**ASSOCIATION OF PHOTOBIOMODULATION AND INTRALESIONAL INJECTION OF CORITCOID IN THE PRE AND POSTOPERATIVE OF KELOID SURGERY: DOUBLE-BLIND, RANDOMIZED CONTROLLED TRAIL PROTOCOL**

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**Abstract:**

Keloids are fibroproliferative scar difficult to treat and with high taxes of recurrence after treatments. The keloids etiopathogenesis is related to the disordered fibroblasts growth and an increase of the transforming growth factor beta (TGF-β) levels. The main intervention is the surgical removal associated with the injection of corticosteroids. The photobiomodulation (PBM) with blue light has demonstrated in *in vitro* studies an inhibition of fibroblasts and TGF-β levels. The present study is a randomized, controlled, and double-blind clinical trial which the aim is to verify the effects of PBM associated to the corticoid treatment during the pre and postoperative periods of keloid removal (keloids of any part of the body sutured primarily after the surgery). Participants (N=38) will be random allocated into two groups named: (1) Sham group (N=19) submitted to the standard procedure (corticoid + removal surgery) and (2) PBM group (N=19) (PMB + Corticoid + removal surgery) using blue light (λ=470nm; P=400mW; E=24J, per point being 1 point per linear scar centimeter). The rate of recurrence and the quality of the new scars will be analyzed using the Vancouver scar scale. Silicone molds of keloids and new scars will be made and transposed in acrylic surface to obtain measurements using optical coherence tomography. The histopathology of the resected keloid will also be analyzed to verify the fibroblasts, TGF-β and collagen deposition and organization. Questionnaires (Qualifibro-UNIFESP and PSAQ) to assess the participant's quality of life and scar will be performed. The data will be submitted to statistical analysis.

**Biography:** Jefferson André Pires is a physician and general surgeon graduated from the Federal University of Pelotas-RS, Brazil, graduating from the PhD. program in Biophotonics from the UNINOVE, São Paulo, Brazil and is also a resident in Plastic Surgery at the Conjunto Hospitalar do Mandaqui, São Paulo, Brazil.