

Screening and Confirmation of Designer Drugs and Anorectics in Urines using Immunoassay and GC/MS

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Immunoassays are frequently used for an screening method to detect the presence of drugs in Urine. The main advantages of the method are well known -- simplicity of handling samples, rapidity, sensitivity, and specificity of analysis. However, it is also known that immunoassays exhibit cross-reactivity to related drugs and there are only limited specific immunoassays on the market. This study reports on the ability of TDx to detect urine samples obtained from suspects of taking over-the-counter medications and illegal drugs containing ATS, designer drugs. Samples identified as positive or negative by TDx assay were confirmed by GC/MS. Accusign MET, SD bioline, TDx, Solaris and selectra were also compared respectively in terms of the specificity and sensitivity for drugs. First, MDMA and MDA were detected in 4 samples, and only MDA was detected in 1 sample. Second, ephedrine (EP) and pseudoephedrine(PEP) were detected in 9 samples, and methoxyphenamine(MTP) was detected in 1 sample. Third, 6 phentermine(PT), one fenfluramine(FF) and two Phendimetrazine(PDT) were detected from the 24 samples. This study also describes the following results for 15 drugs with 6 kinds of immunoassays. First, 250ng/mL of MDA, MDMA, MDEA, EP, norEP, and norPEP were positive by Solaris. Second, the sensitivity for MDMA was the highest by TDx The sensitivity order was MDMA>MDEA>FF>PT>MPT. Third, FF was the most sensitive by Selectra. Fourth, the sensitivity for MDA was high by SD-line AMP, while the sensitivity for MDMA was high by SD-line MET. Fifth, the sensitivity for MDMA and MDEA was high by Accusign, but the sensitivity for MDA was very low.

Poster Presentations – Field B1. Physiology

[PB1-1] [10/17/2002 (Thr) 13:30 – 16:30 / Hall C]

Effects of Protein Kinase Inhibitors on Histamine Release and ROS Generation in RBL 2H3 Cells

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Previous report showed that histamine release by HCl was mediated via reactive oxygen species (ROS) generation in RBL 2H3 cells. To investigate action of protein kinase on histamine release and ROS generation, we observed effects of protein kinase inhibitors on histamine release and ROS generation in RBL 2H3 cells stimulated by HCl. HCl dose-dependently increased both histamine release and ROS generation. HCl-induced histamine release was significantly inhibited by bisindolmaleimide (10 μ M), DHC (10 μ M), and wortmannin (10 μ M), but not by PD098059 (10 μ M). On the other hand, HCl-induced ROS generation was significantly inhibited by DHC (10 μ M), but not by bisindolmaleimide (10 μ M), wortmannin (10 μ M) and PD098059 (10 μ M). However KN-62 did not inhibited both. These results showed that involvement of protein kinase in regulation of histamine release and ROS generation may be different and only tyrosine kinase may be associated with regulation of both histamine release and ROS generation in RBL 2H3 cells.

[PB1-2] [10/17/2002 (Thr) 13:30 – 16:30 / Hall C]

Protective effect of KR-32000 against hypoxia- and oxidative stress-induced cardiac cell death

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