FALK SYMPOSIUM 43

Modulation of Liver Cell Expression

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Proceedings of the 43rd Falk Symposium, held during Basel Liver Week, Basel, October 14 and 15, 1986

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Part 4 Cellular Oncogenes and their Products

SECTION II ACUTE PHASE RESPONSE AND INFLAMMATORY MEDIATORS

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Induction of acute-phase protein synthesis: studies on the regulation of rat α_2-macroglobulin *in vivo* and in hepatocyte primary cultures

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INTRODUCTION

Acute inflammation leads to the increased synthesis of an ensemble of proteins designated as acute-phase proteins[1–3]. The major site of synthesis for these proteins is the liver. Many of the acute-phase proteins are proteinase inhibitors. We study acute-phase protein synthesis in the rat and are interested in

Table 1 The α_2-macroglobulin family

Species	*Protein*	*Concentration (mg/ml)*		*Molecular weight of subunits(s)*	*Number of subunits*	*Carbohydrate content %*
		Normal plasma	*AP-plasma*			
Rat	α_1M	3.8	3.9	168 000		
				38 000	8 (?)	15
	α_2M	<0.02	2.0	182 000	4	15.9
Human	α_1I_3	6.0	2.1	186 000	1	15
	α_2M	2–4	2–4	179 000	4	10.2
	PZP	<0.01	1–1.4	180 000	4	10–12

a family of high molecular weight proteinase inhibitors, the α-macroglobulins. Table 1 shows the three members of the rat α-macroglobulin family: α_1-macroglobulin, α_2-macroglobulin and α_1-inhibitor III. Although all three proteins are proteinase inhibitors, their regulation is different. Whereas α_1-