Washington University in St. Louis
Office of Technology Management

PEGYLATED-GIRLRG PEPTIDE FOR RADIOPHARMACEUTICAL DELIVERY

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Technology: GRP78 is a chaperone that is part of a complex that controls the maturation of glycoproteins in the ER and senses cellular stress in normal cells. However, following radiation treatment, GRP78 is also expressed on the surface of cancer cells and has anti-apoptotic and pro-angiogenesis activities that can support tumor proliferation, metastasis, and survival. The GIRLRG peptide conjugate binds specifically to radiation inducible GRP78 surface protein expressed on cancer cells. This conjugate has a multitude of uses both as a therapeutic and an imaging agent.

Advantages:

- Improvement in patient outcomes due to reduction in systemic toxicity
- Dual therapy : Monitor radiation efficacy and treat cancer

Stage of Development:

- Preclinical studies underway-tested breast and glioma animal model systems
- Clinical studies in various cancers are planned