"Pre-clinical and clinical research of a thermoreversible gel formulation containing standardized propolis extract (EPP-AF) to reduce healing time of lesions in burn victims".

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The present paper examines the pre-clinical and clinical evaluation of a pharmaceutical form that provides sustained delivery of a formulation containing standardized propolis extract – EPP – AF to the treatment of burn wounds. There has been used a polymer with thermoreversible characteristics which made possible the obtainment of a product that maintains its liquid state in low temperatures and provides *in situ* gelling property. The proposed pharmaceutical form intends to enhance patient's comfort and acceptance, to obtain a histological well-organized skin tissue and to reduce wound healing time. This study evaluated in vitro the antimicrobial activity of propolis extract and obtained gels using the agar-diffusion method and also a broth microdilution method with microdillution in microplates containing serially diluted antimicrobial and triphenilthetrazolium agent, against microorganisms *S. aureus, M. luteus* e *P. aeruginosa.* The results show that propolis extract has activity against the listed microorganisms and that the gels did not spread into agar medium plate. In the microdilution method, the used model for the antimicrobial activity study is not adequate to the microorganism *M. luteus*, but it was possible for the obtainment of CIM to *S. aureus* e *P. aeruginosa*, which were, respectively, 50 ug/mL e 200 ug/mL. The clinical research show that the thermoreversible gel formulation containing standardized propolis extract 3,6%p/v presented wound healing time similar to the reference treatment used in the Burn Victims Unity witch is nitrofurazone cream (furacin®) The final pharmaceutical forms are protected by patent process number PI 018080070102. (Supported by Apis Flora and CNPq).

Key-words: propolis, thermoreversible gel, pre-clinical study, clinical study, burn patients