【CLAIMS】

【Claim 1】

Use of an induced T cell co-stimulator ligand (ICOSL)-overexpressing mesenchymal stem cell in the manufacture of a medicament for the prevention or treatment of a regulatory T cell mediated disease.

【Claim 2】

The use of claim 1, wherein the ICOSL is expressed on a surface of a mesenchymal stem cell.

【Claim 3】

The use of claim 1, wherein the stem cell is a clonal stem cell.

【Claim 4】

The use of claim 1, wherein the stem cell is a bone marrow-derived mesenchymal stem cell.

【Claim 5】

The use of claim 1, wherein the ICOSL increases expression of an inducible T cell co-stimulator (ICOS) of a T cell.

【Claim 6】

The use of claim 1, wherein the ICOSL activates a signal pathway of PI3K (phosphoinositide 3-kinase)-Akt.

【Claim 7】

The use of claim 1, wherein the mesenchymal stem cell is treated with one or more selected from the group consisting of IL-1β, TNF-α, IL-6, IL-2, IL-1, and LPS (lipopolysaccharide).

【Claim 8】

The use of claim 1, wherein the regulatory T cell-mediated disease is an inflammatory disease or autoimmune disease.

【Claim 9】

The use of claim 8, wherein the inflammatory disease includes one or more selected from the group consisting of lupus, Sjogren's syndrome, rheumatoid arthritis, fibromyositis, scleroderma, ankylosing spondylitis, Behcet's disease, aphthous stomatitis, Guillain Barre syndrome, alopecia areata, dermatomyositis, Crohn's disease, colitis, polyarteritis nodosa, relapsing polychondritis and autoimmune thrombocytopenia.

【Claim 10】

The use of claim 8, wherein the autoimmune disease includes one or more selected from the group consisting of rheumatoid arthritis, systemic scleroderma, insulin-dependent childhood diabetes mellitus due to pancreatic cell, areata alopecia, psoriasis, pemphigus, asthma, aphthous stomatitis, chronic thyroiditis, partial acquired aplastic anemia, primary hepatocirrhosis, ulcerative colitis, Behcet's disease, Crohn's disease, silicosis, asbestosis, IgA kidney disease, poststreptococcal glomerulonephritis, Sjogren's syndrome, Guillain Barre syndrome, dermatomyositis, polymyositis, multiple sclerosis, autoimmune hemolytic anemia, autoimmune encephalomyelitis, myasthenia gravis, Grave's thyroid hyperplasia, nodular polyarteritis, ankylosing spondylitis, fibrositis, temporal arteritis, Wilson's disease, Pakoni's syndrome, multiple myeloma and systemic lupus erythematosus.

【Claim 11】

Use of ICOSL-overexpressing mesenchymal stem cell in the manufacture of a medicament for inducing of differentiation and proliferation of a $CD4^+$ T cell into a regulatory T cell.

【Claim 12】

The use of claim 11, the medicament including one or more selected from the group consisting of IL-1β, TNF-α, IL-6, IL-2, IL-1, and LPS (lipopolysaccharide).

【Claim 13】

A method for inducing differentiation and proliferation of a $CD4^+$ T cell into a regulatory T cell, the method comprising:

treating a $CD4^+$ T cell *in vitro* with an ICOSL-overexpressing mesenchymal stem cell.

【Claim 14】

The method of claim 13, wherein the ICOSL-overexpressing mesenchymal stem cells are pre-treated with one or more selected from the group consisting of IL-1β, TNF-α, IL-6, IL-2, IL-1, and LPS (lipopolysaccharide).