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Starvation human phenotype open new avenue target for obesity and type II diabetes treatment

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Many obesity related genes have been proposed as targets for the treatment of obesity and type II diabetes. However, these gene targets did not provide efficient drug therapy for obesity and type II diabetes treatment. This is mainly due to the redundancy of the biochemical pathway involved in this life style disorder and the lack of specificity of the gene targets. It is therefore a challenge to identify crucial gene(s) targets involved in energy absorption associated with "lean or starvation phenotype". Congenital Enteropeptidase defficiency is an extremly rare starvation phenotype which answer to all these criteria. Enteropeptidase catalyzes the conversion of inactive trypsinogen into active trypsin via the cleavage of the acidic propeptide from trypsinogen and as a consequence the whole digestive system is activated. We have generated by rational drug design small pseudopeptides inhibitors against the catalytic site of the enzyme. In vivo preclinical data using per os small molecule for long term treatment (9 weeks) against this novel target shows excellent and very promising results that will be presented.

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