[CLAIMS]

[Claim 1]

Stem cells expressing a CD141 (thrombomodulin TM) cell surface antigen.

[Claim 2]

The stem cells of claim 1, wherein the stem cells are vasculogenic multipotent stem cells (vMSCs).

[Claim 3]

The stem cells of claim 2, wherein the stem cells are deposited under accession number KCLRF-BP-00524.

[Claim 4]

The stem cells of claim 2, wherein the stem cells are umbilical cord blood-derived, umbilical cord-derived, adipose-derived or bone marrow-derived.

[Claim 5]

The stem cells of claim 2, wherein the stem cells overexpress a hepatocyte growth factor (HGF) and a receptor thereof compared to other stem cells.

[Claim 6]

The stem cells of claim 2, wherein the stem cells promote angiogenesis by a basic fibroblast growth factor (bFGF) or HGF.

[Claim 7]

The stem cells of claim 2, wherein the stem cells do not express a CD31, CD309, CD34, eNOS, VE-cadherin, or VEGF receptor.

[Claim 8]

A cell therapeutic agent composition for blood vessel regeneration or angiogenesis, comprising the stem cells of claim 1 as an active ingredient.

[Claim 9]

The cell therapeutic agent composition for blood vessel regeneration or angiogenesis of claim 8, further comprising: bone marrow-derived mesenchymal stem cells or adipose-derived mesenchymal stem cells.

[Claim 10]

The cell therapeutic agent composition for blood vessel regeneration or angiogenesis of claim 9, wherein the bone marrow-derived mesenchymal stem cells or adipose-derived mesenchymal stem cells do not express a CD141 cell surface antigen.

[Claim 11]

The cell therapeutic agent composition for blood vessel regeneration or angiogenesis of claim 9, wherein the stem cells of claim 1 and the bone marrow-derived mesenchymal stem cells or adipose-derived mesenchymal stem cells are included in a ratio of 1:10 to 10:1 based on the cell number.

[Claim 12]

The cell therapeutic agent composition for blood vessel regeneration or angiogenesis of claim 8, further comprising: HGF or bFGF.

[Claim 13]

A pharmaceutical composition for preventing or treating vascular disease or vascular dysfunction, comprising the stem cells of claim 1 or the cell therapeutic agent composition of claim 8 as an active ingredient.

[Claim 14]

The pharmaceutical composition for preventing or treating vascular disease or vascular dysfunction of claim 13, wherein the vascular disease is traumatic vascular injury, peripheral vascular disease, cardiovascular disease, cerebrovascular disease, or ischemic disease, wherein the ischemic disease is ischemic myocardial infarction, ischemic heart disease, ischemic vascular disease, ischemic enteritis, ischemic eye disease, ischemic

glaucoma, ischemic renal failure, ischemic retinopathy, ischemic stroke, or ischemic lower extremity disease.

[Claim 15]

The pharmaceutical composition for preventing or treating vascular disease or vascular dysfunction of claim 13, wherein the vascular disease or vascular dysfunction is critical limb ischemia, diabetic angiogenic disorders, vascular dementia, diabetic organ damage, arteriosclerosis, angina, peripheral cardiovascular disease, hypertension, cerebral infarction, brain injury sequelae, heart failure, peripheral circulatory disorders, myocardial infarction, arterial occlusive disease, stroke, spinal cord injury, spinal nerve sequelae, degenerative disease, cerebral infarction sequelae, peripheral neuropathy, diabetic ulcer, presbyopia, degenerative hearing loss, brain surgery sequelae, ischemic stroke, or subarachnoid hemorrhage.

[Claim 16]

A pharmaceutical composition for preventing or treating brain neurological disease, comprising the stem cells of claim 1 or the cell therapeutic agent composition of claim 8 as an active ingredient.

[Claim 17]

The pharmaceutical composition for preventing or treating brain neurological disease of claim 16, wherein the brain neurological disease is a degenerative brain disease, a mental disorder, or a developmental disorder, wherein the degenerative brain disease is cognitive impairment, Alzheimer's disease, dementia with Lewy bodies, frontotemporal dementia, Parkinson’s disease, Creutzfeldt-Jakob disease (CJD), Huntington’s disease, multiple sclerosis, or Guillain-Barre Syndrome (GBS),

wherein the mental disorder is bipolar disorder, autism, depression, hyperactivity, attention deficit, autism, post-traumatic stress disorder (PTSD), anxiety disorder, sleep

disorder, panic disorder, intellectual disability, memory impairment, drug addiction, schizophrenia, obsessive-compulsive disorder, delusions of grandeur, personality disorder, alcoholism, or manic depression,

wherein the developmental disorder is epilepsy, cerebral palsy, developmental language disorder, disturbance of sense, learning disorder, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), intellectual disability, cognitive impairment, or impulse control disorders.

[Claim 18]

A use of stem cells expressing a CD141 cell surface antigen, for use in blood vessel regeneration or angiogenesis.

[Claim 19]

A method for blood vessel regeneration or angiogenesis, comprising administering stem cells expressing a CD141 cell surface antigen to a subject.