I-123 HIPDM has been developed as the brain perfusion imaging agent by Kung et al. and its clinical application has been already started. Significant accumulation of radioactivity in the pancreas was observed in mice and rats. The pancreas to liver (P/L) ratio was 5.15±0.65 at 2 hr after injection, which is higher than that obtained with Se-75 selenomethionine.

It is well known that dl-ethionine has the toxic action against pancreas acinar cells. We studied the tissue distribution of I-125 HIPDM and Se-75 selenomethionine in the rats with pancreas cell damages experimentally induced by dl-ethionine.

P/L ratio of I-125 HIPDM in the rats given dl-ethionine 0.2g/kg:BW, 2 times per week for 4 weeks was 3.6±0.52, which is significantly lower than that of control group, and higher than P/L ratio (1.37±0.13) of Se-75 selenomethionine in the rats with same treatment.

In conclusion, I-123 HIPDM is expected to be a promising pancreas imaging agent.