

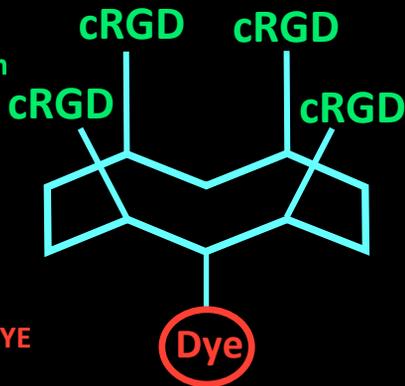
Angiostamp™800

NIR molecular imaging agent for oncology

Angiostamp™800 is a targeted contrast agent for fluorescence and photoacoustic imaging of tumors.

Angiostamp™800 is an organic NIR imaging agent targeting the $\alpha v \beta 3$ integrin, a cell surface receptor involved in cell adhesion and migration. The $\alpha v \beta 3$ integrin is overexpressed in particular on endothelial cells during neoangiogenesis as well as on many tumor cells types.

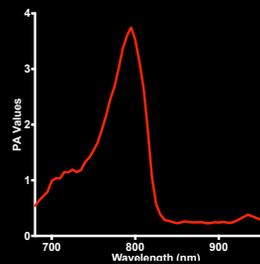
4 cyclic RGD for $\alpha v \beta 3$ recognition



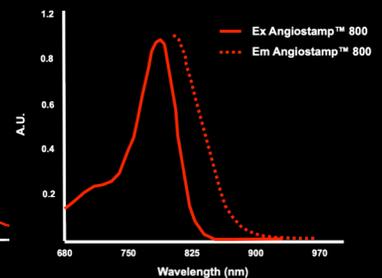
Decapeptide platform

NIR absorbing DYE

Angiostamp™800



Photoacoustic absorption spectrum



Fluorescence absorption and emission spectra

Angiostamp™800 for Photoacoustic imaging in oncology

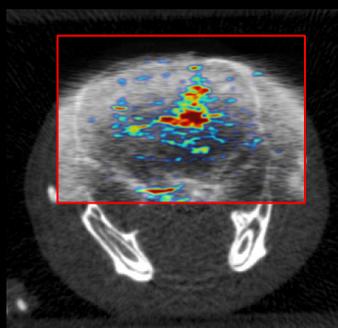
Orthotopic glioblastoma model / multimodal investigation using Angiostamp™800

Bioluminescence



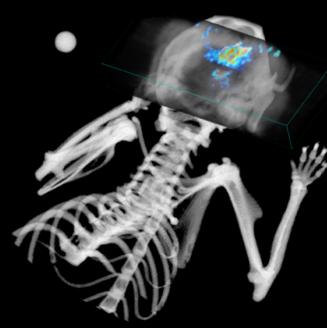
→ Follow-up of cancer cells proliferation

2D PAI / US / μ CT



→ Monitoring of Tumor specific biomarker expression in a detailed anatomical context

3D PAI / US / μ CT



Angiostamp™800 was first developed for *in vivo* tumor detection by fluorescence imaging [1]. Since then, it has been widely characterized and was shown to provide high tumor contrast in various animal models including lung adenocarcinoma [2, 3], ovarian carcinoma [4, 5], peritoneal carcinomatosis [6, 7], fibrosarcoma [8], osteosarcoma [9], head and neck squamous cell carcinoma [10] and bone metastasis from breast cancer origin [11].

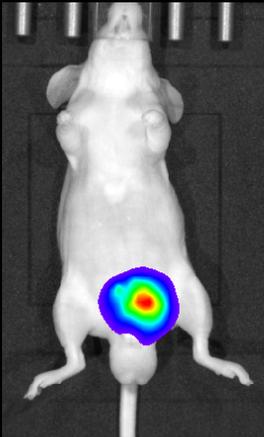
Angiostamp™800

NIR molecular imaging agent for oncology

Angiostamp™800 for Photoacoustic imaging in oncology

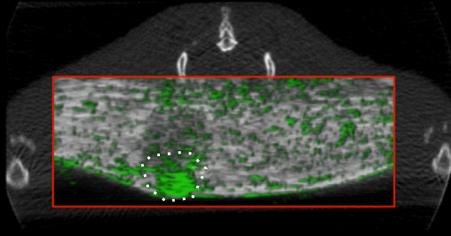
Orthotopic prostate model / multimodal investigation using Angiostamp™800

Bioluminescence



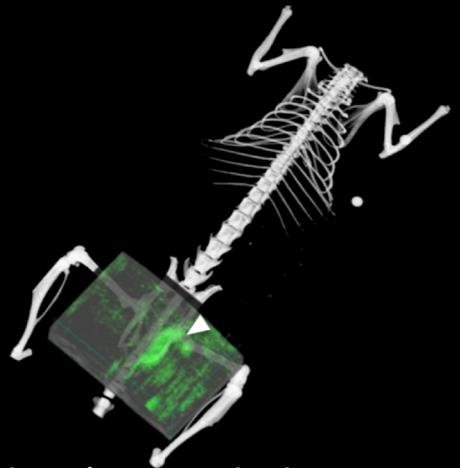
→ Follow-up of cancer cells proliferation

2D PAI / US / μCT



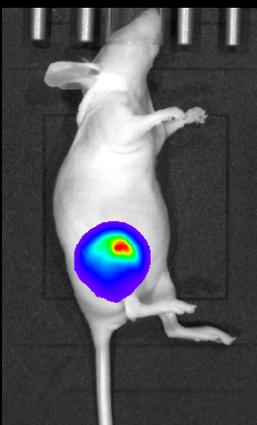
→ Monitoring of Tumor specific biomarker expression in a detailed anatomical context

3D PAI / US / μCT



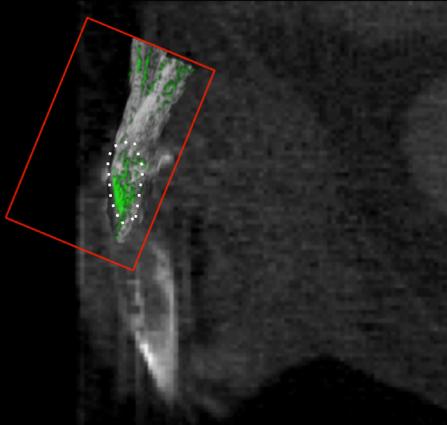
Orthotopic bone metastases model / multimodal investigation using Angiostamp™800

Bioluminescence



→ Follow-up of cancer cells proliferation

2D PAI / US / μCT

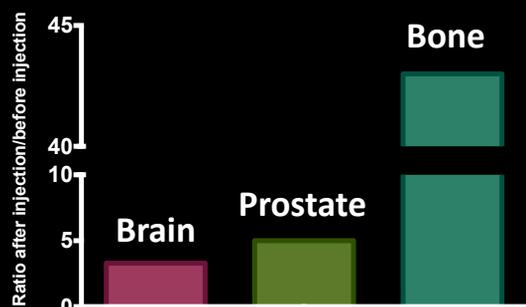


→ Monitoring of Tumor specific biomarker expression in a detailed anatomical context

3D PAI / US / μCT



Angiostamp™800 can increase up to 43 times the tumor contrast depending on $\alpha\beta3$ expression level.



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10. Atallah, I., et al., *Near-infrared fluorescence imaging-guided surgery improves recurrence-free survival rate in novel orthotopic animal model of head and neck squamous cell carcinoma*. Head Neck, 2016. **38 Suppl 1**: p. E246-55.
11. Bellanger, A., et al., *The critical role of the ZNF217 oncogene in promoting breast cancer metastasis to the bone*. J Pathol, 2017. **242**(1): p. 73-89.

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