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Resumo	<p>Background: Sepsis remains the primary cause of death from infection, despite advances in modern medicine. The identification of reliable diagnostic biomarkers for the early detection of this disease is critical and may reduce the mortality rate as it could allow early treatment. The purpose of this study was to describe the changes in the plasma and red cells blood lipidome profiling of patients diagnosed with sepsis and septic shock with the aim to identify potentially useful metabolic markers. Methods: Lipids from plasma and erythrocytes from septic patients (n=20) and healthy controls (n=20) were evaluated by electrospray ionization quadrupole time-of-flight mass spectrometry, and the fatty acid composition of the phospholipids fraction of erythrocytes was determined by gas chromatography. The data were treated with multivariate data analysis, including principal component analysis and (orthogonal) partial least squares discriminant analysis. Results: Potential biomarkers including lysophosphatidylcholines (lyso-PCs) and sphingomyelin (SMs) with specific fatty acid chains were identified. Both Lyso-PCs and SMs were downregulated, whereas the saturated and unsaturated phosphatidylcholines (PCs) were upregulated in the plasma and erythrocytes of septic patients. An increase in oleic acid (C18:1 n-9) accompanied by a decrease in the unsaturation index as well as in the levels on n-3 polyunsaturated fatty acids was observed in erythrocytes phospholipids patients as compared with healthy controls. Conclusions: These results suggest that</p>



	lipidome profiling has great potential in discovering potential clinical biomarkers for sepsis and helping to understand its underlying mechanisms.
Fomento	