<u>Conference's</u> Accelerating Scientific Discovery 5th World Congress on **Bioavailability and Bioequivalence** Pharmaceutical R&D Summit

September 29-October 01, 2014 DoubleTree by Hilton Baltimore-BWI Airport, USA

In vitro monitoring of uric acid excretion with different diets in human urine during 24 h by flow injection chemiluminescence

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A sensitive method for determining uric acid (UA) at nanogram level by flow injection (FI) chemiluminescence (CL) was described, based on the inhibitory effect of UA on luminol-KIO4 CL system. It was found that the CL intensity decrements were linearly proportional to the logarithm of UA concentrations ranging from 3.0 to 500.0 ng mL-1 with the detection limit of 1.0 ng mL-1 (3σ). At a flow rate of 2.0 mL min-1, the whole determining performance including sampling and washing could be accomplished in 36.0 s, offering the sample efficiency of 100 h-1. The proposed method was successfully applied to *in vitro* monitoring of UA excretion in human 24 h urine with different diets, with results showing that porridge, vegetables and meats intake caused differential UA excretions of 722, 767 and 854 mg, respectively.

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