

Radioimmunoassay of bovine placental lactogen (bPL) using an antiserum raised in guinea pigs : measurement in foetal plasma

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AIM

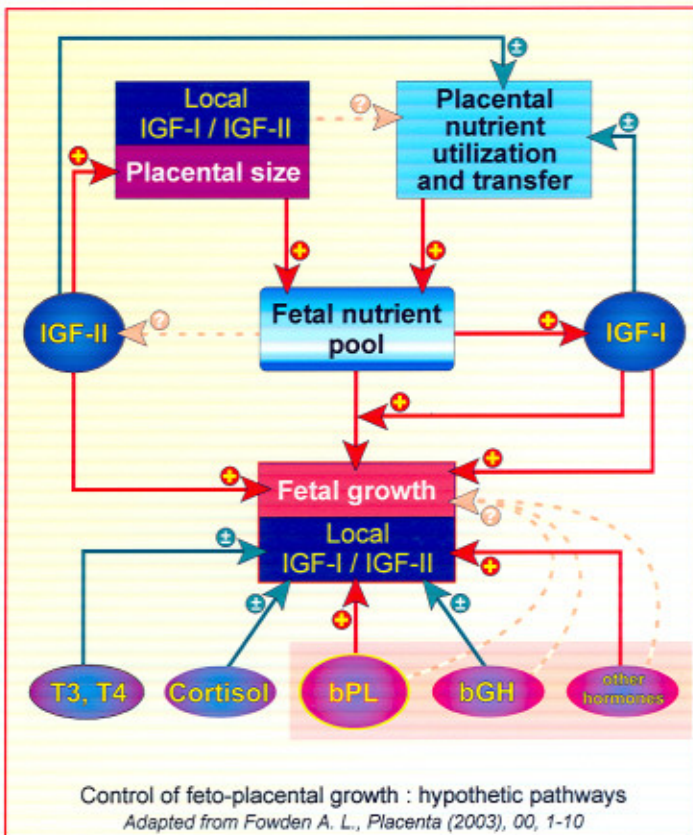
The aim of this study was to develop a new radioimmunoassay system using an antiserum raised in guinea pig in order to measure the circulating bPL concentrations in presence of bPL antibodies originated from rabbits.

INTRODUCTION

As the bovine placental lactogen (bPL) was suspected as a main regulator in foetal growth, six foetuses were catheterised *in utero* and blood samples were removed for bPL, IGF-I and IGF-II measurements after anti-bPL purified immunoglobulins (IgG) injections.

METHODS

Systems	 Rabbit	 Guinea Pig
Ref. Standard	bPL n° 322 (Beckers et al, 1980)	bPL n° 322 (Beckers et al, 1980)
Unknown sample	bPL	bPL (+ rabbit Anti-bPL)
Tracer	[¹²⁵ I]-labelled recomb. bPL (Chloramine T - Na Metabisulfite)	[¹²⁵ I]-labelled recomb. bPL (lactoperoxidase)
Primary antibody	Rabbit Anti-bPL n° 295 (Beckers et al; 1982)	Guinea pig Anti-bPL n° 276 (Beckers et al; 1982)
Incubation time	Overnight at room temperature	Overnight at room temperature
Second antibody	Sheep anti-rabbit IgG antiserum	Rabbit anti-guinea pig IgG antiserum
Incubation time	2 hours at room temperature	2 hours at room temperature
Washing solution		
Centrifugation		
Supernatants aspiration		
Counting in a gamma counter		



RESULTS AND DISCUSSION

The standard dilution curves for both the rabbit (Beckers, 1982) and guinea pig systems were very similar. Serum concentrations of bPL (ng/ml) obtained from both RIA methods were highly correlated ($r^2 = 0.975$).

CONCLUSION

In conclusion our guinea pig RIA is useful to determine bPL concentrations in foetal sera. It remains to establish how the interference of the administration of IgG anti-bPL of rabbit origin can be discarded in the assay.

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