

Nanoparticles for early Diagnostics of inflammatory diseases

New approaches in the field of soft and hard nanoparticles

November 20th - 21st 2013, Lisbon

ORAL COMMUNICATIONS



Ana Loureiro

University of Minho, Portugal

Co-authors:

Andreia C. Gomes

Artur Cavaco-Paulo

University of Minho, Portugal



O1

Protein Based Nanoparticles

Protein nanoparticles have a huge potential as possible vehicles for drug delivery due to their proven biocompatibility and biodegradability, sustained release, increased drug stability and targeting of specific tissues. In this study, we have produced several formulations of bovine serum albumin (BSA) nanoparticles using a high-pressure homogenizer. Different parameters were optimized in order to obtain monodisperse formulations of small nanoparticles, which are compatible with a potential application as drug delivery systems. The different formulations were extensively characterized and in vitro tests were performed. The incorporation of targeting and imaging agents and the encapsulation of drugs in nanoparticles were also performed. Specific internalization and effect of drugs encapsulated in small BSA nanoparticles obtained indicated that these protein nanoparticles exhibit suitable characteristics for application as drug delivery systems.