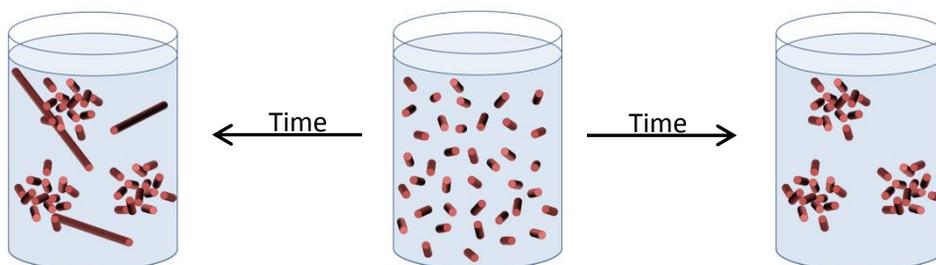


## Controlling the stability of pharmaceuticals

Biologically active peptides have been used in treatments for almost a century, and continue to be a source for new and beneficial medicine. Ferring Pharmaceuticals have built their business by being experts in peptides, and continue to develop novel products. A key property to successful medicine is its stability and the resulting long shelf-life of the sold pharmaceutical product. Through collaboration with NXUS scientists, the structural stability of a highly interesting biologically active peptide in solution has been studied over time and varying many parameters, enabled by the use of automated solution-based small-angle X-ray scattering (SAXS) at a cutting-edge large-scale European facility.



The structural stability of a peptide was investigated over time at conditions mimicking physiological and shelf conditions. This revealed formation of highly complex non-trivial super structures of the peptide.

It was evident that the structural behavior of the peptide over time was highly complicated and depended on unexpected factors. The obtained data were thoroughly analyzed and structural parameters and trends were extracted. These results help Ferring to make stable formulations of their peptides. This case study demonstrates the advantage of automated, high throughput, noninvasive scattering techniques to study dynamic features of complex structural behavior in soluble systems.



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