Curriculum Vitae

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Howon Seo (서호원)

Education

Sep 2012 – Present	**M.S./Ph.D. candidate (Advisor Prof. Pilhan Kim)** Graduate School of Nanoscience and Technology Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea
Sep 2011 – Aug 2012	**Researcher** Graduate School of Nanoscience and Technology Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea
Mar 2008 – Aug 2011	**B. S.** Department of Biochemistry Chungnam National University (CNU), Daejeon, Republic of Korea

Awards

2017, Young Investigator Best Research Award in Annual Biophotonics Conference

2013, Best poster award in Korean Society of Medical & Biological Engineering Spring Meeting

Publications

Ahn S, Choe K, Lee S, Kim K, Song E, **Seo H**, Kim I, Kim P, “Intravital longitudinal wide-area imaging of dynamic bone marrow engraftment and multilineage differentiation through nuclear-cytoplasmic labeling”, ***PLoS One***,12(11):e0187660, Nov. 2017.

Song E, **Seo H**, Choe K, Hwang Y, Ahn J, Ahn S, Kim P, “Optical clearing based cellular-level 3D visualization of intact lymph node cortex”, ***Biomedical Optics Express***, 6(10), 4154, Sep. 2015.

Seo H, Hwang Y, Choe K, Kim P, “In vivo Quantitation of Circulating Tumor Cells from Great Saphenous Vein Based on Video-rate Confocal Microscopy”, ***Biomedical Optics Express***, 6(6), 2158-67, May. 2015.

Lee D, Na J, Ryu J, Kim HJ, Nam SH, Kang M, Jung JW, Lee MS, Song HE, Choi J, Lee GH, Kim TY, Chung JK, Park KH, Kim SH, Kim H, **Seo H**, Kim P, Youn H, Lee JW, "Interaction of tetraspan(in) TM4SF5 with CD44 promotes self-renewal and circulating capacities of hepatocarcinoma cells," ***Hepatology***, 6(6) :1978-97, Mar. 2015.

Yang J, Lee S, Choi WJ, **Seo H**, Kim P, Kim GJ, Kim YW, Shin J, "Thermoset elastomers derived from carvomenthide," ***Biomacromolecules***, 16(1) :246-256, Jan. 2015.

Kim T, **Seo H**, Han J, Ko K, Choi J, “Polyethylenimine-Grafted Polyamidoamine Conjugates for Gene Delivery with High Efficiency and Low Cytotoxicity,” ***Macromolecular Research***, 22(7):757-764, Jul. 2014.

Choe K, Hwang Y, **Seo H**, Kim P, "In vivo high spatiotemporal resolution visualization of circulating T lymphocytes in high endothelial venules of lymph nodes," ***Journal of Biomedical Optics***, 18(3):036005, Mar. 2013.

Patents

1. “Apparatus and method of processing image of targeting material for circulating cells,” Park J, Kim P, **Seo H**, Yoon H, Rep. of Korea Patent 10-0044138 (2016).

2. “APPARATUS AND METHOD FOR IMAGE PROCESSING,” Kim P, **Seo H**, Rep. of Korea Patent 10-0160492 (2015).

Presentations

<<International>>

Seo H, Hwang Y, Choe K, Park I and Kim P, “In vivo Quantitation of Circulating Tumor Cells by High-speed Intravital Laser-scanning Confocal Microscopy,” ***Conference on Lasers and Electro-Optics (CLEO) 2016***, SW4G.3, San Jose, USA, Jun. 2016. (Oral)

Seo H, Hwang Y, Choe K, Park I and Kim P, “In vivo Quantitation of Circulating Tumor Cells by Video-rate Intravital Laser-scanning Confocal Microscopy,” ***The 20th OptoElectronics and Communications Conference (OECC) ’2015***, JThD. 30, Shanghai, China, Jul. 2015. (Oral)

Seo H, Hwang Y, Choe K and Kim P, "In Vivo Image-based Quantitation of Circulating Tumor Cells by Real-time Video-rate Confocal Microscopy," ***Metastasis Research Congress (MRS) '2014***, B51, Heidelberg, Germany, Jun. 2014. (Poster)

Seo H, Hwang Y, Choe K, Ahn J, Song E and Kim P, "In vivo Quantitation of Circulating Tumor Cells Based on Real-time Confocal Microscopy," ***SPIE Photonics West BiOS '2014***, 8947-81, San Francisco, USA, Feb. 2014. (Poster)

<<Domestic>>

Seo H, Hwang Y, Choe K, Park I, Kim P, "*In Vivo* Quantitation of Metastatic Circulating Tumor Cells by Real-time Imaging of Great Saphenous Vein," ***Annual Biophotonics Conference (ABC) '2017***, Tissue Biophotonics 3, Incheon, Korea, Oct. 2017. (Oral)

Seo H, Hwang Y, Choe K, Park I, Kim P, "*In vivo* Quantitation of Circulating Tumor Cells by Real-time Imaging based Detection Analysis," ***Optical Society of Korea (OSK) Winter Annual Meeting '2017***, W1C-VI-6, Busan, Korea, Jul. 2017. (Oral)

Seo H, Hwang Y, Choe K, Park I, Kim P, "*In Vivo* Quantitation of Metastatic Circulating Tumor Cells in Great Saphenous Vein by Real-time Confocal Microscopy," ***Annual Biophotonics Conference (ABC) '2016***, Tissue Biophotonics 16, Daejeon, Korea, Nov. 2016. (Poster)

Seo H, Choe K, Hwang Y, Park I, Kim P, " In Vivo Quantitation of Circulating Tumor Cells by Image-based Analysis with High-speed Laser-scanning Confocal Microscopy," ***Asia-Pacific Laser Symposium (APLS) '2016***, Thu-P-61, Jeju, Korea, May. 2016. (Poster)

Seo H, Choe K, Hwang Y, Park I, Kim P, "In Vivo Quantitation of Circulating Tumor Cells by Hemocytometric Imaging Analysis," ***Optical Society of Korea (OSK) Winter Annual Meeting '2016***, W1C-VI3, Daejeon, Korea, Jan. 2016. (Oral)

Seo H, Choe K, Hwang Y, Park I, Kim P, " In Vivo Quantitation of Circulating Tumor Cells based on Hemocytometric Imaging Analysis with Video-rate Intravital Confocal Microscopy," ***Annual Biophotonics Conference (ABC) '2015***, Tissue Biophotonics 16, Seoul, Korea, Oct. 2015. (Poster)

Seo H, Choe K, Hwang Y, Park I, Kim P, "In Vivo Quantitation of Circulating Tumor Cells by Hemocytometric Imaging Analysis," ***Optical Society of Korea (OSK) Summer Meeting '2015***, W2B-V5, Gyeongju, Korea, Jul. 2015. (Oral)

Seo H, Choe K, Hwang Y, Kim P, "In Vivo Image-based Monitoring of Circulating Tumor Cells Disseminated from the Implanted Primary Tumor," ***Optical Society of Korea (OSK) Summer Meeting '2014,*** MP-VI8, Jeju, Korea, Aug. 2014. (Poster)

Seo H, Hwang Y, Choe K, Kim P, "In Vivo Image-based Quantitation of Circulating Tumor Cells with Real-time Confocal Micrescopy," ***Advacned Laser and Their Applications (ALTA) '2014***, Fri-P-76, Jeju, Korea, May 2014. (Poster)

Seo H, Hwang Y, Choe K, Kim P, "In vivo Quantitation of Circulating Tumor Cells by Real-time Intravital Microscopy," ***International Conference of the Korean Society for Molecular and Cellular Biology '2013***, 13F-1135, Seoul, Korea, Oct. 2013. (Poster)

Seo H, Kim S, Kim Y, Park T, Choe K, Oh W, Kim P, "In Vivo Longitudinal Visualization of Trachea in Asthma Mouse Model by Optical Frequency Domain Imaging," ***Optical Society of Korea (OSK) Summer Annual Meeting '2013***, FP-VI14, Yeosu, Korea, July. 2013. (Poster)

Seo H, Hwang Y, Choe K, Ahn J, Song E, Kim P, "In Vivo High Sensitivity Quantitation of Circulating Tumor Cells Based on Real-time Confocal Microscopy," ***Korean Society of Medical & Biological Engineering Spring Meeting '2013***, P2-04, Gumi, Korea, May 2013. (Poster) [BEST POSTER AWARD]

Seo H, Choe K , Hwang Y, Kim P, "In Vivo Quantification of Circulating Tumor cell with Video-rate Real-time Confocal Microscopy," ***Optical Society of Korea (OSK) Summer Meeting '2012***, W2C-VI2, Jeju, Korea, Aug. 2012. (Oral)