



POSTER PRESENTATION

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# Proteomic profiles among asymptomatic HTLV-1 carriers and HAM/TSP patients in Peru

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High proviral loads have been described in HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP) patients in comparison to asymptomatic HTLV-1 carriers (AC). However, biomarkers related to HAM/TSP progression have not been identified. We analyzed differential proteome changes by two-dimensional gel electrophoresis (2D-electrophoresis) to identify spots of proteins in plasma samples of three groups of patients: five AC, nine HAM/TSP patients: five patients with EDSS scores of 1.0-5.0 (=mild HAM/TSP) and 4 patients with EDSS scores of 5.5-9.0 (=severe HAM/TSP). Proteins were extracted from pooled plasma samples from each group of patients. Protein separations were performed by electrofocusing with 11 cm strips at 3-10 pH range, electrophoresis with 12% polyacrilamide gel electrophoresis and silver staining. Analyses were performed in Progenesis Same Spot software; ANOVA was used to compare the profiles of the groups. Six spots of proteins were differentially expressed among these groups: five proteins increased their expression according to HAM/TSP disease progression (highest fold change= 6.1,  $p=1.671 \times 10^{-4}$ ; lowest fold change= 1.5,  $p= 0.014$ ) while one protein was highly expressed in AC and decreased according to HAM/TSP progression (fold change= 5.8,  $p= 0.002$ ). Further studies to confirm the expression of these proteins in a larger set of samples are still in progress, the identification of these proteins will be performed by mass spectrometry. These results might be promissory to identify biomarkers for HAM/TSP progression.

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