meningococcal disease caused by groups A, C, W–135 and Y Neisseria meningitidis. Group B capsular PS is similar to the PS structure expressed in certain human tissues, thus making it a poor immunogen. Furthermore, if used as a vaccine, the possibility exists of it inducing an autoimmune response. Thus, a need remains to develop additional meningococcal vaccines, particularly for group B and group X meningococcal serogroups.

This application claims immunogenic conjugates including at least one polysaccharide conjugated to a group B factor H binding protein (fHbp). Also claimed are immunogenic conjugates including at least one polysaccharide conjugated to a Neisserial surface protein A (NspA). Additionally, conjugates are claimed.

Potential Commercial Applications:
- Multivalent meningitis vaccine
- Research tool

Competitive Advantages:
- Higher vaccine yield
- More efficient conjugation method
- Lower cost vaccines

Development Stage:
- Pre-clinical
- In vitro data available
- In vivo data available (animal)

Inventors: Che-Hung Robert Lee (FDA/CBER), Vavlerian Pinto (EM), Elizabeth Moran (EM), Robert Burden (EM)


Related Technologies:

Licensing Contact: Peter A. Soukas; Che-Hung Robert Lee at robert.lee@fda.hhs.gov or 301-451–5934.

Enhanced Cancer Therapy Using Photoimmunotherapy (PTT) in Combination With Anti-Cancer Agents

Description of Technology: The invention is in the field of Photoimmunotherapy (PTT). More specifically, the invention relates to antibody-fluorophore conjugates where the antibody is specific for cancer cells and the fluorophore is IR700 dye. Binding of such conjugates to targeted cancer cells followed by irradiation with near infrared light (NIR) was shown to kill cancer cells in a highly specific manner. Furthermore, the invention discloses that the therapeutic effect of the PTT conjugate is significantly enhanced by the administration of one or more anti-cancer agents following the irradiation step. This is achieved by the markedly rapid accumulation of the therapeutic agent in the PTT-treated tissue. Also provided in the invention are wearable devices that incorporate NIR light emitting diodes (LEDs) and can be used to activate the PTT conjugates.

Potential Commercial Applications:
- Anti-cancer therapy.

Competitive Advantages:
- Highly specific to cancer cells
- Do not affect surrounding normal cells
- Negligible toxicity
- Enhancement of therapeutic effects when administered in combination with one or more other therapeutic agents
- Possible to follow the cell killing process in real time, using fluorescence lifetime imaging

Development Stage:
- In vivo data available (animal).

Inventors: Hisataka Kobayashi and Peter L. Choyke (NCI).

Publications:

Intellectual Property:

Licensing Contact: Uri Reichman, Ph.D., MBA; 301–435–4616; reichmav@mail.nih.gov.

Photoimmunotherapy targeting specific cancer cells

Potential Commercial Applications:
- Higher vaccine yield
- Lower cost vaccines
- Higher vaccine yield
- Lower cost vaccines

Competitive Advantages:
- Negligible toxicity
- Enhancement of therapeutic effects when administered in combination with one or more other therapeutic agents
- Possible to follow the cell killing process in real time, using fluorescence lifetime imaging

Development Stage:
- In vivo data available (animal).

Inventors: Hisataka Kobayashi and Peter L. Choyke (NCI).

Publications:

Competitive Advantages:
- Higher vaccine yield
- Lower cost vaccines
- Higher vaccine yield
- Lower cost vaccines

Development Stage:
- In vivo data available (animal).

Inventors: Hisataka Kobayashi and Peter L. Choyke (NCI).

Publications: