**Determination studies of urinary bioactive metabolites**

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**Abstract**

The control of bacterial infections is starting to destabilize quickly, increasing the risk of sepsis even to immunocompetent patients. Frequently, pathogens involved in those infections are the multi-drug-resistance bacteria, which causes over 700,000 of deaths every year. 36 to 41 % of healthcare associated infections are the urinary tract infections (UTI), with 80% Escherichia coli strains as etiological pathogen.

It was demonstrated that some urinary metabolites are in a dependence with the bacterial growth in UTI and indicates the treatment direction. Therefore, there is a need to optimize the use of antibiotic therapy and propose rapid and specific techniques for the analysis of bioactive compounds of diagnostic importance in urine.

This study aims to identify and optimize an electrochemical method for the screening of uric acid, using a screen-printed carbon electrode (DRP 150) with a platinum auxiliary electrode, with a pH variation from 2.6 to 7, by differential pulse voltammetry and a limit of detection of 0.048 mmol/L.

The results obtained sustains that this method is rapid and sensitive for testing uric acid and can be applied for testing urinary uric acid and as a model study for detection of other urinary metabolites.

**Key words:** *multi-drug-resistance, uric acid, electrodes*