

REVIEW OF CLINICAL PHARMACOLOGY AND  
PHARMACOKINETICS, INTERNATIONAL  
EDITION 20: 301 (2006)  
©PHARMAKON-Press

## Serum Regulates the Expression of Heparin Affin Regulatory Peptide

Evangelia Poimenidi, Apostolis Polykratis and Evangelia Papadimitriou

Laboratory of Molecular Pharmacology, Department of Pharmacy, University of Patras,  
Patra, Greece

*Key words:* HARP, pleiotrophin, serum, glioblastoma, endothelial cells

Heparin affin regulatory peptide (HARP) is a heparin-binding growth factor expressed at sites of early development of the nervous system in embryos and at healing wounds. Its constitutive expression in many human tumors is associated with an angiogenic phenotype, suggesting that HARP has an important role in angiogenesis during development, wound repair and advanced malignancies. Few things are known on the transcriptional regulation of the harp gene. We have recently shown that HARP expression is regulated by activator protein-1 (AP-

1) through two AP-1 binding sites in the distal 5'-promoter region. In this work, we investigated the effect of serum on the expression and secretion of HARP. Serum increased the amounts of HARP in the culture medium of both MO59K human glioblastoma cells and human umbilical vein endothelial cells (HUVEC) in a concentration dependent manner. Further studies are conducted using a reporter gene vector containing the 5'-flanking region of the harp gene, in order to study the effect of serum in harp gene transcription.