Conclusion GLP-2 reduced HLA-DR and increased CD14 on DCs, though this effect does not correlate with T-cell stimulation *in-vitro*. More studies are needed to detect any functional significance to the changes GLP-2 induced on dendritic cells.
Competing interests None.
Keywords dendritic cells, glucagon like peptide-2.

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Cellular and Molecular Pathology

PTU-098 **UNRAVELLING THE IMMUNOMODULATORY FUNCTIONS OF GLUCAGON LIKE PEPTIDE-2 THROUGH DENDRITIC CELLS**

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Introduction Animal studies have shown that glucagon like peptide-2 (GLP-2) may reduce mucosal inflammation; it decreases proinflammatory cytokines and ameliorates chronic colitis[1]. However, we do not yet know whether this anti-inflammatory effect occurs in humans. If so, it potentially opens the door for use of GLP-2 as therapy in conditions like inflammatory bowel disease. Therefore we studied the immunomodulatory functions of GLP-2 in humans.
Methods Dendritic cells (DC) enriched from human blood of healthy volunteers were cultured *in-vitro* for 24 h with GLP-2 at concentrations of 1 pM, 1 nM and 1 mM. The effect of GLP-2 on DC survival was determined using apoptosis experiments. Phenotype and functions of DC were then assessed by flow cytometry and mixed leucocyte reaction (MLR), respectively. Each experiment was performed independently at least 3 times and analysed for statistically significant effects.
Results Apoptosis experiments showed that GLP-2 at all concentrations did not have a toxic effect on DC; their survival after *in-vitro* culture with GLP-2 was similar to that in basal control culture (p=NS). GLP-2 conditioning changed the phenotype of DC with reduction in HLA-DR intensity (p=0.0243) and increase in CD14 expression (p=0.0237), compared with basal control culture. However, the down-regulation of HLA-DR intensity and up-regulation of CD14 expression did not correlate with an increase in the phagocytic capacity (p=NS). Other markers of immature DC, ILT3 and DC SIGN, were not affected. TLR2/4 expression was also not affected by the treatment (p=NS). Finally, MLR experiments showed that GLP-2 treatment on DC did not have an effect on their stimulation of T cell proliferation (p=NS).