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(54) **Title**: FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE

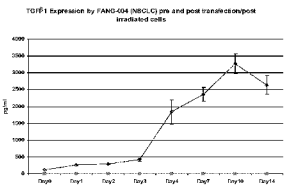


FIG. 2A

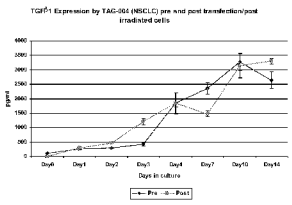


FIG. 2D

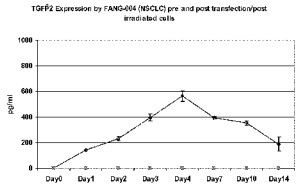


FIG. 2B

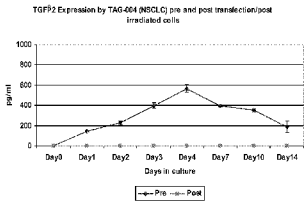


FIG. 2E

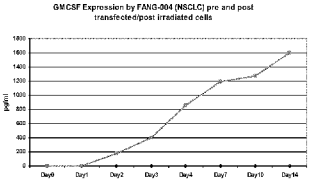


FIG. 2C

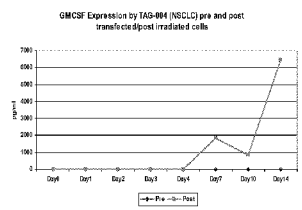


FIG. 2F

(57) **Abstract**: The present invention includes compositions and methods for cancer treatment. More specifically the present invention describes an autologous cancer vaccine genetically modified for Furin knockdown and GM-CSF expression. The vaccine described herein attenuates the immunosuppressive activity of TGF-β through the use of bi-functional shRNAs to knock down the expression of furin in cancer cells, and to augment tumor antigen expression, presentation, and processing through expression of the GM-CSF transgene.

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TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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