

9,364 patents relating to the human body have been filed for so far. The applications made cover 126,672 genes or partial gene sequences. Here are some of them.

TYPE	Patent Number	Patent holder	Granted Y/N	Date filed	Gene	Function/Use	Notes
Breast cancer susceptibility	EP 0699754	Myriad Genetics Inc, University of Utah & US Dept of Health	N	11/08/95	BRCA1 gene mapping primer sequence tdj1474B	Testing for susceptibility to breast and ovarian cancer, developing treatments	Genetic evidence for gene location came from 4 kindred families.
Breast cancer susceptibility	EP 0705903	Myriad Genetics Inc, Cancer Institute, Cent Rech du Chul	N	11/08/95	BRCA1 gene	Testing for susceptibility to breast and ovarian cancer, developing treatments	
Breast cancer susceptibility	US 5837492	Myriad Genetics Inc	17/11/98 EU not yet granted	17/12/96	BRCA2	Testing for susceptibility to breast cancer, developing treatments	
Prostate cancer susceptibility	WO 0012694	Myriad Genetics Inc	Pending	28/08/99	HPC1	Testing for susceptibility to prostate cancer	Held by Myriad who also own BRCA 1 & 2

Skin	WO 9955865	Genesis Res & Dev Corp	Pending	20/04/99	A skin cell transmembr ane protein gene	Modulates growth of epithelial (skin) cells. Use in cancer and wound treatment	
	UK 2322132	Amgen Inc	Y	15/10/97	Keratinocyt e growth factor-2	Stimulates skin cell growth.	
	WO 0029438	Millenium Pharm Inc	Pending	19/11/99	A skin growth factor gene	To modulate cell activity. Use in inflammatory disease, allergic conditions, to promote hair growth and wound healing.	
Brain	AU41015 99	Millenium Biotherapeuti cs Inc	Pending	28/05/99	Brain signalling factor gene	Treatment of neurological disorders (e.g Alzheimer's, Huntingdon's Parkinson's, MS, epilepsy), or memory, inflammatory conditions etc	
	US 6008020	Human Genome Sciences	Y 28/12/99	10/10/97	Brain- associated inhibitor of tissue-type plasminoge n activator	Expressed mainly in brain and to use in diagnosis and treatment of brain disorders	

Brain	WO 0011157	Gen Hospital Corp	Pending	25/08/00	Dysferlin gene	Diagnosis, risk identification and treatment of hereditary muscular dystrophies and other dysferlin related disorders	
	WO 9941372	Zeneca	Pending	11/02/99	Brain- specific potassium channel DNA	Diagnosis and treatment of brain disorders with dysfunctional neurones – anxiety, schizophrenia, Alzheimer's, epilepsy Parkinson's.	
	US 5874290	Northwest Biotherapeuti cs	Y 23/02/99	07/11/97	Brain associated D2-2 gene	To develop products to treat disorders associated with cell proliferation – tumours, growth deficiencies, wounds etc	
	EP 093441	Human Genome Sciences Inc	Pending	23/04/98	Brain associated inhibitors of tissue plasminoge n activator	Treatment and diagnosis of neurological disorders and modulating plasminogen activator	

Brain	JP 0919450 2	Seikagaky Kogyo Co	Not yet granted	13/11/96	Brain neuroglycan C glycoprotein DNA	Diagnosis and treatment of nervous system diseases	
	EP 624100	Synaptic Pharm Corp	Y 03/05/00	29/10/93	Serotonin receptor %- HT4B	Drug screening and treatments of diseases such as angina, strokes, CNS disorders	
	US 5319073	US Dept of Health and Human Service	Y 07/06/94	28/01/93	Brain receptor cholecystoki nin	To produce anti- cholecystokin receptor antibodies	
	EP 385476	Daichi Pure Chem KK	Disputed	01/03/90	Brain naturetic polypeptide DNA	Cardiac, pulmonary oedema, hypertension, renal failure.	
Bone	US 6034062	Genetics Inst Inc	Y 07/03/00	13/03/97	Bone morpogenet ic protein 4 gene	Treatment of bone and cartilage disorders, wound healing, liver growth and function.	
	UK 2312899	Amgen Inc	Y	20/12/96	Osteoprote grin	Involved in the regulation of bone metabolism. For treatment of osteoporosis	
	AU45141 93	Sumimoto Metal Ind	Pending	09/07/93	Bone formation- inducing protein	Treatment of osteoporosis, other bone disorders	

Bone	EP 107673	University of Emory	Pending	29/07/98	Bone mineralisation on protein partial DNA	Treatment of osteoporosis, other bone disorders, fractures	
	EP 0946728	Genesci Regeneration Sci Inc	Pending	11/12/97	Bone stimulatory activity peptide	Diagnosis, prevention and treatment of bone disorders esp. osteoporosis	
	US 5880094	Osteopharm Ltd	09/03/99	07/06/96	Bone apposition factor	Stimulate bone growth e.g. osteoporosis.	
	US 7432044	National Institute of Health	Yes	03/11/89	Bone osteopontin II	Diagnosis, detection, treatment of diseases such as osteoporosis, arthritis, Pagets disease.	
	EP 401055	Chiron Corp	EU not yet granted	04/06/90	Bone calcification factor	Induces bone formation, useful for screening drugs and in diagnosis.	
Ear	AU12235 00	Kil J	Pending	27/04/00	Inner ear transcription factor	Stimulating regeneration of inner ear cells in diseases such as tinnitus, Meniere's disease, vertigo etc.	
Lung	EP 996857	Ludwig Inst Cancer Res	Pending	15/07/98	Lung cancer associated gene	Diagnosis, treatment monitoring of cancers.	
	EP 0994899	Genset	Pending	31/07/98	Coding for proteins from lung	Proteins affect cell growth and activity. For use in forensics, gene therapy and chromosome mapping	

Lung	AU23443 99	Corixa Corp	Pending	26/01/99	A lung tumour protein (SALT-T9)	Diagnosis and treatment of lung cancer	
	AU30949 99	Corixa Corp	Pending	17/03/99	Lung tumour associated nucleotides	Detection, treatment and monitoring of lung cancer	
	WO 9820143	Abbott Lab	N	05/11/97	Lung tissue gene LU103	Diagnose, monitor, treatment of lung cancer	
	JP 0725829 3	Asahi Kasei Kogyo KK	?	23/03/94	Embryo lung protein precursor gene.	Inhibits production of oxygen radicals in eosinophils – for use in asthma.	
Liver	EP 1037986	Cedars Sinai Medical Centre	Pending	11/12/98	Liver neoplastic polynucleotide	Associated with liver tumours and useful for screening go cirrhosis and liver cancer.	
	EO 1012296	Karo Bio & J P Dean	Pending	28/01/98	Liver protein 1	Useful as a free radical scavenger in tissue damage	
	EP 0914424	Geneyme Corp	Pending	16/01 97	Augmenter of liver regeneration (hALR)	Growth factor increasing growth rate of damaged liver tissue. Treatment of liver disease and cystic fibrosis.	

Liver	EO 0897426	Takeda Chem Ind	Pending	24/04/97	Liver metalloprot ease partial peptide gene	Treatment of conditions in which activity is suppressed including diabetic nephropathy, cirrhosis, osteoporosis. Screening for treatments etc.	
	AU	University of Yale	N	16/11/93	Liver E- cadherin	Diagnosis, therapy of t- cadherin disorders such as tumours.	
	JP 0207287 9	Agency of Industry Science and Technology	?	09/09/88	Cytochrome p-450 encoding gene	Prepared in yeast system to treat liver disease.	
Kidney	WO 9964435	Smithkline Beecham Corp	N	27/05/99	Kidney specific protein K86	Protein may play a role in kidney disease. To treat kidney diseases, identify mutations etc.	
	AU 9303498	Medical College Georgia	Pending	11/03/99	Kidney aminopeptid ase P (AmP)	To identify patients with deficiency, treatment angioedema, identify antagonists to treat hypertension..... degrade industrial protein feeds, wastes, malabsorbtion treatments.....	
	AU76892 98	University of Yale	Pending	20/05/98	Kidney hkNBC	Sodium bicarbonate transporter to treat water retantion. Hypertension, inflammation, glaucoma, epilepsy and more.	

Kidney	EP 0907735	Biogen Inc	Pending	23/05/97	Kidney injury related molecule (KIM)	Activity increased in injury and regeneration. To treat renal disease, assist with transplants, injury.	
	EO 0850303	Pharmacia and Upjohn Co	Unknown	09/09/96	Kidney inward rectifier K channel 3 (KIRK-3)	To screen for potassium channel modulators for use in treatments.	
	EP 0792159	Rhone Poulenc	Pending	22/11/95	Kidney calcium sensor protein	Involved in calcium control. Useful for diagnostics and identifying therapeutic compounds.	
Psychosis	WO 9426107	University of New York State	N	13/05/94	Psychosis protecting peptide	Discovered from twins, one with and one without psychosis. Higher expression in fit twin. Diagnosis and research of psychotic disorders	
	JP 0908458 1	Takeda Chem Ind Ltd	N	26/09/95	Melatonin receptor	To identify compounds activating the receptor to treat conditions such as jet lag, seasonal melancholia. Receptor can be used to modulate ovulation.	

Sperm	US 5989549	Immucon Inc	23/11/99	08/06/98	Acrosomal sperm protein P34	Expressed in epididymis and has potential role in immuncontraceptive agents	
	US 5602005	University Virginia Patents Foundation	11/02/97	03/03/89	Acrosomal sperm antigen 10	Contraceptive vaccines	
	US 7364379	National Institute of Diabetes	Y	12/06/89	Zona pelucida protein epitope	Immuno-contraception in female	
Blood and Immune System	EP 676470	Amgen Inc	N	04/10/90	Stem cell factor (SCF)	Stimulates growth of haemopoetic cell precursors. To treat leucopenia, anaemia, bone marrow transplant aid	
	UK 2311783	Yamanouchi & Littlemore Hospital, Oxford, Ludwig Institute for Cancer Research and UCL	Y	03/04/96	Wiskott-Aldrich syndrome related genes	Treatment of autoimmune disorders and other inflammatory diseases.	
	WO 9940184	Human Genome Science Inc	Pending	04/02/99	Immun-globlin Fc region	Immune disorders, cancers, inflammation, transplant rejection or food additives	

Immune system	WO 9960128	Bayer Corp	Pending	13/05/99	Inerkeukin-2 (IL-2) protein	Treatment of diseases such as HIV, other infectious diseases, cancer.	
	WO 9954469	Incyte Pharm Inc	Pending	06/04/99	B-cell growth factor related protein (BGFRP)	Treatment and prevention of immune and cell proliferative disorders.	
Drug Dependency	WO 9833937	Delbrueck Cent Molecukulare Medizin Max	Pending	02/02/98	Mu-opiod receptor	Method for detecting predisposition to addictive disease esp. opiates, cocaine and alcohol	
	US 5500343	University of California and University Texas System	19/03/96	07/02/90	Dopamine D2 receptor DRD2	Detecting genetic susceptibility to alcohol dependency	
Colon	WO 9964576	Bayer Corp	N	09/06/99	Genes activated in colon cancer	Diagnosis and treatment of cancer of the colon.	
	WO 0007632	Diadexus	N	02/07/99	Colon specific marker gene	Diagnosis and treatment of cancer of the colon.	
Teeth	WO 9906555	Fuji Yakunin Kogyo KK	N	29/07/98	Dental pulp-originated enamelysin	To study tooth development and in the production of drugs.	

Tongue	WO 0006719	University of California	N	27/07/99	Taste specific protein	To identify taste responsive cells and identify taste modulating compounds.	
Uterus	US 6066724	Human Genome Science	Y 23/05/00	21/03/97	Endometrial specific steroid binding factors	For use in research and developing treatments and diagnosis in uterine disorders.	
Muscle	EP 1000152	Genset	Pending	31/07/98	Proteins from muscle	Involved in cell growth and activity. For use in forensics, gene therapy and chromosome mapping	