

# The Use of a *Jet-Phoresis Transdermal Delivery System* for *Pain Control* - ASLMS 2010 - ePoster Presentation

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## Summary

### Background and Objective:

#### What is JetPeel?

- A treatment based on supersonic delivery of materials, including actives, to the skin
- Ability to simultaneously introduce active nutrients and oxygen into the skin, using pressure and air

## Current Study Design:

- Prospective clinical study to compare lidocaine jet-phoresis trans-cutaneous anesthesia to EMLA 5% topical cream
- 20 patients that were scheduled to undergo needling roller for upper lip rhytids enrolled into study
- Each patient served as own control – 40 lips evaluated
- Half of the upper lip had EMLA 5% cream applied for 45 minutes
- Contra-lateral portion of the lip treated with lidocaine 3% jet-phoresis for 5 minutes
- Pain elicited with needling roller uniformly applied across the upper lip
- Pain response measured using VAS scale

## Current Study Results:

- Statistically significant advantage of pain control in the lidocaine jet-phoresis group compared to EMLA group ( $p < 0.005$ )
- Jet-phoresis lidocaine pain control was better or comparable to EMLA in > 82% of lips
- Further confirmed by reversing the sides of the tested lips in the same subjects

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## Background: Basic Principles

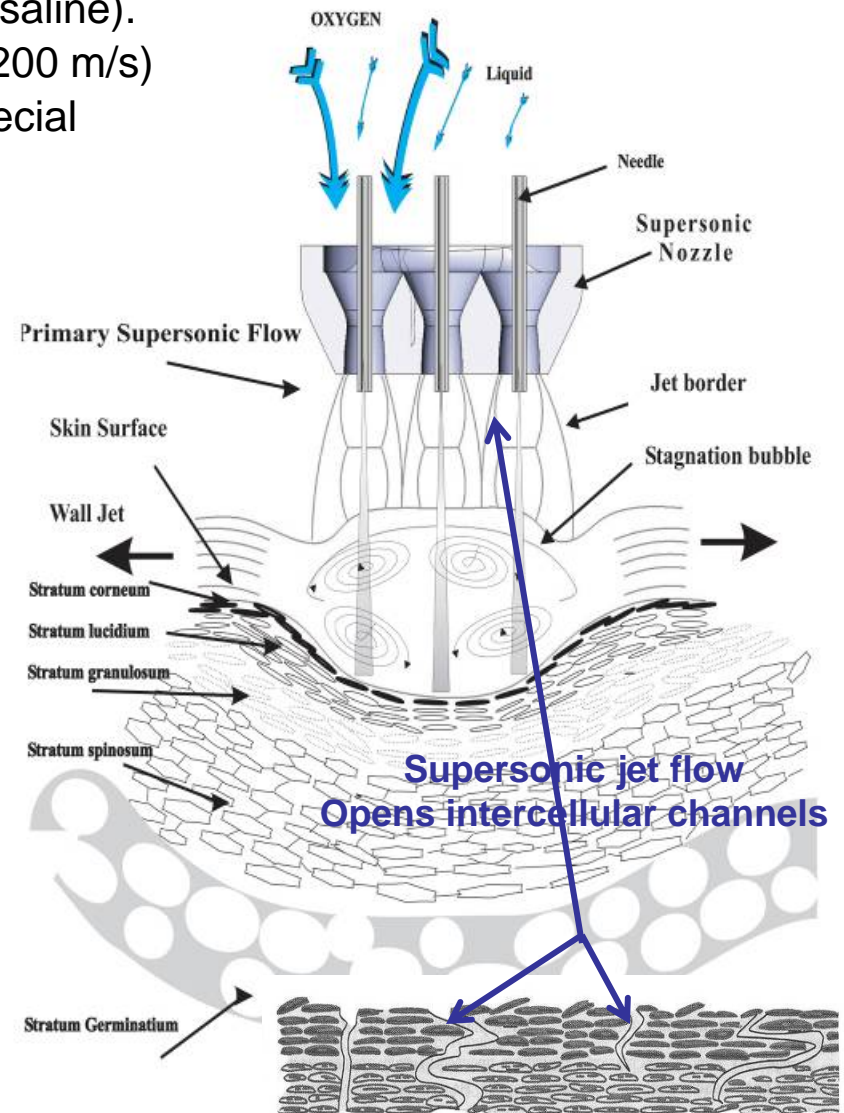
- Pressurized gas is used to accelerate a liquid agent (saline).
- Water droplets accelerated to supersonic velocities (200 m/s)
- The mixture of liquid and gas is emitted through a special nozzle unit.



- The high velocity jet exfoliates the superficial layers of the skin

## Supersonic Technology:

- Supersonic two-phase jet directed onto the skin with specialized handpieces and nozzles.
- Spray consists of micro droplets of saline or supplements (actives) and gas (air, oxygen or CO2).
- High velocity spray induces skin rejuvenation through exfoliation and supplementation.



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## **Skin Rejuvenation with Jet-Phoresis**

**Restore youthful function and appearance by:**

- Reduces cellular buildup
- Exercise and strengthen capillary respiration
- Remove metabolic waste from tissues
- Hydrate, oxygenate tissues
- Provide nutritional support and protection
- Energize cell renewal and wound healing process

**The nutritional elements that are used include:**

- Hyaluronic acid to enrich connective tissue
- Vitamin C to improve dyschromias
- Vitamins E, B, and A for proper functioning of cells
- Other potentials for Jet-Phoresis
  - Lidocaine administration
  - Toxin administration

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