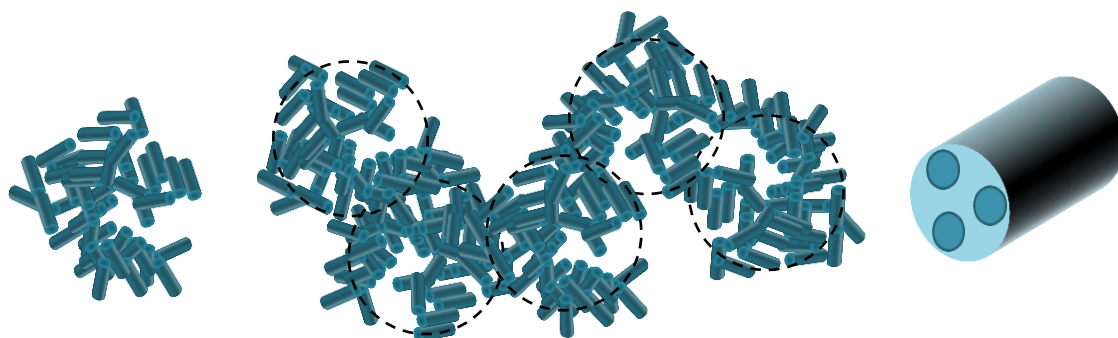


Revealing peptide structure-function relationship

Diabetes and obesity are invariably linked and are among the major problems faced by the developed world. Using a unique set of skills and methods, the Danish biotech company Gubra ApS has launched a highly ambitious target and drug discovery program within this field. During the participation in the NXUS project, the structure of three variations of a peptide based drug candidate has been correlated with their respective *in vivo* absorption profiles. This was possible by the use of advanced solution based X-ray scattering methods at leading international synchrotrons.



Three radically different super structures formed when minute changes are made to the investigated peptide

The experiments carried out under the NXUS project revealed that the three peptide drugs are assembled into radically different nanostructures, intimately connected to the differences in their *in vivo* uptake. Small-Angle X-ray Scattering (SAXS) was used to probe these structures in solution and revealed structural details that could not be investigated with other techniques. The new structural knowledge helps Gubra ApS to design a drug with an optimal absorption profile and gives a favorable edge in a highly competitive field to develop their lead peptides faster and better.



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