espansione group science onward

New Horizons in Posterior Segment Care

LM™ LLLT (PBM) for dAMD and Beyond

Blocco 27, Via Degli Orefici 152
Centergross, Funo (BO)
40050, Italy

VAT NUMBER: IT 00707821203
TAX CODE: 00874760408

—WHY WE'RE HERE

Helping people, through science. That's the privilege we take pride in.

We have the ambition to establish new paradigms in ophthalmology, driven by our desire to provide our customers and their patients with the best, certified medical technologies.

The resonance of our tech has been incredible, with new scientific research building up at an impressive pace on known and new applications.

> POSTERIOR SEGMENT

dAMD

5+

Scientific Papers

> ANTERIOR SEGMENT

DED (MGD, CLD, ...)

35+

Scientific Papers + Articles

CHALAZION

3+

Scientific Articles

SJÖGREN'S

2+

Scientific Papers

BLEPHARITIS

2+

Scientific Papers

DEMODEX

4+

Scientific Articles

CATARACT & REFRACTIVE SURGERY-INDUCED DED

5+

Scientific Papers

—WHERE WE ARE

↓

6+ Technology Patents

55+ Scientific Papers

50+ Countries

Enabling progress through science for the betterment of all isn't an easy purpose to work towards—yet it's our north star, the guiding principle of all our actions.

That's what guided us for over four decades. That's what moved us to become the one and only company to develop, patent and certify Light Modulation™ LLLT, a unique photobiomodulation (PBM), technology.

With a strong focus on anterior segment care, we challenge the status quo in ophthalmology, innovate with care and ingenuity, and believe in the power of our people.

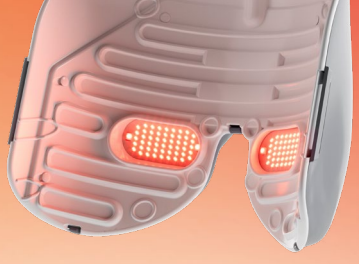
—WHERE WE'RE GOING

We aspire to extend our leadership beyond ocular surface conditions into the posterior segment field, leveraging our decades-long expertise in photobiomodulation (PBM) technology.

Our goal is to redefine the management of posterior segment pathologies through the most optimized and disruptive light-based solutions.

We have always delivered the highest standard in the industry—pushed on by expert craftsmanship and family-owned values coupled with a global mindset and aspiration.

Every day, we invest heavily in researching and developing the Espansione Ecosystem of technologies and solutions to achieve our ambition.



eye-light®

From the front to the back of the eye, an all-in-one powerhouse for eye care.

The Espansione Ecosystem offers a comprehensive range of certified medical devices, ensuring safety and reliability while meeting patient and operator needs.

eye-light®, our core solution, integrates our groundbreaking patented technology: Light Modulation™ Low-level Light Therapy.

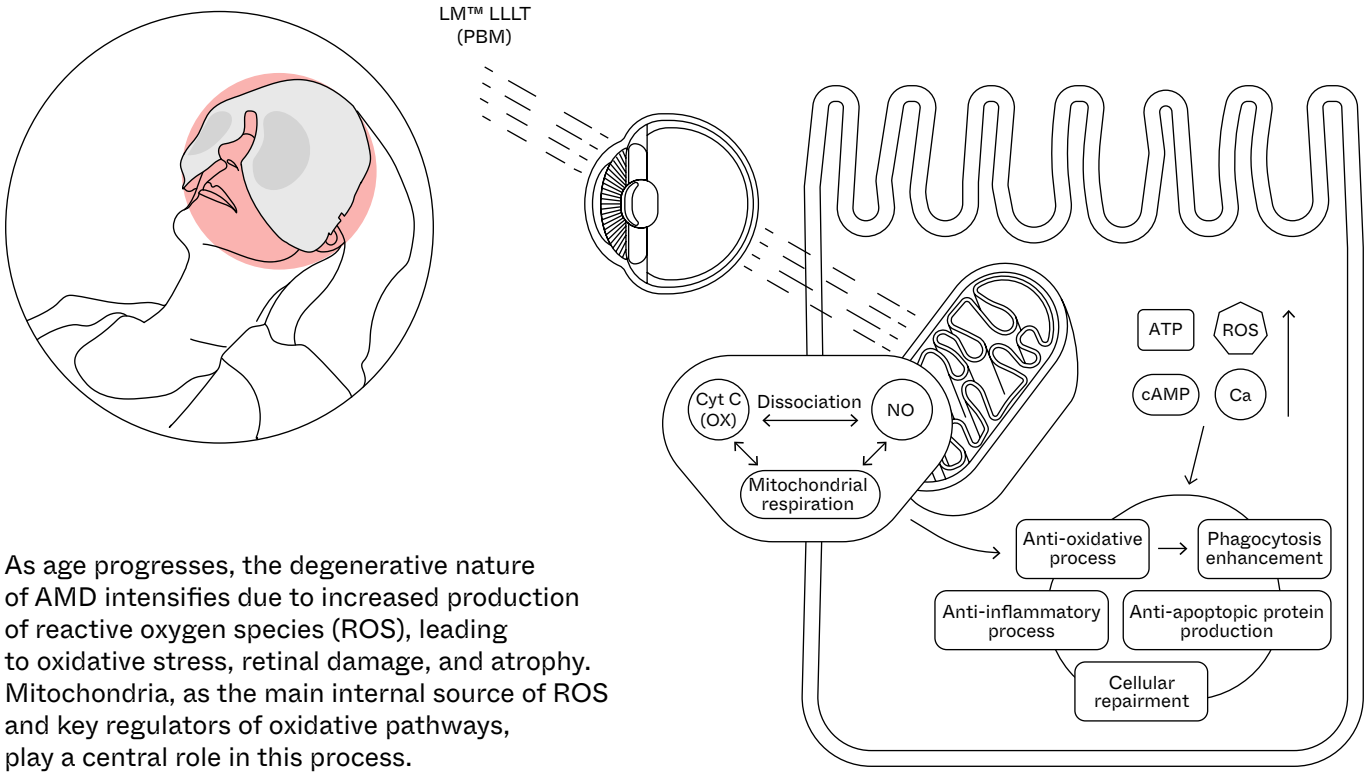
LM™ LLLT already providing highly effective, non-invasive treatment for various ocular surface conditions, from Dry Eye Disease (DED) to Sjögren's Syndrome, is now venturing into posterior segment management starting with dAMD, while ongoing research explores its potential for other significant retinal conditions.

Discover LM™ LLLT/PBM

At the heart of our ecosystem lies Light Modulation™ LLLT, our innovative, patented **photobiomodulation (PBM)** technology.

Utilizing powerful LEDs, LM™ LLLT stimulates ATP production in cells, promoting healing and regeneration at the biological level.

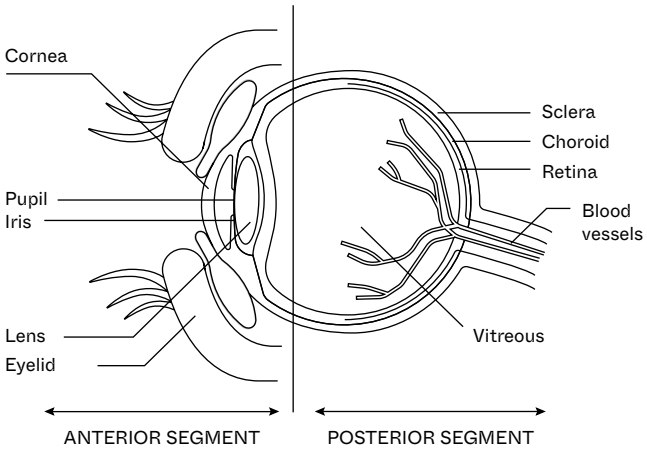
Enabled by LM™ LLLT (PBM), photobiostimulation therapy is a unique kind of near-infrared light therapy (NILT) completely painless for the patient—yet extremely effective in managing a vast number of eye conditions, from the front to the back of the eye.



As age progresses, the degenerative nature of AMD intensifies due to increased production of reactive oxygen species (ROS), leading to oxidative stress, retinal damage, and atrophy. Mitochondria, as the main internal source of ROS and key regulators of oxidative pathways, play a central role in this process.

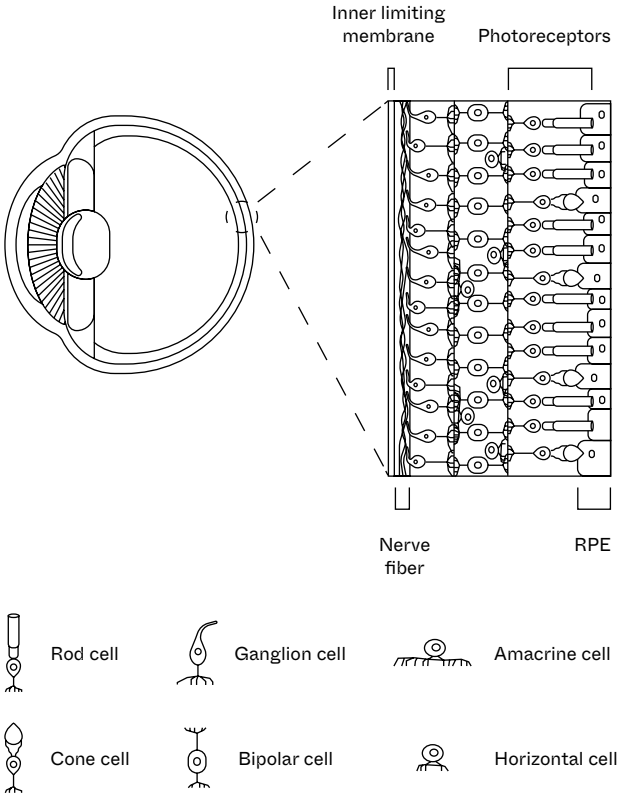
Photobiomodulation targets these mitochondrial dysfunctions effectively by stimulating ATP production and reducing oxidative stress, thus reducing the progression of AMD and supporting retinal health.

The Posterior Segment of the eye comprises crucial structures like the retina, optic nerve, and vitreous body, and it plays a vital role in processing visual information.



Retina, operating as a camera's film, captures incoming light, transforms it into neural signals, and transmits these signals via the optic nerve to the brain, facilitating vision.

Each retina's component plays a role in maintaining the retina's ability to process visual information efficiently and accurately.



Photoreceptors, primarily rods and cones in the retina, are key for vision by converting light into neural signals.

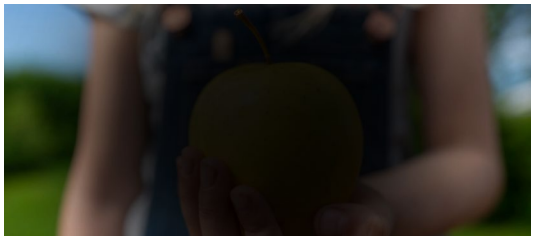
Rods, sensitive to low light, enable night vision, while **cones**, located in the central macula, handle sharp, detailed vision and color perception under higher light levels.

Behind these, the retinal **pigment epithelium (RPE)** supports visual processing and retinal health through nutrient transport, light absorption, and oxidative stress protection.

Damage to photoreceptors and the RPE, as seen in conditions like age-related macular degeneration, can significantly impair vision.

AMD—leading cause of irreversible blindness in the developed world

NORMAL VISION



MACULAR DEGENERATION

Age-related macular degeneration (AMD) is the leading cause of irreversible blindness in the developed world, that predominantly affects individuals aged 60 and above.

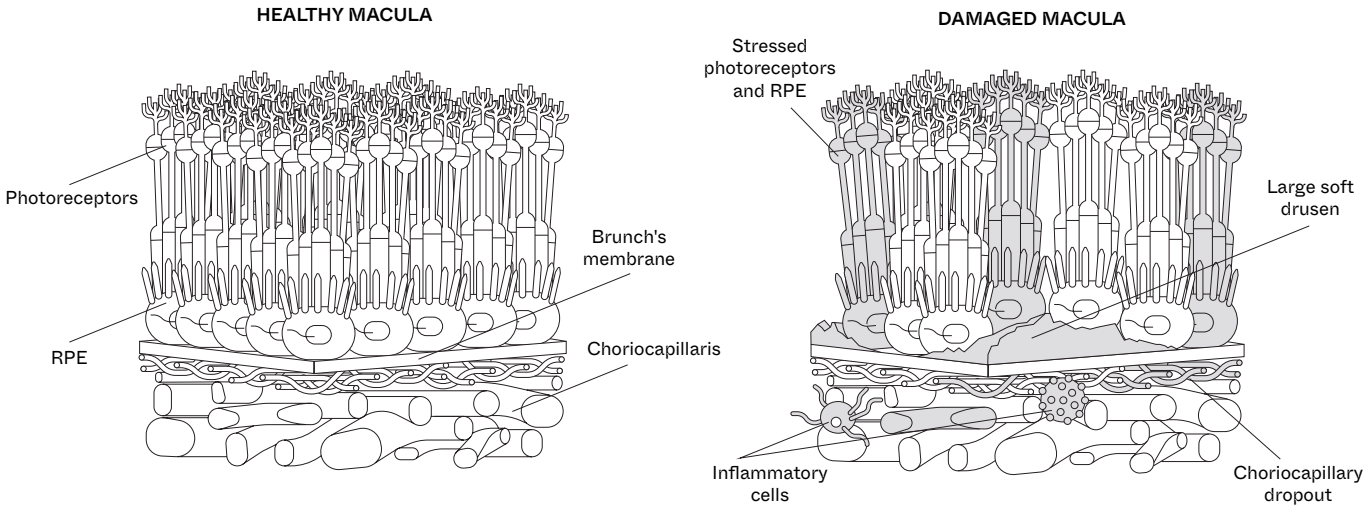
Estimates suggest that nearly 50 million people worldwide are affected by AMD.

AMD is a progressive retinal disease that irreversibly impairs vision by damaging the macula, primarily affecting photoreceptors and the retinal pigment epithelium (RPE).

SOURCE: SCHULTZ NM, ET AL. "GLOBAL BURDEN OF DRY AGE-RELATED MACULAR DEGENERATION: A TARGETED LITERATURE REVIEW." CLIN THER. 2021;43(10):1792-1818.

—RISK FACTORS

- AGE
- CIGARETTE SMOKING
- GENETIC SUSCEPTIBILITY
- HYPERTENSION
- FAMILY HISTORY
- HYPERCHOLESTROLEMIA
- NUTRITION



Age-related macular degeneration (AMD) involves complex factors including drusen formation, which significantly contributes to the disease's progression.

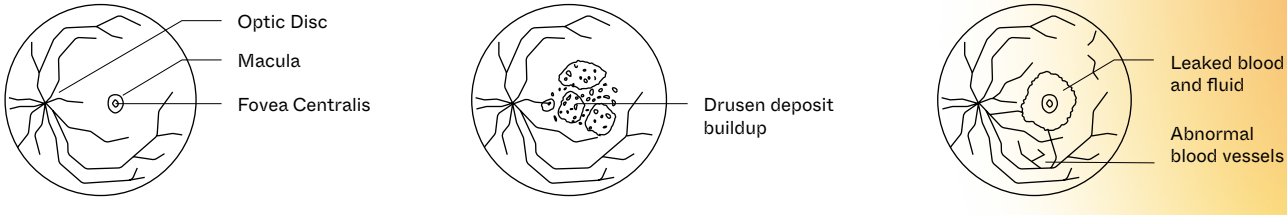
Drusen, accumulations of lipids, proteins, and debris between the retinal pigment epithelium (RPE) and Bruch's membrane, are not adequately cleared by RPE cells.

Their presence is a key risk factor for advancing to severe stages of AMD.

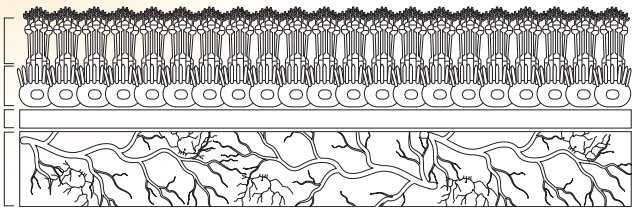
There are two main forms of AMD
and they affect the eye in different ways:

> Dry (Atrophic)

> Wet (Exudative)

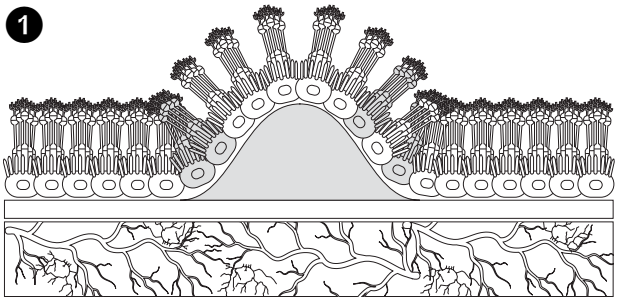


Dry AMD, which is also known as the atrophic or nonexudative form, represents the majority of AMD cases, **accounting for about 90% of diagnoses**.

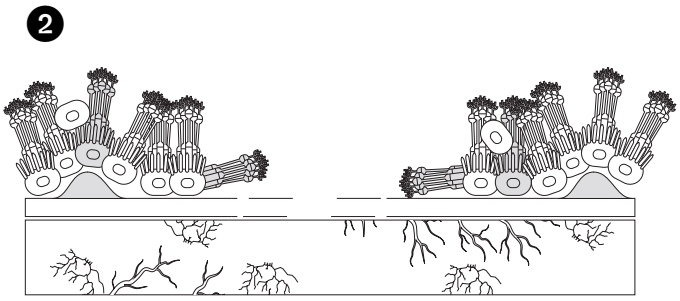


MACULA

It is characterized by the gradual accumulation of drusen [①]—tiny yellow or white deposits under the retina.
As the RPE degenerates, it fails to support the photoreceptors effectively, leading to their gradual dysfunction and death.



Drusen Formation in Dry AMD



Late AMD (Geographic Atrophy)

CNV in Wet AMD

Geographic Atrophy (GA) [②] is the advanced stage of dry Age-related Macular Degeneration (AMD). It involves irreversible damage to the macula, characterized by the loss of retinal pigment epithelium (RPE) cells, photoreceptors, and the underlying choriocapillaris. The degenerated areas where the RPE has atrophied form "geographic" patches with map-like outlines.

Wet AMD [③], also known as exudative AMD, is less common than dry AMD but progresses more rapidly to severe vision loss.
It is marked by the growth of fragile, abnormal blood vessels from the choroid behind the retina, a condition known as choroidal neovascularization (CNV). These vessels often leak fluid and blood, causing significant damage.
The leakage can elevate the macula, leading to pigment epithelial detachment (PED), distorting vision and causing rapid central vision loss.

Age-related macular degeneration (AMD) is commonly classified based on its clinical presentation into early, intermediate, and late stages. The Age-Related Eye Disease Study (AREDS) provided a detailed classification system that is widely used in research and clinical practice.

Here's an overview of the classification:

AREDS 1
Low risk

An eye with no or few **small drusen** (AREDS 1) has a very low risk.

FOCUS 2 →

AREDS 2
Moderate risk

In **early AMD** (AREDS 2), patients often have several small drusen or a few medium-sized drusen. There are generally no symptoms in the early stage of AMD.

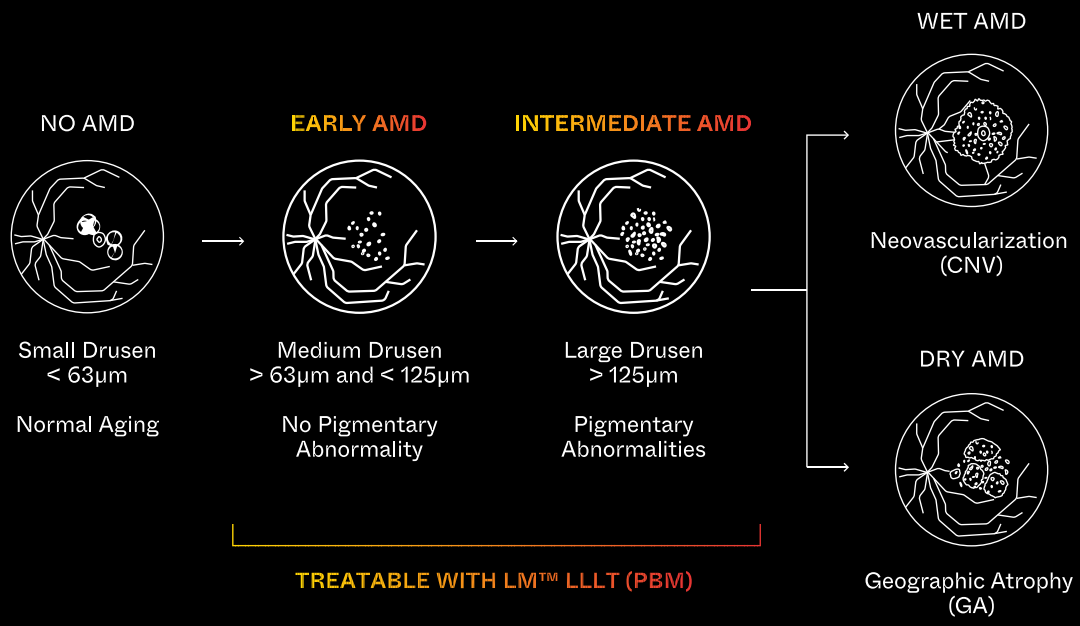
FOCUS 1 →

AREDS 3
Medium risk

Intermediate AMD (AREDS 3), is characterized by either many medium-sized drusen or one or more large drusen. There may also be changes in the pigmentation of the retina. Some people start to experience mild to moderate vision loss, but they may not notice any symptoms immediately. Difficulty seeing in low light, mild blurriness in central vision, and difficulty recognizing faces until very close to them can be signs.

AREDS 4
High risk

Late/Advanced AMD (AREDS 4), is where the most significant vision loss occurs, and it is divided dry and wet.



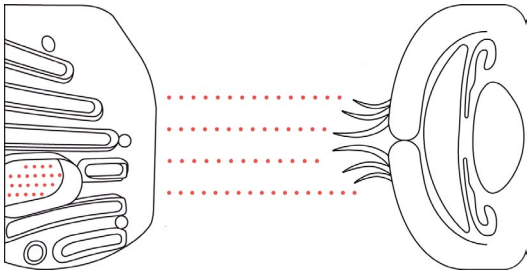
> “ The primary strategy to delay early and intermediate AMD progression includes maintaining a healthy lifestyle and taking oral nutritional supplements.

SOURCE: BORRELLI, ENRICO, ET. AL. “SAFETY, TOLERABILITY, AND SHORT-TERM EFFICACY OF LM™ LLLT (PBM) FOR DAMD”. OPHTHALMOLOGY & THERAPY, 2024

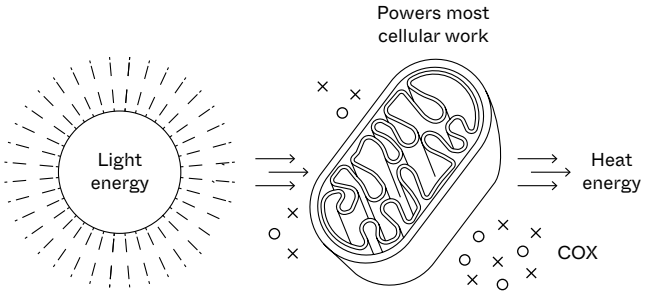
Until now.

PBM addresses current management gaps, offering an innovative method to manage disease progression, preserve vision, and improve the quality of life for patients.

This groundbreaking technology uses light therapy to promote cellular repair and regeneration, providing a promising new guideline for treating dry AMD, specifically AREDS 2 and 3 stages.



LM™ LLLT, our patented photobiomodulation (PBM), involves targeted use of selected wavelengths of visible light to near-infrared light (500-1000 nm) produced by a laser or a noncoherent light source such as light-emitting diodes.

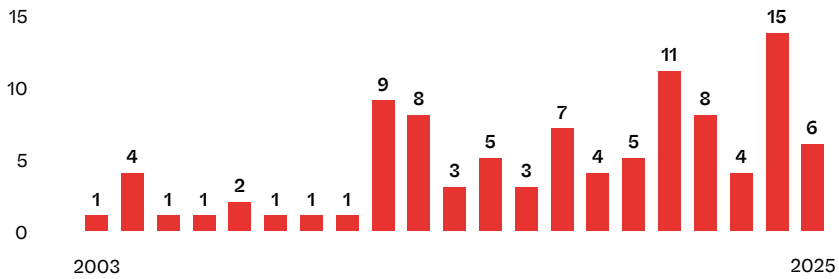


The primary effect of LM™ LLLT is a localized transient stimulus of the absorbing chromophore based on electric or light oscillations.

Beneficial effects of LM™ LLLT on the eye have been found in a wide array of ocular surface conditions, from **MGD** to **Sjögren's Syndrome**, from **Chalazia** all the way to the prevention of **Cataract** and **Refractive Surgery-induced Iatrogenic DED**.

Recent clinical research has highlighted increasing interest in PBM as a potential treatment for dAMD. Studies show that PBM improves visual acuity and decrease drusen volume.

These findings emphasize the effectiveness of PBM as a treatment and reflect the scientific community's dedication to broadening therapeutic approaches for dAMD.



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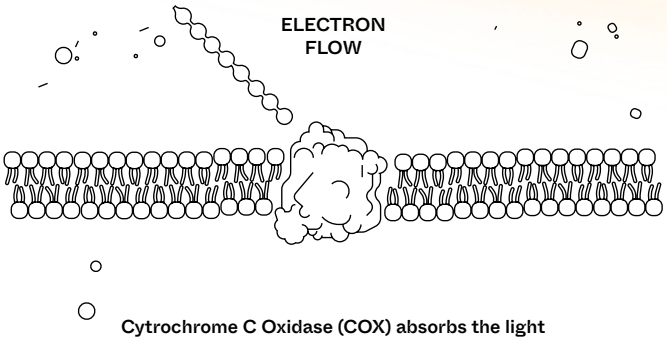
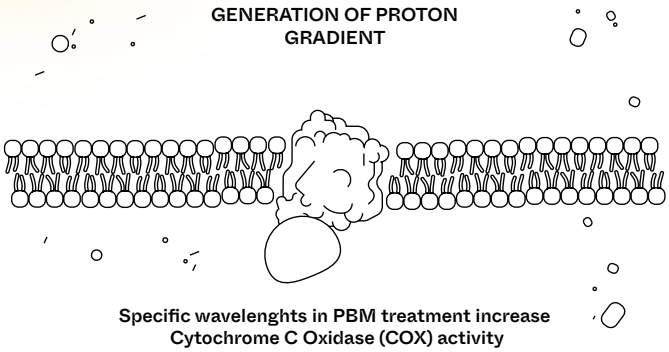
PUBMED WEBSITE

Read the Updates

PUBMED TIMELINE RESULTS BY YEAR / SEARCH QUERY: PHOTOBIOMODULATION AND AGE RELATED MACULAR DEGENERATION, MARCH 2025



Cytrochrome C Oxidase (COX) absorbs the light



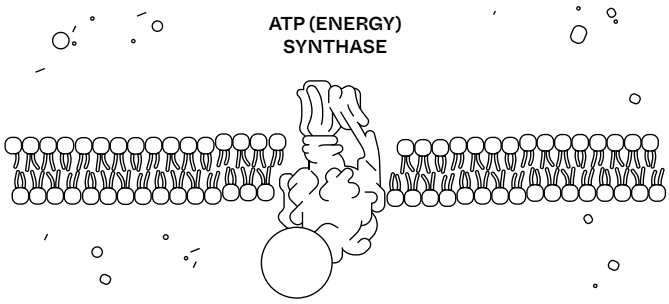
Specific wavelenghts in PBM treatment increase Cytochrome C Oxidase (COX) activity

①

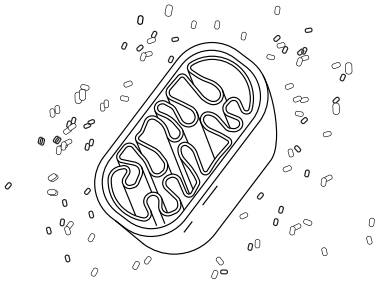
The initial photon absorption event occurs in the cellular mitochondria, and the principal molecule that absorbs the light is an enzyme called **Cytochrome C Oxidase (COX)**.

②

When cells are damaged by disease or aging, the mitochondria within the cells produce **excess nitric oxide (NO**), which **inhibits electron transport** within mitochondria and **decrease mitochondrial membrane potential**.



The ATP synthase produces ATPD (Adenosine Triphosphate) the main energy carrier in cells



Cellular respiration and methabolism are improved through increased ATP production

③

Light absorption triggers the photodissociation of NO from Cytochrome C Oxidase (COX), facilitating its release. Given that NO plays a role in inhibiting electron transport, PBM's action leads to an increase in mitochondrial membrane potential, oxygen consumption, and the proton gradient, culminating in boosted ATP production.

④

PBM also reduces oxidative stress and **inflammation** and modulates cell signaling and gene expression.

• Yellow Light

The Yellow light (590 nm) **naturally inhibits expression of vascular endothelial growth factor (VEGF),** a signaling protein that stimulates the formation of blood vessels that contributes to the development of the wet-form of AMD.

It also increases the signaling protein, nitric oxide which reduces oxidative stress-mediated injury in the cell and increases local O2 delivery. Light absorption leads to NO dissociation from COX, restoring mitochondrial function and increasing ATP production.

> Oxydative Stress Reduction
> VEGF Inhibition
> Oedema Reduction & Drainage

• Red Light

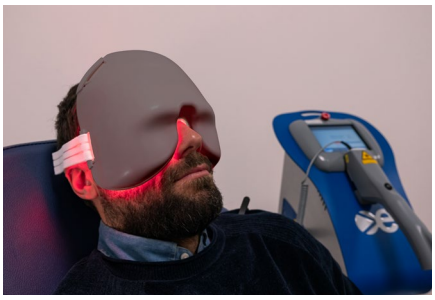
The Red (630 nm) light exposure is directly associated with a significant **increase in ATP**. The 630 nm wavelength is chosen based on its known interaction with cellular photo acceptors in COX.

The 630 nm wavelength promotes electron transfer and oxygen binding, respectively, in COX **leading to restoration of mitochondria function and increases in metabolic activity** (i.e. energy production) and **inhibition in inflammatory events and cells death.**

> HIF-1α Factor Stimulus
> Inflammatory Biomarkers Reduction
> ATP Stimulus

A technology Like no other.

Operators and patients can enjoy
the unique benefits of LM™ LLLT technology.



i. it’s fast—a treatment lasts 12’
ii. it’s painless
iii. it’s easy and safe
iv. it’s plug&play—requires minimal training

LM™ LLLT patented photobiomodualtion (PBM) technology targets cells to effectively slow the progression of dAMD, offering a safe, effective and well-tolerated treatment.

The treatment consists of an initial cycle of 8 sessions, each one involving two phases, one with the yellow mask and one with the red mask. Each session is conducted 3-4 days apart, while there is a maintenance cycle 4 to 6 months after.

↗ **REQUEST**
POSTERIOR SEGMENT
PROTOCOL

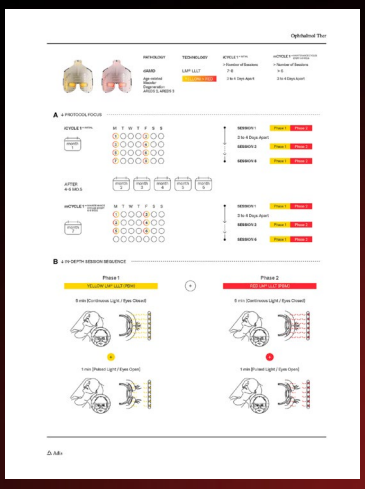
espansionegroup.it/protocols

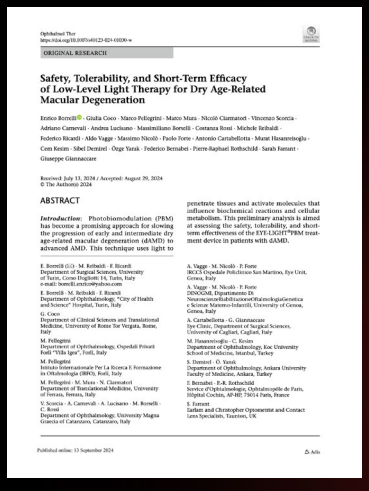
LightWave I

Safety, Tolerability, and Short-Term Efficacy of Low-level Light Therapy for dry AMD

6-months results

← GO TO
LIGHTWAVE I
CLINICAL TRIAL
PRESS RELEASE
Read the Press Release





Ophthalmol Ther
https://doi.org/10.1007/s40123-024-01030-w

ORIGINAL RESEARCH

Safety, Tolerability, and Short-Term Efficacy of Low-Level Light Therapy for Dry Age-Related Macular Degeneration

Enrico Borrelli · Giulia Coco · Marco Pellegrini · Marco Mura · Nicolò Ciampresti · Vincenzo Scorcia · Adriano Carnevali · Andrea Luciano · Massimiliano Borrelli · Costanza Rossi · Michele Reibaldi · Federico Ricardi · Aldo Vagge · Massimo Nicolò · Paolo Forte · Antonio Cartabellotta · Murat Hasanreisoglu · Cem Kesim · Sibel Demirel · Ozge Yaruk · Federico Bernabei · Pierre-Raphael Rothschild · Sarah Farnant · Giuseppe Giannaccare

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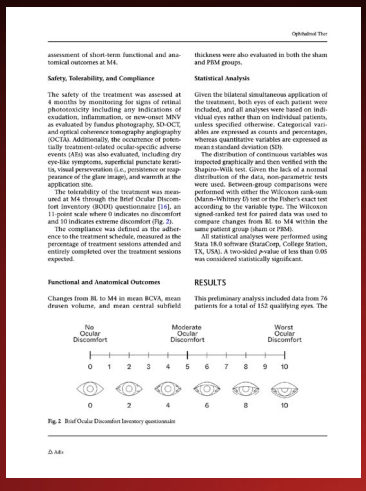
ABSTRACT

Introduction: Photobiomodulation (PBM) has become a promising approach for slowing the progression of early and intermediate dry age-related macular degeneration (dAMD) to advanced AMD. This technique uses light to penetrate tissues and activate molecules that influence biochemical reactions and cellular metabolism. This preliminary analysis is aimed at assessing the safety, tolerability, and short-term effectiveness of the EYE-LIGHT™PBM treatment device in patients with dAMD.



mean patient age was 68.6 ± 10.2 years, and 76% (n = 58) were female.

Most patients were phakic (81.8%) and had early/intermediate-stage dAMD, classified as AREDS categories 2 (40.0%) and 3 (46.7%). No statistically significant differences between the sham and the PBM groups were found at BL for demographic and clinical parameters, as shown in Table 1.

Safety, Tolerability, and Compliance Outcomes

No signs of retinal phototoxicity were observed in either group at M4. A total of 66 eyes (85.3% of the total) had at least one ocular AE. The number of eyes with ocular-specific AEs was higher in the sham group (40.8%; n = 31) than in the PBM group (18.7%; n = 15) ($p = 0.008$); specifically, dry eye-like symptoms in seven eyes (9.2% of the total) in the sham group versus six eyes (7.9%) in PBM ($p = 1.00$); visual perseveration in nine eyes (11.8%) in the sham group versus three eyes (3.9%) in PBM ($p = 0.130$); warmth at the application site in 17 eyes (22.4%) in the sham group versus eight eyes (10.5%) in the PBM ($p = 0.079$). Conversely, superficial punctate keratitis was never diagnosed after any mask session in either group. No ocular-specific AEs led to study discontinuation.

At M4, the mean BODI score was 1.22 ± 2.0 in the sham group and 1.4 ± 2.5 in the PBM group, with no significant differences between the two groups ($p = 0.55$).

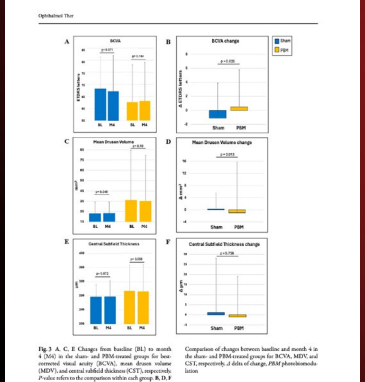
Overall, all patients (100%) of both the sham and PBM groups were fully compliant with all treatment sessions. Three patients were withdrawn from the study due to the development of MNV in one eye; interestingly, all these patients belonged to the sham group (7.8% vs. 0% in the treatment group; $p = 0.240$).

Functional and Anatomical Outcomes

The values of all functional and anatomical parameters for the sham and PBM groups at both time points are reported in Table 2.

Best-Corrected Visual Acuity

Sham- and PBM-treated groups had similar BCVA at BL (66.2 ± 14.7 vs. 64 ± 15.5 ETDRS letters, respectively; $p = 0.367$). At M4, neither the sham nor the PBM group experienced significant BCVA changes compared to BL; however, a non-statistically significant decrease in ETDRS letters was noted in the sham group (1.13 ± 5.0; $p = 0.071$), while a non-statistically significant improvement was detected in the PBM group (0.48 ± 5.31, $p = 0.184$) (Fig. 3A). The comparison of BCVA changes from BL to M4 detected in the two groups was significantly different in favor of patients treated with PBM ($p = 0.026$) (Fig. 3B). Additionally, stratified analysis showed that a



assessment of short-term functional and anatomical outcomes at M4.

Safety, Tolerability, and Compliance

The safety of the treatment was assessed at 4 months by monitoring for signs of retinal phototoxicity including any indications of exudation, inflammation, or new-onset MNV as evaluated by fundus photography, SD-OCT, and optical coherence tomography angiography (OCTA). Additionally, the occurrence of potentially treatment-related ocular-specific adverse events (AEs) was also evaluated, including dry eye-like symptoms, superficial punctate keratitis, visual perseveration (i.e., persistence or reappearance of the glare image), and warmth at the application site.

The tolerability of the treatment was measured at M4 through the Brief Ocular Discomfort Inventory (BODI) questionnaire [16], an 11-point scale where 0 indicates no discomfort and 10 indicates extreme discomfort (Fig. 2).

The compliance was defined as the adherence to the treatment schedule, measured as the percentage of treatment sessions attended and entirely completed over the treatment sessions expected.

Functional and Anatomical Outcomes

Changes from BL to M4 in mean BCVA, mean drusen volume, and mean central subfield thickness were also evaluated in both the sham and PBM groups.

Statistical Analysis

Given the bilateral simultaneous application of the treatment, both eyes of each patient were included, and all analyses were based on individual eyes rather than on individual patients, unless specified otherwise. Categorical variables are expressed as counts and percentages, whereas quantitative variables are expressed as mean ± standard deviation (SD).

The distribution of continuous variables was inspected graphically and then verified with the Shapiro–Wilk test. Given the lack of a normal distribution of the data, non-parametric tests were used. Between-group comparisons were performed with either the Wilcoxon rank-sum (Mann–Whitney *U*) test or the Fisher's exact test according to the variable type. The Wilcoxon signed-ranked test for paired data was used to compare changes from BL to M4 within the same patient group (sham or PBM).

All statistical analyses were performed using Stata 18.0 software (StataCorp, College Station, TX, USA). A two-sided *p*-value of less than 0.05 was considered statistically significant.

RESULTS

This preliminary analysis included data from 76 patients for a total of 152 qualifying eyes. The

Fig. 2 Brief Ocular Discomfort Inventory questionnaire

Fig. 4 Representative OCT B-scans showing the reduction of macular drusen in a patient belonging to PBM group. A Baseline (BL). B Month 4 (M4)

(500–1000 nm) delivered by a light source [18]. EYE-LIGHT® LLLT uses light-emitting diodes (LED) emitting two wavelengths at 590 nm (yellow) and 630 nm (red) in continuous and pulsed mode. On the other hand, the Valeda Light Delivery System delivers through LED three wavelengths in the yellow (590 nm–5 mW/cm²), red (660 nm–65 mW/cm²) and near-infrared (NIR) (850 nm–8 mW/cm²) in a total exposure time of 250 s subdivided into four phases. Phase

of nitric oxide (NO) from intracellular stores, reducing oxidative stress-mediated injury and enhancing oxygen delivery. Furthermore, photon absorption activates numerous transcription factors, leading to increased expression of antioxidant enzymes and anti-apoptotic and anti-inflammatory signaling proteins supporting the vitality of retinal cells [19–21]. These effects suggest that PBM treatment could have a beneficial role in AMD, a condition marked by

LIGHTWAVE I > CLINICAL TRIAL - PUBLISHED IN OPHTHALMOLOGY & THERAPY, SEPT. 2024

As AMD increasingly affects quality of life and raises social costs, managing its diagnosis, monitoring, and treatment is a growing challenge for ophthalmology.

Innovative therapies like **LM™ LLLT (PBM**) aim to slow progression and prevent advanced stages, including Geographic Atrophy and wet AMD.

The 6-month follow-up, part of the **LightWave I clinical trial**, has demonstrated the safety, tolerability, and short-term efficacy of **LM™ Low-level Light Therapy (LLLT)** in patients with **Dry Age-related Macular Degeneration (dAMD)**.

These findings, based on 76 patients (152 eyes) and published in the September issue of Springer's Ophthalmology & Therapy Journal, show that by month 4, a significantly higher percentage of PBM-treated patients experienced a gain of five or more letters in BCVA compared to the sham group (20.3% vs. 8.9%, p=0.043), along with a **notable reduction in drusen volume** (p=0.013).

152
EYES

76
PATIENTS

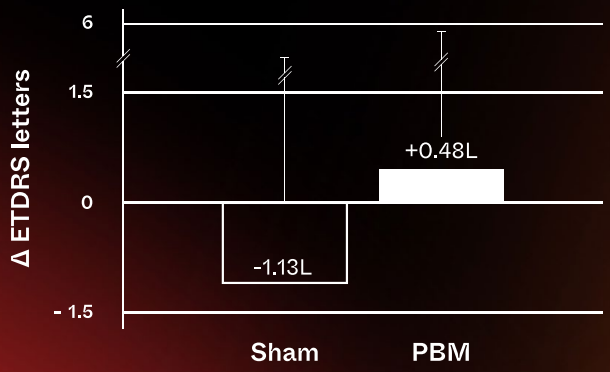
6
MONTHS FOLLOW-UP [INTERIM]

7
UNIVERSITY HOSPITALS

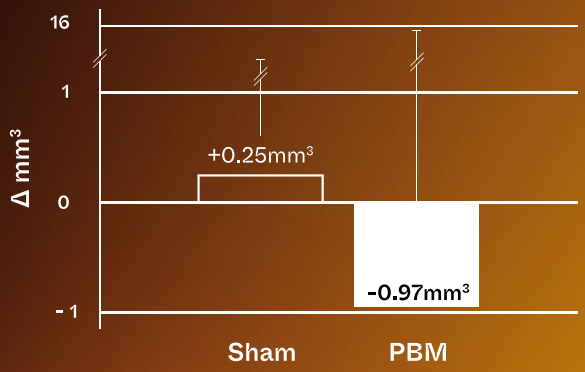
> Stratified analysis showed that a **significantly higher** percentage of patients in the PBM group gained **5 or more letters** (one-line improvement or better) compared to the sham group (20.3% vs. 8.9%, respectively; p=0.043).

> The **significant drusen reduction** in association with functional improvement is particularly compelling. Although drusen formation and regression are in constant process of change, it is known that the drusen area tends to increase even during a short period of time.

BCVA Change **p=0.0026**



Mean Drusen Volume Change **p=0.013**



BORRELLI, Enrico, et. Al., Safety, Tolerability, and Short Term Efficacy of LM™ LLLT (PBM) for dAMD, Ophthalmology & Therapy Journal, 2024

Onto the Retina LightWave I

The **first**, **multi-centric** clinical trial studying **PBM tech** for **retinal diseases.**

Through **LightWave I** we're **pioneering** what's next in retinal care, starting with **dry AMD** (AREDS 2 & 3).

We have selected key case studies from the multi-center, prospective clinical trial, **LightWave I**, showcasing the clinical efficacy and potential of Photobiomodulation (PBM) technology as a novel therapeutic solution to address the unmet needs in dry AMD management.

LightWave I: First Dry AMD Multi-centric Study

A female subject, aged 68, diagnosed with Age-Related Macular Degeneration (AMD) classified under the Age-Related Eye Disease Study (AREDS) Category 3, was incorporated into the multicentric, randomized controlled investigation termed LightWave I.

At baseline, the subject's best-corrected visual acuity was quantified at 50 letters on the Early Treatment Diabetic Retinopathy Study (ETDRS) chart.

> CASE REPORT #1

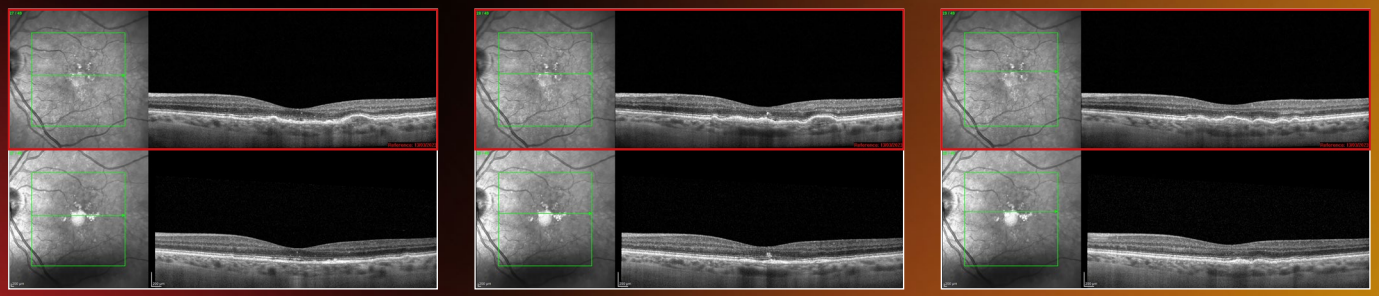
The subject underwent a regimen of photobiomodulation (PBM) employing Light Modulation™ Low-level Light Therapy (LM™ LLLT) via the eye-light® system. The treatment protocol entailed bi-weekly sessions spanning a four-week duration.

Subsequent to a one-month interlude post the culmination of the therapy, a reevaluation of the subject's best-corrected visual acuity manifested an enhancement to 55 ETDRS letters. Additionally, a complete resolution of certain soft drusen was observed.

[WOMAN, 68 Y/O, AREDS 3]

CASE #1—Describes a 68-year-old female patient with AMD (AREDS Category 3) witnessed an improvement in visual acuity from 50 to 55 ETDRS letters post-treatment.

① ② ③



Figures 1, 2, and 3, which are retinal images of the identical eye, depict a marked decrement in the volume of drusen within the macular region, corroborating the therapeutic efficacy of the intervention.

NOTE: Presented cases are integral to the multicentric clinical trial, LightWave I, currently underway.

A female subject, aged 72, diagnosed with Age-related Macular Degeneration (AMD) classified under the Age-Related Eye Disease Study (AREDS) Category 3, was included in the multicentric randomized controlled investigation termed LightWave I.

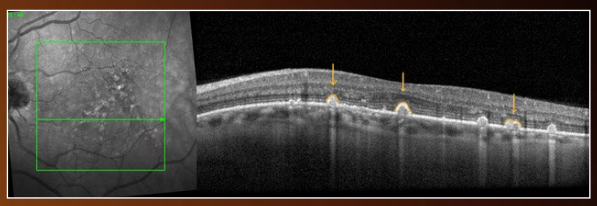
At baseline, the subject's best-corrected visual acuity was quantified at 52 letters on the Early Treatment Diabetic Retinopathy Study (ETDRS) chart.

The subject underwent a regimen of photobiomodulation (PBM) employing Light Modulation™ Low-level Light Therapy (LM™ LLLT) via the eye-light® system. The treatment protocol entailed bi-weekly sessions spanning a four-week duration.
Subsequent to a one-month interlude post the culmination of the therapy, a reevaluation of the subject's best-corrected visual acuity manifested anenhancement to 56 ETDRS letters. Additionally, a marked decrement in the volume of certain soft drusen was observed.

[WOMAN, 72 Y/O, AREDS 3]

CASE #2—Describes a 72-year-old female patient with AMD (AREDS Category 3) witnessed an improvement in visual acuity from 52 to 56 ETDRS letters post-treatment.

①



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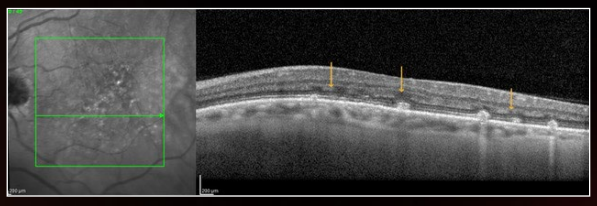

Figures 1 and 2, showing retinal images of the same eye, illustrate a significant reduction in drusen volume, confirming the effectiveness of the treatment.

NOTE: Presented cases are integral to the multicentric clinical trial, LightWave I, currently underway.

What are the benefits?

LM™ LLLT delivers wavelengths of 590 nm and 630 nm in continuous and pulsed mode addressing independent cellular mechanisms that are important in Age-related Macular Degeneration (AMD). Below are the key benefits offered:

① Visual Acuity Improvement

② Contrast Sensitivity Improvement

③ Central Drusen Volume Reduction

④ Completely Painless Therapy

⚠ dAMD remains a degenerative condition with no cure, but PBM potentially offers:

> Painless & Safe Therapy

> Drusen Volume Reduction w/ No Atrophy

> BCVA Improvement

> Contrast Sensitivity Improvement

LightWave II Seeing Beyond

We're **pioneering** what's next in retinal care through a second wave of **large-scale**, **global**, **multi-centric** research studies.

←
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LIGHTWAVE II
CLINICAL TRIALS
LightWave II

Not all solutions and use cases available in all countries. Every piece of information shown ought to be consideredas fact-based evidence deriving from publicly available literature, for the sole purpose of scientific exchange.

C. IOVINO
MD

E. BORRELLI
A. PROF, MD, PHD

M. PELLEGRINI
MD

P.R. ROTHSCHILD
PROF, MD, PHD

S. DEMIREL
A. PROF, MD, PHD

G. GIANNACCARE
PROF, MD

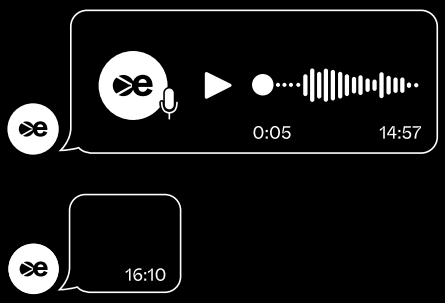
M. HASANREISOGLU
PROF, MD, PHD

E. LIGABUE
MD, PHD

A growing and heterogeneous community of prominent thought leaders actively support us in developing new applications and elevating posterior segment care.

Become Part of our Global Scientific Community!

Throughout the years, valued members of the scientific community have contributed to the resonance of Espansione technologies by publishing a vast array of research and scientific, peer-reviewed papers applications.



Explore the cutting-edge advancements with Espansione Group's Scientific Community.

Join us for exclusive resources, expert-led webinars, and invaluable insights from global leaders in LM™ LLLT and OPE™ IPL technologies.

← **JOIN US**
AT THE FOREFRONT
INNOVATION:
SCIENTIFIC COMMUNITY
Join Now!

Visit our Scientific Community to connect and grow with fellow innovators.

Founded with a strong focus on anterior segment care, Espansione Group has been a pioneer in ophthalmology, developing and patenting the innovative Light Modulation™ LLLT technology.

Science told us. It just works.

Numerous clinical studies validate the effectiveness of LM™ LLLT (PBM) in ophthalmology for a wide array of ocular surface conditions, from **MGD** to **Sjögren's Syndrome**, from **Chalazia** all the way to the prevention of **Cataract** and **Refractive Surgery-induced Iatrogenic DED**.

However, **the potential of ocular surface conditions extends beyond** direct treatment of ocular surface conditions, making the Espansione Ecosystem the optimal choice for enhancing your practice.

We have consistently been at the forefront of treating ocular surface conditions such as MGD, DED, and blepharitis, and we are now expanding our expertise to include posterior segment management.

Join us as we continue to challenge the status quo and innovate for the betterment of ocular health.

Discover the Science behind LM™ LLLT

No pain,
Extreme gains.

Photobiostimulation therapy enabled by LM™ LLLT is a unique kind of near-infrared light therapy (NILT) that's completely painless for the patient —yet extremely effective in managing a vast number of Conditions.

Different wavelengths (Red, Blue, Yellow) are available for various applications, making it a versatile solution for both anterior and posterior segment conditions.

CERTIFIED FOR MEDICAL USE

ON AMD

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espansione
group

Blocco 27, Via Degli Orefici 152
Centergross, Funo (BO)
40050, Italy

VAT NUMBER: IT 00707821203
TAX CODE: 00874760408