediately after treatment, the condition will last a few hours to a day. If inflammatory reaction continues for more than a week, the patient shall consult with a doctor and undergo treatment immediately.



● **SIDE EFFECTS**

The medical professionals must inform the patient that the following symptoms may appear after the injection of RMDA-S immediately or after a certain period.

Occurrence of such symptoms must be reported to the sales department.

i) Inflammatory reaction that is accompanied with a pierced wound or pain (red spots and/or edema, etc.) may be sustained for about a week after injection.

ii) Abscess and hypersensitive reaction may occur after injection of hyaluronic acid.

iii) If inflammatory reaction continues for more than a week or other side effects occur, consult a doctor and undergo treatment immediately.

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