Hemagglutination Activity in Exotic Seeds Germinated and Edible

Lima, V. C. O.[1]; Silva, P. F. S. [2]; Alves, N. R. M.[2]; Pereira, D. A. O.[2]; Figueredo, J. B. S.[2]; Carvalho, F. M. C.[3]; Aguiar, A. J. F. C.[2]; Uchôa, A. F.[1]; Santos, E. A.[1]; Morais, A. H. A.[3,4]

[1]Postgraduate Biochemistry Program, Biosciences Center, Federal University of Rio Grande Do Norte, Natal, RN, Brazil; [2]Course of Nutrition, Faculty of Science and Culture Extension of Rio Grande Do Norte, Natal, RN, Brazil; [3]Postgraduate Nutrition Program, Center for Health Sciences, Federal University of Rio Grande Do Norte, Natal, RN, Brazil and [4]Department of Nutrition, Center for Health Sciences, Federal University of Rio Grande Do Norte, Natal, RN, Brazil.

INTRODUCTION: The unconventional seeds have been gaining ground in the food scene by the arguments that they are beneficial to health; concomitant to this fact, the consumption of these seeds germinated, is increasing sustained by gains related to nutritional quality, especially the Quinoa, Sunflower, Fenugreek, Mungo beans, Azuki beans and Sesame. However, seed germination alter your metabolism and composition, fact related, according to the literature, the higher synthesis and lower degradation of agglutinins. **OBJECTIVES:** The objective of this study consisted in evaluating the hemagglutination activity in aqueous total extracts of germinated seeds and edible exotic. **MATERIAL AND METHODS:** Were tested the hemagglutination activity (DEBRAY et al., 1981), the dependence on ions (magnesium and calcium) and the inhibition of hemagglutination activity per carbohydrate extracts from these seeds. **RESULTS AND DISCUSSION:** As a result, for seeds analyzed, we identified the presence of agglutinin in all germinated seeds being more significant in sesame seeds (88.11 HU/mg) and sunflower (61.07 HU/mg), and the seeds that do not germinated, they had not only the hemagglutination activity of Quinoa, Mungo beans and Sesame. The specificity for blood types (AB0), treated with papain or trypsin ranging from seeds, as well as dependence by ion magnesium and calcium, paying attention to the growing need for further studies of anti-nutritional factors in alternative foods and sprouted seeds. **CONCLUSIONS:** Although the results indicate the presence of agglutinins in the extracts of all germinated seeds studied, and even in some not germinated, it is not possible to state the reproducibility of these phenomena in vivo during germination, nor is it recommended abolishing the consumption of these seeds within a rational consumption, have many other beneficial health factors, probably surpassing the possible deleterious effects.

Keywords: germination; agglutinins; anti-nutritional factors.
Supported by: CNPq and NUPLAM/UFRN