

# IPR exercise about GLP-1

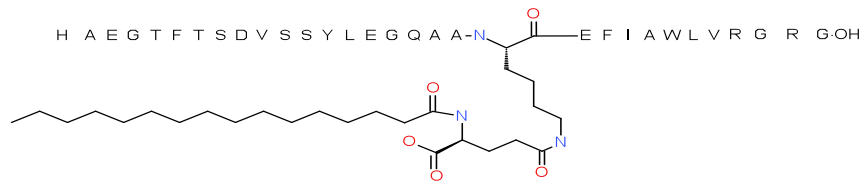
- Find the compound patent applications and example numbers for the following GLP-1 analogues:

1. Taspoglutide: HXEGTFTSDVSSYLEGQAAKEFIAWLVKXR-amide

(Aib8, Aib35) GLP-1 (7-36) amide

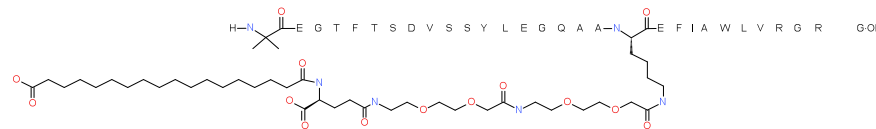
X = aminoisobutyric acid (Aib)

2. Liraglutide: HAEGTFTSDVSSYLEGQAAKEFIAWLVRGRG



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3. Semaglutide: H $\times$ EGTFTSDVSSYLEGQAAKEFIAWLVRGRG,  $\times$  = aminoisobutyric acid (Aib)



4. Dulaglutide: GLP-1 Fc Fusion

The first 31 amino acids of this peptide are residues 3-37 of human GLP-1 with the following substitutions (relative to GLP-1 numbering): Ala8Gly, Gly22Glu, Arg36Gly. The next 16 amino acids (GGGGGGSGGGGSG) are a linker sequence. The remaining 228 amino acids are human Fc fragment (immunoglobulin G4).