Setting a standard in magnetic heating of nanoparticles for bioapplications

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Magnetic nanoparticles (MNPs) with functionalized surfaces are bringing novel and promising ways to treat deadly diseases such as cancer. They have multiple applications that range from magnetic hyperthermia, localized drug delivery and release, to tissue engineering and new materials. MNPs are designed to attack, with high specificity, a given tissue, challenging researchers in solving biochemical and physiological issues. Depending on the success in such a challenge, cancer specific hyperthermia and drug delivery protocols could be developed. Clinical success of these techniques has been delayed for several years in an important part because of the lack of reliable and compliant specific instrumentation.

The Spanish company nanoScale Biomagnetics, formed in 2008 as a Spin Off coming from the University of Zaragoza, entered the market in 2010 with a set of instruments and accessories that can be described as the first high end resource for magnetic heating experiments with MNPs, from material characterization to in vivo experiments. With the common goal of developing the use of the technique, nB works with customers and institutions from all around the globe in the search of new standards and tools.