



BIOVOC project

ASSESSING EMOTIONAL STATES: METABONOMIC PROFILING AND QUANTIFICATION OF A SALIVARY BIOMARKER



19th FORUM OF
PHARMACEUTICAL SCIENCES
Brussels, 17 – 18 October 2016

Context : Aviation

Most accidents due to human mistake

Goal : objectify emotionnal states

And correlate them with voice signal changes

Methodology :

voice and saliva sampling in a driving simulator first, then in plane simulator.

Saliva

NMR

PCA

Metabonomic Profile



Score plots

Resting student compared to the same students after an exam

Biomarker Quantification

❖ UPLC separation

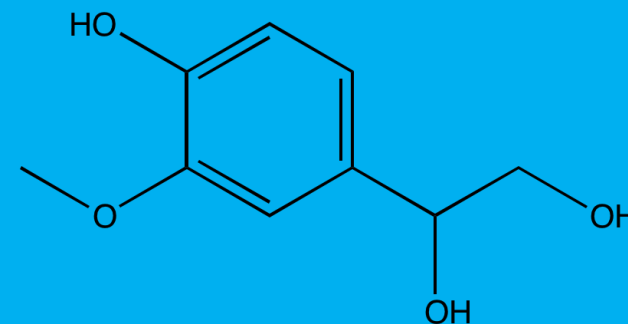
❖ Electrochemistry

-Voltamperometry

-Chronoamperometry

❖ MS detection (Acquity QDa)

❖ Other biomarkers



3-Methoxy-4-hydroxyphenylglycol (MHPG)

Metabonomics