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(54) **Title:** IMMUNOSTIMULATORY BACTERIA-BASED VACCINES, THERAPEUTICS, AND RNA DELIVERY PLATFORMS

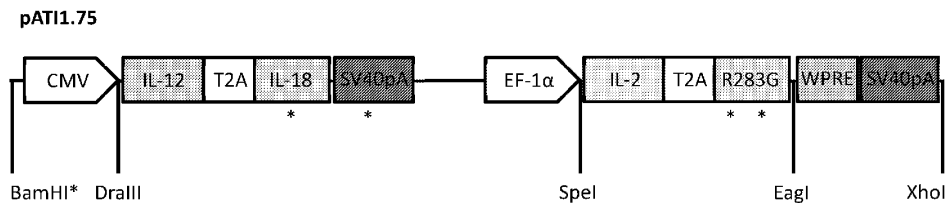


FIG. 1A

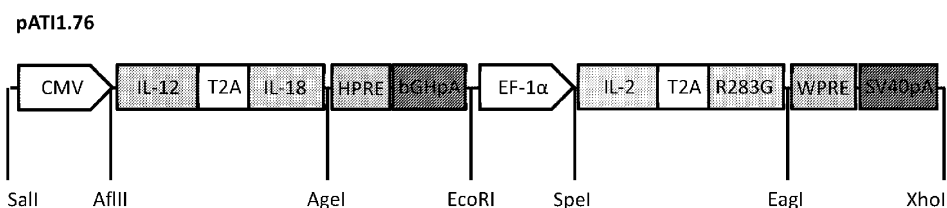


FIG. 1B

EES26

(57) **Abstract:** Provided are attenuated immunostimulatory bacteria with genomes that are modified to, for example, reduce toxicity and improve the anti-tumor activity, such as by increasing accumulation in the tumor microenvironment, particularly in tumor-resident myeloid cells, improving resistance to complement inactivation, reducing immune cell death, promoting adaptive immunity, and enhancing T-cell function. Also provided are immunostimulatory bacteria for use as vaccines, and for delivery of mRNA. The increase in colonization of phagocytic cells improves the delivery of encoded therapeutic products to the tumor microenvironment and to tumors and permits, among other routes, systemic administration of the immunostimulatory bacteria. The increase in colonization of phagocytic cells also provides for use of immunostimulatory bacteria for direct tissue administration for use as vaccines.

[Continued on next page]

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

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