

# endoret® technology

## NEW PLASMATERM H PLUS

The new PLASMATERM H PLUS equipment provides an extra step to the eye drop protocol by heating the activated plasma. This step allows you to perform the ImmunSAFE ENDORET® Technology treatment which is safe and effective for treating patients with primary and secondary SS. (2)



Reduction of the immunologic component contents such as complement activity and levels of IgE. (1)

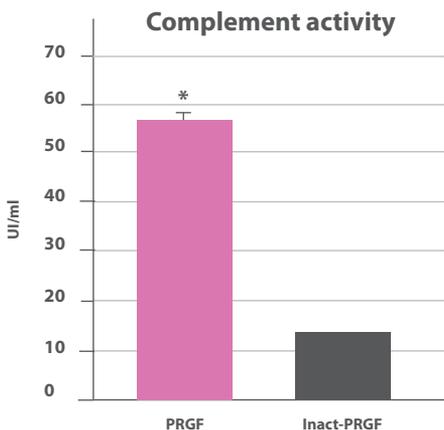


FIG 1. Complement activity was completely reduced after heat-treatment of Plasma Rich in Growth Factors (PRGF) at 56 °C for 1 h.

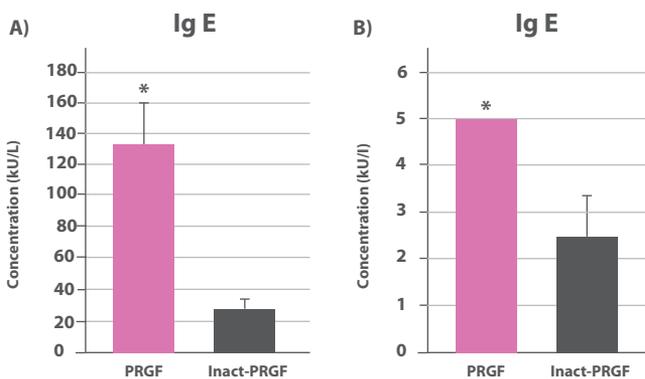


FIG 2. The levels of immunoglobulin E were significantly reduced (\*) after heat-inactivation of Plasma Rich in Growth Factors (PRGF) samples from allergic (A) and non-allergic (B) donors.

## IMMUNOSAFE ENDORET® Technology in SJÖGREN SYNDROME

### THE EFFECT OF IMMUNOLOGICALLY SAFE PLASMA RICH IN GROWTH FACTORS EYE DROPS IN PATIENTS WITH SJÖGREN SYNDROME

Patients with Sjögren Syndrome, significantly reduced the symptomatology and ocular pain and improved visual acuity after treatment with ImmunSAFE ENDORET® Technology Eye Drops. (2)

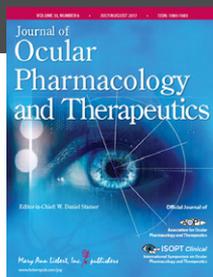


FIG 3. Outcome measures before and after ImmunSAFE ENDORET® Technology eye drop treatment in patients with SS.

	% Change
OSDI	-41.86%
BCVA	-62.97%
VAS frequency	-34.75%
VAS severity	-41.50%

### REDUCTION OF SYMPTOMS Vs. AUTOLOGOUS SERUM

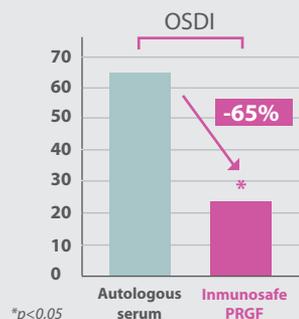


FIG 4. The ImmunSAFE ENDORET® Technology Eye drop treatment shows a 65,2% of improvement in Ocular Surface Disease Index Outcome (OSDI) for patients previously treated with autologous serum.

(1) E. Anitua a, F. Muruzabal a, M. De la Fuente a, J. Merayo-Lloves b, G. Orive a,\* Effects of heat-treatment on plasma rich in growth factors-derived autologous eye drop Experimental Eye Research 119 (2014) 27e34. (2) Sanchez-Avila RM, Merayo-Lloves J, Riestra AC, Anitua E, Muruzabal F, Orive G, Fernández-Vega L. The Effect of Immunologically Safe Plasma Rich in Growth Factor Eye Drops in Patients with Sjögren Syndrome. J Ocul Pharmacol Ther. 2017; 33:391-399.

# ABSTRACT

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## The Effect Of Immunologically Safe Plasma Rich In Growth Factors Eye Drops In Patients With Sjögren Syndrome

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DOI: 10.1089/Jop.2016.0166

### PURPOSE

**The objective was to provide preliminary information about the efficacy and safety of immunologically safe plasma rich in growth factor (immunosafe PRGF) eye drops in the treatment of moderate to severe dry eye in patients with primary and secondary Sjögren's syndrome (SS) and to analyze the influence of several variables on treatment outcomes.**

### METHODS

This retrospective study included patients with SS. All patients were treated with previously immunosafe PRGF eye drops to reduce the immunologic component contents. Ocular Surface Disease Index (OSDI) scale, best-corrected visual acuity (BCVA), visual analog scale (VAS) frequency, and VAS severity outcome measures were evaluated before and after treatment with immunosafe PRGF. The potential influence of some patient clinical variables on results was also assessed. Safety assessment was also performed reporting all adverse events.

### RESULTS

Twenty-six patients (12 patients with primary SS, and 14 patients suffering secondary SS) with a total of 52 affected eyes were included and evaluated. Immunosafe PRGF treatment showed a significant reduction ( $P < 0.05$ ) in OSDI scale (41.86%), in BCVA (62.97%), in VAS frequency (34.75%), and in VAS severity (41.50%). BCVA and VAS frequency scores improved significantly ( $P < 0.05$ ) after concomitant treatment of PRGF with corticosteroids. Only 2 adverse events were reported in 2 patients (7.7% of patients).

### CONCLUSION

Signs and symptoms of dry eye syndrome in patients with SS were reduced after treatment with PRGF-Endoret eye drops. Immunosafe PRGF-Endoret is safe and effective for treating patients with primary and secondary SS.