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Extended Abstract

Veltis®: Innovative albumin based technology for half-life extension and optimization of biotherapeutics

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Abstract

Short circulatory half-life represents a major obstacle for many protein and peptide-based therapeutic agents, resulting in increased dosing with the consequent risk of side effects and reduced patient compliance. It has been demonstrated that the pharmacokinetics of small drugs, peptides and proteins can be significantly improved by conjugation, association or fusion to albumin. This extended circulatory half-life derives from both the size of albumin and recycling of the molecule via the neonatal Fc receptor, FcRn. Using advanced protein engineering expertise, human serum albumin has been modified to enhance its affinity for FcRn. This increase in affinity for the FcRn receptor translates into improved pharmacokinetic properties of the albumin molecule and ultimately the therapeutic candidate that is fused or conjugated to it. The application of these novel albumin variants to improve the pharmacokinetic properties of a number of therapeutic candidates, including proteins and small peptides will be exemplified and discussed.

Biography

Mikael Bjerg Caspersen has completed his PhD from The Technological University of Denmark and did Post-doctoral studies at The University of Copenhagen. He has a background working in the Analytical service industry from Ciphergen Biosystems and in the CMO industry from working at CMC Biologics. He is working at Novozymes Biopharma with the development and implementation of albumin based technologies for formulation and half-life extension.

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