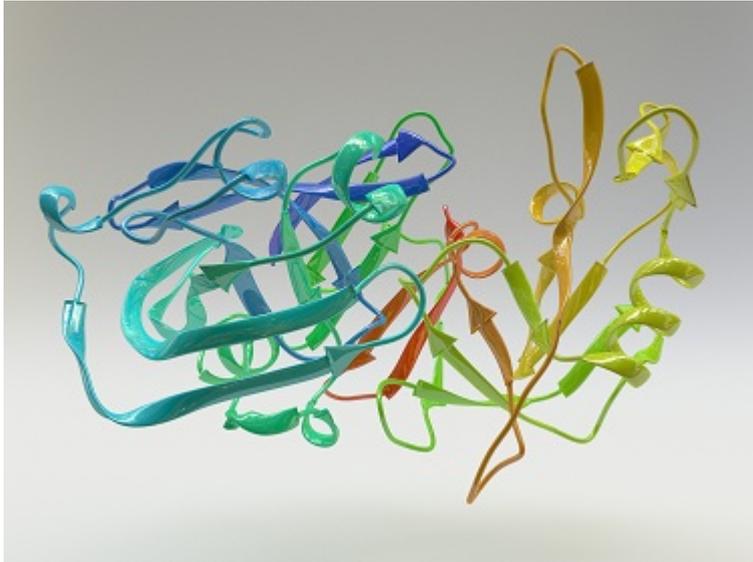




Published on *Horizon 2020* (<https://ec.europa.eu/programmes/horizon2020/>)

Monday, 24 February, 2014



[1]

Proteins, which are present in every cell and tissue of the human body, play a significant role in human health. They are composed of amino acids linked together chemically, and the shorter stretches of amino acids are commonly referred to as peptides. In the body, peptides regulate the activity of many systems. Some peptides act as hormones, others as neurotransmitters, yet others as natural pain relievers.

Synthetic peptides are now easy to reproduce and are increasingly being used by European scientists to identify or mimic molecules that are the focus of biological research. However, the cost of synthesising them is still a significant barrier to progress in research.

The European Union (EU)-funded PEPCHIPOMICS project has developed a new technology which synthesises and analyses peptides in hundreds of thousands on a single microscope slide.

"The research team developed an innovative peptide 'chip' technology platform," says project director, Professor Søren Buus of the University of Copenhagen, Denmark. *"This allows more than one million different peptides to be synthesised on a surface the size of a postage stamp,"* he adds.

"The innovative technology we developed significantly multiplies the number of peptides that can be handled and the range of concrete applications," comments Dr. Claus Schafer-Nielsen, chief executive of Schafer-N, the Danish private-sector research organisation that worked with the PEPCHIPOMICS team.

These synthetic peptides are now being used for developing new vaccines, analysing the reactions of patients to infections from viruses, bacteria and parasites, and detecting traces of allergens – peanuts, hazel nuts and so on – in processed foods.

"The new technology not only increases the amount and quality of the information obtained, but also

reduces the price per peptide by a factor of as much as 10,000," concludes Dr. Schafer-Nielsen. The technology is expected to help the scientific community conduct further large-scale investigations into the overall functions and effects of proteins and peptides.

See also:

[CORDIS](#) [2]

Project:

High-density peptide microarrays and parallel on-line detection of peptide-ligand interactions

Project Acronym:

PEPCHIPOMICS

Source URL: <https://ec.europa.eu/programmes/horizon2020/en/news/100000-peptides-microscope-slide>

Links

[1]
https://ec.europa.eu/programmes/horizon2020/sites/default/files/newsroom/fotolia_50895306_subscription_small_6238.jpg

[2]
<http://cordis.europa.eu/projects/index.cfm?fuseaction=app.details&TXT=PepChipOmics&FRM=1&STP=10&SIC=&PGA=&CCY=&PCY=&SRC=&LNG=fr&REF=88549>