CLAIMS

1. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of cancer, wherein the polypeptide further comprises an EGF binding domain.

2. The use of claim 1, where said cancer is breast cancer, brain cancer, stomach cancer, lung cancer, prostate cancer, ovarian cancer, testicular cancer, colon cancer, skin cancer, rectal cancer, cervical cancer, uterine cancer, liver cancer, pancreatic cancer, head & neck cancer or esophageal cancer.

3. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of an autoimmune disease, wherein the polypeptide further comprises an EGF binding domain.

4. The use of claim 3, wherein said autoimmune disease is spondyloarthropathy, ankylosing spondylitis, psoriatic arthritis, reactive arthritis, enteropathic arthritis, ulcerative colitis, Crohn’s disease, irritable bowel disease, inflammatory bowel disease, rheumatoid arthritis, juvenile rheumatoid arthritis, familial Mediterranean fever, amyotrophic lateral sclerosis, Sjogren’s syndrome, early arthritis, viral arthritis, multiple sclerosis, systemic lupus erythematosus, psoriasis, vasculitis, Wegener's granulomatosis, Addison's disease, alopecia, antiphospholipid syndrome, Behcet's disease, celiac disease, chronic fatigue syndrome, ulcerative colitis, type I diabetes, fibromyalgia, autoimmune gastritis, Goodpasture syndrome, Graves' disease, idiopathic thrombocytopenic purpura (ITP), myasthenia gravis, pemphigus vulgaris, primary biliary cirrhosis, rheumatic fever, sarcoidosis, scleroderma, vitiligo, vasculitis, small vessel vasculitis, hepatitis, primary biliary cirrhosis, sarcoidosis, scleroderma, graft versus host disease (acute and chronic), aplastic anemia, or cyclic neutropenia.

5. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of a viral disease, wherein the polypeptide further comprises an EGF and/or a Kringle binding domain.

6. The use of claim 5, wherein said viral disease is influenza, human immunodeficiency virus, dengue virus, West Nile virus, smallpox virus, respiratory syncytial virus, Korean hemorrhagic fever virus, chickenpox, varicella zoster virus, herpes simplex virus 1 or 2, Epstein-Barr virus, Marburg virus, hantavirus, yellow fever virus,

hepatitis A, B, C or E, Ebola virus, human papilloma virus, rhinovirus, Coxsackie virus, polio virus, measles virus, rubella virus, rabies virus, Newcastle disease virus, rotavirus, HTLV-1 and -2.

7. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of a hypercoagulation disorder in a subject, wherein the polypeptide further comprises an EGF binding domain.

8. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of sepsis, wherein the polypeptide further comprises an EGF binding domain.

9. Use of an isolated polypeptide comprising a gamma-carboxyglutamic-acid (Gla) domain and lacking a protease or hormone-binding domain in the manufacture of a medicament for the treatment of vaso-occlusive crisis in a sickle cell subject, wherein the polypeptide further comprises an EGF binding domain.

10. The use of any one of claims 1 to 9, wherein the Gla domain is a Gla domain from Factor II, Factor VII, Factor IX, Factor X, Protein S or Protein C.

11. The use of any one of claims 1 to 10, wherein the Gla domain and EGF domain are from Protein S.

12. The use of any one of claims 1 to 11, wherein the polypeptide further comprises a detectable label.

13. The use of claim 12, wherein the detectable label is a fluorescent label, a chemilluminescent label, a radiolabel, an enzyme, a dye or a ligand.

14. The use of any one of claims 1 to 13, wherein said medicament further comprises a therapeutic agent.

15. The use of claim 14, wherein said therapeutic agent is selected from the group consisting of a radionuclide, a chemotherapeutic agent, a toxin, an anti-inflammatory, an immune-modulating composition, a beta blocker, an anti-hypertensive, a cardiotonic, an anti-thrombotic, a vasodilator, a hormone antagonist, an endothelin antagonist, a cytokine inhibitor/blocker, a clcium channel blocker, a phosphodiesterase inhibitor, an angiotensin type 2 antagonist, an anti-coagulant and an anti-viral agent.

16. The use of claim 15, wherein the chemotherapeutic agent selected from the group consisting of temozolomide, epothilones, melphalan, carmustine, busulfan, lomustine, cyclophosphamide, dacarbazine, polifeprosan, ifosfamide, chlorambucil, mechlorethamine, busulfan, cyclophosphamide, carboplatin, cisplatin, thiotepa, capecitabine, streptozocin, bicalutamide, flutamide, nilutamide, leuprolide acetate, doxorubicin hydrochloride, bleomycin sulfate, daunorubicin hydrochloride, dactinomycin, liposomal daunorubicin citrate, liposomal doxorubicin hydrochloride, epirubicin hydrochloride, idarubicin hydrochloride, mitomycin, doxorubicin, valrubicin, anastrozole, toremifene citrate, cytarabine, fluorouracil, fludarabine, floxuridine, interferon α-2b, plicamycin, mercaptopurine, methotrexate, interferon α -2a, medroxyprogersterone acetate, estramustine phosphate sodium, estradiol, leuprolide acetate, megestrol acetate, octreotide acetate, deithylstilbestrol diphosphate, testolactone, goserelin acetate, etoposide phosphate, vincristine sulfate, etoposide, vinblastine, etoposide, vincristine sulfate, teniposide, trastuzumab, gemtuzumab ozogamicin, rituximab, exemestane, irinotecan hydrocholride, asparaginase, gemcitabine hydrochloride, altretamine, topotecan hydrochloride, hydroxyurea, cladribine, mitotane, procarbazine hydrochloride, vinorelbine tartrate, pentrostatin sodium, mitoxantrone, pegaspargase, denileukin diftitix, altretinoin, porfimer, bexarotene, paclitaxel, docetaxel, arsenic trioxide and tretinoin.

17. The use of claim 14, wherein the toxin is selected from the group consisting of Pseudomonas exotoxin (PE38), ricin A chain, diphtheria toxin, Pokeweed antiviral protein (PAP), saporin and gelonin.

18. The use of claim 14, wherein the radionuclide is selected from Y-90, P-32, I-131, In-111, Sr-89, Re-186, Sm-153 and Sn-117m.

19. The use of claim 15, wherein the anti-inflammatory or the immune-modulating composition is selected from the group consisting of prednisone, methylprednisone, Venipred, Celestone, hydrocortisone, triamcinoclone, Aristonpan Intra-Articular injection, Methapred, Rayos oral, betamethasone, and etanercept.

20. The use of claim 15, wherein the anti-viral agent is selected from the group consisting of Abacavir, Aciclovir, Acyclovir, Adefovir, Amantadine, Amprenavir, Ampligen, Arbidol, Atazanavir, Atripla, Boceprevirertet, Cidofovir, Combivir, Darunavir, Delavirdine, Didanosine, Docosanol, Edoxudine, Efavirenz, Emtricitabine, Enfuvirtide, Entecavir, Entry inhibitors, Famciclovir, Fomivirsen, Fosamprenavir, Foscarnet, Fosfonet, Ganciclovir, Ibacitabine, Imunovir, Idoxuridine, Imiquimod, Indinavir, Inosine, Integrase inhibitor, Interferon type III, Interferon type II, Interferon type I, Interferon, Lamivudine, Lopinavir, Loviride, Maraviroc, Moroxydine, Methisazone, Nelfinavir, Nevirapine, Nexavir, Nucleoside analogues, Oseltamivir,

Peginterferon alfa-2a, Penciclovir, Peramivir, Pleconaril, Podophyllotoxin, Protease inhibitor, Raltegravir, Reverse transcriptase inhibitor, Ribavirin, Rimantadine, Ritonavir, Pyramidine, Saquinavir, Stavudine, Synergistic enhancer (antiretroviral), Tea tree oil, Telaprevir, Tenofovir, Tenofovir disoproxil, Tipranavir, Trifluridine, Trizivir, Tromantadine, Truvada, Valaciclovir, Valganciclovir, Vicriviroc, Vidarabine, Viramidine, Zalcitabine, Zanamivir or Zidovudine.

21. The use of any one of claims 1 to 19, wherein the polypeptide further comprises an antibody Fc region.

22. The use of any one of claims 1 to 21, wherein the polypeptide comprises 9 to 13 Gla residues.

23. The use of any one of claims 1 to 22, wherein the polypeptide comprises at least one disulfide bond.

24. The use of any one of claims 1 to 23, wherein the polypeptide is between 4.5 and 30 kD in size.

25. The use of any one of claims 1 to 24, wherein the polypeptide further comprises a Kringle domain.