NOVEL ASSAY FOR PANCREATIC PATHOLOGY -- DETERMINATION OF CARBOXYPEPTIDASE A LEVELS IN HUMAN SERUM

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Technology description

Researchers at Princeton University have developed a novel assay for pancreatic pathology which is expected to be far superior to the conventional assay based on amylase.

The technology is an improved procedure for measuring serum levels of Carboxypeptidase A. It is therefore a significantly more reliable assay of pancreatic pathology than the conventional assay for amylase since the pancreas is the only source of CPA in serum.

Moreover, the method allows for the measuring of levels of pro-Carboxypeptidase A by specifically activating pro-CPA while leaving levels of CPA unaffected. These improvements will provide a diagnostic tool superior to amylase determination, and will be invaluable in diagnosing pancreatic disease.

The following chart compares the traditional amylase assay with the Princeton assay as follows:

Disadvantages of Traditional Amylase Assay	Advantages of Princeton Assay Based on Carboxypeptidase A
1. High background limits sensitivity	1. Extremely low background
2. 40% of serum amylase is of pancreatic origin	2. Exclusive production by pancreas
3. No correlation with the severity of the disease	3. Low molecular weight assures that it will be a current reporter of the status of the pancreas
4. Many false positives	4. No serpin in serum
	5. Huge dynamic range 0.07 to 300 U/L

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