



We analyse the mechanism of action of HCV in diabetes/insulino-resistence production.

Methods

Basic Local Alignment Search Tool Protein (BLASTP) comparison between human glucagon and HCV proteins [followed by visual examination of 2073 HCV (genotypes 1, 2, 3, 4, 5 and 6) E2 envelopes from the European database of Pr Gilbert Deleage (Lyon) ([euhcvdb.ibcp.fr](http://euhcvdb.ibcp.fr))], and analysis of glucagon structure-function relationship and three dimensional (3D) structure (Koth CM, 2012).

Results



## C.79-Hepatitis C virus and type 2 diabetes: Molecular homology between HCV E2 envelope and glucagon

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Adipokinetic Hormone

pQVNFTPGWGT

(pQ = pyroGlu)

HCV 2b E2

E- DFRI GWGT

Mini-glucagon (19-29) AQDFVQWLMNT is 1000 fold more powerful than glucagon itself (Dalle S, 2002). It is a very potent (ID50 close to 0.1 pmol/l) inhibitor of insulin release from beta-cell.

The glucagon (1-21) and des-(22-26) glucagon have potencies of