

Espansione Group: Pioneering Light-Based Solutions in Ophthalmology

Espansione Group, a pioneer in the medtech industry and an advocate for science-driven innovation, strives to deliver the highest standards in the ophthalmic industry. With a strong commitment to improving patient care, the company has developed and introduced cutting-edge solutions for a wide range of ocular conditions, from the ocular surface to the posterior segment, and beyond with new applications being researched as we speak in fields from dermatology to neurology.

About LM[®] LLLT and eye-light[®]

At the heart of the company's innovation pipeline is Light Modulation[®] Low-level Light Therapy (LM[®] LLLT), its patented photobiomodulation (PBM) technology available on the eye-light[®] solution. LM[®] LLLT is a groundbreaking approach that harnesses monochromatic light waves to stimulate cellular activity through a number of mechanisms of action (e.g., ATP production stimulus, reduction of the oxidative stress).

Our flagship solution, eye-light[®] combines the efficacy of LM[®] LLLT with the versatility of OPE[®] IPL (Optimal Power Energy[®] Intense Pulsed Light) into one. OPE[®] IPL is well-known to be effective in addressing inflammatory conditions, a common contributor to a number of conditions, by thermally regulating the treatment area, reducing bacterial load in the process.



Revolutionizing Patient Care

Espansione's technologies have shown remarkable results in managing a variety of anterior segment conditions. From treating chalazia to managing complex autoimmune conditions such as Sjögren's Syndrome, to providing a

non-invasive, painless solution for dry eye disease all the way to dAMD via the LightWave I study, these technologies have reshaped patient care, offering effective, safe and painless treatment options to a number of conditions—with over 50 papers and counting published worldwide on eye-light[®] alone.

Preventing Iatrogenic Dry Eye in Cataract Surgery: A Breakthrough Study

One of the latest pieces of research focusing on LM[®] LLLT's ability to elevate patient care comes from a recent study published in the British Journal of Ophthalmology. The research focused on preventing iatrogenic dry eye disease (DED) in healthy patients undergoing senile cataract surgery—a procedure aimed at improving patients' quality of life, that in ~30% of instances though results in the development of major ocular surface discomfort.

This prospective, interventional, randomized, controlled, double-masked clinical trial involved 153 healthy patients who underwent two sessions of LM[®] LLLT (or sham treatment). The protocol saw one session of Red LM[®] LLLT being administered one week before and one week after the cataract surgery. The results were groundbreaking: patients treated with LM[®] LLLT showed significantly lower Ocular Surface Disease Index (OSDI) scores (9.0 ± 9.0 vs 18.2 ± 17.9) and higher Non-Invasive Break-up Time (NIBUT) values (12.5 ± 6.6 seconds vs 9.0 ± 7.8 seconds) compared to the control group at 30 days post-surgery.

Moreover, the Meiboscore values for Meibomian Gland Loss (MGL) were significantly lower in the LM[®] LLLT group compared to the control group, highlighting the therapy's efficacy in maintaining ocular surface integrity.

The study emphasized the seamless integration of the LM[®] LLLT treatment into the routine workflow of cataract surgery, making it a convenient, non-invasive, and highly effective prophylactic intervention against postoperative DED.

In conclusion, Espansione Group continues to lead the way in innovative patient care, with LM[®] LLLT and eye-light[®] at the forefront of this revolution. As evidenced by rigorous clinical research, these technologies not only promise but deliver substantial improvements in patient outcomes, particularly in the challenging arena of cataract surgery and dry eye disease prevention.



Discover the revolutionary LM[®] LLLT
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