

Published clinical trial data

Photobiomodulation (PBM) treatment in ocular indications

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Clinical Study	LED Specifics	Ocular Indication	Sample Size	Endpoints	Results	Safety Concerns
<p>Treatment of Dry Age-related macular degeneration with Photobiomodulation</p> <p>[Merry GM et al. <i>Proceedings 9th WALT</i>, 2012]</p>	<p>Freq: PBM treatment 3x/week for 6 weeks</p> <p>LED: 88s PBM of 670 nm (50-80 mW/cm²) [WARP 10, Quantum Devices]</p> <p>35s PBM of 590 nm (4m W/cm²) and 790 nm (0.6 mW/cm²) [Gentlewaves]</p>	<p>Dry Age-related Macular Degeneration</p>	<p>9 Subjects [18 eyes]</p>	<ul style="list-style-type: none"> - Visual acuity (VA) - Contrast sensitivity (CS) 	<ul style="list-style-type: none"> - Statistically significant improvements in VA and CS 	<p>None</p>
<p>Photobiomodulation reduces drusen volume and improves visual acuity and contrast sensitivity in dry age-related macular degeneration</p> <p>[Merry GM, et al. <i>Acta Ophthalmol.</i> 2016;95:e270-e277]</p>	<p>Freq: PBM treatment 9x/3 weeks</p> <p>LED: 2 x 88s PBM of 670 nm (50-80 mW/cm²) [WARP 10, Quantum Devices]</p> <p>2 x 35s PBM of 590 nm (4 mW/cm²) and 790 nm (0.6 mW/cm²) [Gentlewaves]</p>	<p>Dry Age-Related Macular Degeneration</p>	<p>22 Subjects [42 Eyes]</p>	<ul style="list-style-type: none"> - Visual acuity (VA) - Contrast sensitivity (CS) - Drusen volume - Central drusen thickness 	<ul style="list-style-type: none"> - Statistically significant improvements in VA and CS - Statistically significant reductions in drusen volume and central drusen thickness - Unchanged retinal thickness 	<p>None</p>

<p>Photobiomodulation in the treatment of patients with noncenter-involving diabetic macular oedema</p> <p>[Tang J et al. <i>Br J Ophthalmol.</i> 2014;98:1013-5]</p>	<p>Freq: PBM treatment 2x daily/ 2-9 months</p> <p>LED: 88s PBM of 670 nm (50-80 mW/cm²) [WARP 10, Quantum Devices]</p>	Diabetic Macular Oedema	4 Subjects [8 eyes; 4 sham and 4 treated]	- Retinal and macular thickness	- Statistically significant reductions in macula edema and focal retinal thickness	None
<p>Low-Level Laser Therapy Improves Visual Acuity in Adolescent and Adult Patients with Amblyopia</p> <p>[Ivancic & Ivancic. <i>Photomed Laser Surg.</i> 2012;30:167-71]</p>	<p>Freq: PBM treatment 4x/2 weeks</p> <p>LED: 30s PBM of 780 nm (292 Hz, 1:1 duty cycle, AVG power 7.5mW; 3mm²)</p>	Amblyopia	178 Subjects [231 eyes; 20 sham and 211 treated]	- Visual acuity (VA)	- Statistically significant improvements in VA	None
<p>Low-level laser therapy improves vision in a patient with retinitis pigmentosa</p> <p>[Ivancic & Ivancic. <i>Photomed Laser Surg.</i> 2014;32:181-4]</p>	<p>Freq: PBM treatment 2x/2 weeks</p> <p>LED: 30s PBM of 780 nm (292 Hz, 1:1 duty cycle, AVG power 10mW; 3mm²)</p>	Retinitis Pigmentosa	1 subject	- Visual acuity (VA)	- Statistically significant improvements in VA	None
<p>Low-Level Laser Therapy Improves Vision in Patients with</p>	<p>Freq: PBM treatment 4x/2 weeks</p> <p>LED: 30s PBM of</p>	Age-related Macular Degeneration	203 Subjects (348 eyes; 20 sham and 328 treated)	- Visual acuity (VA) - Prevalence of metamorphopsia,	- Statistically significant improvements in VA - Reduced metamorphopsia,	None

<p>Age-Related Macular Degeneration</p> <p>[Ivancic & Ivancic. <i>Photomed Laser Surg.</i> 2008;26:241-5]</p>	<p>780 nm (292 Hz, 1:1 duty cycle, AVG power 7.5mW; 3mm²)</p>			<p>scotoma, and Dyschromatopsi</p> <ul style="list-style-type: none"> - Edema and bleeding in Wet AMD subjects 	<p>scotoma, and Dyschromatopsi</p> <ul style="list-style-type: none"> - Reduced edema and bleeding in Wet AMD 	
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