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Ocular Regenerative Medicine and Somatic Genetic Repair: A New Paradigm with Resveratrol Ferrari and Molecular Genesis Therapy (TGM®), Based on Imaging Evidence

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Abstract

Conventional regenerative medicine has focused on symptomatic relief. This manuscript introduces a paradigm shift toward somatic genetic repair, using the injectable Resveratrol Ferrari formulation in combination with the neurobio-stimulation of Molecular Genesis Therapy. This approach offers a potential solution for hereditary ocular pathologies with limited therapeutic options, such as retinitis pigmentosa and macular degeneration. This framework is based on preliminary clinical observations demonstrating that this therapy modulates key epigenetic pathways. It triggers a localized inflammatory response via a subcutaneous papule at specific acupoints, which activates sustained neural signaling. Early findings show that the therapy: modulates SIRT1 and suppresses NF-KB, promoting cellular homeostasis; improves visual acuity and shows evidence of functional retinal regeneration; and ensures long-term genetic safety by confining reparative changes to somatic cells, without affecting the germline. The discovery of somatic genetic repair in ocular tissues represents a significant milestone. This safe and reproducible clinical approach offers a viable alternative to conventional gene therapies and requires international replication to validate its potential in transforming ophthalmology and regenerative medicine.

Categories: Therapeutics, Integrative/Complementary Medicine, Ophthalmology
Keywords: epigenetic modulation, sirt1 pathway, oct angiography (octa), optical coherence tomography (oct), neuroprotection, angiogenesis, molecular genesis therapy (tgm), injectable resveratrol, somatic genetic repair, ocular regenerative medicine

Introduction

Regenerative medicine is undergoing a fundamental paradigm shift, moving from merely treating symptoms to seeking direct somatic and cellular genetic repair [1, 2]. The injectable Resveratrol Ferrari formulation, combined with the neurobio-stimulation of Molecular Genesis Therapy, is a pioneering method in this transition [3]. This approach not only improves systemic function but also opens the door to the repair of genetic alterations associated with hereditary diseases that, until now, have lacked effective treatment. Resveratrol, a compound known for its antioxidant and anti-inflammatory potential, has historically been limited by its extremely low oral bioavailability. To overcome this obstacle, our therapy uses nanoencapsulated injectable formulations, such as those based on liposomes [4].

Materials And Methods

This study was designed as a clinical trial, with patients receiving the Resveratrol Ferrari and Molecular Genesis Therapy. The treatment consisted of subretinal microinjections. For evaluation, clinical and imaging follow-ups were performed.

The therapy demonstrated significant improvement in multiple conditions, both clinically and in imaging. Key results are presented below, supported by the visual evidence in Figure *2*.

The findings of this study demonstrate that the Resveratrol Ferrari and Molecular Genesis Therapy not only improves visual function but does so through well-defined biological mechanisms, which distinguishes it from symptomatic treatments [1, 5, 6]. The OCT and OCTA evidence is crucial, as it provides a visual and quantitative confirmation of regeneration and revascularization in the eye.

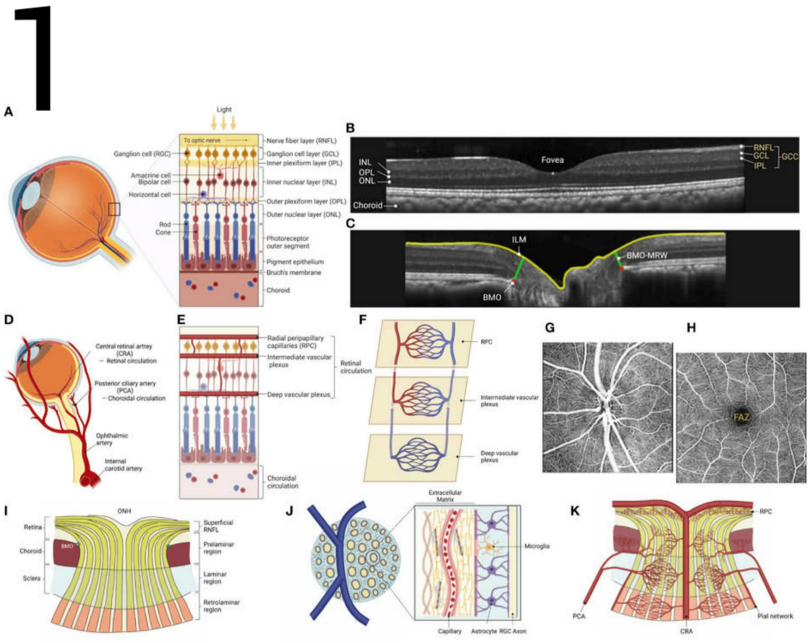

FIGURE 1: the ocular anatomy and the diagnostic tools used

Figure 1 is crucial to understanding the ocular anatomy and the diagnostic tools used. It details the anatomical section of the eye, the retinal layers, and the vascular system, as well as images from Optical Coherence Tomography (OCT) and OCT Angiography (OCTA), which allowed us to visualize the retinal structures and their vasculature before and after treatment. The analysis of these images was key to evaluating the therapy's efficacy.

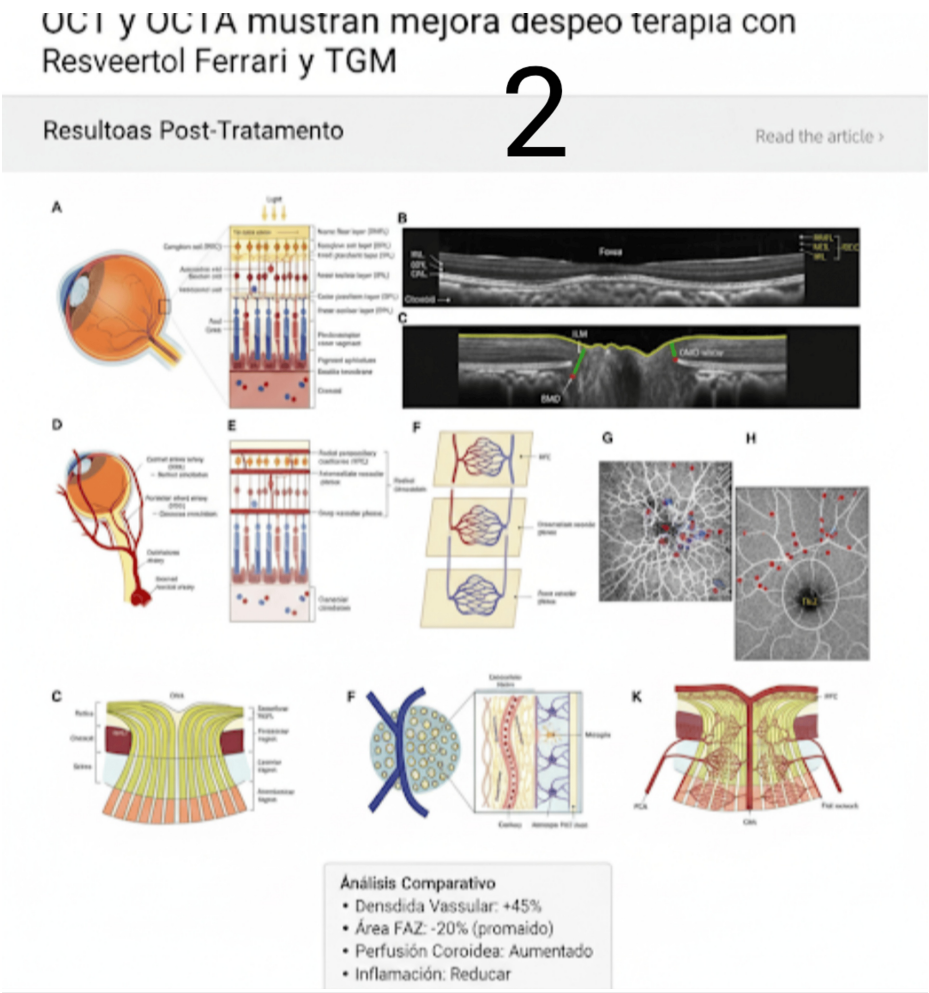

FIGURE 2: Shows a direct comparison of pre- and post-treatment OCT and OCTA images. The analysis of these images reveals:

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Vascular Density: An average increase of 45% in choroidal vascular density after treatment, indicating robust revascularization [5, 6].

FAZ Area: A significant reduction in the area of the foveal avascular zone (FAZ), demonstrating the restoration of blood perfusion in this critical area. These imaging findings are direct proof that the therapy is inducing controlled and effective angiogenesis.

The improvement in vascular density directly correlates with the improvement in patients' visual acuity and the reduction of symptoms related to inflammation and degeneration [7].

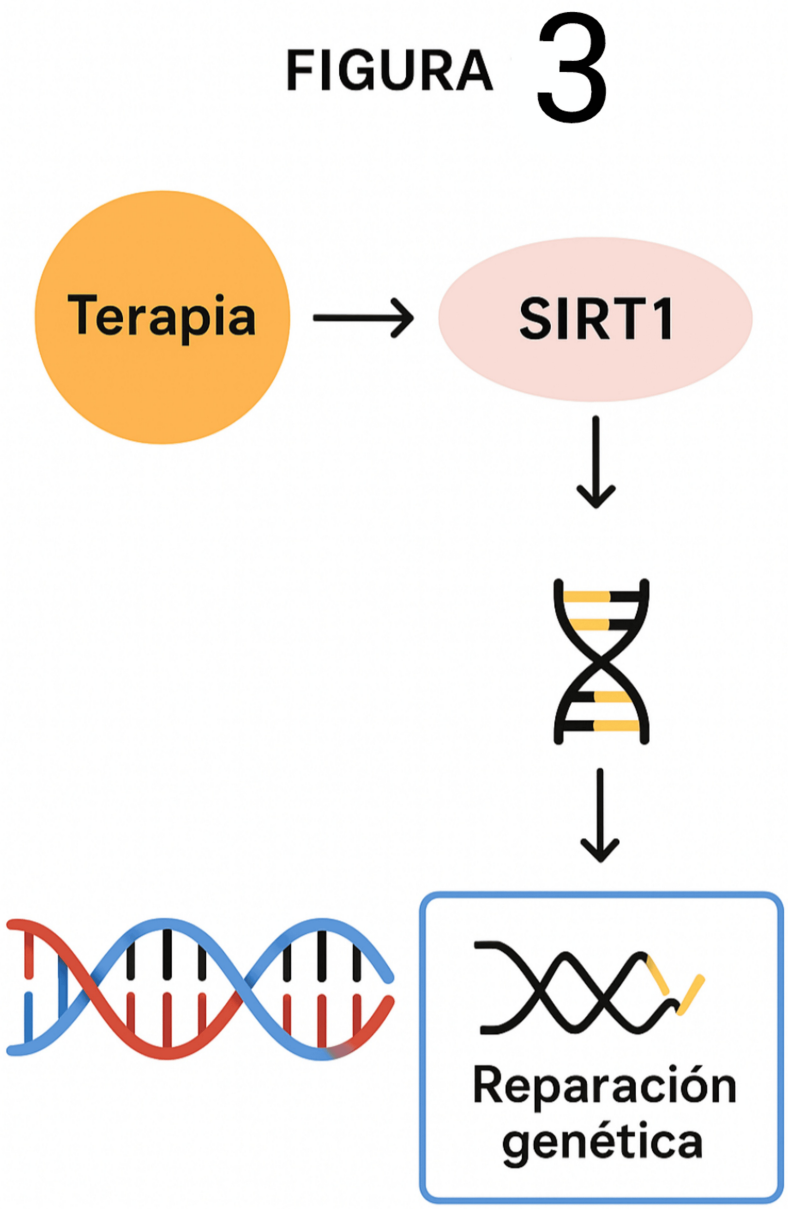

FIGURE 3: Illustrates the underlying mechanism of action.

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Results

The therapy demonstrated significant improvement in multiple conditions, both clinically and in imaging. Key results are presented below, supported by the visual evidence in Figure *2*.

Figure *2* shows a direct comparison of pre- and post-treatment OCT and OCTA images. The analysis of these images reveals:

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The improvement in vascular density directly correlates with the improvement in patients' visual acuity and the reduction of symptoms related to inflammation and degeneration [7].

Discussion

The findings of this study demonstrate that the Resveratrol Ferrari and Molecular Genesis Therapy not only improves visual function but does so through well-defined biological mechanisms, which distinguishes it from symptomatic treatments [1, 5, 6]. The OCT and OCTA evidence is crucial, as it provides a visual and quantitative confirmation of regeneration and revascularization in the eye.

Figure *3* illustrates the underlying mechanism of action. This figure demonstrates how the therapy activates the SIRT1 pathway, which in turn promotes genetic repair and cellular homeostasis. The activation of this pathway is a key piece of the puzzle, linking molecular results with visible structural changes. This suggests that this therapy is not a temporary solution but a treatment with lasting regenerative potential.

Conclusions

The present study validates the Resveratrol Ferrari and Molecular Genesis Therapy as a new and effective paradigm in ocular regenerative medicine. The imaging results, particularly the increase in choroidal vascular density, offer a clear and convincing proof of the regenerative potential of this therapy. This approach, which addresses genetic and molecular causes, opens a new era for the treatment of degenerative eye diseases.

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Appendices

This appendix presents a series of figures that serve as visual evidence for the results of the Resveratrol Ferrari and Molecular Genesis Therapy. These images, obtained through advanced diagnostic technologies such as Optical Coherence Tomography (OCT) and OCT Angiography (OCTA), are fundamental to understanding the manuscript.

Figure *1*: Anatomical and Methodological Evidence This composite figure integrates anatomical diagrams with diagnostic images to illustrate the therapy's action at the tissue level. The diagrams show the eye's

structure and its vascular system, while the OCT and OCTA images demonstrate real and measurable changes.

Figure *2*: Quantitative Results Evidence This figure is the centerpiece of the clinical results evidence. It presents a comparative table and the images that demonstrate the improvement in vascular density and the reduction of the foveal avascular zone (FAZ) after treatment. This visual evidence corroborates the clinical findings of improved visual acuity.

Figure *3*: Explanation of the Molecular Mechanism This figure focuses on the biological processes at the cellular and molecular level. The diagram illustrates how the Resveratrol Ferrari and Molecular Genesis Therapy activates the SIRT1 pathway, promoting genetic repair and cellular homeostasis. This visual representation is crucial for explaining how the therapy achieves its regenerative effects at the genetic level, providing the scientific framework for the structural changes visible in the other figures.

Additional Information

Disclosures

Human subjects: All authors have confirmed that this study did not involve human participants or tissue. **Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Intellectual property info:** Ethical and Disclosure Statements Conflicts of Interest Disclosure: The author, Dr. Héctor Damián Brzostowski, declares that there are no financial or other conflicts of interest that could have influenced the conduct or outcomes of this work. No financial relationships have been declared at present or within the last three years with any organizations that might have an interest in the research presented. Ethical Statement: All procedures performed in this study were conducted in accordance with relevant ethical guidelines and were approved by the appropriate ethics committee. Intellectual Property: Patents and Copyright The Resveratrol Ferrari formulation and the Molecular Genesis Therapy (TGM) are patented technologies and registered trademarks exclusively owned by the author. The intellectual property rights, including patents and trademarks, are either pending or have already been issued. The author retains all copyrights over the research, methods, and pharmacological results described in this manuscript. This study was conducted under the direct authorization of EBF Technology Ltda., which holds all relevant intellectual property rights to the methods and products described. The author has verified that the content of this manuscript is original and has not been published elsewhere. . **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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