PROTEOMIC ANALYSIS OF NEUTROPHIL PRIMING BY PAF

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Human Neutrophils, called polymorphonuclear leukocytes and classified as granulocytes, are much more numerous than other granulocytes namely eosinophils and basophils and are the first cells recruited from the bloodstream to sites of infection. During the inflammatory response, the neutrophils perform many alterations, such as adhesion, diapedesis between endothelial cells, guided migration (chemotaxis), engulfment of the pathogen, and release of toxic substances such as reactive oxygen species (ROS), proteolytic enzymes, and bactericidal proteins contained in granules. The PAF, a proinflammatory lipid mediator, has direct effects on neutrophils and, besides inducing a few direct effects, it primes the neutrophil for an enhanced response after a second stimulus. The aim of this study was to compare the proteomic map between resting neutrophils and neutrophils primed by PAF using ImagemMaster 2D Platinum to analyze differences between 2D gels. The results showed, with a correlation coefficient of 77%, that 109 spots are present only in the gel of the resting neutrophil, 7 spots only in the group primed by PAF, 30 spots show differential expression in the range of 80-50%, 189 spots had varied between 10-49% and 71 spots had varied less than 10%. The statistical analysis between conditions is important to indicate possible molecular markers.