TENTECH

10 LUX HAIR

PhotoBioModulation Treatment

Tentech Item

10 LUX HAIR

10 THERMA

Monopolar RF

10 THERA

2 Line HIFU

10 PL

168 Cell Fractional IPL

10 CELL

3cm x 3cm
CO2 Fractional Laser

ONE THERA

Dual Mode
Ultrasound System

TEN HI

Fractional & Thermal RF

10 SONO

DSS & NBS
Dual Mode System

LIPO THERA

Dual Mode
Ultrasound System

10 LUX

High Intensity &
Multiple Light Therapy
Device

10 LUX HAIR

PhotoBioModulation
Device

Regevan® LED Mask

Dr. Oracle LED Mask
4,474 LED Lights

10 mono Thread

Mono Thread
[Registered for NMPA]

10 cog Thread

Asymmetrical Cog
Thread

Monophasic Filler
[for Export]

Regevan® Pn

Polynucleotide Sodium

Regevan®C

Growth Factor Ointment

Regevan®S

Growth Factor Spray

Regevan® ALO CARE

Growth Factor Ampoule

TENTECH

10 LUX HAIR

PhotoBioModulation Treatment

10LUX-Hair is a device that increases the metabolic activity of mitochondria within cells by irradiating LEDs to the scalp, producing various effects depending on the wavelength.

Performance

01 Steam Hair Treatment

02 High and uniform light irradiance

03 Wavelength can be changed (415, 590, 633, 830nm)

04 Ergonomic LED panel

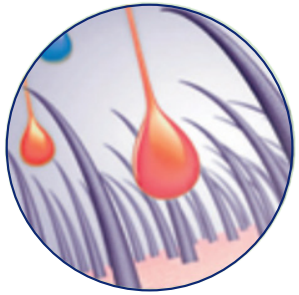
05 Various investigation modes

06 Continuous and direct cooling system

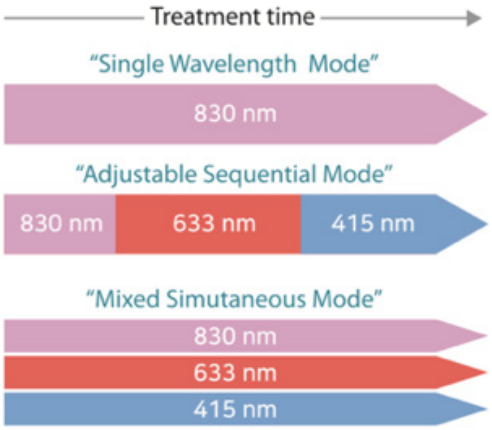
Various treatment modes

Perm & Styling

+



Scalp & Hair Clinic



- Single Wavelength mode : Single wavelength irradiation
- Sequential mode : Sequentially investigate selected 2nd and 3rd wavelengths
- Mixed wavelength: Simultaneous irradiation of selected 2 and 3 wavelengths

Auto Lift Function

User Convenience

Auto Lift function

Moves to user's head height without using hands

Professional Scalp Care

2 Outstanding advantages

↓

Evenly irradiated with gap-free design

Sufficient light intensity with over 5000 LEDs

↓

Increased Efficiency

Specification

Technical Specification				
Wavelength(nm) (Embedded Optical LENS)	415	633	650	830
Max Output (mW/cm2)	30	50	20	80
Interface	7 inch Touch screen			

What is PBM?

10 LUX HAIR

PBM (Photo Bio Modulation)

Treatment using the principle of increasing cellular metabolic activity by light

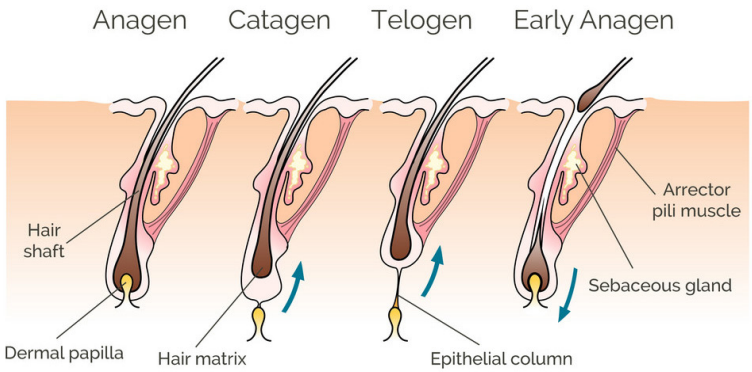
Light → Transcription factor activation →

Increased gene expression	
Protein synthesis	Increased cell activity
Proliferation	Increased tissue repair and regeneration
Cell Migration	Wound healing and immune response
Anti-Inflammatory Signaling	Reduces pain and inflammation
Anti Apoptosis	Prevent tissue damage
Antioxidant	Prevents tissue aging

After the initial photon absorption events, numerous signaling pathways are activated via reactive oxygen species, cyclic AMP, NO and Ca2+, leading to activation of transcription factors. These transcription factors can lead to increased expression of genes related to protein synthesis, cell migration and proliferation anti-inflammatory signaling, anti-apoptotic proteins, antioxidant enzymes.
Stem cell and progenitor cells appear to be particularly susceptible to LLLT.

*Source: Proposed Mechanisms of Photobiomodulation or Low-Level Light Therapy. IEEE J Sel Top Quantum Electron. 2016 ; 22(3): . doi:10.1109/JSTQE.2016.2561201

Hair Cycle



Anagen

Cell division progresses in hair-producing cells for 3 to 5 years. (about 1cm/month)

Catagen

Cell division gradually stops for 2-3 weeks
Loss of hair strands in blood
Hair follicles shrink and move outward

Telogen

After dormancy for 1 to 4 months, a new growth period begins.

PBM Treatment Mechanism

Light reacts with Cytochrome C oxydase in the mitochondrial inner membrane electron transport system to generate NO, ATP, and ROS. Therefore, it leads to an increase in gene transcription, cell regeneration, and differentiation.

Light → Mitochondria → Increased energy metabolis

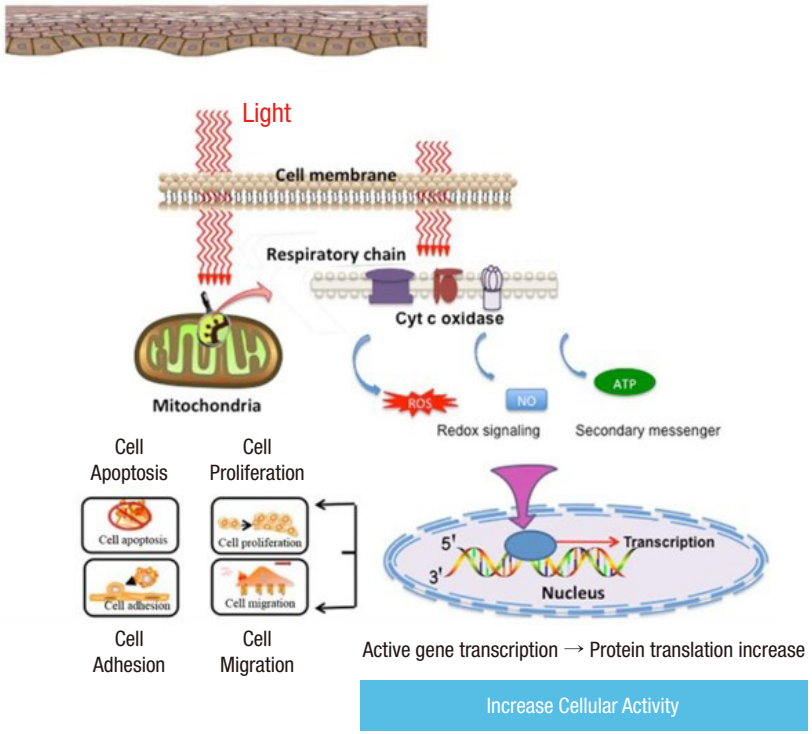
↓

ATP generation + NO(Nitric Oxide) + Active oxygen

↓

1. NO(Nitric Oxide): Vasodilation → Increased Blood Circulation
   (hair follicle vasodilation effect)

2. NO(Nitric Oxide), Active oxygen: Promote cell signaling system
   → Cell growth and differentiation



Hair Treatment Mechanism

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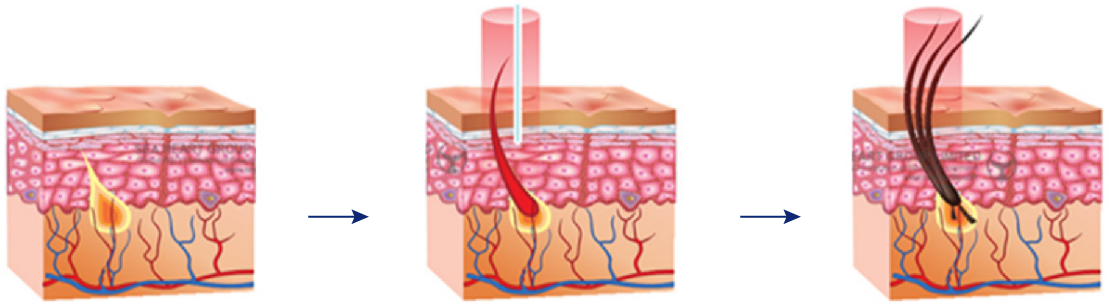
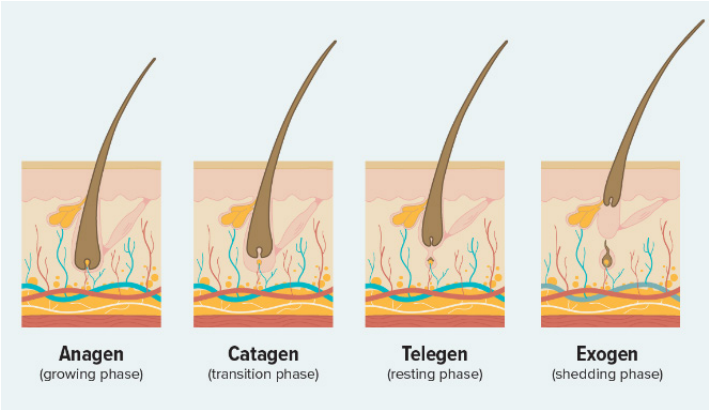


Before treatment
Hair follicles shrink

During treatment
Hair follicles gain energy

During treatment
Hair follicles rejuvenated



Mechanism of action	
PBM	**Telogen** Hair follicle stimulation **Anagen** Facilitating entry **Anagen** Increased hair follicle proliferation rate Early **Catagen** prevention Extended duration Vasodilation Inhibit inflammation

Hair treatment cases using PBM

Case 1

After 60 days

Case 2

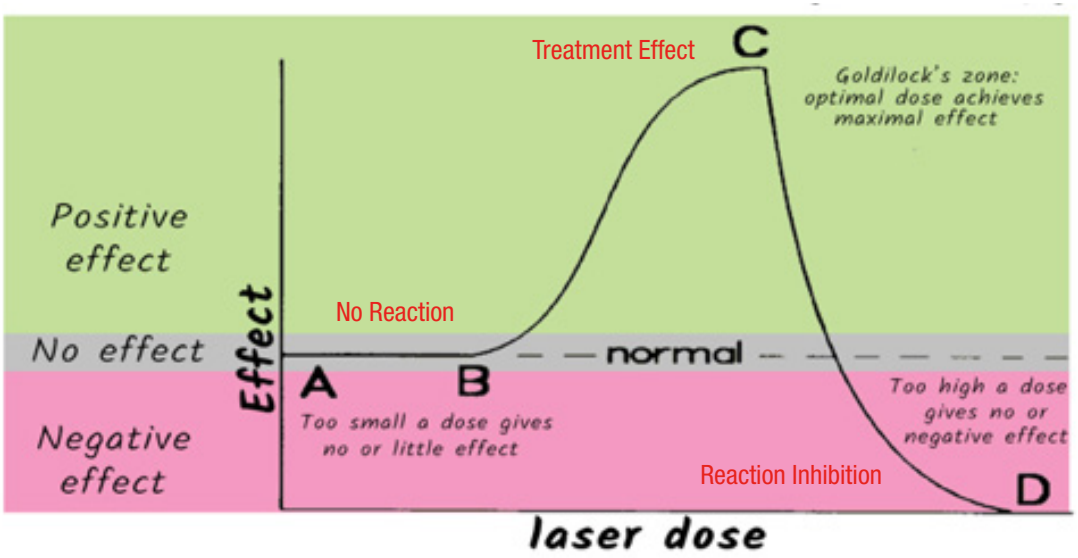
After 60 days

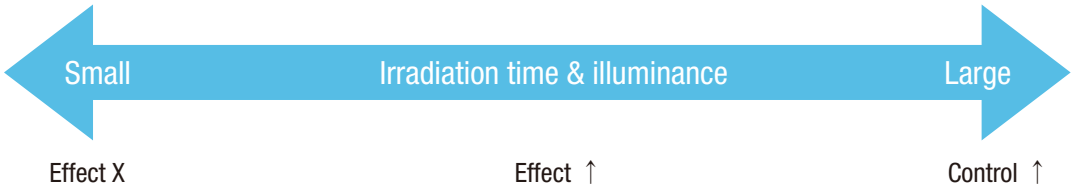
Case 3

	Symptom	Treatment method		Result
Case 1	Male pattern hair loss	Target	35 people	Improved hair growth in all treated areas for both men and women. Especially, It is more effective for men.
		Term	5-10 minutes, 3 times a week (6 months)	
		Wavelength	655nm	
Case 2	Alopecia areata	Target	15 people	Compared to the non-irradiated area, almost 47% of patients in the laser-irradiated area indicated an increase in hair count after about 50 days.
		Term	3 minutes (3 times a week)	
		Wavelength	600 ~1600nm	
Case 3	Male pattern hair loss	Wavelength	Blue-5J/cm2, Red-10J/cm2	Photochemical and dynamic cosmetic treatments involving laser and LED devices are effective for alopecia.
		Drug	Photoactive-Dr.Peel	
		Term	5 times a month	

Treatment effect according to parameters

Arndt-Schultz Curve





Optimization of **illumination intensity** and **stimulation time** is key.

10 LUX HAIR

Tentech Inc. 4F, 5F Namjeon Building, 326, Bongeunsa-ro, Gangnam-gu, Seoul, Korea
TEL. 02-6954-2203 I FAX. 02-3444-4999 I www.tenlaser.com