京都大学大学院人間・環境学研究科　第７８回国際交流セミナー

Iron Oxide Based Magnetic Nanoparticles: Synthesis, Characterization and Biomedical Applications

酸化鉄系磁性ナノ粒子の合成、キャラクタリゼーションと生物医療応用

日時：2022 年 1 月 20 日（木）、16:45～18:15　　場所：人環棟 233 演習室
問い合わせ先：小松直樹（komatsu.naoki.7w@kyoto-u.ac.jp，内線：6833）
言語：英語　　主催：人間・環境学研究科、後援：総人／人環国際交流推進後援会

Prof. Md. Mahbubor Rahman
Rajshahi University (Bangladesh)
京都大学招へい研究員

Superparamagnetic iron oxide nanoparticles (SPIONs) have been extensively investigated because of their potential applications in drug delivery, hyperthermic cancer treatment, magnetic resonance imaging (MRI), tissue engineering, separations, and purification technology. Iron oxide magnetic nanoparticles, which have very high price in the global market, have already been commercialized as promising kits for biomolecule separation and purification. Recently, the combination of diagnosis and therapy in one platform (known as “theranostic”) based on magnetic nanoparticles has been adopted for cancer diseases. Nonetheless, the research and development of magnetic nanomaterials are still to be explored to reach clinical trials. Therefore, interest, efforts, and motivation for research in this outstanding field are envisioned. This talk will give an overview for the synthesis of SPIONs with their physicochemical characterization, and applications.

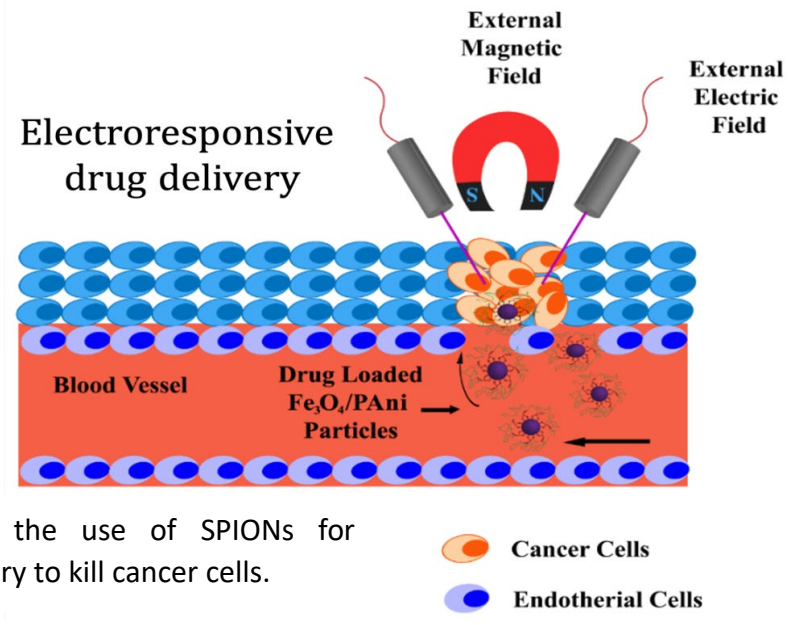

Figure: A schematic illustration of the use of SPIONs for electromagnetic responsive drug delivery to kill cancer cells.

今後の感染状況によりオンライン開催、あるいは中止の可能性があります。変更は、人環ホームページにてお知らせいたします。対面の場合、感染に十分配慮して開催します。