

P032 Expression of the *comt* gene in culture cells
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Catechol-O-methyltransferase (COMT) plays a critical role in the detoxification of redox-cycling catechols. The *comt* gene is expressed in different mammalian tissues, where it exerts various biological functions. The *comt* gene expression is controlled by two promoters, which give rise to two transcripts of different size. The 1.3 kb transcript encodes the soluble protein (S-COMT), and the 1.5 kb mRNA can rise either the soluble or the membrane-bound protein (MB-COMT). The study of the expression level of COMT may be relevant in understanding the pathobiology associated to ROS-production. In this work we have developed a quantitative real-time RT-PCR (RT-qPCR) method to measure mRNA levels of COMT (1.3 kb and 1.5 kb transcripts) in primary cells of human granulose and in the human cell lines HepG2, A375, MDA-MB-231, MDA-MB-435, HeLa, and CEM. The expression of S-COMT and MB-COMT isoforms was also evaluated by western blot using specific antibodies. Results showed that the human highly metastatic breast carcinoma cell line MDA-MB-435 expressed COMT at neither the protein- nor the transcriptional levels. All the other cells expressed both transcripts, the 1.5 kb transcript being more abundant. Respecting the protein, MB-COMT was found to be the major isoform. We also found no correlation between mRNA levels and COMT isoforms. Supported by Gobierno Vasco and Universidad del País Vasco (MPI 2007)