Monoclonal Antibodies for the Diagnosis and Treatment of Basal Breast Carcinoma

ID 1792

Background
Breast cancer affects over one million women worldwide every year. Advances in our understanding of the biology of this disease have lead to improved patient survival with the use of new anti-hormonal agents in the treatment of hormone receptor positive disease and the addition of HER-2 directed therapies for the 25% of women with HER-2 amplification. There remains however, a subset of women for whom these approaches are not an effective option and chemotherapy offers only limited benefits. This group has been described as “triple-negative” (i.e. estrogen receptor negative, progesterone receptor negative, and HER-2 negative) or basal breast cancer and represents a distinct clinical and molecular subgroup of the disease.

Technology Description
Dr. Ferrone and colleagues have determined the High Molecular Weight Melanoma Associated Antigen (HMW-MAA) is overexpressed on basal breast carcinoma cells and in malignant pleural effusions from patients with breast carcinoma. This invention provides for methods of using anti-HMW-MAA monoclonal antibodies to diagnose and treat basal breast carcinoma.

Applications
1. Therapeutic, diagnostic or prognostic for triple negative breast cancer
2. Radio-immunotherapy and Radio- immuno-guided surgery
3. Imaging of primary tumors and metastasis

Advantages
1. High specificity
2. High avidity
3. Can be humanized and used in combination therapies

Stage of Development
Preclinical animal studies completed

Provisional Patent Application Filed

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Research Interests

1. Escape mechanisms utilized by tumor cells to avoid immune recognition and destruction

2. Antibody-based immunotherapy of solid tumors

3. Identification of targets for immunotherapy on human cancer stem cells

Publications


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