M-047-23 **IMMUNOLOGICAL RESPONSES TO FLAGELLA AND PILI ENRICHED FRACTION FROM MULTIDRUG-RESISTANT P. aeruginosa COMPLEXED**

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Resumo

Multidrug-resistant Pseudomonas aeruginosa (Pa) producing the São Paulo Metallo-beta-lactamase-1 (SPM-1) and the 16S rRNA methylase RmtD has become endemic in Brazilian hospitals. Unfortunately, this genotype has rendered ineffective potent double-coverage regimens of carbapenem plus aminoglycoside, contributing to the emergence of panresistant phenotypes. Thus, in the absence of effective antibiotics the immunotheraphy is an alternative worthy of investigation. The aim of this study was to identify model antigens for immunological research. Flagella and pili enriched fraction (PPF) from SPM-1/RmtD-producing Pa was characterized and formulated with a novel immunoadjuvant based on cationic bilayer nano-fragments of dioctadecyldimethylammonium bromide (CBNF). PPF/CBNF complexes were characterized by dynamic light scattering. At 50 µg/ml PPF/0.1mM CBNF concentration PPF/CBNF complexes were colloidally stable exhibiting a mean diameter of 224.5 ± 4.3 çm and a zeta-potential (?) of 9.78 ± 0.79 mV, displaying a polidispersion index similar to CBF alone. In a mouse model, significant delayed type hypersensitivity (DTH) reaction was induced by the subcutaneous immunization of PPF/CBNF complex (two doses of 50 µg/ml PPF/0.1mM). The IgG specific levels were similar in animals immunized with PPF/CBNF complex and in the controls; meanwhile the IgG avidity index of PPF/CBNF group was higher than PPF group and similar with PPF-alummen group. The results revealed a promissory immunoresponse against multidrug-resistant Pa infection, which deserves additional investigation. Fapesp: 2009/52613-0