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A breakthrough in enhancing the therapeutic index of immunotherapy and target therapy for cancer

Statement of the Problem: A common issue for anti-cancer drugs are the strong toxicity and low efficacy of most therapies. This is especially an issue to many immunotherapies such as IL12. This is caused by not enough drugs enter tumor tissues to have satisfactory efficacy, and left majority of the drugs enter normal tissues to cause high toxicities to the normal tissues. Target drug delivery technologies such as liposomes are effective in improving the therapeutic index (efficacy/toxicity) of small molecular chemotherapies. But, no effective technology has been demonstrated to effectively enhancing the therapeutic index of protein drugs including monoclonal antibody targeted therapies.

Breakthrough in Cancer Treatment: A new nanotechnology, MNC technology, has been dramatically improved the therapeutic index of all classes of anti-cancer drugs. Successful applications are demonstrated by Trastuzumab (monoclonal antibody), Interferon alpha (immunotherapy) and Sunitinib (chemotherapy).

Principle of Technology: MNC technology is a micelle nanocomplex that can reversably bind to drugs, target deliver majority of the drug to the tumor site plus effectively slow release of the drug from circulation to tumor to enhance the full usage of the drug and reduce toxicity.

Biography

Pauline Y Lau has been working in medical industry for over 35 years with experiences in both pharmaceutical and *in-vitro* medical device (IVD). Her accomplishment is well recognized by the international societies in the last 20 years. Suntec Medical Inc., USA (pharmaceutical company) under her leadership has successfully registered pharmaceutical products globally. Currently, the company is developing a portfolio of cancer therapies including immuno-oncology and targeted therapies utilizing its proprietary MNC technology platform. She is global Expert and accomplished Researcher in Precision Medicine. She was an Executive Director in Integrated Medicine at Roche Pharmaceuticals.

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