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(72) Inventors; and
(71) Applicants : **GILL, Parkash** [US/US]; 29420 Cresthaven Court, Agoura, CA 91301 (US). **LIU, Ren** [US/US]; 824 North Pasadena Avenue #17, Azusa, CA 91702 (US).

(74) Agent: **CRANDALL, Craig, A.**; Craig A Crandall, APC, 3034 Deer Valley Avenue, Newbury Park, CA 91320 (US).

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(54) Title: CANCER TREATMENT USING ANTIBODIES THAT BING CELL SURFACE GRP78

(57) Abstract: This application provides, inter alia, antibodies or antigen-binding fragments thereof, targeting cell surface GRP78 expressed on tumor cells, tumor endothelial cells, and tumor initiating cancer cells. These anti-GRP78 antibodies, or antigen-binding fragments thereof, have a high affinity for GRP78 and are less immunogenic compared to their unmodified parent antibodies in a given species, e.g., a human, and function to inhibit GRP78. Importantly, these isolated novel antibodies and antigen-binding fragments thereof, attenuate PI3K signaling and promote apoptosis in tumor cells, while leaving normal cells unaffected. The antibodies and antigen-binding fragments are useful for UPR- targeted cancer therapeutic treatments.

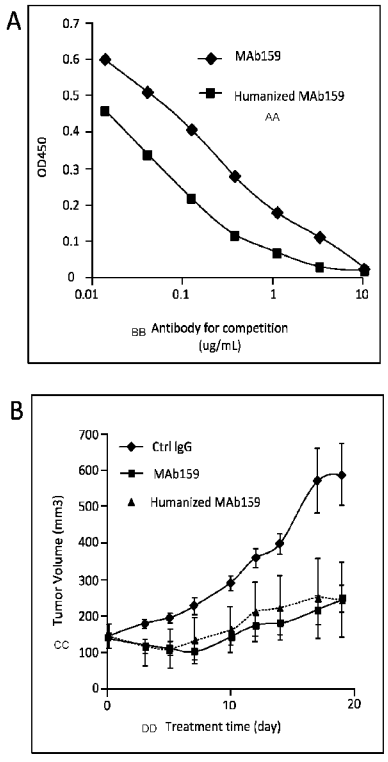


FIG. 8

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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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