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(71) Applicant (for all designated States except US): **THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES** [US/US]; 6011 Executive Boulevard, Suite 325, Rockville, MD 20852-3804 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PASTAN, Ira H.** [US/US]; 11710 Beall Mountain Road, Potomac, Maryland 20854 (US). **WELDON, John** [US/US]; 10624 Spotted

Horse Lane, Columbia, Maryland 21044 (US). **BEERS, Richard** [US/US]; 306 Russett Road, Rockville, Maryland 20853 (US).

(74) Agents: **MYCROFT, Frank J.** et al.; Kilpatrick Townsend & Stockton LLP, Two Embarcadero Center, Eighth Floor, San Francisco, California 94111-3834 (US).

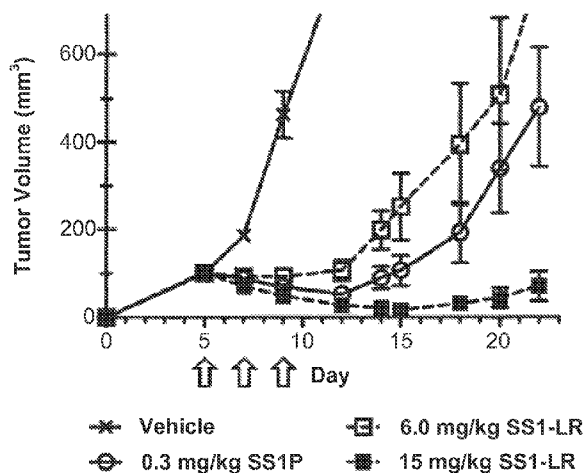
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[Continued on next page]

(54) Title: RECOMBINANT IMMUNOTOXIN TARGETING MESOTHELIN

Figure 3



(57) Abstract: Mesothelin is a differentiation antigen present on the surface of ovarian cancers, mesotheliomas and several other types of human cancers. Because among normal tissues, mesothelin is only present on mesothelial cells, it represents a good target for antibody mediated delivery of cytotoxic agents. The present invention is directed to improved recombinant immunotoxins comprising anti-mesothelin antibodies, including Fv molecules with particularly high affinity for mesothelin, and a Pseudomonas Exotoxin moiety which has been modified to reduce its immunogenicity and protease sensitivity and providing a better cytotoxicity for cells which express mesothelin. The RITs are well-suited for the treatment of cancers of the ovary, stomach, squamous cells, mesotheliomas and other malignant cells expressing mesothelin.



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