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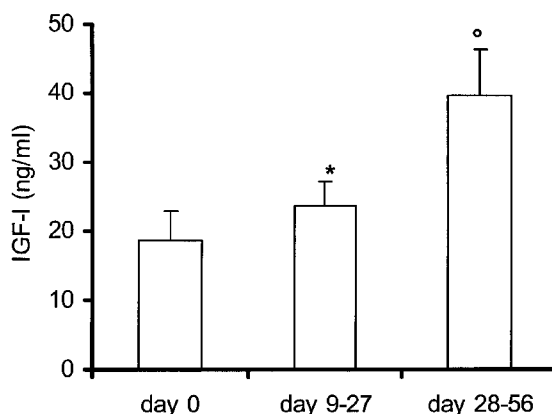
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60/339,610 11 December 2001 (11.12.2001) US(71) Applicants: **ADVISYS, INC.** [US/US]; 2700 Research Forest Drive, Suite 180, The Woodlands, TX 77381 (US). **BAYLOR COLLEGE OF MEDICINE** [US/US]; One Baylor Plaza, Houston, TX 77030 (US).(72) Inventors: **DRAGHIA-AKLI, Ruxandra**; 5215 Starkridge Drive, Houston, TX 77035 (US). **CARPENTER, Robert, H.**; 1303 Pecan Street, Bastrop, TX 78602 (US). **KERN, Douglas, R.**; 64 Autumn Crescent, The Woodlands, TX 77381 (US). **SCHWARTZ, Robert,****J.**; 4019 Marlowe, Houston, TX 77005 (US). **KING, Glen**; 5105 Max Road, Rosharon, TX 77583 (US). **HAHN, Kevin**; 4510 Durango Bend Drive, Missouri City, TX 77459 (US). **BRENNER, Malcolm, K.**; 4802 Willow, Bellaire, TX 77401 (US).(74) Agent: **CHWANG, Ling, T.**; Jackson Walker L.L.P., 2435 N. Central Expressway, Suite 600, Richardson, TX 75080 (US).(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: PLASMID MEDIATED SUPPLEMENTATION FOR TREATING CHRONICALLY ILL SUBJECTS



(57) **Abstract:** The present invention pertains to compositions and methods for plasmid-mediated supplementation. The compositions and method are useful for retarding the growth of the tumor, and retarding cachexia, wasting, anemia and other effects that are commonly associated in cancer bearing animals. Overall, the embodiments of the invention can be accomplished by delivering an effective amount of a nucleic acid expression construct that encodes a GHRH or functional biological equivalent thereof into a tissue of an animal and allowing expression of the encoded gene in the animal. For example, when such a nucleic acid sequence is delivered into the specific cells of the animal tissue specific constitutive expression is achieved. Furthermore, external regulation of the GHRH or functional biological equivalent thereof gene can be accomplished by utilizing inducible promoters that are regulated by molecular switch molecules, which are given to the animal. The preferred method to deliver the constitutive or inducible nucleic acid encoding sequences of GHRH or the functional biological equivalents thereof is directly into the cells of the animal by the process of in vivo electroporation. In addition, a treatment for retarding the growth of the tumor, and retarding cachexia or the wasting effects that are commonly associated with tumors is achieved by the delivery of recombinant GHRH or biological equivalent into the animal.



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