

SYSTEMS BIOLOGY OF SEPSIS AND PARASITES

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Sepsis is characterized by intense reaction of the organism due to infection, particularly of the inflammatory and coagulation systems. It is a common illness, of high cost treatment and deaths. To further its study, 2-D plasma profiles from 10 patients with sepsis caused by *Acinetobacter baumannii*, a gram-negative bacillus and 10 healthy donors, both depleted of the 6 most abundant proteins were compared using DIGE technique and DeCyder® 5.0 software. Protein spots were detected, quantitated and statistically analysed. This approach allowed confident detection of small differences in protein levels among several biological samples. *Leishmania (Viannia) braziliensis (Lb)* is a parasite responsible for most of the Cutaneous Leishmaniasis cases in the American Continent. *Trichomonas vaginalis (Tv)* is the causative agent of the Human Urogenital Trichomoniasis, a sexually transmitted disease affecting over 200 million people world-wide. *Lb* map allowed us to identify 101 spots representing 75 protein entries from fifteen groups according to biological processes including potential virulence factors and drug targets. Iron-removal from *Tv* culture medium affects the cellular shape of the parasite reflecting a significant change of protein expression.

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