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T E C H N O L O G Y O P P O R T U N I T Y

Soluble IGF-1 Receptor for Treatment of Cancer and Metastasis

Applications: Prevention and treatment of metastasis

Advantages: Other approaches to targeting the IGF-1 use MAb based methodologies. Our approach is advantageous because:

- High affinity and high specificity for IGF-1 and IGF-2 (low cross-reactivity with insulin)
- Minimal effects on the IR-insulin axis (hyper- and hypoglycemia seen with Abs).
- Ability to inhibit the growth promoting effects of both IGF-1R and IR-A in cells that express both receptor systems (Abs can only block IGF-1R)

Technology: The receptor for the type 1 insulin-like growth factor (IGF-IR) has been identified as a major regulator of the malignant phenotype and a target for cancer therapy. Thus, reducing circulating IGF-1 and IGF-2 levels represents a potential approach for the treatment of cancer. The present technology relates to the use of of the “soluble” full length extracellular domain of the IGF-1 receptor (sIGF-1R) as a trap to reduce circulating IGF-1 and IGF-2 for the treatment of cancer and liver metastases..

Mice were inoculated with H-59 lung carcinoma cells and treated i.p. every 3 days with soluble IGF-1 receptor (sIGF1R) There was a marked reduction in metastases and several animals had none.

Lead Inventor



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Research Focus:

Dr. Brodt and her group study the molecular aspects of cancer metastasis with particular focus on Angiogenesis Cell Adhesion Receptors; Inflammatory Cytokines; Growth Factors; IGF-IR; Cell Signaling; E-selectin; VCAM-1; PECAM-1; ICAM-1

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Opportunity: Exclusive license or research collaboration

