

New 3-D visual of intestinal growth promoting peptide

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UCD Conway researchers have determined the 3-dimensional solution structure of glucagon-like peptide-2 (GLP-2) for the first time using nuclear magnetic resonance and molecular modelling. This visual was selected as the cover image of the current issue of the biochemical journal, *FEBS Letters*.

Glucagon-like peptide-2 (GLP-2) is a therapeutic target used in the treatment of short bowel syndrome, where nutrients are not being correctly absorbed either due to severe intestinal disease or surgical resection of a large portion of the intestine.

Acting as an intestinal growth promoting agent in the small and large bowel, GLP-2 promotes the expansion of the epithelial mucosa and, consequently, better absorption of nutrients. It does this by stimulating crypt [cell proliferation](#) and preventing [cell death](#) in the gut epithelium.

Conway Fellow, Dr Chandralal Hewage led the study to determine the structure of the peptide and the nature of the docking interaction between the hormone and its receptor. Commenting on the research, Dr Hewage said, “These results provide a valuable insight into the structural and functional properties of GLP-2 and its receptor interactions, which could help in the design of novel therapeutic drugs that may be active at the GLP-2 receptor”.

PhD student, Kalyana Venneti won the young researcher award for his presentation of this work at the 18th International Symposium on

Regulatory [Peptides](#) held in Belfast from September 5th – 8th 2010. Science Foundation Ireland funded the study through research and studentship grants.

More information: Conformational and molecular interaction studies of glucagon-like peptide-2 with its N-terminal extracellular receptor domain. Kalyana C. Veneti, Chandralal Hewage. *FEBS Letters* volume 585 issue 2 21 January 2011

Provided by University College Dublin

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