Mesotherapy: Origins and Clinical Foundations
SEDUSKIN SCIENTIFIC DOSSIER

Mesotherapy: Origins and Clinical Foundations

Mesotherapy is a minimally invasive therapeutic technique that involves multiple micro-injections of a mixture of compounds dermis[i]. This method was pioneered in France by Dr. Michel Pistor in 1952, originally to treat pain and vascular disorders[ii]. Mesotherapy itself denotes a delivery method rather than a single formula – it can deliver a variety of agents depending on the clinical goal.

Dr. Jamel Fares, a Brazillian physician and entrepreneur, is a direct inheritor of this mesotherapy legacy. In 1994, Dr. Fares apprenticed under Dr. Michel Pistor, absorbing the foundational techniques of mesotherapy and skin booster therapy. Dr. Fares went on to become a pioneer in the medical aesthetics field himself – as the first to introduce and teach the use of stabilized HA dermal fillers worldwide in the 1996 through his partnership with Restylane. His deep knowledge of injectable treatments and firsthand training in mesotherapy set the stage for combining these domains into advanced skin booster products.

Laboratoire GlobalSkin France (LGSF): Manufacturer and Vision

In 2005, Dr. Jamel Fares founded ObvieLine Laboratory in Lyon and developed **PERFECTHA,** a line of cross-linked HA dermal fillers that became globally recognized for quality, eventually leading to the brand's acquisition by Sinclair Pharma in 2014. Dr. Fares learned with PERFECTHA how to converge European manufacturing standards with his know-how to create better aesthetic products. Building on this success, Dr. Fares founded and currently directs Laboratoire GlobalSkin France (LGSF), the company behind the SeduSkin line of skin boosters.

LGSF's facilities include a manufacturing plant and R&D laboratory in the Technopole science park in Martillac on the outskirts of Bordeaux, France. Construction of the facility began in 2022, and by

2024 LGSF had exported the first batch of SeduSkin products – now present in EU, Latin American, and Eastern markets. LGSF has Good Manufacturing Practice (GMP) certification and ISO 13485 certification.

SeduSkin Skin Booster Portfolio and Scientific Review

SeduSkin's product portfolio comprises five distinct formulations, each designed as a **skin booster** or adjunct injectable targeting specific aesthetic and dermatologic needs. All products are supplied in sterile 5 mL vials (typically packaged as five vials per box) for multi-microinjection use. Depending on a practitioner's technique, they can be delivered via needle injection, mesotherapy "nappage" (multiple small injections), cannula, or even microneedling devices, giving flexibility in how treatments are administered. Below is a detailed scientific and clinical overview of each SeduSkin product – **HYLA-PDRN**, **HYLAGEN³**, **HYLADERM 2%**, **EVOLUTION**, and **LIPAX** – including their composition, mechanisms of action, indications, ideal patient profiles, and illustrative clinical considerations.

SeduSkin
HYLA-PDRN

HYLA-PDRN – Regenerative Skin Repair & Deep Hydration

Composition and Mechanism: HYLA-PDRN is a hybrid bio revitalizing solution combining **Polydeoxyribonucleotide (PDRN)** with **hyaluronic acid**. PDRN is a mixture of deoxyribonucleotides (DNA fragments) originally derived from salmon, known for its regenerative properties in tissues. Mechanistically, PDRN acts on the A2A adenosine receptors in cells, which triggers a cascade of tissue repair processes and modulates inflammation[iii]. By engaging A2A receptors, PDRN promotes angiogenesis (formation of new blood capillaries) and fibroblast activity, leading to increased production of collagen and other matrix components in the skin. Additionally, PDRN provides a pool of nucleotides that cells can use in the "salvage pathway" to synthesize DNA, effectively giving cells the raw materials to accelerate repair of damaged tissue[iv].The net result is a stimulation of wound healing and regenerative processes in the dermis. Indeed, experimental and clinical studies have shown that PDRN has **multifaceted effects: it enhances tissue repair, is anti-ischemic (improves microcirculation), and has anti-inflammatory action[v]**. In dermatologic contexts, PDRN has been documented to speed up wound closure and re-epithelialization in difficult-to-heal skin ulcers, partly by upregulating vascular endothelial growth factor (VEGF) and downregulating

inflammatory cytokines like TNF-α[vi].This evidence underpins its use as a skin rejuvenating agent.

The hyaluronic acid (HA) in HYLA-PDRN is non-crosslinked and of high purity (medical-grade), serving as a hydrating vehicle and scaffold. HA is a glycosaminoglycan naturally present in dermal extracellular matrix, responsible for retaining water and conferring turgor and suppleness to the skin. By injecting HA directly into the dermis, HYLA-PDRN provides immediate osmotic hydration – each HA molecule can bind many times its weight in water – thus rehydrating dry or atrophic areas. Moreover, the presence of HA can physically support cell migration and provide a temporary extracellular matrix for fibroblasts as new collagen is being laid down. Studies of injectable HA boosters have shown that beyond hydration, they can induce **biomechanical stretching of fibroblasts and serve as a matrix** that promotes collagen synthesis over time[vii]. In essence, HYLA-PDRN's HA component addresses the extracellular environment (improving moisture and viscoelasticity), while the PDRN component works at the cellular level to repair and regenerate. This dual action (hydration + regeneration) makes HYLA-PDRN particularly potent for revitalizing skin that has been damaged or stressed.

Clinical Indications: HYLA-PDRN is indicated for skin in need of repair and restorative treatment at the cellular level. Key use cases include:

- **Post-acne scarring and discoloration:** The product helps resurface atrophic acne scars by stimulating dermal matrix regeneration and can reduce post-inflammatory hyperpigmentation through its modulation of inflammation (dampening melanocyte-stimulating cytokines). PDRN has been shown to promote collagen synthesis in fibroblasts, thereby improving the appearance of pitted scars[viii].
- **Post-inflammatory hyperpigmentation (PIH):** By downregulating inflammatory mediators and aiding skin turnover, it may accelerate the clearing of pigment from prior inflammation.
- **Sun-damaged skin with dyschromia:** UV exposure generates free radicals and matrix metalloproteinases that break down collagen; PDRN's anti-inflammatory and DNA-repair stimulating actions, along with HA's barrier support, help mitigate UV-induced damage[ix]. Cases of mottled pigmentation or solar elastosis can see improvement in tone and texture.
- **Early fine lines and thinning under-eye skin:** In delicate areas like the periorbital region, where skin is thin and early wrinkles appear, HYLA-PDRN can thicken the dermis by boosting fibroblast activity and microcirculation, thus improving elasticity and reducing fine creases.

- **Skin recovery after dermatologic procedures:** For patients who have undergone ablative lasers, deep peels, or microneedling, HYLA-PDRN can be used post-procedure to accelerate healing. PDRN's role in tissue repair (for example, speeding re-epithelialization of wounds)[x] translates to faster recovery and less downtime when used as a post-treatment booster.
- **Uneven texture or dull, sallow complexion:** By improving dermal matrix quality and hydration, the product can smooth rough texture and enhance skin radiance. Increased dermal hydration plumps the skin, and improved microvascular perfusion via PDRN gives a healthier color to sallow skin.
- **"Smoker's skin" (poor microcirculation):** In patients with long-term tobacco use, compromised capillary circulation leads to dull, grayish skin and delayed healing. PDRN's pro-angiogenic effect (it significantly increases VEGF in treated tissue)[xi] helps recruit a better blood supply, oxygenating the skin and improving its vitality.
- **Pre- and post-surgical skin conditioning:** Some clinicians use PDRN-based injections before a surgical procedure (like a facelift or dermabrasion) to "pre-condition" the skin, or afterward to promote faster healing of incisions. By accelerating tissue repair and reducing inflammation, HYLA-PDRN may help surgical sites heal with minimal scarring[xii].

In summary, HYLA-PDRN is generally favored when the skin shows signs of **damage, inflammation, or early aging** at a cellular level (pigmentation, roughness, fine lines) but without advanced sagging. It *regenerates* more than it volumizes.

Ideal Patient Profile: Ideal candidates for HYLA-PDRN are adults roughly between ages 28 and 50+ who present with early signs of photoaging or skin stress. Typically, these patients have **Fitzpatrick skin types II–V** (it can be used across many ethnicities and is often useful in darker skin types for PIH). Men or women with a history of acne scarring, or those with dull, irritated skin (for example, a patient with long-standing post-acne redness and patchy pigmentation), would benefit. First-time aesthetic patients who are more concerned with improving skin quality (texture and tone) rather than adding volume are an excellent fit – HYLA-PDRN can be a gentle introduction to injectables for someone who wants a "skin refresher." Because of its regenerative focus, it is also suitable for younger patients in their 30s who want to *prevent* aging changes by keeping the skin's repair mechanisms activated. On the other hand, someone with very lax or sagging skin might need to combine HYLA-PDRN with a

collagen-stimulating treatment or a tightening procedure, since PDRN alone targets quality over firmness.

Scientific Rationale and Supporting Evidence: The use of polynucleotides like PDRN in dermatology is supported by a growing body of research. PDRN is essentially a biologic stimulator of skin healing – it has been used clinically in wound healing (diabetic foot ulcers, graft donor sites) with significant efficacy[xiii]. In one study, a topical gel containing PDRN plus HA achieved complete healing in 67% of chronic venous ulcers within 45 days, compared to only 22% with HA alone[xiv]. This highlights a synergistic benefit of combining PDRN with hyaluronic acid for tissue repair. The anti-inflammatory effect of PDRN is another key point: by activating A2A receptors, PDRN downregulates pro-inflammatory cytokines (like TNF-α and IL-6) and upregulates anti-inflammatory signals[xv]. This creates a more favorable environment for skin regeneration, especially important after injuries or in inflammatory conditions like acne. Histologically, treatment with PDRN has been shown to increase dermal fibroblast density and collagen deposition, and to improve dermal thickness in animal models[xvi]. From a patient perspective, these microscopic changes translate into smoother scars, improved fine lines, and healthier skin tone.

Clinical Example: *A 32-year-old female with atrophic acne scars and lingering reddish-brown post-acne marks on her cheeks undergoes three sessions of HYLA-PDRN, spaced 2 weeks apart. Over two months, her dermatologist notes significant improvement in skin texture – the depressions from old acne are shallower – and a more even complexion. The patient herself reports that her skin "heals faster" from minor breakouts and looks more radiant. These outcomes align with the known effects of PDRN on collagen remodeling and anti-inflammation, as PDRN-treated skin tends to regenerate and turnover cells more effectively, softening the appearance of scars and hyperpigmentation.* No adverse effects were observed aside from mild injection-site swelling. This case exemplifies how HYLA-PDRN can "restore the skin's code" by biologically repairing dermal damage and rehydrating the tissue.