

## PW01-44 - IMPACT OF GLYOXALASE-I MRNA EXPRESSION ON CCK-4 INDUCED ANXIETY

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**Objectives:** There is evidence that the antioxidant enzyme glyoxalase-1 (Glx-1) may play a role in anxiety-related behaviour. However, discordant findings between Glx-1 expression and anxiety-related behaviour have been observed in animal models. Because no data are available on the relation between Glx-1 mRNA expression and human anxiety so far, we investigated the expression of Glx-1 mRNA in peripheral red blood cells in relation to cholecystokinin-tetrapeptide (CCK-4) induced anxiety in healthy subjects.

**Methods:** Twenty-three healthy subjects underwent challenge with CCK-4. Glx-1 mRNA expression was assessed by quantitative real-time polymerase chain reaction prior to CCK-4 injection. Baseline anxiety was assessed with the State-Trait-Anxiety-Inventory (STAI) and panic response was measured with the Panic Symptom Scale (PSS).

**Results:** CCK-4 elicited a marked anxiety response accompanied by a significant increase in heart rate. Glx-1 mRNA expression correlated significantly with severity of CCK-4 induced anxiety. In contrast, Glx-1 activity did not correlate with state or trait anxiety.

**Conclusions:** The positive correlation between Glx-1 mRNA expression and CCK-4 induced panic severity suggests that Glx-1 is involved into the acute anxiety response to CCK-4. Our preliminary findings support preclinical findings and point towards a role of Glx-1 for human anxiety.