

特別講演会のお知らせ

北海道支部 支部長 竹澤 聡

この度下記の通り特別講演会が開催されます。

皆様におかれましては是非ご参加くださいますようお願いを申し上げます。

参加希望者は直接会場へお越しください。

記

日 時 : 2018 年 10 月 29 日 (月) 11:00~12:00

場 所 : 北海道大学大学院工学部 大会議室 A1-17 (札幌市北区北 13 条西
8 丁目)

講 演 : 「Optimization of the magnetic nanovector for focused
hyperthermia」

講 師 : Prof. M. Ricardo Ibarra

Institute of Nanoscience of Aragon, University of Zaragoza, Zaragoza
50420 Spain

Laboratory of Advanced Microscopies, University of Zaragoza, Zaragoza 50420, Spain
Department of Condensed Physics, University of Zaragoza, Zaragoza 50420, Spain

Magnetic nanoparticles are considered as promising nanovectors in tumor treatment at the clinic. It is relevant the knowledge of the mechanism triggering the cell death using magnetic nanoparticles as targeting vectors. In particular, the design of this nanovector is fundamental, in order to induce cell death in "in vitro" experiment. Their design will be relevant for the influence of the physical properties the applied electromagnetic field [1], magnetic nanoparticles properties [2], cell lines [3] and internal biodistribution in cells [4]. I report that the tune of different parameters could make suitable procedures in order to trigger the cell death following the apoptosis or necrosis mechanisms. The drastic effect of the

intracellular damage induced by magnetic hyperthermia is a key issue for the use of magnetic functional nanoparticles in focused therapies in comparison with exogenous heating [5]. Our results demonstrate that a complex interplay of physical effect in “in vitro” models make this technique a very promising alternative or adjuvant therapy for tumor treatment and that the optimization of the functional nanomaterials is relevant for their application.

共催 日本機械学会北海道支部、日本機械学会バイオエンジニアリング部門

研究会 日本生体医工学会専門別研究会「バイオメカニクス研究会」

問い合わせ先:

大橋 俊朗 北海道大学大学院工学研究院人間機械システムデザイン部門

Tel&Fax: 011-706-6424, Email: ohashi@eng.hokudai.ac.jp