Retrospective study of biological activity indicators with *Punica granatum* experimental

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**Introduction**

The *Punica granatum*, popularly known as roma, is a millennia plant used for therapeutic purposes. Several studies have shown biological activity related to direct and indirect effects of *Punica*, such as anti-inflammatory, antibiotic, anti-tumor and others. Taking into account the constant search for new therapies targeting a functional excellence, as well as minor side effects, natural products have been increasingly exploited. Thus, this study aimed to understand the main therapeutic studies associated with the *Punica granatum*, as well as the type of association with the plant.

**Results and Discussion**

The systematic review and meta-analysis after the data was performed. Inclusion criteria were considered a search of the last five years in the North American database - Pubmed with the following descriptors: *Punica granatum*, activity and animals. Were used exclusion criteria the review articles and *in vitro* study, an association of data was performed, where we compared the frequency of the aims proposed in the studies and the type of extraction *P. granatum*, as well as the effects found. Statistical analysis was performed using the program "Graphpad Prism 6.0," for the analysis of the frequencies of the data was used chi-square test or Fisher extract the correlations was used spearman test (p <0.05 was considered significant). They found 80 articles; these 5 were excluded (review). Interestingly association with therapeutic effects of *P. granatum* was heterogeneous, demonstrating their biological potential. We found a positive correlation between the use of frequencies of use of the shell with the use of anti-inflammatory activity and antimicrobial activity (p <0.05).

**Conclusion**

Thus we can conclude a broad potential for therapeutic use of *P. granatum*, also pointing to the need for new efforts in clinical studies with it. The results of this study will provide theoretical basis for discussions on alternative treatments for *P. granatum* base as an adjunct in the management of various diseases.

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**References**