

# DUALYN

The Dual-Layer Formula for Immediate Fulfillment and Lasting Results.



# The Modern Patient's Dilemma: A Compromise Between Now and Later

## The Demand for Immediate Results



Patients desire an instant “glow”—visible hydration, plumpness, and improved texture immediately following treatment. This is often achieved with fast-acting, low-persistence ingredients.

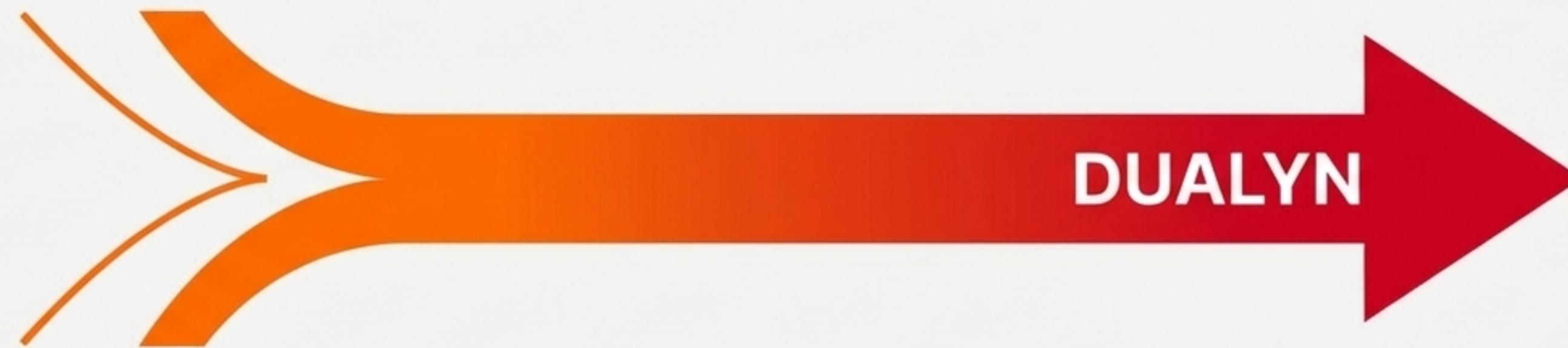


## The Goal of Lasting Improvement

Patients also seek genuine, long-term anti-aging benefits: improved skin structure, sustained elasticity, and collagen synthesis. This requires ingredients that work on a deeper, more structural level over time.

# Introducing DUALYN: The End of Compromise.

A premium skin booster engineered with a “Dual-Layer Formula” that synergistically delivers both immediate hydration and long-term regeneration in a single treatment.



**Key Benefit  
Equation**



Immediate  
Hydration



Long-Term  
Moisture



Skin  
Regeneration

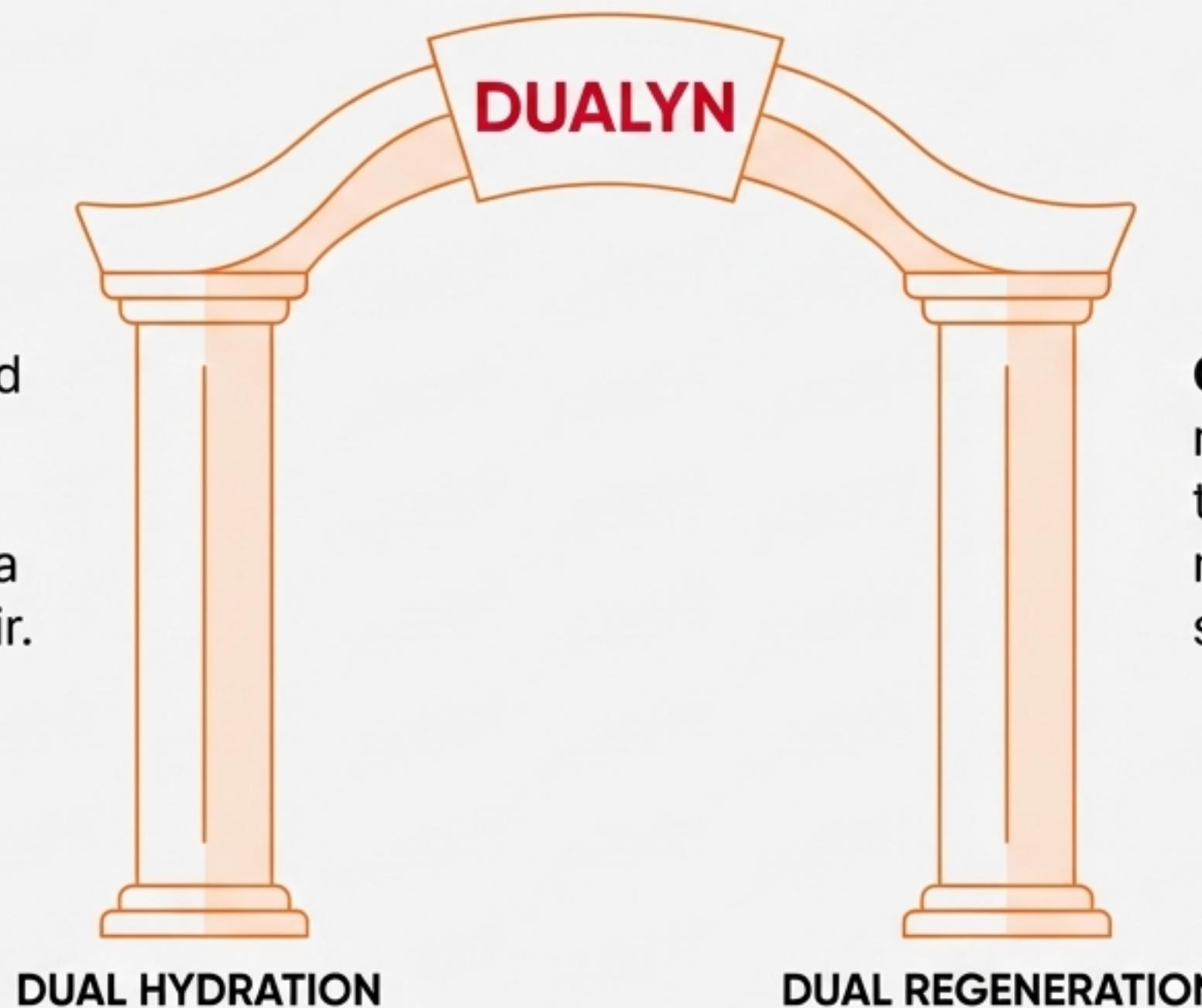


Cell Energy  
Activation

# The Philosophy of Duality: Two Pillars of Synergistic Action

DUALYN is not a simple combination of ingredients. It is a meticulously engineered formula where each component is chosen for its specific role in a dual-action timeline.

**Concept:** Combining low and high molecular weight Hyaluronic Acid to provide rapid moisture infusion and a sustained hydration reservoir.



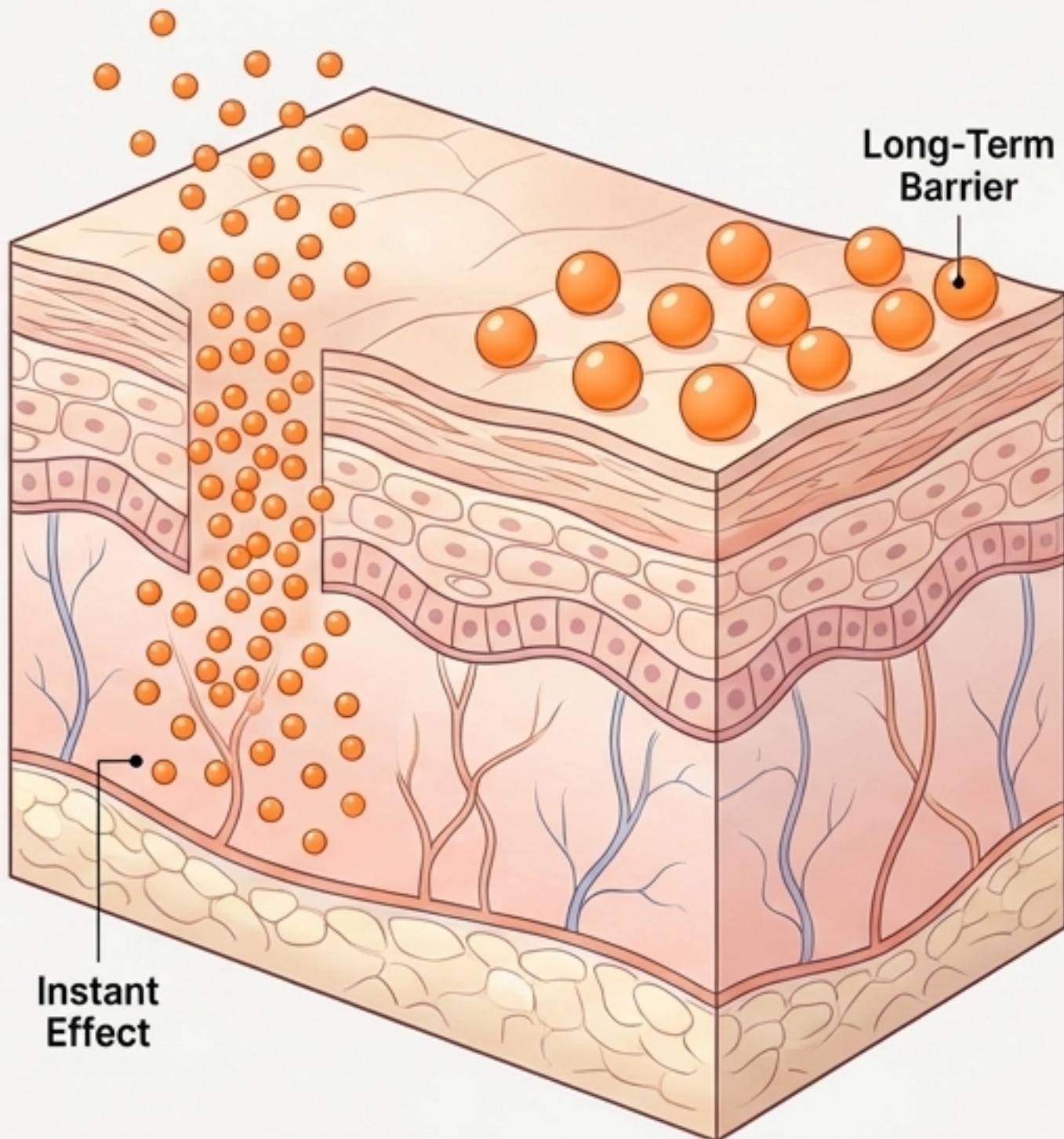
**Concept:** Uniting fast-acting miPDRN with long-acting PN to initiate immediate cellular repair and promote deep, structural skin improvement.

# Pillar 1: DUAL HYDRATION for Multi-Layered Moisture.



## Immediate Quench

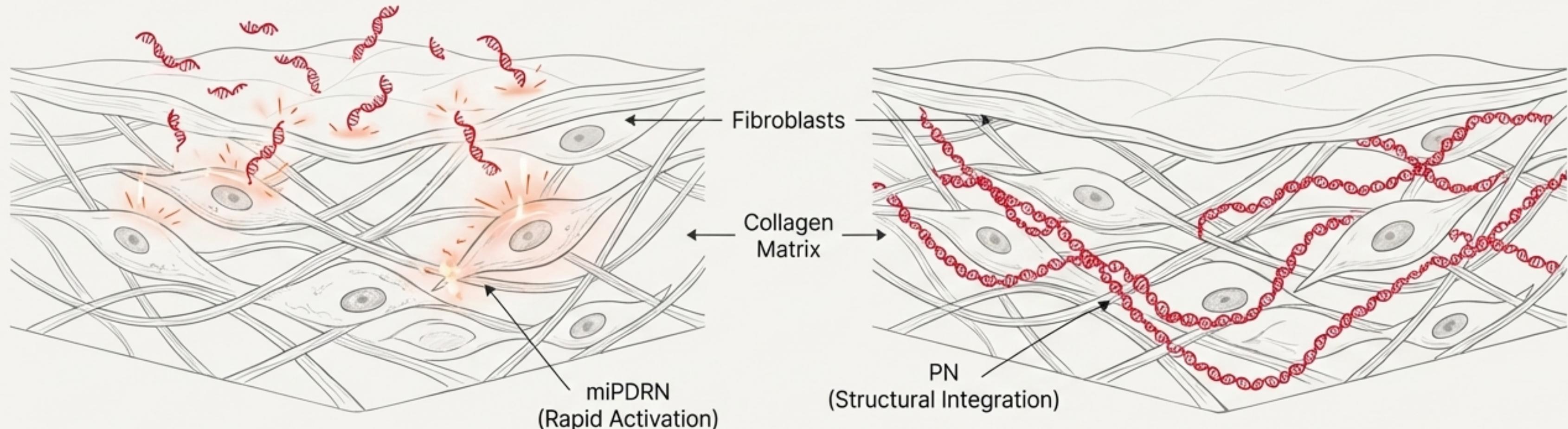
- **Ingredient:** Low Molecular Weight Hyaluronic Acid (HA 0.8)
- **Specification:** Approx. 0.2-0.5 MDa
- **Mechanism:** Rapidly absorbed into the skin to provide immediate hydration and a visible plumping effect.
- **Limitation:** Lower persistence, requiring a long-term complement.



## Lasting Reservoir

- **Ingredient:** Hyaluronic Acid (HA 1.8)
- **Specification:** Approx. 1.0 MDa
- **Mechanism:** Degrades slowly, supplying moisture over an extended period and forming a protective barrier to lock in hydration.
- **Function:** Complements the low MW HA by providing sustained moisture.

## Pillar 2: DUAL REGENERATION for Accelerated and Sustained Repair.



### Rapid Repair

**Ingredient:** miPDRN (Micro-Polydeoxyribonucleotide)  
**Specification:** Ultra-low molecular weight DNA fragments (<25bp)  
**Mechanism:** Absorbed quickly to initiate rapid cell regeneration, enhance restorative functions, and impart vitality.  
**Limitation:** Shorter duration of action.

### Structural Reconstruction

**Ingredient:** PN (Polynucleotide)  
**Specification:** Medium-large nucleic acids (500-2500bp)  
**Mechanism:** Works within the dermis for long-term tissue improvement, promoting collagen synthesis to enhance skin structure and elasticity.  
**Function:** Provides the lasting structural benefits that complement miPDRN's initial boost.

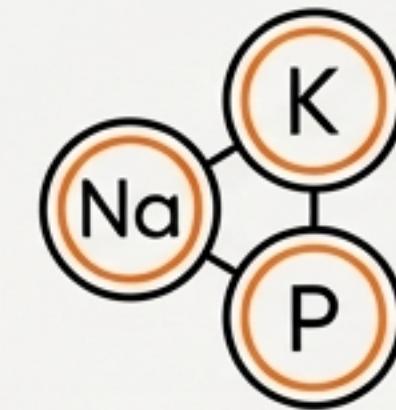
# The Optimizing Matrix: Enhancing Cellular Performance

To maximize the effectiveness of the dual pillars, DUALYN includes a matrix of essential bio-stimulators and minerals that optimize the cellular environment.



## Vitamin B12

Activates cellular energy metabolism, mitigates oxidative stress, and accelerates the recovery of damaged skin cells for a healthy, vibrant skin tone.



## Balanced Minerals (Sodium, Potassium, Phosphates)

Maintain the skin's ideal mineral balance, supporting overall cellular health and function.

# The Complete Formula: A Meticulously Balanced Composition.

DUAL HYDRATION ●		DUAL REGENERATION ●		OPTIMIZING MATRIX ●	
Ingredient	Concentration	Ingredient	Concentration	Ingredient	Concentration
Hyaluronic Acid (HA 1.8)	<b>18 mg/mL</b> (1.80%)	miPDRN (from 20mg/mL stock)	<b>5 mg/mL</b> (0.50%)	Vitamin B12	<b>0.05 µg/mL</b> (0.0005%)
Low Molecular Weight Hyaluronic Acid (HA 0.8)	<b>5 mg/mL</b> (0.50%)	PN	<b>1 mg/mL</b> (0.10%)	Sodium Chloride	<b>8 mg/mL</b> (0.80%)
				Potassium Chloride	<b>0.2 mg/mL</b> (0.02%)
				Phosphate Buffers	<b>1.4 mg/mL total</b>

*A precise synergy of hydration, regeneration, and optimizing agents designed for maximum efficacy.*



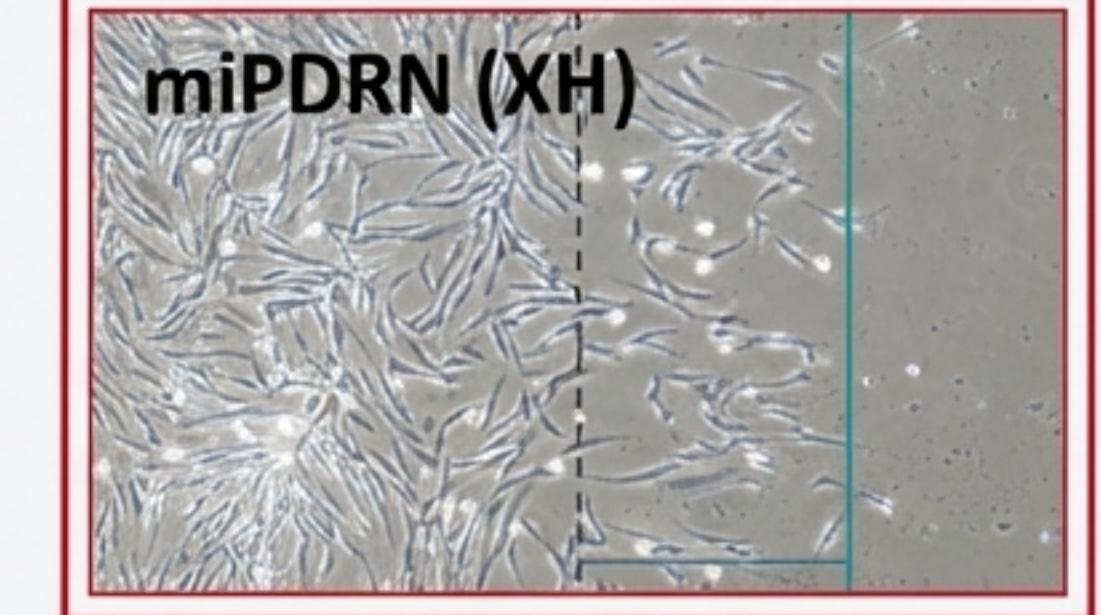
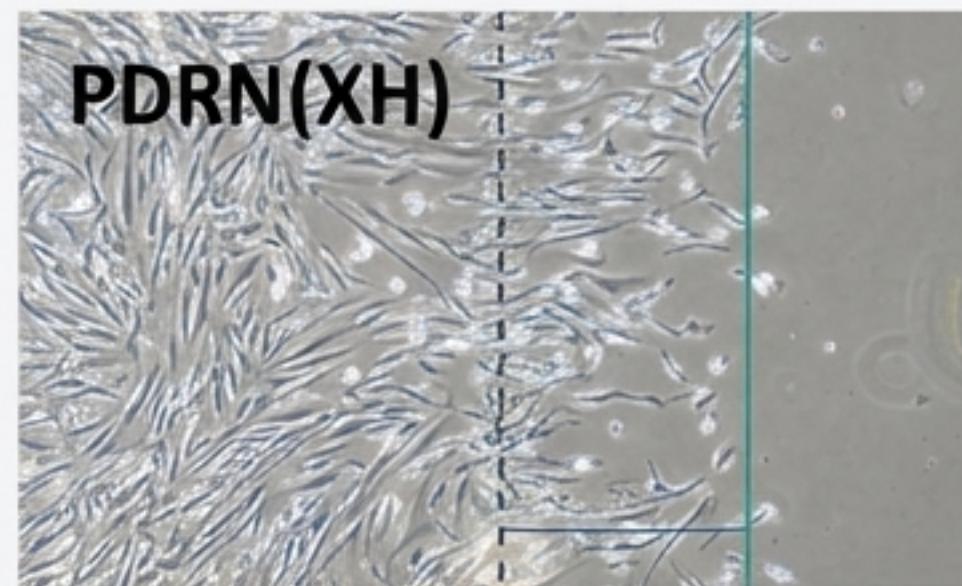
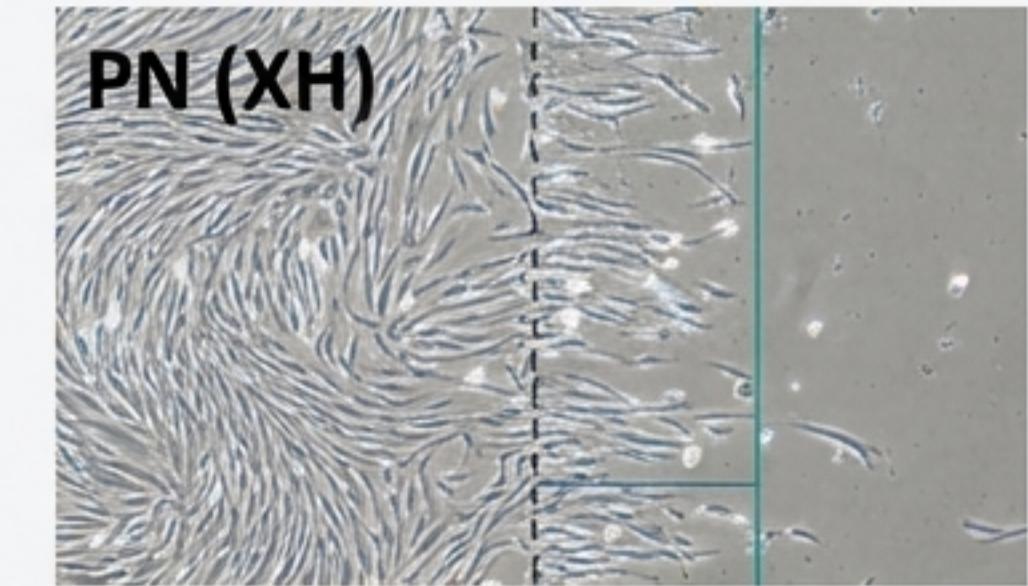
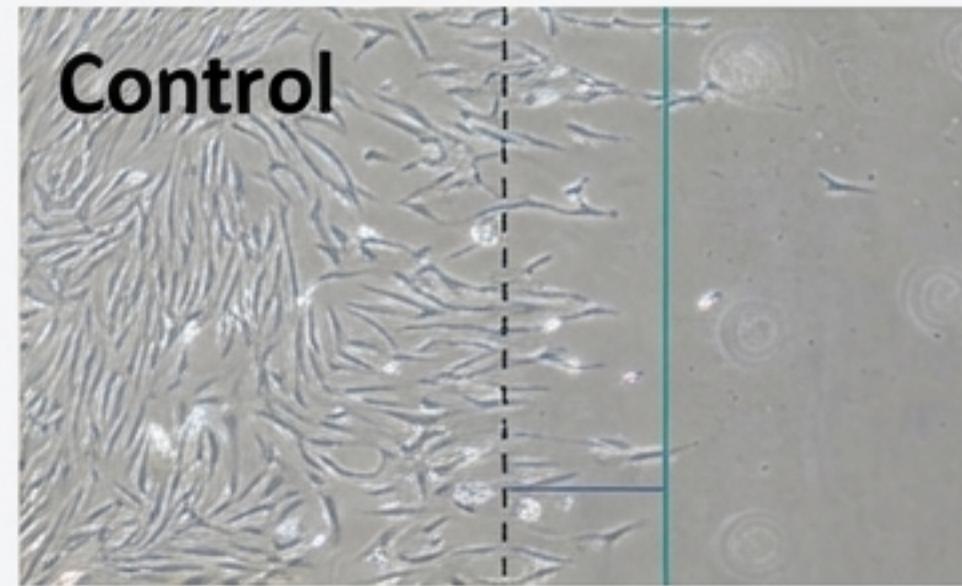
# Innovative Theory. Verified Performance.

The synergistic design of the DUALYN formula is validated by in-vitro studies demonstrating superior efficacy in key markers of skin health and regeneration.

# Evidence I: miPDRN Demonstrates Superior Cell Regeneration and Migration.

**Experiment:** Wound Healing Assay (Scratch Test)

**Methodology:** A gap was created in a monolayer of cells. The rate of cell migration to close the gap was measured for Control, PN, PDRN, and miPDRN groups.



**\*Key Finding:** The miPDRN group exhibits the most significant cell migration and gap closure, confirming its excellent efficacy in accelerating cell regeneration compared to both standard PN and PDRN.

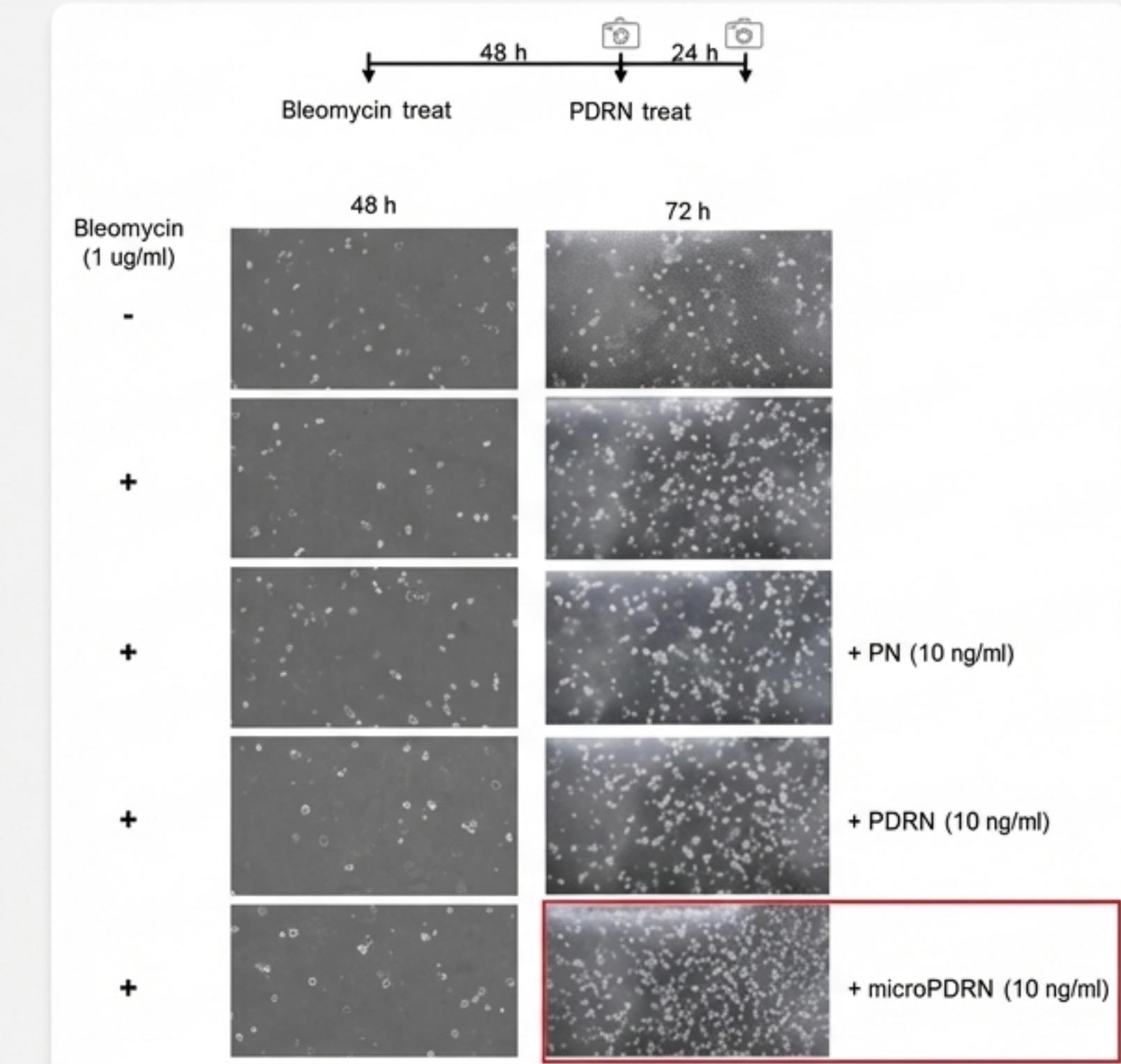
# Evidence II: miPDRN Provides Optimal Protection and Recovery for Damaged Cells.

## Experiment:

Cell Viability Assessment after Bleomycin-induced damage.

## Methodology:

Cells were damaged using Bleomycin. The restorative effects of PN, PDRN, PN, PDRN, and miPDRN on cell **survival** and proliferation were compared at 72 hours.

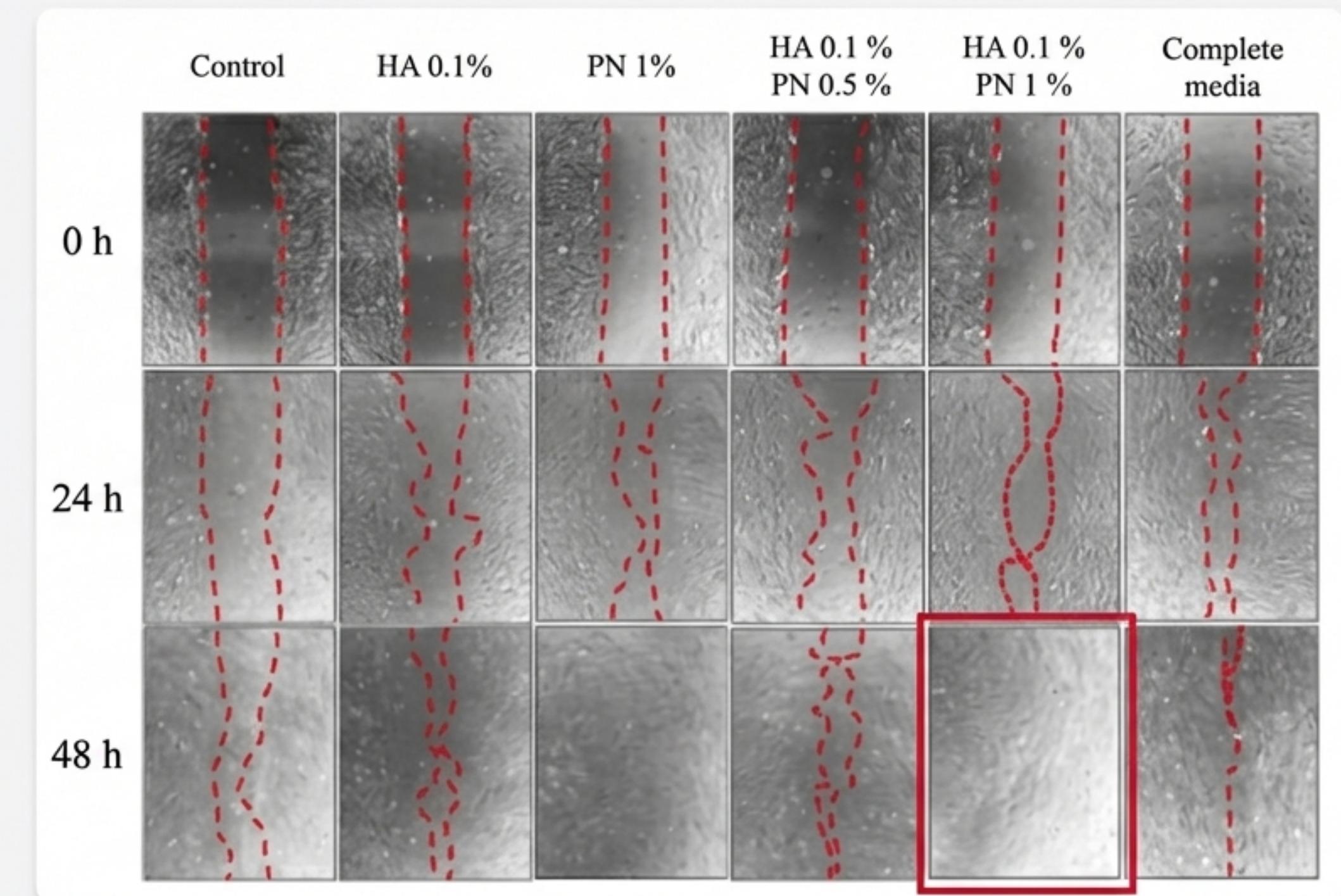


**Key Finding:** While all nucleic acids offered restorative benefits, the **microPDRN** group showed the most robust cell survival and **proliferation**. This indicates a superior capacity to help cells recover from significant stress.

# Evidence III: The Synergy of HA + PN Accelerates Tissue Repair.

**Experiment:**  
Wound Healing Assay  
(Combination Therapy)

**Methodology:**  
A direct comparison of wound closure rates between Control, HA 0.1% alone, PN 1% alone, and a combination of HA 0.1% + PN.



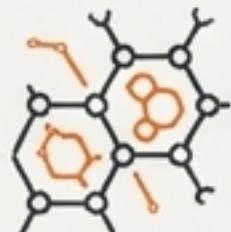
**\*Key Finding:** The combination of HA 0.1% + PN 1% demonstrated a visibly superior rate of wound closure at 48 hours compared to either ingredient alone. This scientifically validates the core synergistic principle of the DUALYN form

# Translating Science into Clinical Success

## For Your Patients



**Immediate:** Instantly replenished moisture and a visible 'glass skin' glow.



**Long-Term:** Sustained improvement in skin elasticity, texture, and structural integrity.



**Overall:** Revitalized, healthy skin tone and enhanced resilience against damage.

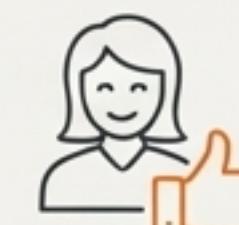
## For Your Practice



**Efficacy:** A premium, all-in-one solution that reliably addresses the top two patient demands (immediate and lasting results).



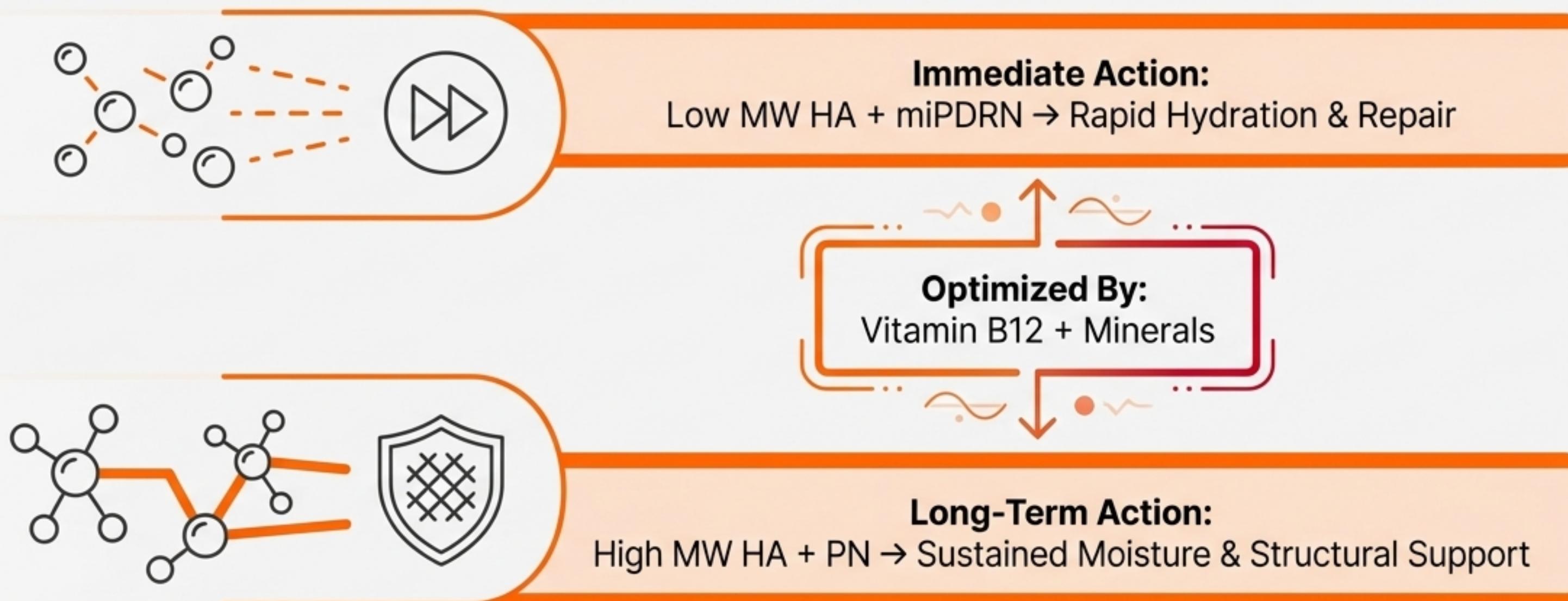
**Confidence:** Robust scientific backing empowers confident consultations and treatment recommendations.



**Satisfaction:** Delivers high patient satisfaction, fostering loyalty and driving practice growth.

## DUALYN: Beyond Combination, Towards Synergy

DUALYN resolves the fundamental compromise between immediate and long-term results by pioneering a synergistic, dual-action formula.



**The intelligent answer to the demand for both  
immediate gratification and lasting skin health.**

# **Partner with BioBijou. Elevate Your Practice with DUALYN.**



**Regional Sales Director**



# **BioBijou**