## Accepted Manuscript

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PII: S0304-8853(18)31974-7

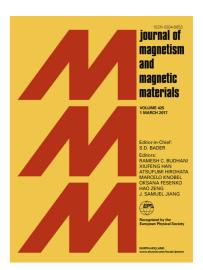
DOI: https://doi.org/10.1016/j.jmmm.2018.09.118

Reference: MAGMA 64400

To appear in: Journal of Magnetism and Magnetic Materials

Received Date: 23 June 2018

Revised Date: 17 September 2018 Accepted Date: 28 September 2018



Please cite this article as: B-K. Lim, E.C. Tighe, S.D. Kong, The Use of Magnetic Targeting forDrug Delivery into Cardiac Myocytes, *Journal of Magnetism and Magnetic Materials* (2018), doi: https://doi.org/10.1016/j.jmmm. 2018.09.118

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## **ACCEPTED MANUSCRIPT**

## The Use of Magnetic Targeting for Drug Delivery into Cardiac Myocytes

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Key words: Cardiac Myocytes, External Magnetic Fields, Magnetic Nanoparticle drug delivery, Magnetic-field guided

#### Abstract

With the continuous technological advancements being made in the medical field every day, the ability to improve drug delivery uptake in cardiac research is a prominent topic of discussion. Nanoparticles provide the opportunity to improve the efficiency of drug therapy while minimizing chemotherapy side effects through controllably releasing the encapsulated drug at the target site. Mono-disperse  $Fe_3O_4$  nanoparticles/polystyrene composite nanospheres with a large volume fraction of trapped magnetite and fluorophores were used in an *in vivo* experiment. In this study, magnetic nanoparticles were successfully delivered into the heart by utilizing magnetic targeting. Magnetic targeting allowed the mono-disperse  $Fe_3O_4$  nanospheres to be

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