Conclusion and summary

Nanobodies are the smallest fragments of naturally occurring heavy-chain antibodies that have evolved to be fully functional in the absence of a light chain. As such, the cloning and selection of antigen-specific nanobodies obviate the need for construction and screening of large libraries, and for lengthy and unpredictable invitro affinity maturation steps**(Gura T,et al., 2002).**

The unique and well-characterised properties enable nanobodies to excel conventional therapeutic antibodies in terms of recognising uncommon or hidden epitopes, binding into cavities or active sites of protein targets, tailoring of half-life, drug format flexibility, low immunogenic potential and ease of manufacture**(Rosebrough SF,et al., 1996).**

Moreover, the favourable biophysical and pharmacological properties of nanobodies, together with the ease of formatting them into multifunctional protein therapeutics, leaves them ideally placed as a new generation of antibody-based therapeutics**(conrath KE,et al., 2003).**

This essay describes the state of the art on nanobodies and illustrates their potential as cancer therapeutic agents in comparison with traditional monoclonal antibodies which considerd as a very expensive medications.