Supplementary Materials for the Manuscript Entitled

“Monitoring Breast Tumor Lung Metastasis by U-SPECT-II/CT with an Integrin αvβ3-Targeted Radiotracer 99mTc-3P-RGD2”

By

Yang Zhou¹, Guoqiang Shao¹,², and Shuang Liu¹ *

¹School of Health Sciences, Purdue University, IN 47907, USA

²Department of Nuclear Medicine, Nanjing First Hospital, Nanjing Medical University, Nanjing, China

*To whom correspondence should be addressed. School of Health Sciences, Purdue University, 550 Stadium Mall Drive, West Lafayette, IN 47907. Phone: 765-494-0236; Fax 765-496-1377; Email: liu100@purdue.edu
Figure S11. Typical radio-HPLC chromatogram of $^{99m}$Tc-3P-RGD$_2$ to illustrate its radiochemical purity.
Figure SI2. Relationship between the radioactivity counts from the SPECT/CT fusion images and those from $\gamma$-counter. Obviously, there was a linear relationship with $R^2$ being 0.9997. The conversion formula was $y = 1.0885x + 0.0618$, where $y$ represents the radioactivity (MBq) from $\gamma$-counter, and $x$ is the radioactivity ($U \times 10^{-7}$) from the SPECT/CT.
Figure SI3. Integrin β3 immunostaining of MDA-MB-231 human breast cancer cells. MDA-MB-231 cells were seeded into 8-well chamber slides. Cells were allowed to attach and spread for >24 h. The tumor cells were fixed in -20°C methanol for 5 min and rinsed with PBS. Cells were blocked with 10% goat serum for 30 min at room temperature, and then incubated with hamster anti-integrin β3 antibody (1:100, BD Biosciences, San Jose, CA) for 1 h at room temperature followed by incubation with Cy3-conjugated goat anti-hamster secondary antibody (1:100, Jackson ImmunoResearch Inc., West Grove, PA). After washing with PBS, the slides were mounted with Dapi-Fluoromount-G (SouthernBiotech, Birmingham, AL). Primary antibody replaced by PBS only was served as the negative control. Fluorescence was visualized with an Olympic BX51 fluorescence microscope (Olympus America Inc., Center Valley, PA).