

Traditional african nutrition			
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1960s): data collected by the Max-Planck-Nutrition Research Unit, Bumbuli, Tanzania.
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Traditional medical plants			
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¹ [11518548] BMC Complement Altern Med 1(-):5 (2001)

TRAF

12991

TRAF

IAP	TRAF	Ubiquitin	
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2001 Tumor necrosis factor receptor-associated factors (TRAFs).

1 [11607847] *Oncogene* 20(44):6482-91 (2001)

2010 Regulation of TNFRSF and innate immune signalling complexes by TRAFs and cIAPs.

2 [19680262] *Cell Death Differ* 17(1):35-45 (2010)

2002 All TRAFs are not created equal: common and distinct molecular mechanisms of TRAF-mediated signal transduction.

3 [11865024] *J Cell Sci* 115(Pt 4):679-88 (2002)

2009 Role of non-degradative ubiquitination in interleukin-1 and toll-like receptor signaling.

4 [18684710] *J Biol Chem* 284(13):8211-5 (2009)

2008 Roles of TRAF molecules in B lymphocyte function.

5 [18499506] *Cytokine Growth Factor Rev* 19(3-4):199-207 (2008)

TRAF2

12992

TRAF2

DUB	TRAF3	Ubiquitin	
TRAF2	TRAF6		

2009 Lysine 63 polyubiquitination in immunotherapy and in cancer-promoting inflammation.

1 [19887490] Clin Cancer Res 15(22):6751-7 (2009)

TRAF3

12993

TRAF3

DUB Interferon alpha and preliminary (BASKET)	TRAF2 TRAF3	TRAF6 Ubiquitin	
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2006 TRAF3: a new regulator of type I interferons.

1 [16582590] Cell Cycle 5(8):804-7 (2006)

2009 Lysine 63 polyubiquitination in immunotherapy and in cancer-promoting inflammation.

2 [19887490] Clin Cancer Res 15(22):6751-7 (2009)

TRAF6

12994

TRAF6

DUB	TGF beta	TRAF3	Ubiquitin
TAK1	TRAF2	TRAF6	

2009 Lysine 63 polyubiquitination in immunotherapy and in cancer-promoting inflammation.

1 [19887490] Clin Cancer Res 15(22):6751-7 (2009)

2009 TGF-beta uses the E3-ligase TRAF6 to turn on the kinase TAK1 to kill prostate cancer cells.

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Traffic medicine			
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1999 **Role of cannabis in motor vehicle crashes.**
1 [10682259] Epidemiol Rev 21(2):222-32 (1999)

Aids	Death receptor5 DR5	Kidney (Disease models)	TRAIL APO2
Apoptosis	Dendritic cell (Plasmacytoid)	Neoplasia (Oncolytic virus)	TWEAK Fn14
CD31 PECAM1	Diabetes mellitus (Involvement kidney)	RNA (tRNA)	
CD95 FAS Apo1	Interferon beta	Skin (Neoplasia Melanoma)	
CD95L FASL	Interleukin24 MDA7	Tolerance (Immunology)	

2005 Current understanding on the immunological functions of tumor necrosis factor-related apoptosis-inducing ligand.

1 [16274624] Cell Mol Immunol 2(4):265-9 (2005)

2004 TRAIL and its receptors as targets for cancer therapy.

2 [15504243] Cancer Sci 95(10):777-83 (2004)

2003 Apo2L/TRAIL and its death and decoy receptors.

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2010 Cellular dynamics of tRNAs and their genes.

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2010 TNF superfamily: a growing saga of kidney injury modulators.

5 [20953353] Mediators Inflamm 2010(-):- (2010)

2009 Following TRAIL's path in the immune system.

6 [19476510] Immunology 127(2):145-54 (2009)

2002 Inhibition of human lung cancer growth following adenovirus-mediated mda-7 gene expression in vivo.

7 [12085234] Oncogene 21(29):4558-66 (2002)

2008 Killing of human melanoma cells induced by activation of class I interferon-regulated signaling pathways via MDA-7/IL-24.

8 [18511292] Cytokine 43(1):34-44 (2008)

2007 TRAIL in cancer therapy: present and future challenges.

9 [17907960] Expert Opin Ther Targets 11(10):1299-314 (2007)

2008 TRAIL receptor-targeted therapeutics: resistance mechanisms and strategies to avoid them.

10 [18374623] Drug Resist Updat 11(1-2):17-24 (2008)

2009 TNF-related apoptosis-inducing ligand (TRAIL): a new path to anti-cancer therapies.

11 [19836385] Eur J Pharmacol 625(1-3):63-72 (2009)

2007 HIV-1 immunopathogenesis: how good interferon turns bad.

12 [17112786] Clin Immunol 123(2):121-8 (2007)

HLA and MHC	Neutrophils	TRALI	
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2009 Transfusion-related acute lung injury: a change of perspective.

- 1 [19915225] *Neth J Med* 67(10):320-6 (2009)

2009 Transfusion-related acute lung injury: current concepts for the clinician.

- 2 [19224781] *Anesth Analg* 108(3):770-6 (2009)

2008 Gadolinium hydroxide coprecipitation system for the separation-preconcentration of some heavy metals.

- 3 [18178004] *J Hazard Mater* 155(3):595-600 (2008)

2007 Case report: transfusion-related acute lung injury (TRALI) - a clear and present danger.

- 4 [18056211] *Can J Anaesth* 54(12):1011-6 (2007)

2008 Transfusion-related acute lung injury: past, present, and future.

- 5 [18208810] *Am J Clin Pathol* 129(2):287-97 (2008)

2005 Transfusion-related acute lung injury.

- 6 [15572582] *Blood* 105(6):2266-73 (2005)

2005 Understanding the consequences of transfusion-related acute lung injury.

- 7 [16306059] *Chest* 128(5 Suppl 2):598S-604S (2005)

2004 Transfusion-related acute lung injury: a review.

- 8 [15249468] *Chest* 126(1):249-58 (2004)

2006 Transfusion-related acute lung injury: an update.

- 9 [17124105] *Hematology Am Soc Hematol Educ Program* -(-):497-501 (2006)

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- 10 [11960539] *JAMA* 287(15):1968-71 (2002)

2005 Transfusion-related acute lung injury.

- 11 [15945528] *Mayo Clin Proc* 80(6):766-70 (2005)

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2003 Transfusion-related acute lung injury (TRALI)--under-diagnosed and under-reported.
15 [12697582] Br J Anaesth 90(5):573-6 (2003)

2010 Is there transfusion-related acute renal injury?
16 [20881590] Anesthesiology 113(5):1012-3 (2010)

2010 Another blow to leukocyte antibody-mediated TRALI.
17 [21083026] Expert Rev Hematol 3(4):373-5 (2010)

2007 Leukocyte antigen and antibody detection assays: tools for assessing and preventing pulmonary transfusion reactions.
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2009 The role of neutrophils in the pathogenesis of transfusion-related acute lung injury.
19 [19765516] Transfus Med Rev 23(4):266-83 (2009)

2007 TRALI--definition, mechanisms, incidence and clinical relevance.
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The accuracy of natriuretic peptides (brain natriuretic peptide and N-terminal pro-brain natriuretic) in the differentiation between transfusion-related acute lung injury and transfusion-related circulatory overload in the critically ill.
21 [18954397] Transfusion 49(1):13-20 (2009)

Pain medicine (BASKET)	Tramadol	Ulcus pepticum	
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2009 Tramadol as an analgesic for mild to moderate cancer pain.

- 1 [\[20081232\] Pharmacol Rep 61\(6\):978-92 \(2009\)](#)

2008 Perforated peptic ulcer and short-term mortality among tramadol users.

- 2 [\[17922882\] Br J Clin Pharmacol 65\(4\):565-72 \(2008\)](#)

2007 Tramadol extended-release in the management of chronic pain.

- 3 [\[18488071\] Ther Clin Risk Manag 3\(3\):401-10 \(2007\)](#)

Antifibrinolytic agents	Aprotinin	Liver (Surgery)	
Antiinflammatory compounds	Gastrointestinal hemorrhage	Tranexamic acid	

2008 Systematic review: tranexamic acid for upper gastrointestinal bleeding.

1 [18248659] Aliment Pharmacol Ther 27(9):752-8 (2008)

2008 An anti-inflammatory role for tranexamic acid in cardiac surgery?

2 [18254939] Crit Care 12(1):105 (2008)

2009 Aprotinin increases mortality as compared with tranexamic acid in cardiac surgery: a meta-analysis of randomized head-to-head trials.

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2010 Antifibrinolytics in liver surgery.

4 [21224964] Indian J Anaesth 54(6):489-95 (2010)

Tranquilizer

13000

Tranquilizer

Alcohol	Midazolam		
Antipsychotic agents	Tranquilizer		

1980 Systematic review of the benzodiazepines.

1 [6107162] Br Med J 281(6246):1009 (1980)

1971 II. Major tranquilizers.

2 [4930514] South Med J 64(4):403-10 (1971)

1990 Benzodiazepines and human memory: a review.

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1981 Current theories about the mechanisms of benzodiazepines and neuroleptic drugs.

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2006 Strategies for discontinuing long-term benzodiazepine use: meta-analysis.

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2005 A conceptualization of integrated actions of ethanol contributing to its GABAmimetic profile: a commentary.

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1983 Chemical structure and biological activity of the diazepam.

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1983 Chemical structure and properties of midazolam compared with other benzodiazepines.

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1979 Pharmacokinetics and metabolism of various benzodiazepines used as hypnotics.

9 [41545] Br J Clin Pharmacol 8(1):7S-13S (1979)

**trans 1 2 bis mercaptoacetamido
cyclohexane ttPDI mimic**

13001

**trans 1 2 bis mercaptoacetamido
cyclohexane ttPDI mimic**

Amyotrophic lateral sclerosis	Protein (ptm S nitrosylation)	trans 1 2 bis mercaptoacetamido cyclohexane ttPDI mimic	
ERS UFR (Diseases)	Protein disulfide isomerase		

2010 Protein disulphide isomerase protects against protein aggregation and is S-nitrosylated
in amyotrophic lateral sclerosis.
¹ [19903735] Brain 133(Pt 1):105-16 (2010)

Biliary system (PTC percutaneous transhepatic cholangiogram) Biliary sytem (Drainage)	ERCP Liver (Neoplasia)	Liver (TIPS) PEG feeding tube	Trans arterial chemoembolization
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2011 The infectious complications of interventional radiology based procedures in gastroenterology and hepatology.

1 [21451801] J Gastrointestin Liver Dis 20(1):71-5 (2011)

2008 Treatment response to transcatheter arterial embolization and chemoembolization in primary and metastatic tumors of the liver.

2 [19088924] HPB (Oxford) 10(6):396-404 (2008)

Trans golgi network

13003

Trans Golgi Network

Trans golgi network			
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2004 Domains of the TGN: coats, tethers and G proteins.

[1](#) [\[15086781\] Traffic 5\(5\):315-26 \(2004\)](#)

Transcription factor (Allel specific binding)

13004

Transkriptionsfaktor (Allelspezifisch)

DNA (Methylation allele specific) Epigenetics	Gene expression (Allele specific) Genetics (Imprinting)	Transcription factor (Allel specific binding)	
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2010 **Allele-specific DNA methylation: beyond imprinting.**
1 [20855472] Hum Mol Genet 19(R2):R210-20 (2010)

Bioinformatics	Transcription Factor (BASKET)		
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2008 Eukaryotic transcription factor binding sites--modeling and integrative search methods.

¹ [18426806] Bioinformatics 24(11):1325-31 (2008)

2010 Unexpected roles for core promoter recognition factors in cell-type-specific transcription and gene regulation.

² [20628347] Nat Rev Genet 11(8):549-58 (2010)

2011 Enhancer function: new insights into the regulation of tissue-specific gene expression.

³ [21358745] Nat Rev Genet 12(4):283-93 (2011)

2009 Insights from genomic profiling of transcription factors.

⁴ [19668247] Nat Rev Genet 10(9):605-16 (2009)

2009 From DNA sequence to transcriptional behaviour: a quantitative approach.

⁵ [19506578] Nat Rev Genet 10(7):443-56 (2009)

PGC1alpha Src	Transcription factor (Coactivator) Transcription factor (Corepressor)		
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2009 Minireview: the PGC-1 coactivator networks: chromatin-remodeling and mitochondrial energy metabolism.

¹ [19008463] Mol Endocrinol 23(1):2-10 (2009)

2010 Minireview: the SRC family of coactivators: an entrée to understanding a subset of polygenic diseases?

² [19846539] Mol Endocrinol 24(2):279-85 (2010)

Transcription factor (Corepressor)

13007

Transkriptionsfaktor (Corepressor)

PGC1alpha	Transcription factor (Coactivator)	Transcription factor (Corepressor)	
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2009 Minireview: the PGC-1 coactivator networks: chromatin-remodeling and mitochondrial energy metabolism.

¹ [19008463] Mol Endocrinol 23(1):2-10 (2009)

Transcriptional interference			
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2007 Transcriptional interference: an unexpected layer of complexity in gene regulation.

1 [17690303] J Cell Sci 120(Pt 16):2755-61 (2007)

Data base (Medicine Biology Pharmacology) Gene expression profiling	Genetics (Cap analysis gene expression) Genome	RNA (RNA Seq) Transcriptom	
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2004 Repetitive sequences that shape the human transcriptome.

1 [15165906] FEBS Lett 567(1):136-41 (2004)

2001 Transcriptomes, transcription activators and microarrays.

2 [11412845] FEBS Lett 498(2-3):140-4 (2001)

2008 Deep cap analysis gene expression (CAGE): genome-wide identification of promoters, quantification of their expression, and network inference.

3 [18474037] Biotechniques 44(5):627-8, 630, 632 (2008)

2010 Studying bacterial transcriptomes using RNA-seq.

4 [20888288] Curr Opin Microbiol 13(5):619-24 (2010)

2009 Whole genome transcriptome analysis.

5 [19875928] RNA Biol 6(2):107-12 (2009)

2011 TRAM (Transcriptome Mapper): database-driven creation and analysis of transcriptome maps from multiple sources.

6 [21333005] BMC Genomics 12(-):121 (2011)

Liver (Development) Regeneration of tissues and other biologic structures	Stem cell (Adult somatic derived reprogrammed) Transdifferentiation		
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2003 Transdifferentiation of pancreas to liver.

1 [12490301] Mech Dev 120(1):107-16 (2003)

2003 Pancreatic-hepatic switches in vivo.

2 [12490300] Mech Dev 120(1):99-106 (2003)

2007 Transdifferentiation in developmental biology, disease, and in therapy.

3 [17948254] Dev Dyn 236(12):3208-17 (2007)

2004 Transdifferentiation, metaplasia and tissue regeneration.

4 [19521559] Organogenesis 1(2):36-44 (2004)

2009 Introducing transcription factors to multipotent mesenchymal stem cells: making transdifferentiation possible.

5 [19591229] Stem Cells 27(10):2509-15 (2009)

Transducin

13011

Transducin

Rhodopsin	Transducin		
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2010 Complexes between photoactivated rhodopsin and transducin: progress and questions.

1 [\[20423327\] Biochem J 428\(1\):1-10 \(2010\)](#)

Transepithelial transport			
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2000 Vesicular transport as a new paradigm in short-term regulation of transepithelial transport.

¹ [10803686] J Korean Med Sci 15(2):123-32 (2000)

2004 The basis for transport across epithelial cells.

² [15475487] Am J Physiol Gastrointest Liver Physiol 287(5):G941-2 (2004)

2010 Sorting it out in endosomes: an emerging concept in renal epithelial cell transport regulation.

³ [20940433] Physiology (Bethesda) 25(5):280-92 (2010)

Transfer factor

13013

Transfer Faktor

Transfer factor			
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1970 **Transfer factor and other mediators of cellular immunity.**

1 [\[4918182\]](#) Am J Pathol 60(3):437-52 (1970)

RNA (tRNA)	Transfer RNA derived fragments		
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2011 Transfer RNA-derived fragments: origins, processing, and functions.

1 [21976287] Wiley Interdiscip Rev RNA 2(6):853-62 (2011)

Lactoferrin	Transferrin		
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1994 Transferrin: from inorganic biochemistry to medicine.

1 [\[18476227\]](#) *Met Based Drugs* 1(2-3):161-7 (1994)

1990 The role of transferrin in the mechanism of cellular iron uptake.

2 [\[2222403\]](#) *Biochem J* 271(1):1-9 (1990)

2007 A structural comparison of human serum transferrin and human lactoferrin.

3 [\[17216400\]](#) *Biometals* 20(3-4):249-62 (2007)

Transfusion (Artificial blood)			
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2010 Hemoglobin-based oxygen carriers: compassionate use and compassionate clinical trials.

¹ [20185643] *Anesth Analg* 110(3):659-62 (2010)

2009 Hemoglobin-based oxygen carriers: current status and future directions.

² [19858869] *Anesthesiology* 111(5):946-63 (2009)

2009 A review of blood substitutes: examining the history, clinical trial results, and ethics of hemoglobin-based oxygen carriers.

³ [19690667] *Clinics (Sao Paulo)* 64(8):803-13 (2009)

**Transfusion (autologous
erythrocytes)**

13017

**Transfusion (autologe
Erythrozyten)**

Transfusion (autologous erythrocytes)			
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2011 Pre-operative autologous blood donation: clinical parameters and efficacy.

1 [21235851] Blood Transfus 9(1):10-8 (2011)

Cryopreservation	Immune deviation	Neonatology	Transfusion (BASKET)
Erythrocytes (BASKET)	Myelodysplastic syndrome	Regeneration of tissues and other biologic structures	

1990 Transfusion-induced immunomodulation and its possible role in cancer recurrence and perioperative bacterial infection.

1 [2293502] Yale J Biol Med 63(5):429-33 (1990)

1990 Transfusion-transmitted diseases other than AIDS and hepatitis.

2 [1963503] Yale J Biol Med 63(5):347-51 (1990)

2009 Noninfectious serious hazards of transfusion.

3 [19224780] Anesth Analg 108(3):759-69 (2009)

1996 Blood transfusion-induced immunomodulation.

4 [8712400] Anesth Analg 82(1):187-204 (1996)

2005 Bacterial contamination of blood components.

5 [15653826] Clin Microbiol Rev 18(1):195-204 (2005)

1994 Transfusion-associated bacterial sepsis.

6 [7923050] Clin Microbiol Rev 7(3):290-302 (1994)

2002 Blood transfusions and non-Hodgkin's lymphoma.

7 [12762097] Epidemiol Rev 24(2):269-79 (2002)

2008 The hazards of blood transfusion in historical perspective.

8 [18809775] Blood 112(7):2617-26 (2008)

2001 Deleterious clinical effects of transfusion-associated immunomodulation: fact or fiction?

9 [11222359] Blood 97(5):1180-95 (2001)

1994 Biologic effects of leukocytes present in transfused cellular blood products.

10 [8080981] Blood 84(6):1703-21 (1994)

1999 Cell therapy: achievements and perspectives.

11 [10586214] Haematologica 84(12):1110-49 (1999)

2001 Reducing the risk of blood transfusion.

12 [11722997] Hematology Am Soc Hematol Educ Program -(-):433-42 (2001)

2007 Pathogen inactivation: a new paradigm for preventing transfusion-transmitted infections.

13 [18024320] Am J Clin Pathol 128(6):945-55 (2007)

2002 Autologous transfusion.

14 [\[11923162\]](#) *BMJ* 324(7340):772-5 (2002)

2009 Massive transfusion: new insights.

15 [\[19995767\]](#) *Chest* 136(6):1654-67 (2009)

2010 Complications of massive transfusion.

16 [\[20051407\]](#) *Chest* 137(1):209-20 (2010)

2007 Controversies in RBC transfusion in the critically ill.

17 [\[17494811\]](#) *Chest* 131(5):1583-90 (2007)

2007 Leukocyte reduction's role in the attenuation of infection risks among transfusion recipients.

18 [\[17879916\]](#) *Clin Infect Dis* 45(8):1008-13 (2007)

2007 Universal leukocyte reduction of blood transfusions.

19 [\[17879917\]](#) *Clin Infect Dis* 45(8):1014-5 (2007)

2011 Risk-reduction strategies for platelet transfusion in the United States.

20 [\[21403979\]](#) *ScientificWorldJournal* 11(-):624-40 (2011)

2010 Multi-scale heat and mass transfer modelling of cell and tissue cryopreservation.

21 [\[20047939\]](#) *Philos Transact A Math Phys Eng Sci* 368(1912):561-83 (2010)

2010 Association between red blood cell transfusions and development of non-Hodgkin lymphoma: a meta-analysis of observational studies.

22 [\[20625008\]](#) *Blood* 116(16):2897-907 (2010)

2010 Optimal use of blood products in severely injured trauma patients.

23 [\[21239837\]](#) *Hematology Am Soc Hematol Educ Program* 2010(-):465-9 (2010)

2007 Management of RBC-transfusion dependence.

24 [\[18024657\]](#) *Hematology Am Soc Hematol Educ Program* -(-):398-404 (2007)

2011 Recommendations for the transfusion management of patients in the peri-operative period. II. The intra-operative period.

25 [\[21527082\]](#) *Blood Transfus* 9(2):189-217 (2011)

2011 Recommendations for the transfusion management of patients in the peri-operative period. I. The pre-operative period.

26 [\[21235852\]](#) *Blood Transfus* 9(1):19-40 (2011)

2011 Neonatal red blood cell transfusions: searching for better guidelines.

27 [\[21235854\]](#) *Blood Transfus* 9(1):86-94 (2011)

2011 Recommendations for the transfusion management of patients in the peri-operative period. III. The post-operative period.

28 [\[21627922\]](#) *Blood Transfus* 9(3):320-35 (2011)

2010 Anaerobic storage of red blood cells.

29 [\[20967163\]](#) *Blood Transfus* 8(4):220-36 (2010)

2009 Recommendations for the transfusion of plasma and platelets.

30 [19503635] Blood Transfus 7(2):132-50 (2009)

2008 Systems for monitoring transfusion risk.

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2008 Proteomics: applications in transfusion medicine.

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2008 The good use of plasma. A critical analysis of five international guidelines.

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2008 Plasma, guidelines, and evidence-based medicine.

35 [18661916] Blood Transfus 6(1):3-5 (2008)

2010 Venous oxygen saturation as a physiologic transfusion trigger.

36 [20236457] Crit Care 14(2):213 (2010)

2011 Clinical effects of leucoreduction of blood transfusions.

37 [22058263] Neth J Med 69(10):441-50 (2011)

2009 Transfusion management of trauma patients.

38 [19448199] Anesth Analg 108(6):1760-8 (2009)

2002 Blood transfusion in critical illness.

39 [11881885] Br J Anaesth 88(1):6-9 (2002)

2011 Reducing noninfectious risks of blood transfusion.

40 [21792054] Anesthesiology 115(3):635-49 (2011)

2009 Massive blood transfusions: the impact of Vietnam military data on modern civilian transfusion medicine.

41 [19417598] Anesthesiology 110(6):1412-6 (2009)

2007 Blood transfusion in critically ill patients: state of the art.

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2004 Neonatal transfusion practice.

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2011 Determinants of mortality in trauma patients following massive blood transfusion.

44 [21633570] J Emerg Trauma Shock 4(1):58-63 (2011)

2011 Transfusion protocol in trauma.

45 [21633577] J Emerg Trauma Shock 4(1):103-8 (2011)

2011 Red blood cell transfusion in the critically ill patient.

46 [21970512] Ann Intensive Care 1(-):43 (2011)

2011 Transfusion medicine in trauma patients: an update.

47 [21939420] *Expert Rev Hematol* 4(5):527-37 (2011)

2011 Massive transfusion protocols for patients with substantial hemorrhage.

48 [21664104] *Transfus Med Rev* 25(4):293-303 (2011)

2010 Transfusion-transmitted parasitic infections.

49 [20859503] *Asian J Transfus Sci* 4(2):73-7 (2010)

2010 Coagulation parameters as a guide for fresh frozen plasma transfusion practice: A tertiary hospital experience.

50 [20376262] *Asian J Transfus Sci* 4(1):25-7 (2010)

2010 Optimal use of blood in trauma patients.

51 [20074980] *Biologicals* 38(1):72-7 (2010)

2011 Erythroblast enucleation.

52 [22007239] *Stem Cells Int* 2011(-):139851 (2011)

Tissue transglutaminase	Transglutaminase		
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2010 Physio-pathological roles of transglutaminase-catalyzed reactions.

1 [21541002] World J Biol Chem 1(5):181-7 (2010)

Transglutaminase4

13020

Transglutaminase4

Interleukin24 MDA7	Prostate (Neoplasia)	Transglutaminase4	
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2011 Prostate transglutaminase (TGase-4) antagonizes the anti-tumour action of MDA-7/IL-
24 in prostate cancer.
1 [21524313] J Transl Med 9():49 (2011)

Transient monosomy 7			
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1999 Transient monosomy 7: a case series in children and review of the literature.

1 [10375115] *Cancer* 85(12):2655-61 (1999)

Transient synovitis of the hip

13022

Transiente Synovitis des
Hueftgelenks

Transient synovitis of the hip			
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1987 Transient synovitis of the hip. Its incidence, epidemiology and relation to Perthes' disease.

1

[3818754] J Bone Joint Surg Br 69(2):238-42 (1987)

Growth hormone	Growth retardation	Transition patients	
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**American Association of Clinical Endocrinologists medical guidelines for clinical
2009 practice for growth hormone use in growth hormone-deficient adults and transition
1 patients - 2009 update: executive summary of recommendations.**
[19858064] *Endocr Pract* 15(6):580-6 (2009)

Translin associated protein X

13024

Translin associated protein X

ARNO Receptor (Adenosine)	Translin associated protein X USP4		
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2008 The A(2A)-adenosine receptor: a GPCR with unique features?
1 [18246094] Br J Pharmacol 153 Suppl 1(-):S184-90 (2008)

Translin

13025

Translin

RNA (BASKET)	Translin	Trax	
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2008 The Translin/Trax RNA binding complex: clues to function in the nervous system.

1 [\[18424275\] Biochim Biophys Acta 1779\(8\):479-85 \(2008\)](#)

Transplant vasculopathy			
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Transplantation (Non heart beating donors)

13028

Transplantation (Non heart beating donors)

Transplantation (Non heart beating donors)			
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Alefacept	CMV	Interleukin17A	Rituximab ttCD20
Anti thymocyte globulin	Composite tissue allotransplantation	Ischemia reperfusion	RPSGLIG ttPSelectin
Antigen presentation and processing	Diabetes mellitus (secondary to)	Kidney (Transplantation)	T cell (Th17)
Atherosclerosis (peripheral vessels)	Eculizumab ttFactorH	Medical ethics	Tocilizumab ttIL6
Belatacept ttCD80 ttCD86	Efalizumab ttLFA1	NK cells	Tolerance (Immunology)
Belimumab ttBLYS	Epratuzumab ttCD22	Perforin	TP10 ttsCR3
Biobank Repository	Granzyme	Preimplantation genetic testing	Transplantation
BLYS	Immunosuppressive agents	QPI1002 ttp53	Tropical medicine
Bortezomib ttProteasom	Infliximab ttTNFalpha	Regulatory T cell	Varicella zoster virus
Cardiovascular risk	Interleukin17	Repertaxin ttCXCR1 ttCXCR2	

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Transplastomic plants

13030

Transplastomic plants

Photosynthesis	Plastid	Transplastomic plants	
Plants (BASKET)	Polycistronic gene		

2010

Plant plastid engineering.

1

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ABCA4 Antigen presentation and processing	Antineoplastic agents (Resistance) CNS (Blood brain barrier)	Receptor (Sulfonylurea) TAP	Transporter (ABC family)
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**Transporter (Adenine nucleotide
mitochondrial)**

13032

**Transporter (Adenin Nukleotid
mitochondrial)**

Mitochondria (BASKET)	Transporter (Adenine nucleotide mitochondrial)		
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ARHGEF9 collybistin	GLRA1	Protein (ptm Tyrosine nitration)	Transporter (Hexoses)
Asymmetric dimethylarginine	GLRB	Receptor (Glycine)	Transporter (Receptor function)
CAT1 (Transporter)	Hyperekplexia	SLC6A5 GlyT2 Glycine	
Gephyrin	Peroxynitrite	Transporter (Amino acid)	

2008 Amino acid transport across mammalian intestinal and renal epithelia.1 [18195088] *Physiol Rev* 88(1):249-86 (2008)**1998 Molecular biology of mammalian plasma membrane amino acid transporters.**2 [9790568] *Physiol Rev* 78(4):969-1054 (1998)**1998 Transporters for cationic amino acids in animal cells: discovery, structure, and function.**3 [9562037] *Physiol Rev* 78(2):487-545 (1998)**2001 Function and structure of heterodimeric amino acid transporters.**4 [11546643] *Am J Physiol Cell Physiol* 281(4):C1077-93 (2001)**2001 Heteromeric amino acid transporters: biochemistry, genetics, and physiology.**5 [11704550] *Am J Physiol Renal Physiol* 281(6):F995-1018 (2001)**1994 Regulatory and molecular aspects of mammalian amino acid transport.**6 [8172590] *Biochem J* 299 (Pt 2)(-):321-34 (1994)**2000 Amino acid transporters: molecular structure and physiological roles.**7 [11144002] *Nephrol Dial Transplant* 15 Suppl 6(-):9-10 (2000)**2009 Amino acid transporters: gate keepers of nutrient exchange and regulators of nutrient signaling.**8 [19158318] *Am J Physiol Endocrinol Metab* 296(4):E603-13 (2009)**2005 The genetics of heteromeric amino acid transporters.**9 [15772300] *Physiology (Bethesda)* 20(-):112-24 (2005)**2008 Apical transporters for neutral amino acids: physiology and pathophysiology.**10 [18400692] *Physiology (Bethesda)* 23(-):95-103 (2008)**2003 Regulation of amino acid and glucose transporters in endothelial and smooth muscle cells.**11 [12506130] *Physiol Rev* 83(1):183-252 (2003)**2003 Amino acid transporters: roles in amino acid sensing and signalling in animal cells.**12 [12879880] *Biochem J* 373(Pt 1):1-18 (2003)

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Transporter (Ammonia)

13034

Transporter (Ammonium)

Transporter (Ammonia)			
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2001 **Ammonium carriers in medullary thick ascending limb.**

1 [\[11133509\] Am J Physiol Renal Physiol 280\(1\):F1-9 \(2001\)](#)

Ion channel (BASKET)	Testis (Sertoli cell)	Transporter (Bile acid)	Transporter (Xenobiotics)
Testis (Anatomy)	Transporter (BASKET)	Transporter (Cholesterol)	

2004 Structures and models of transporter proteins.

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1994 Computer-aided analyses of transport protein sequences: gleaned evidence concerning function, structure, biogenesis, and evolution.

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2008 Technologies for transporter drug discovery.

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ABCB11	Biliary system (Cholestasis BASKET)	TGR5	Transporter (Cholesterol)
Adipose tissue (Brown)		Transporter (BASKET)	
ATP8B1	Biliary system (Cholestasis hereditary)	Transporter (Bile acid)	Transporter (Xenobiotics)
	OST		

2003 Bile salt transporters: molecular characterization, function, and regulation.

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2010 Xenobiotic, bile acid, and cholesterol transporters: function and regulation.

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2010 The bile salt export pump: clinical and experimental aspects of genetic and acquired cholestatic liver disease.

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**Transporter (Calcium store
operated)**

13037

**Transporter (Kalzium store
operated)**

Transporter (Calcium store operated)			
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2005

Store-operated calcium channels.

1

[\[15788710\] Physiol Rev 85\(2\):757-810 \(2005\)](#)

Calcium (Physiology Intestines)	Transporter (Calcium)	TRPV6	
Calcium (Physiology renal)	TRPV5		

2000 Plasma membrane Ca²⁺-ATPase in excitable and nonexcitable cells.

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Transporter (Cation and chloride)

13039

Transporter (Kation und Chlorid)

Transporter (Cation and chloride)			
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2005 **Molecular physiology and pathophysiology of electroneutral cation-chloride cotransporters.**
1 [15788703] *Physiol Rev* 85(2):423-93 (2005)

Acidosis (renal tubular)	Hearing (Neurophysiology)	SLC4A1 AE1	TRPV5
Anemia (Spherocytic)	SLC26	Slc4a2 Ae2	TRPV6
Anemia (Stomatocytic)	SLC26A4 Pendrin	SLC4A3 AE3	
Erythrocytes (Ovalocytosis)	SLC4	Transporter (Chloride and bicarbonate)	

2009 Review. Leaky Cl⁻/HCO₃⁻ exchangers: cation fluxes via modified AE1.

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2008 Plasma membrane Cl⁻/HCO₃⁻ exchangers: structure, mechanism and physiology.

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Transporter (Chloride and potassium)

13041

Transporter (Chlorid und Kalium)

Angelman s syndrome	Epilepsy (BASKET)	GABRE	Receptor (GABA A)
Autosomal dominant epilepsy with febrile seizures plus	GABRA1	GABRG2	Transporter (Chloride and potassium)
	GABRA4	GABRG3	UBE3A
Autosomal dominant Juvenile Myoclonic Epilepsy	GABRA5	GABRP	
	GABRA6	Heart (Coronary heart disease Main stenosis)	
BSND Barttin	GABRB3	Ion channel (Chloride)	
Childhood absence epilepsy	GABRD	KCC3	
CLCN2 CIC2			
Dravet s syndrome			

2010 Modulation of CIC-K channel function by the accessory subunit barttin.

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2010 Mutations affecting GABAergic signaling in seizures and epilepsy.

2 [20352446] Pflugers Arch 460(2):505-23 (2010)

ERS UFR (Pharmacology)	NPC1L1 Niemann Pick C1 Like1	Transporter (Cholesterol)	
Ezetimibe	Transporter (BASKET)	Transporter (Xenobiotics)	
Insulin (resistance)	Transporter (Bile acid)		

2009 Inhibition of hepatic Niemann-Pick C1-like 1 improves hepatic insulin resistance.

1 [19654286] Am J Physiol Endocrinol Metab 297(5):E1030-8 (2009)

2010 Xenobiotic, bile acid, and cholesterol transporters: function and regulation.

2 [20103563] Pharmacol Rev 62(1):1-96 (2010)

Transporter (Choline)

13043

Transporter (Cholin)

Biomembranes (BASKET) CHT1	CTL1 Transporter (Choline)		
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2006 The "ins" and "outs" of the high-affinity choline transporter CHT1.

1 [16524384] J Neurochem 97(1):1-12 (2006)

2006 Choline transport for phospholipid synthesis.

2 [16636297] Exp Biol Med (Maywood) 231(5):490-504 (2006)

ATP7A	COMMD1	Transporter (Copper)	
ATP7B	Ctr1	XIAP	
Cisplatin	CTR2		

2007 Function and regulation of human copper-transporting ATPases.

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Transporter (Dopamine)

13045

Transporter (Dopamin)

CNS (PET)	CNS (SPECT)	Transporter (Dopamine)	
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2010 **Molecular imaging of the dopamine transporter.**

1 [\[20720060\] J Nucl Med 51\(9\):1331-4 \(2010\)](#)

Skin (Anatomy)	SLC27A4 FATP4	Transporter (Fatty acids)	
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2010 Membrane fatty acid transporters as regulators of lipid metabolism: implications for metabolic disease.

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2011 Role of fatty acid transporters in epidermis: Implications for health and disease.

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2008 Protein-mediated Fatty Acid Uptake in the Heart.

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Transporter (Glucose)			
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1993 The glucose transporter family: structure, function and tissue-specific expression.

1 [8240230] *Biochem J* 295 (Pt 2):329-41 (1993)

2000 Mechanism and regulation of GLUT-4 vesicle fusion in muscle and fat cells.

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2008 The facilitative glucose transporter GLUT3: 20 years of distinction.

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2008 GLUT7: a new intestinal facilitated hexose transporter.

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2008 Regulation of the fructose transporter GLUT5 in health and disease.

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2008 Transcriptional regulation of the insulin-responsive glucose transporter GLUT4 gene: from physiology to pathology.

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2008 Emerging role for AS160/TBC1D4 and TBC1D1 in the regulation of GLUT4 traffic.

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2003 A forty-year memoir of research on the regulation of glucose transport into muscle.

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2005 Apical GLUT2: a major pathway of intestinal sugar absorption.

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2005 Minireview: recent developments in the regulation of glucose transporter-4 traffic: new signals, locations, and partners.

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2009 The molecular basis of insulin-stimulated glucose uptake: signalling, trafficking and potential drug targets.

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2008 The GLUT4 code.

13 [17717074] *Mol Endocrinol* 22(2):226-33 (2008)

CNS (Excitotoxicity)	CNS (Stroke BASKET)	Transporter (Glutamate)	
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2008 Slips, leaks and channels in glutamate transporters.

1 [18690049] Channels (Austin) 2(1):51-8 (2008)

2008 Glutamate forward and reverse transport: from molecular mechanism to transporter-mediated release after ischemia.

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Transporter (Glycin)

13049

Transporter (Glycin)

GLYT1	Transporter (Glycin)		
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2011 The glycine transporter GLYT1 in human intestine: expression and function.

1 [21628872] Biol Pharm Bull 34(6):784-8 (2011)

Transporter (Hexoses)

13050

Transporter (Hexose)

SLC2A9 GLUT9	Transporter (Hexoses)		
Transporter (Amino acid)	Transporter (Uric acid)		

2007 Facilitated hexose transporters: new perspectives on form and function.

1 [17699876] Physiology (Bethesda) 22(-):234-40 (2007)

2008 SLC2A9--a fructose transporter identified as a novel uric acid transporter.

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2003 Regulation of amino acid and glucose transporters in endothelial and smooth muscle cells.

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Transporter (Iron)

13051

Transporter (Eisen)

DMT1	Iron (Medical aspects)		
Ferroportin	Transporter (Iron)		

2011

Human iron transporters.

1

[21437029] Genes Nutr 6(1):45-54 (2011)

Transporter (Magnesium)

13052

Transporter (Magnesium)

Transporter (Magnesium)			
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2010 Molecular identification of ancient and modern mammalian magnesium transporters.

1 [19940067] Am J Physiol Cell Physiol 298(3):C407-29 (2010)

Transporter (Metal divalent)

13053

Transporter (Metall divalent)

DMT1 Iron (Medical aspects)	Manganese SLC11A2	Transporter (Metal divalent)	
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2005 Iron Imports. II. Iron uptake at the apical membrane in the intestine.

1 [16286504] Am J Physiol Gastrointest Liver Physiol 289(6):G981-6 (2005)

2008 Manganese transport in eukaryotes: the role of DMT1.

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Interleukin24 MDA7	Transporter (Multidrug resistance ABCB ABCG)		
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2005 What do proton motive force driven multidrug resistance transporters have in common?

1 [15580777] Curr Issues Mol Biol 7(1):7-21 (2005)

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2007 Melanoma differentiation associated gene-7/interleukin-24 reverses multidrug resistance in human colorectal cancer cells.

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2009 Imaging the function of P-glycoprotein with radiotracers: pharmacokinetics and in vivo applications.

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LeuT Serotonin	SLC6A4 Serotonin Transporter (Neurotransmitter)		
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1998 The family of Na⁺/Cl⁻ neurotransmitter transporters.

1 [\[9798903\]](#) J Neurochem 71(5):1785-803 (1998)

1999 Neurotransmitter transporters in the central nervous system.

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2010 Substrate and drug binding sites in LeuT.

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2008 How the serotonin story is being rewritten by new gene-based discoveries principally related to SLC6A4, the serotonin transporter gene, which functions to influence all cellular serotonin systems.

4 [\[18824000\]](#) Neuropharmacology 55(6):932-60 (2008)

Heart (Physiology)	Heart failure (chronical)	Transporter (Norepinephrine)	
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2006 The norepinephrine transporter and its regulation.

1 [16539676] J Neurochem 97(2):310-33 (2006)

2007 Cardiac sympathetic nerve terminal function in congestive heart failure.

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Transporter (Nucleobase ascorbate
family)

13057

Transporter (Nucleobase Ascorbate
Familie)

Transporter (Nucleobase ascorbate family)			
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2008 The nucleobase-ascorbate transporter (NAT) family: genomics, evolution, structure-
function relationships and physiological role.
1 [18414738] Mol Biosyst 4(5):404-16 (2008)

Transporter (Nucleotides and sugar)			
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2006 Nucleotide-sugar transporters: structure, function and roles in vivo.

1 [16981043] Braz J Med Biol Res 39(9):1149-58 (2006)

2002 Role of MRP4 and MRP5 in biology and chemotherapy.

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Arterial hypertension (BASKET)	OATP1B1	SLC13A1 NaS1 NaSi1	SLC6A8 CRT Creatine
Breast cancer resistance protein	Oct2	SLC13A2 NaDC1 NaDC1 NaC1	Transporter (Organic molecules)
CNS (Blood brain barrier)	Oct3	SLC13A3 NaDC3 SDCT2 NaC3	Transporter (Sulfate)
Histamine N methyltransferase	OST	SLC13A4 NaS2 SUT1	
Histamine	OSTalpha	SLC13A5 NaCT NaC2	
Kidney (Uremic toxin)	OSTbeta	SLC22A3 OCT3	
Oat3	SLC13	SLC6A6 Taut Taurin	

2010 Getting the mOST from OST: Role of organic solute transporter, OSTalpha-OSTbeta, in bile acid and steroid metabolism.
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2000 Structure of renal organic anion and cation transporters.
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2008 Overview of the proton-coupled MCT (SLC16A) family of transporters: characterization,

- 11 **function and role in the transport of the drug of abuse gamma-hydroxybutyric acid.**
[18523892] *AAPS J* 10(2):311-21 (2008)
- 2006 **Recent advances in molecular pharmacology of the histamine systems: organic cation**
12 **transporters as a histamine transporter and histamine metabolism.**
[18648665] *J Pharmacol Sci* 101(1):24-30 (2006)
- 2005 **Biology of a novel organic solute and steroid transporter, OSTalpha-OSTbeta.**
13 [16246895] *Exp Biol Med* (Maywood) 230(10):689-98 (2005)
- 2006 **Molecular properties of the SLC13 family of dicarboxylate and sulfate transporters.**
14 [16211368] *Pflugers Arch* 451(5):597-605 (2006)
- 2008 **Organic cation transporters and their pharmacokinetic and pharmacodynamic**
15 **consequences.**
[18762711] *Drug Metab Pharmacokinet* 23(4):243-53 (2008)
- 2008 **Impact of genetic polymorphisms of transporters on the pharmacokinetic,**
16 **pharmacodynamic and toxicological properties of anionic drugs.**
[18762709] *Drug Metab Pharmacokinet* 23(4):223-35 (2008)
- 2008 **Organic anion transporter 3 inhibitors as potential novel antihypertensives.**
17 [18973812] *Pharmacol Res* 58(5-6):257-61 (2008)
- 2008 **Physiology, structure, and regulation of the cloned organic anion transporters.**
18 [18668434] *Xenobiotica* 38(7-8):889-935 (2008)
- 2011 **Research progress in the organic cation transporters.**
19 [22086000] *Zhong Nan Da Xue Xue Bao Yi Xue Ban* 36(10):913-26 (2011)
- 2011 **Transport characteristics of guanidino compounds at the blood-brain barrier and blood-**
20 **cerebrospinal fluid barrier: relevance to neural disorders.**
[21352605] *Fluids Barriers CNS* 8(1):13 (2011)

**Transporter (Ornithine and
citrulline)**

13060

Transporter (Ornithin und Citrullin)

Arginase Arginine Argininosuccinate lyase	Argininosuccinate synthetase Azauridine Carbamoyl phosphate	Lysinuric protein intolerance Ornithine carbamoyltransferase deficiency Orotic acid	Transporter (Ornithine and citrulline) Urea cycle
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2007 **Orotic acid excretion and arginine metabolism.**
1 [17513443] J Nutr 137(6 Suppl 2):1656S-1661S (2007)

Transporter (Oxygen)

13061

Transporter (Sauerstoff)

Ero1alpha Mitochondria (associated ER membrane)	Receptor (Inositol trisphosphate) Transporter (Oxygen)		
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2010 Ero1alpha requires oxidizing and normoxic conditions to localize to the mitochondria-associated membrane (MAM).

¹ [20186508] Cell Stress Chaperones 15(5):619-29 (2010)

Drug delivery PEPT1	PepT2 Transporter (Peptides)		
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2003 An update on renal peptide transporters.

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HHRH	Transporter (Phosphate)		
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2008 Novel NaPi-2c mutations that cause mistargeting of NaPi-2c protein and uncoupling of Na-Pi cotransport cause HHRH.

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2007 Phosphate transporters: a tale of two solute carrier families.

² [17581921] Am J Physiol Renal Physiol 293(3):F643-54 (2007)

Epithelium (Transport)	Ion channel (Sodium ENaC)	Kidney (Tubulus CNT)	
HKalpha1	Kallikrein	Potassium (Physiology renal)	
HKalpha2	Kidney (Intercalated cell)	Transporter (Potassium and proton)	
Ion channel (Proton)	Kidney (Principal cells)	Transporter (Proton vacuolar)	

2010 The renal H⁺-K⁺-ATPases: physiology, regulation, and structure.

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2009 The gastric HK-ATPase: structure, function, and inhibition.

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2011 Role of tissue kallikrein in regulation of tubule function.

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2006 Mechanisms of acid and base secretion by the airway epithelium.

4 [17091214] J Membr Biol 211(3):139-50 (2006)

Biomembranes (BASKET)	Kidney (Intercalated cell)	Transporter (Potassium and proton)	
Epithelium (Transport)	Kidney (Tubulus)	Transporter (Proton vacuolar)	
Ion channel (Proton)	Proton motive force		

2006 The where, when, and how of organelle acidification by the yeast vacuolar H⁺-ATPase.

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2003 Organelle acidification and disease.

2 [12559032] Traffic 4(2):57-64 (2003)

2004 Renal vacuolar H⁺-ATPase.

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1999 Vacuolar and plasma membrane proton-adenosinetriphosphatases.

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2003 Proton translocation driven by ATP hydrolysis in V-ATPases.

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1998 Structure, function and regulation of the vacuolar (H⁺)-ATPases.

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AQP2	HSP90	Transporter (Proton)	
CASR	Nephrolithiasis	Urine (Acid)	
Efrapeptins	Proteasome (Pharmacology)		

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Transporter (Receptor function)

13067

Transporter (Rezeptoreigenschaft)

Transporter (Amino acid)	Transporter (Receptor function)		
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Transporter (RND family)

13068

Transporter (RND Familie)

Bacteria (Resistance mechanisms)	Transporter (RND family)		
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**Transporter (Sodium and
bicarbonate)**

13069

**Transporter (Natrium und
Bikarbonat)**

SLC4	Transporter (Sodium and bicarbonate)		
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cotransporter stoichiometry.

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disease processes.

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Amiodarone	Cardioprotective agents	NCKX2	SN6
Aprindine	Cibenzoline	NCX1	Transporter (Sodium and calcium)
Arterial hypertension (BASKET)	Dronedarone	NCX2	
Azimilide	Endogenous ouabain	NCX3	
Bepridil	Ischemia reperfusion	NCXSQ1	
CALX	KBR7943	SEA0400	

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2000 Increased Na⁽⁺⁾-Ca⁽²⁺⁾ exchanger in the failing heart.

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1999 Sodium/calcium exchange: its physiological implications.

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- 2009 Na⁺ -Ca²⁺ exchanger expression and its modulation.**
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Arterial hypertension (BASKET)	NKCC1	Transporter (Sodium and chloride)	WNK2
Familial hyperkalemic hypertension	NKCC2	Transporter (Sodium potassium and chloride)	WNK3
Kidney (Tubulus)	OSR1		WNK4
NCC	SPAK	WNK	
		WNK1	

2010 Sorting out lysosomal trafficking of the thiazide-sensitive Na-Cl Co-transporter.

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Dapagliflozin	Kidney (Tubulus)	SLC5A2 SGLT2	
Diabetes mellitus T2DM (Type2)	SLC5A1 SGLT1	Transporter (Sodium and glucose)	

2001 Renal Na(+)-glucose cotransporters.

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NIS	SLC26A4 Pendrin	Thyroid (Physiology)	
Pendred s syndrome	Thyroid (Neoplasia)	Transporter (Sodium and iodine)	

2003 The sodium/iodide Symporter (NIS): characterization, regulation, and medical significance.

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2009 Minireview: The sodium-iodide symporter NIS and pendrin in iodide homeostasis of the thyroid.

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Calcification	Hepatorenal syndrome	NaPiIIa	Receptor (cAMP extracellular)
CAMP	Hypophosphatemic rickets with hypercalciuria	NPT2c	Transporter (Sodium and phosphate)
CYP24A1 1 25 hydroxyvitamin d3 24 hydroxylase	Kidney (Hyperfiltration)	Phosphatonin	Vitamin D
FGF23	Kidney (Tubulus)	Phosphorous	
Glucagon	Klotho	PiT1	

2010 Phosphate and vascular calcification: Emerging role of the sodium-dependent phosphate co-transporter PiT-1.

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2005 NaPi-IIa and interacting partners.

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2009 Type IIc sodium-dependent phosphate transporter regulates calcium metabolism.

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Dopamine Kidney (Tubulus) Lung (Physiology)	Phospholemnan Pulmonary edema SIK salt induced kinase	Sodium (Physiology Kidney) Transporter (Sodium and potassium)	
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2001 Electrophysiology of the sodium-potassium-ATPase in cardiac cells.

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1989 Advances in Na⁺,K⁺-ATPase studies: from protein to gene and back to protein.

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2003 Na⁺-K⁺-ATPase-mediated signal transduction: from protein interaction to cellular function.

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2009 Visualizing the mapped ion pathway through the Na,K-ATPase pump.

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Acid base balance	Kidney (Physiology)	NHE3	TRPM6
Angiogenesis	Kidney (Tubulus Proximal)	NHE8	Zoniporide
Calcium (Physiology renal)	Kidney (Tubulus)	Signal transduction	
Diuretic agents (Thiazides)	Magnesium (Physiology Kidney)	Transporter (Sodium and proton)	

2003 Zoniporide: a potent and selective inhibitor of the human sodium-hydrogen exchanger isoform 1 (NHE-1).

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2006 Na⁺/H⁺ exchangers in renal regulation of acid-base balance.

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2008 Structure and function of the human Na⁺/H⁺ exchanger isoform 1.

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**Transporter (Sodium potassium
and chloride)**

13077

**Transporter (Natrium Kalium und
Chlorid)**

Arterial hypertension (BASKET)	Neuron (BASKET)	Transporter (Sodium and chloride)	WNK3
Blood vessels (Physiology)	NKCC1	Transporter (Sodium potassium and chloride)	WNK4
Cell volume	NKCC2		
Kidney (Tubulus)	OSR1	WNK	
NCC	SPAK	WNK1	
		WNK2	

2000 Membrane topology and function of the secretory Na⁺-K⁺-2Cl⁻ cotransporter (NKCC1).

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2000 Sodium-potassium-chloride cotransport.

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**2007 NKCC1 as a regulator of vascular tone and a novel target for antihypertensive
therapeutics.**

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**2008 The regulation of salt transport and blood pressure by the WNK-SPAK/OSR1 signalling
pathway.**

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2010 Kinase regulation of Na⁺-K⁺-2Cl⁻ cotransport in primary afferent neurons.

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Transporter (Structure)			
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2009 The rocking bundle: a mechanism for ion-coupled solute flux by symmetrical transporters.

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SLC13	SLC13A3 NaDC3 SDCT2 NaC3	Transporter (Organic molecules)	
SLC13A1 NaS1 NaSi1	SLC13A4 NaS2 SUT1	Transporter (Sulfate)	
SLC13A2 NaDC1 NaDC1 NaC1	SLC13A5 NaCT NaC2		

2001 Physiological roles and regulation of mammalian sulfate transporters.

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2006 Molecular properties of the SLC13 family of dicarboxylate and sulfate transporters.

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Transporter (Thyroxine)

13080

Transporter (Thyroxin)

Allan Herndon Dudley syndrome CD98 4F2HC LAT1	LAT2 NTAL LAB MCT10 MCT8	OATP1A2 OATP1A4 OATP1C1	Transporter (Thyroxine)
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2007 The MCT8 thyroid hormone transporter and Allan-Herndon-Dudley syndrome.

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2011 Primary and secondary thyroid hormone transporters.

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Transporter (Urea)

13081

Transporter (Harstoff)

Transporter (Urea)			
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2009 Mammalian urea transporters.

1 [\[19028811\]](#) Exp Physiol 94(2):180-5 (2009)

2003 Gene structure of urea transporters.

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Transporter (Uric acid)

13082

Transporter (Harnsaure)

Kidney (Physiology)	Transporter (Hexoses)		
SLC2A9 GLUT9	Transporter (Uric acid)		

2008 SLC2A9--a fructose transporter identified as a novel uric acid transporter.

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2011 Hypouricemia and tubular transport of uric acid.

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Transporter (V ATPase)

13083

Transporter (V ATPase)

Transporter (V ATPase)			
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2001 Neurotransmitter release through the V0 sector of V-ATPase.

1 [\[11701751\] J Neurochem 79\(3\):485-8 \(2001\)](#)

Transporter (Vitamine B1)

13084

Transporter (Vitamin B1)

Alcohol	THTR2	Vitamin B1	
THTR1	Transporter (Vitamine B1)		

2010 Effect of chronic alcohol feeding on physiological and molecular parameters of renal
thiamin transport.
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Transporter (BASKET) Transporter (Bile acid)	Transporter (Cholesterol) Transporter (Xenobiotics)		
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2010 Xenobiotic, bile acid, and cholesterol transporters: function and regulation.

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2008 Natural and synthetic polymers as inhibitors of drug efflux pumps.

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2010 Drug uptake systems in liver and kidney: a historic perspective.

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Aconitase	Human papilloma virus	Prostate (Neoplasia)	Transporter (Zinc)
Cadmium	Insulin (Biosynthesis and Regulation)	SLC30A8 ZnT8	Zinc
Citric acid cycle	Kidney (Toxicology)	Slc39a14 ZIP14A ZIP14B	ZIP1
EVER1	Mammary gland (Neoplasia)	SLC39A6	ZnT1
EVER2	Prostate (BASKET)	Slc39a8 ZIP8	

2007 The emerging role of the LIV-1 subfamily of zinc transporters in breast cancer.

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2007 Zinc as an anti-tumor agent in prostate cancer and in other cancers.

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2009 The EVER proteins as a natural barrier against papillomaviruses: a new insight into the pathogenesis of human papillomavirus infections.

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2010 Think zinc: New roles for zinc in the control of insulin secretion.

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2009 Discovery of ZIP transporters that participate in cadmium damage to testis and kidney.

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Fontan procedure	Transposition of the great arteries		
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1984 Transposition of the great arteries.

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2008 Transposition of the great arteries.

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1973 Transposition of the great arteries. A review of 37 cases after Mustard's operation.

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2004 Extending the boundaries of the primary arterial switch operation in patients with transposition of the great arteries and intact ventricular septum.

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Transsexuality			
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Amino acids (Sulfur containing)	Homocysteine	Pyridoxal phosphate	Vitamin B12
Cystathionine beta synthase	Homocystinuria	Remethylierung	Vitamin B6
Folic acid	Methionine metabolic cycle	Transsulfuration	

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Amyloid neuropathy familiar	Diabetes mellitus (Involvement central peripheral autonomic nervous systems)	Peripheral nervous system (Small fiber neuropathy)	Vasculitis (Nervous system)
Amyloidosis	Neuropathy peripheral	Transthyretin	

2010 Pathology and functional diagnosis of small-fiber painful neuropathy.

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Autoantibodies Anti Phospholipid Anti Cardiolipin Anti beta 2 GP	Transverse myelitis		
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Tranylcypromine

13092

Tranylcypromin

Phenelzine	Tranylcypromine		
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tranylcypromine: a review.**
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TRAP1

13093

TRAP1

Calcium (Intracellular)	Heat shock proteins	TRAP1	
Cyclophilin D	Sorcin		

2012 **New insights into TRAP1 pathway.**
1 [\[22432061\] Am J Cancer Res 2\(2\):235-48 \(2012\)](#)

TRAPP complex

13094

TRAPP Komplex

TRAPP complex			
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2008 The TRAPP complex: insights into its architecture and function.

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Trapped lung

13095

Trapped Lung

Trapped lung			
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2007 Characteristics of trapped lung: pleural fluid analysis, manometry, and air-contrast chest CT.

¹ [17218577] Chest 131(1):206-13 (2007)

**TRAPS TNF Receptor Associated
Periodic Syndrome**

13096

**TRAPS TNF Receptor Associated
Periodic Syndrome**

Autoinflammatory syndromes	Hyper immunoglobulin D syndrome	Neonatal onset multi system inflammatory disease (NOMID)	Receptor (TNFalpha)
Cryopyrin	Inflammasome	Papa s syndrome	TRAPS TNF Receptor Associated Periodic Syndrome
Familial Cold Autoinflammatory Syndrome	Muckle Wells syndrome	PSTPIP1 CD2BP1	
Familial mediterranean fever	Mvalonate kinase	Pyrin	

2009 The inherited autoinflammatory syndrome: a decade of discovery.

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2010 Skin manifestations in tumor necrosis factor receptor-associated periodic syndrome (TRAPS).

2 [21547145] Dermatoendocrinol 2(1):26-9 (2010)

81C6 ttTenasin	Cetuximab ttEGFR	Ipilimumab ttCTLA4	Raxibacumab ttAnthrax
Abatacept ttCTLA4Conjugate	Daclizumab ttIL2R	Mepolizumab ttIL5	REGN88 ttIL6R
Abciximab ttGPIIAIIIB	Dalotuzumab ttIGF1R	Motavizumab ttRSVirus	Reslizumab ttIL5
Adalimumab ttTNFalpha	Denosumab ttRANKL	MuromonabCD3 ttCD3	Riloncept ttIL1R
AIN457	Eculizumab ttFactorH	Naptumomab estafenatox tt5T4	Rituximab ttCD20
Alemtuzumab ttCD52	Efalizumab ttLFA1	Natalizumab ttIntegralpha4	Solanezumab ttAmyloidBeta
AMG386 ttAngiopoietin1 ttAngiopoietin2	Epratuzumab ttCD22	Necitumumab ttEGFR	T1H ttCD6
Antibodies (therapeutic use)	Etanercept ttTNFalpha	Nimotuzumab ttEGFR	Tanezumab ttNGF
Atacicept ttBlys ttAPRIL	FactorIXFc ttFactorIX	Obinutuzumab ttCD20	Teplizumab ttCD3
Bapineuzumab ttAmyloidBeta	FactorVIIIcF ttFactorVIII	Ocrelizumab ttCD20	Tocilizumab ttIL6
Basiliximab ttIL2R	Farletuzumab ttFolateRalpha	Ofatumumab ttCD20	Tositumomab ttCD20
Belatacept ttCD80 ttCD86	Figitumumab ttIGF1R	Omalizumab ttCD20	Trastuzumab emtansine ttHER2
Belimumab ttBLYS	Galiximab ttCD80	Otelixizumab ttCD3	Trastuzumab ttHER2
Bevacizumab ttVEGF	Gemtuzumab ozogamicin ttCD33	Pagibaximab ttLipoteichoicAcidStaphylococcus	Tremelimumab ttCLTA4
Brentuximab vedotin ttCD30	Girentuximab ttCarbomicAnhydraseIX	Palivizumab ttRSVirusFprotein	Ustekinumab ttIL12 ttIL23
Briakinumab ttIL12 ttIL23	Golimumab ttTNFalpha	Panitumomab ttEGFR	Vedolizumab ttIntegrina4b7
Canakinumab ttIL1beta	Ibritumomab tiuxentan yttrium ttCD20	Pertuzumab ttHER2	Zalutumumab ttEGFR
Catumaxomab ttEpCAM ttCD3 linkerAb	Infliximab ttTNFalpha	Ramucirumab ttVEGFR2	Zanulimumab ttCD4
Certolizumab ttTNFalpha	Inotuzumab ozogamicin ttCD22	Ranibizumab ttVEGF	

2011 Antibody-based therapeutics to watch in 2011.
1 [21051951] Mabs 3(1):76-99 (2011)

2010 Antibodies to watch in 2010.
2 [20065640] Mabs 2(1):84-100 (2010)

81C6 ttTenascin	Daclizumab ttIL2R	Mepolizumab ttIL5	Reslizumab ttIL5
Abatacept ttCTLA4Conjugate	Dalotuzumab ttIGF1R	Motavizumab ttRSVirus	Riloncept ttIL1R
Abciximab ttGPIIAIIIB	Denosumab ttRANKL	MuromonabCD3 ttCD3	Rituximab ttCD20
Adalimumab ttTNFalpha	Eculizumab ttFactorH	Naptumomab estafenatox tt5T4	Solanezumab ttAmyloidBeta
AIN457	Efalizumab ttLFA1	Natalizumab ttIntegralpha4	Stomach (Neoplasia)
Alemtuzumab ttCD52	Epratuzumab ttCD22	Necitumumab ttEGFR	T1H ttCD6
AMG386 ttAngiopoietin1 ttAngiopoietin2	Etanercept ttTNFalpha	Nimotuzumab ttEGFR	Tanezumab ttNGF
Antibodies (therapeutic use)	FactorIXFc ttFactorIX	Obinutuzumab ttCD20	Teplizumab ttCD3
Atacicept ttBlys ttAPRIL	FactorVIIIFc ttFactorVIII	Ocrelizumab ttCD20	Tocilizumab ttIL6
Bapineuzumab ttAmyloidBeta	Farletuzumab ttFolateRalpha	Ofatumumab ttCD20	Tositumomab ttCD20
Basiliximab ttIL2R	Figitumumab ttIGF1R	Omalizumab ttCD20	Trastuzumab emtansine ttHER2
Belatacept ttCD80 ttCD86	Galiximab ttCD80	Otelixizumab ttCD3	Trastuzumab ttHER2
Belimumab ttBLYS	Gemtuzumab ozogamicin ttCD33	Pagibaximab ttLipoteichoicAcidStaphylococcus	Tremelimumab ttCLTA4
Bevacizumab ttVEGF	Girentuximab ttCarbomicAnhydraseIX	Palivizumab ttRSVirusFprotein	Ustekinumab ttIL12 ttIL23
Brentuximab vedotin ttCD30	Golimumab ttTNFalpha	Panitumomab ttEGFR	Vedolizumab ttIntegrina4b7
Briakinumab ttIL12 ttIL23	Ibritumomab tiuxentan yttrium ttCD20	Pertuzumab ttHER2	Zalutumumab ttEGFR
Canakinumab ttIL1beta	Infliximab ttTNFalpha	Ramucirumab ttVEGFR2	Zanulimumab ttCD4
Catumaxomab ttEpCAM ttCD3 linkerAb	Inotuzumab ozogamicin ttCD22	Ranibizumab ttVEGF	
Certolizumab ttTNFalpha	Ipilimumab ttCTLA4	Raxibacumab ttAnthrax	
Cetuximab ttEGFR	Mammary gland (Neoplasia)	REGN88 ttIL6R	

2009 The art of healing broken hearts in breast cancer patients: Trastuzumab and heart failure.

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- 2009 Trastuzumab for the treatment of primary breast cancer in HER2-positive women: a single technology appraisal.**
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4 [17264064] *Ann Oncol* 18(7):1152-8 (2007)
- 2007 Trastuzumab: mechanism of action, resistance and future perspectives in HER2-overexpressing breast cancer.**
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- 2011 Antibody-based therapeutics to watch in 2011.**
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- 2010 Antibodies to watch in 2010.**
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- 2011 Immune effects of trastuzumab.**
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Blood coagulation	Infusion therapy	Traumatology (BASKET)	
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2011 A profile of deaths among trauma patients in a university hospital: the Philippine experience.

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Bmp2	Traumatology (Fracture healing)		
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2011 Use and efficacy of bone morphogenetic proteins in fracture healing.

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Traumatology (Imaging)			
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2008 Current Role of Emergency US in Patients with Major Trauma.

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1999 Helical CT in emergency radiology.

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Disseminated intravascularcoagulation	Traumatology (Surgery)		
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Escherichia coli (BASKET)	Traveller s diarrhea		
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2009 Systematic review: the epidemiology and clinical features of travellers' diarrhoea.

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2009 Management of the returning traveler with diarrhea.

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Travoprost

13104

Travoprost

Eye (Glaucoma)	Travoprost		
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2007 Travoprost in the management of open-angle glaucoma and ocular hypertension.

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Trax

13105

Trax

RNA (BASKET)	Translin	Trax	
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2008 The Translin/Trax RNA binding complex: clues to function in the nervous system.

1 [\[18424275\] Biochim Biophys Acta 1779\(8\):479-85 \(2008\)](#)

Trazodone

13106

Trazodon

Dementia (BASKET)	Trazodone		
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2009 Mechanism of action of trazodone: a multifunctional drug.

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2011 Trazodone for the treatment of sleep disorders in dementia: an open-label, observational and review study.

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Autophagy	ERS UFR (Pharmacology)	MCP1 Monocyte chemotactic protein1	SB212090 ttp38MAPK
Cell stress (Genotoxic)	Fatty acids (Free)	Osteoarthritis	TRB3
Diabetes mellitus (BASKET)	FoxO3A	P38MAPK	Wortmannin
Diabetes mellitus (Involvement kidney)	GADD153 CHOP	Palmitate	
ERS UFR (Apoptosis)	IGF1	Protein kinase B Akt	
ERS UFR (Induced Mediators)	Kidney (Podocytes)	PUMA	

2010 TRB3 is stimulated in diabetic kidneys, regulated by the ER stress marker CHOP, and is a suppressor of podocyte MCP-1.

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2005 Genotoxic and endoplasmic reticulum stresses differentially regulate TRB3 expression.

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ADAR DICER	NFAR protein family PACT	Protein kinase R RNA (Binding proteins)	TRBP NCoA6 PRIP RAP250 NRC
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2009 The NFAR's (nuclear factors associated with dsRNA): evolutionarily conserved members of the dsRNA binding protein family.
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5q minus syndrome Anemia (Diamond Blackfan) Cartilage hair hypoplasia	Dyskeratosis congenita Ribosome RPS14	RPS19 Shwachman Diamond syndrome TCOF1 Treacle	Treacher Collins syndrome
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2002 Clinical features, treatment and genetic background of Treacher Collins syndrome.

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1995 Treacher Collins syndrome.

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2010 Ribosomopathies: human disorders of ribosome dysfunction.

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2009 Treacher Collins syndrome: unmasking the role of Tcof1/treacle.

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Trefoil Peptid			
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2001 Trefoil peptides in airway epithelium: an important addition to the plethora of peptides.

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1999 Trefoil peptides.

² [10323896] Gut 44(6):890-5 (1999)

Trehalose

13111

Trehalose

Trehalose			
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2003 **New insights on trehalose: a multifunctional molecule.**
1 [\[12626396\]](#) *Glycobiology* 13(4):17R-27R (2003)

TREK1

13112

TREK1

Ion channel (Potassium)	TREK1		
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2007 **Starring TREK-1: the next generation of vascular K⁺ channels.**

1 [\[17641234\]](#) Circ Res 101(2):119-21 (2007)

TREM1

13113

TREM1

Pleura (Effusion)	Procalcitonin	TREM1	
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2008 PCT and sTREM-1: the markers of infection in critically ill patients?

1 [19043381] Med Sci Monit 14(12):RA241-7 (2008)

2005 Clinical review: role of triggering receptor expressed on myeloid cells-1 during sepsis.

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2009 TREM and TREM-like receptors in inflammation and disease.

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2011 Pleural fluid soluble triggering receptor expressed on myeloid cells-1 as a marker of bacterial infection: a meta-analysis.

4 [22014385] BMC Infect Dis 11(-):280 (2011)

Trematodiasis**13114****Trematodiasis**

Clonorchiasis	Fasciola hepatica	Paragonimiasis	
Echinostomiasis	Fasciolopsis buski	Trematodiasis	
Fasciola gigantica	Opisthorchiasis		

2009 Food-borne trematodiasis.

1 [19597009] Clin Microbiol Rev 22(3):466-83 (2009)

Abatacept ttCTLA4Conjugate	Certolizumab ttTNFalpha	Ipilimumab ttCTLA4	REGN88 ttIL6R
Abciximab ttGPIIAIIIB	Cetuximab ttEGFR	Motavizumab ttRSVirus	Reslizumab ttIL5
Adalimumab ttTNFalpha	CTLA4	MuromonabCD3 ttCD3	Rilonacept ttIL1R
AIN457	Daclizumab ttIL2R	Naptumomab estafenatox tt5T4	Rituximab ttCD20
Alemtuzumab ttCD52	Dalotuzumab ttIGF1R	Natalizumab ttIntegralpha4	Skin (Neoplasia Melanoma)
AMG386 ttAngiopoietin1 ttAngiopoietin2	Denosumab ttRANKL	Necitumumab ttEGFR	Solanezumab ttAmyloidBeta
Antibodies (therapeutic use)	Eculizumab ttFactorH	Nimotuzumab ttEGFR	T1H ttCD6
Atacept ttBlys ttAPRIL	Efalizumab ttLFA1	Obinutuzumab ttCD20	Teplizumab ttCD3
Bapineuzumab ttAmyloidBeta	Epratuzumab ttCD22	Ofatumumab ttCD20	Tocilizumab ttIL6
Basiliximab ttIL2R	Etanercept ttTNFalpha	Omalizumab ttCD20	Tositumomab ttCD20
Belatacept ttCD80 ttCD86	FactorIXFc ttFactorIX	Otelixizumab ttCD3	Trastuzumab emtasine ttHER2
Belimumab ttBLYS	FactorVIIIIfc ttFactorVIII	Pagibaximab ttLipoteichoicAcidStaphlococcus	Trastuzumab ttHER2
Bevacizumab ttVEGF	Farletuzumab ttFolateRalpha	Palivizumab ttRSVirusFprotein	Tremelimumab ttCTLA4
Brentuximab vedotin ttCD30	Gemtuzumab ozogamicin ttCD33	Panitumomab ttEGFR	Ustekinumab ttIL12 ttIL23
Briakinumab ttIL12 ttIL23	Girentuximab ttCarbomicAnhydraseIX	Pertuzumab ttHER2	Vedolizumab ttIntegrina4b7
Canakinumab ttIL1beta	Golimumab ttTNFalpha	Ramucirumab ttVEGFR2	Zalutumumab ttEGFR
Catumaxomab ttEpCAM ttCD3 linkerAb	Ibritumomab tiuxentan yttrium ttCD20	Ranibizumab ttVEGF	Zanulimumab ttCD4
CD152 CTLA4	Infliximab ttTNFalpha	Raxibacumab ttAnthrax	

2008 Overcoming immunologic tolerance to melanoma: targeting CTLA-4 with tremelimumab (CP-675,206).

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2 [17673618] Oncologist 12(7):873-83 (2007)

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3

[20086001] Clin Cancer Res 16(3):1042-8 (2010)

2011 Antibody-based therapeutics to watch in 2011.

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2010 Anti-CTLA-4 antibody therapy: immune monitoring during clinical development of a novel immunotherapy.

5 [21074063] Semin Oncol 37(5):473-84 (2010)

Parkinson s disease	Tremor (BASKET)		
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2000 Diagnosis and management of tremor.

- 1 [10979054] Arch Intern Med 160(16):2438-44 (2000)

2009 My hands shake--classification and treatment of tremor.

- 2 [19893794] Aust Fam Physician 38(9):678-83 (2009)

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- 3 [10908186] Brain 123 (Pt 8)(-):1545-67 (2000)

1993 A combined clinical and neurophysiological approach to the study of patients with tremor.

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1995 Tremor disorders. Diagnosis and management.

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Tremor of the palate

13117

Tremor des Gaumens

Tremor of the palate			
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2004 **Progressive ataxia and palatal tremor (PAPT): clinical and MRI assessment with review
of palatal tremors.**
1 [\[15090471\] Brain 127\(Pt 6\):1252-68 \(2004\)](#)

Trench Fever

13118

Wolhynisches Fieber

Bacillary angiomatosis	Bartonella spp	Trench Fever	
Bartonella henselae	Carrion s disease		

2003 What do we (not) know about the human bartonelloses?

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Treponemas

13119

Treponemas

Alzheimer s disease	Paradontosis	Treponemas	
Borreliosis	Spirochaete		

2011 Alzheimer's disease - a neurospirochetosis. Analysis of the evidence following Koch's and Hill's criteria.

1 [21816039] J Neuroinflammation 8(-):90 (2011)

Treprostinil

13120

Treprostinil

Epoprostenol Iloprost	Prostacyclin Pulmonary hypertension	Treprostinil	
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2008 Treprostinil for pulmonary hypertension.

1 [18827901] Vasc Health Risk Manag 4(3):507-13 (2008)

2010 Prostacyclin in the intensive care setting.

2 [20216163] Pediatr Crit Care Med 11(2 Suppl):S41-5 (2010)

Tretinoin

13121

Tretinoin

Acne	Tretinoin		
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2011 Tretinoin: A Review of Its Anti-inflammatory Properties in the Treatment of Acne.
1 [22125655] J Clin Aesthet Dermatol 4(11):22-9 (2011)

TREX

13122

TREX

RNA (nRNA BASKET)	TREX		
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2009 Roles of the TREX complex in nuclear export of mRNA.

1 [19229134] RNA Biol 6(2):149-52 (2009)

TREX1

13123

TREX1

Aicardi Goutieres syndrome	Systemic lupus erythematosus	TREX1	
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2009 Aicardi-Goutieres syndrome and related phenotypes: linking nucleic acid metabolism with autoimmunity.
1 [19808788] Hum Mol Genet 18(R2):R130-6 (2009)

TRF1

13124

TRF1

BLM	Rap1	TPP1	
Cell senescence	Shelterin	TRF1	
DNA (helicase)	Telomerase	TRF2	
Pot1	Telomere	WRN	

2011 Telomeres in cancer and ageing.

1 [21115533] Philos Trans R Soc Lond B Biol Sci 366(1561):76-84 (2011)

2010 Unwinding protein complexes in ALternative telomere maintenance.

2 [19911388] J Cell Biochem 109(1):7-15 (2010)

TRF2

13125

TRF2

BLM DNA (helicase)	Pot1 Telomere	TRF1 TRF2	WRN
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2010 Unwinding protein complexes in ALternative telomere maintenance.

1 [19911388] J Cell Biochem 109(1):7-15 (2010)

TRH like peptides

13126

TRH like peptides

TRH like peptides			
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2011

TRH-like peptides.

1

[21114375] *Physiol Res* 60(2):207-15 (2011)

TRH

13127

TRH

CRH Corticotropin releasing hormone GHRH	GnRH Nonthyroidal illness syndrome	Somatostatin Thyroid (Hypothyreosis)	TRH
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2003 Thyrotropin-releasing hormone receptors -- similarities and differences.

1 [12683933] J Mol Endocrinol 30(2):87-97 (2003)

2005 Hypothalamic hormones a.k.a. hypothalamic releasing factors.

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2010 Mechanisms behind the non-thyroidal illness syndrome: an update.

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Triacylglycerol

13128

Triacylglycerol

Diacylglycerol	Phosphatidic acid		
Phosphatidic acid phosphatase	Triacylglycerol		

2006 Roles of phosphatidate phosphatase enzymes in lipid metabolism.
1 [17079146] Trends Biochem Sci 31(12):694-9 (2006)

Calcium (Intracellular)	Heart (Physiology)	Muscle (Physiology)	Triadin
Calcium (sarcoplasmic reticulum)	Histidine rich Ca2 plus binding protein	Receptor (Ryanodine)	
Calsequestrin	Ischemia reperfusion	Receptor (RyR2)	
ERS UFR (Diseases)	Junctin	Sarcoplasmic reticulum	

2005 Triadin: the new player on excitation-contraction coupling block.

1 [15802617] *Circ Res* 96(6):607-9 (2005)

2009 Junctin and the histidine-rich Ca2+ binding protein: potential roles in heart failure and arrhythmogenesis.

2 [19403607] *J Physiol* 587(Pt 13):3125-33 (2009)

2009 Triadin: what possible function 20 years later?

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2009 New roles of calsequestrin and triadin in cardiac muscle.

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5 [19567746] *J Physiol* 587(Pt 13):3069-70 (2009)

2009 Triadin, not essential, but useful.

6 [19567750] *J Physiol* 587(Pt 13):3123-4 (2009)

2012 Ablation of junctin or triadin is associated with increased cardiac injury following ischaemia/reperfusion.

7 [22411973] *Cardiovasc Res* 94(2):333-41 (2012)

2011 On the footsteps of Triadin and its role in skeletal muscle.

8 [21909459] *World J Biol Chem* 2(8):177-83 (2011)

Triage			
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2011 Emergency department triage scales and their components: a systematic review of the scientific evidence.

¹ [21718476] Scand J Trauma Resusc Emerg Med 19(-):42 (2011)

2010 Risk scoring systems for adults admitted to the emergency department: a systematic review.

² [20146829] Scand J Trauma Resusc Emerg Med 18(-):8 (2010)

Triamcinolone acetonide

13131

Triamcinolon Acetonid

Eye and orbita (Neovascularization)	Triamcinolone acetonide		
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2009 Early effects of intravitreal triamcinolone acetonide on inflammation and proliferation
in human choroidal neovascularization.
¹ [19273790] Arch Ophthalmol 127(3):275-81 (2009)

Tribbles3

13132

Tribbles3

Erythropoietin	Podocalyxin like1		
Hemopoiesis (BASKET)	Tribbles3		

2010 **Erythropoietin receptor response circuits.**
1 [\[20173635\] Curr Opin Hematol 17\(3\):169-76 \(2010\)](#)

Basal cell carcinoma	Fibrofolliculoma	Muir Torre s syndrome	Spiradenoma
Basaloid follicular hamartoma	FLCN Folliculin	Neoplasia (Inherited)	Trichilemmoma
Bazex acrokeratosis paraneoplastica	Generalised basaloid follicular hamartoma syndrome	PTCH	Trichodiscoma
Birt Hogg Dube syndrome	Gorlin Goltz phacomatosis Gorlin s syndrome Naevoid basal cell carcinoma	PTEN MMAC1 TEP1	Trichoepithelioma
Brooke Spiegler syndrome	Keratoacanthoma	Seabceous epithelioma	
Cowden s syndrome	MLH1	Sebaceous adenoma	
CYLD Cylindromatosis	Mltiple familial trichoepitheliomas	Sebaceous carcinoma	
Familial cylindromatosis	MSH2	Skin (Neoplasia)	

2005 Genetics of skin appendage neoplasms and related syndromes.

1 [16272260] J Med Genet 42(11):811-9 (2005)

Trichinellosis			
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2009 Epidemiology, diagnosis, treatment, and control of trichinellosis.

1 [19136437] Clin Microbiol Rev 22(1):127-45, Table of Contents (2009)

2002 New aspects of human trichinellosis: the impact of new Trichinella species.

2 [11796866] Postgrad Med J 78(915):15-22 (2002)

2006 Trichinosis: epidemiology in Thailand.

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2011 Trichinella inflammatory myopathy: host or parasite strategy?

4 [21429196] Parasit Vectors 4(-):42 (2011)

Trichloroethylene

13135

Trichloroethylen

Trichloroethylene			
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2006 **Trichloroethylene: mechanisms of renal toxicity and renal cancer and relevance to risk assessment.**

¹ [16421178] Toxicol Sci 91(2):313-31 (2006)

Basal cell carcinoma	Fibrofolliculoma	Muir Torre s syndrome	Spiradenoma
Basaloid follicular hamartoma	FLCN Folliculin	Neoplasia (Inherited)	Trichilemmoma
Bazex acrokeratosis paraneoplastica	Generalised basaloid follicular hamartoma syndrome	PTCH	Trichodiscoma
Birt Hogg Dube syndrome	Gorlin Goltz phacomatosis Gorlin s syndrome Naevoid basal cell carcinoma	PTEN MMAC1 TEP1	Trichoepithelioma
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Familial cylindromatosis	MSH2	Skin (Neoplasia)	

2005 Genetics of skin appendage neoplasms and related syndromes.

1 [16272260] J Med Genet 42(11):811-9 (2005)

Basal cell carcinoma	Fibrofolliculoma	Muir Torre s syndrome	Spiradenoma
Basaloid follicular hamartoma	FLCN Folliculin	Neoplasia (Inherited)	Trichilemmoma
Bazex acrokeratosis paraneoplastica	Generalised basaloid follicular hamartoma syndrome	PTCH	Trichodiscoma
Birt Hogg Dube syndrome	Gorlin Goltz phacomatosis Gorlin s syndrome Naevoid basal cell carcinoma	PTEN MMAC1 TEP1	Trichoepithelioma
Brooke Spiegler syndrome	Keratoacanthoma	Seabceous epithelioma	
Cowden s syndrome	MLH1	Sebaceous adenoma	
CYLD Cylindromatosis	Mltiple familial trichoepitheliomas	Sebaceous carcinoma	
Familial cylindromatosis	MSH2	Skin (Neoplasia)	

2005 Genetics of skin appendage neoplasms and related syndromes.

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Trichomoniasis			
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2004 Trichomoniasis.

- 1 [\[15489349\]](#) Clin Microbiol Rev 17(4):794-803, table of contents (2004)

2004 Treatment of infections caused by metronidazole-resistant Trichomonas vaginalis.

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1998 Clinical and microbiological aspects of Trichomonas vaginalis.

- 3 [\[9564565\]](#) Clin Microbiol Rev 11(2):300-17 (1998)

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- 4 [\[17143810\]](#) Clin Infect Dis 44(1):23-5 (2007)

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Trichorhinophalangeal syndrome

13139

Trichorhinophalangeales Syndrom

Trichorhinophalangeal syndrome			
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1991 **Trichorhinophalangeal syndrome.**
1 [\[1925732\] South Med J 84\(10\):1268-70 \(1991\)](#)

Trichosanthin

13140

Trichosanthin

Antineoplastic agents (Novel target ideas)	Trichosanthin		
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2010 Possible mechanisms of trichosanthin-induced apoptosis of tumor cells.

1 [20225201] Anat Rec (Hoboken) 293(6):986-92 (2010)

Trichosporonosis			
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2004 **Trichosporon asahii as an emerging etiologic agent of disseminated trichosporonosis: a case report and an update.**

¹ [17642680] Indian J Med Microbiol 22(1):16-22 (2004)

Trichostrongylosis

13142

Trichostrongylose

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Fumonisin	Trichothecene	Zearalenone	
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2008 Fumonisin, trichothecenes and zearalenone in cereals.

1 [19330061] *Int J Mol Sci* 9(11):2062-90 (2008)

2011 Trichothecenes: from simple to complex mycotoxins.

2 [22069741] *Toxins (Basel)* 3(7):802-14 (2011)

Ataxia teleangiectasia	Hutchinson Gilford syndrome	TTDA	XPG
Bloom s syndrome	Progeria	Werner s syndrome	
Cockayne s syndrome	Rothmund Thomson s syndrome	Xeroderma pigmentosum	
DNA (Repair and Toxicology)	TFIIH	XPB	
Genetic instability	Trichothiodystrophy	XPD	

2006 Nucleotide excision repair disorders and the balance between cancer and aging.

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2009 From the rarest to the most common: insights from progeroid syndromes into skin cancer and aging.

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2007 Xeroderma pigmentosum, trichothiodystrophy and Cockayne syndrome: a complex genotype-phenotype relationship.

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Obsessive compulsive disorder	SAPAP3	Trichotillomania	
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2005 Dermacase. Trichotillomania.

- 1 [15856968] Can Fam Physician 51(-):509-10 (2005)

1998 Retrospective review of treatment outcome for 63 patients with trichotillomania.

- 2 [9546007] Am J Psychiatry 155(4):560-1 (1998)

2004 Trichotillomania in childhood: case series and review.

- 3 [15121993] Pediatrics 113(5):e494-8 (2004)

2007 Lifting the veil on trichotillomania.

- 4 [17403968] Am J Psychiatry 164(4):568-74 (2007)

2011 Trichotillomania and its treatment: a review and recommendations.

- 5 [21797657] Expert Rev Neurother 11(8):1165-74 (2011)

2009 Multiple rare SAPAP3 missense variants in trichotillomania and OCD.

- 6 [19096451] Mol Psychiatry 14(1):6-9 (2009)

Ascariasis	Helminths and Helminthoses	Trichuriasis	
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2004 Immunity, immunoregulation and the ecology of trichuriasis and ascariasis.

1 [15771679] *Parasite Immunol* 26(11-12):429-41 (2004)

2011 Are we paying too much attention to cardio-pulmonary nematodes and neglecting old-fashioned worms like *Trichuris vulpis*?

2 [21385441] *Parasit Vectors* 4(-):32 (2011)

Heart (Echocardiography)	Mitral valve (Regurgitation)	Tricuspid valve (Regurgitation)	
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2009 The tricuspid valve: current perspective and evolving management of tricuspid regurgitation.

1 [19470900] *Circulation* 119(20):2718-25 (2009)

2009 Right-sided valve disease deserves a little more respect.

2 [19470901] *Circulation* 119(20):2726-34 (2009)

2009 Acute valvular regurgitation.

3 [19564568] *Circulation* 119(25):3232-41 (2009)

2007 Management of tricuspid valve regurgitation.

4 [17228081] *Heart* 93(2):271-6 (2007)

2009 Interventional cardiology perspective of functional tricuspid regurgitation.

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2010 European Association of Echocardiography recommendations for the assessment of valvular regurgitation. Part 2: mitral and tricuspid regurgitation (native valve disease).

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Drug repositioning	Triethylenetetramine ttCuChelator	Wilson s disease	
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2010 Triethylenetetramine pharmacology and its clinical applications.

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Neuroprotective agents	Triflusal		
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2009 Triflusal: an old drug in modern antiplatelet therapy. Review of its action, use, safety and effectiveness.

- 2 [19465361] Hellenic J Cardiol 50(3):199-207 (2009)

Botulinus toxin (Therapeutic use) Nervus trigeminus	SNAP25 Trigeminal nerve (Neuralgia)	TRPV1	
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2001 Trigeminal neuralgia--pathophysiology, diagnosis and current treatment.

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1999 The trigeminovascular system in humans: pathophysiologic implications for primary headache syndromes of the neural influences on the cerebral circulation.

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2009 Retreatment of trigeminal neuralgia with Gamma Knife radiosurgery: is there an appropriate cumulative dose? Clinical article.

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2009 Results of microvascular decompression for trigeminal neuralgia.

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1995 Trigeminal neuropathy: evaluation with MR imaging.

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2003 Treatment options for trigeminal neuralgia.

18 [14670852] BMJ 327(7428):1360-1 (2003)

2007 Trigeminal neuralgia and its management.

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2009 Microvascular decompression as a surgical management for trigeminal neuralgia: a critical review of the literature.

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Trigemino cardiac reflex			
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1991 Trigemino cardiac reflexes.

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Trigger point			
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Triglyceride lipase

13153

Triglyceride lipase

Adipose tissue (Adipocyte) CGI58	Chanarin Dorfman syndrome Lipid droplets	Perilipin Triglyceride lipase	
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2010 Crucial role of CGI-58/alpha/beta hydrolase domain-containing protein 5 in lipid metabolism.

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Trigonoplasty

13154

Trigonoplastie

Trigonoplasty			
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2008 **Current status of Gil-Vernet trigonoplasty technique.**

1 [\[18682815\] Adv Urol -\(-\):536428 \(2008\)](#)

TRIM32

13155

TRIM32

BCA2	RNF5	SMURF2	XRN185
Cbl	SCF (betaTRCP)	TRIM32	
HDM2	SMURF1	Ubiquitin	

2010 Roles of E3 ubiquitin ligases in cell adhesion and migration.

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TRIM5alpha

13156

TRIM5alpha

Cyclophilin A	TRIM5alpha		
HIV1	Virus (Restriction)		

2007 The control of viral infection by tripartite motif proteins and cyclophilin A.

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Trimetazidine			
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Trimethylaminuria

13158

Trimethylaminurie

Trimethylaminuria			
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2001 **Trimethylaminuria: the fish malodor syndrome.**

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**Triosephosphate dehydrogenase
deficiency**

13159

**Triosephosphat Dehydrogenase
Mangel**

Triosephosphate dehydrogenase deficiency			
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1998 The feasibility of replacement therapy for inherited disorder of glycolysis:
triosephosphate isomerase deficiency (review).

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Triploidy

13160

Triploiditaet

Triploidy			
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2002 **Diploid sperm and the origin of triploidy.**
[1](#) [\[11756352\] Hum Reprod 17\(1\):5-7 \(2002\)](#)

Tripod Sign

13161

Tripod Sign

Clinical examination (Neurology)	Tripod Sign		
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2009 **Tripod sign.**
1 [19884752] J Postgrad Med 55(3):211-3 (2009)

Triptans**13162****Triptan**

Almotriptan	Migraine	Telcagepant ttCGRP	
Calcitonin gene related peptide	Naratriptan	Triptans	
Frovatriptan	Sumatriptan	Zolmitriptan	

2003 The triptan formulations: a critical evaluation.

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IgA nephropathy	Natural products	Tripterygium wilfordii Hook F	
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- 2010 **Meta-analysis of Tripterygium wilfordii Hook F in the immunosuppressive treatment of IgA nephropathy.**
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Trisomy X			
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Trisomy13

13165

Trisomie13

Trisomy13			
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Trisomy22

13166

Trisomie22

Trisomy22			
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1975 Trisomy 22. Two new cases and delineation of the phenotype.

1 [\[49427\] J Med Genet 12\(2\):193-9 \(1975\)](#)

Trisomy5q

13167

Trisomie5q

Trisomy5q			
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1987 Clinical manifestations of trisomy 5q.
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Trisomy9

13168

Trisomie9

Trisomy9			
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1985 **Complex cardiac malformation in a case of trisomy 9.**
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Antiinflammatory compounds BRF1	BRF2 RNA (Decay)	RNA (nRNA BASKET) Tristetraproline	
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Triterpenoid

13170

Triterpenoid

Antiinflammatory compounds Antineoplastic agents (Novel target ideas)	Lupeol Natural products	Triterpenoid	
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1984 Bacterial triterpenoids.

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2010 Targeting inflammatory pathways by triterpenoids for prevention and treatment of cancer.

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2009 Lupeol, a novel anti-inflammatory and anti-cancer dietary triterpene.

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Trithorax

13171

Trithorax

DNA (Methylation)	Polycomb		
Neurogenesis (adult)	Trithorax		

2010 Epigenetic regulation of neurogenesis in the adult hippocampus.

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Trk

13172

Trk

CNS (Neoplasia Neuroblastoma)	Trk	TrkA	
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2009 **Trk receptor expression and inhibition in neuroblastomas.**
1 [\[19417027\] Clin Cancer Res 15\(10\):3244-50 \(2009\)](#)

TrkA

13173

TrkA

CNS (Neoplasia Neuroblastoma)	Trk	TrkA	
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2009 **Trk receptor expression and inhibition in neuroblastomas.**
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TrkB

13174

TrkB

Antineoplastic agents (Novel target ideas)	BDNF	TrkB	
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Genetic code	RNA (tRNA)	tRNA synthetases	
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Troglitazone			
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Trogocytosis

13177

Trogozytose

Trogocytosis			
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Interferon tau	Syncytin	Trophoblast	
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Tropial sprue

13179

Tropische Sprue

Tropial sprue			
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Drug development	Transplantation		
Ecology	Tropical medicine		

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Tropical pyomyositis			
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Tropomodulin

13182

Tropomodulin

Actin	Tropomodulin		
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ACTA1 Actin	Congenital fiber type disproportion SEPN1	TPM3 Tropomyosin3 Tropomyosin	
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BNP	Heart (Physiology)	Titin	
CNS (Stroke BASKET)	Pulmonary embolism	Troponin	
Heart (Coronary heart disease BASKET)	Thorax (Pain)		

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Trousseau s syndrome			
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Trovafloxacin

13186

Trovafloxacin

Trovafloxacin			
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ADTB3A	Developmental malformations deafness dystonia OMIM_607371	KIF5A	RAB7
Amyotrophic lateral sclerosis slow progressing ALS8	DTNBP1	Limb girdle muscular dystrophy type 2B	RABGDIA
Amyotrophic lateral sclerosis	Dysferlin	LMAN1 ERGIC53	REP1
ARC syndrome	Elajalde syndrome	Lowe s syndrome	SEC23A
ARL6	Griscelli syndrome II	LYST CHS1	SNAP29
Bardet Biedl syndrome	Factor V (Coagulation)	Martsof syndrome	SPG20 Spartin
beta Actin	Factor VIII (Coagulation)	MCFD2	SPG4 Spastin
beta3 spectrin	Familial hemophagocytic lymphohistiocytosis	Miyoshi s myopathy	Spinal muscular atrophy late onset
CEDNIK syndrome	Griscelli s syndrome III	MLPH	Spinocerebellar ataxia5
Cell secretion (Intracellular transport)	Griscelli s syndrome2	Myosin Ia Myo1a	Syntaxin11
Charcot Marie Tooth disease type 2a	Hereditary spastic paraplegia SPG10	Myosin Va Myo5a	Troyer syndrome SPG20
Charcot Marie Tooth disease type 2b	Hereditary spastic paraplegia SPG4	Myosin VI	UNC13D Munc13 4 HPLH3
Chediak Higashi syndrome	Hermansky Pudlak syndrome	Myosin VIIa	Usher syndrome type Ib
Choroideremia	HPS1	Myosin XVa Myo15a	VAPB
COG7	HPS3	OCRL1	VPS33B
Congenital disorder of glycosylation type IIe	HPS4	OMIM_300104	Warburg Micro syndrome
Cranio lenticulo sutural dysplasia	HPS5	RAB27A	
Deafness (Inherited)	HPS6	RAB3GAP	
	KIF1B		

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4 oxo 2 nonenal	Chemosensation	Prazosine	TRPV2
Allodynia	Cinnamaldehyde	ttalphaadrenergic	TRPV3
Allyl isothiocyanate	ttTRPA1	Resolvin D1	TRPV4
ttTRPA1	Fatty acid amide hydrolase	TRPA1	TRPV6
Analgesics agents and analgetic effects	HC030031 ttTRPA1	TRPC4	URB597 ttFAAH
Blood vessels (Vasodilation)	Hexamethonium bromide	TRPM5	
Butamben	ttganglionblocker	TRPM6	
Cajal Interstitial cells of Cajal	Ion channel (TRP Family)	TRPM7	
Calcium (Physiology Intestines)	Magnesium (Physiology Intestines)	TRPM8	
Cannabis	Mechanotransduction	TRPV1	
	Paclitaxel		

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Blood vessels (Permeability)	Ion channel (TRP Family)	STIM1	TRPM8
Blood vessels (Shear stress)	Lung (Physiology)	TRPC1	TRPV4
Calcineurin	Mammary gland (Neoplasia)	TRPC3	TRPV6
Calcium (Capacitative transport)	NFAT	TRPC4	
Calcium (Endoplasmic reticulum)	Pain (Neurophysiology)	TRPC6	
Calmodulin	Pulmonary edema	TRPM7	

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TRPC3

13190

TRPC3

BTP2 3 5 bis trifluoromethyl pyrazole derivative ttTRPC3 ttTRPC5 Calcineurin Calcium (Capacitative transport) Calcium (Endoplasmic reticulum)	Calmodulin Natural products NFAT St John s wort	TRPC1 TRPC3 TRPC5 TRPC6	TRPC7 TRPV6
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2005 **A functional link between store-operated and TRPC channels revealed by the 3,5-bis(trifluoromethyl)pyrazole derivative, BTP2.**
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AIP4	Ion channel (TRP Family)	TRPC1	TRPV1
Blood vessels (Permeability)	Lung (Physiology)	TRPC4	TRPV4
Blood vessels (Shear stress)	Magnesium (Physiology Intestines)	TRPC6	TRPV6
Blood vessels (Vasodilation)	Mechanotransduction	TRPM5	Ubiquitin
Cajal Interstitial cells of Cajal	Pulmonary edema	TRPM6	
Calcium (Physiology Intestines)	TRPA1	TRPM7	

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TRPC5

13192

TRPC5

BTP2 3 5 bis trifluoromethyl pyrazole derivative ttTRPC3 ttTRPC5 Calcium (Capacitative transport)	Ion channel (TRP Family) Nitric oxide NO	Protein (ptm S nitrosylation) TRPC3	TRPC5
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2005 A functional link between store-operated and TRPC channels revealed by the 3,5-bis(trifluoromethyl)pyrazole derivative, BTP2.
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Action Myoclonus Renal Failure Syndrome	Hypomagnesemia with hypercalciuria familiar	NPHS1 Nephrin	TRPC3
ACTN4 Alpha actinin4	Ion channel (TRP Family)	NPHS2	TRPC4
Blood vessels (Shear stress)	Kidney (FSGS)	Osmosensor	TRPC6
Blood vessels (Vasodilation)	Kidney (Glomerulus)	Pain (Neurophysiology)	TRPC7
Calcium (Physiology renal)	Kidney (Inherited diseases)	Phospholipase C epsilon	TRPM6
CD151 Tetraspanin	Kidney (Podocytes)	Pierson s syndrome	TRPM7
CD2AP	Kidney (Polycystic kidney disease)	PLCE1	TRPM8
Coenzyme Q10	LAMB2 Laminin beta2	Podocin	TRPP2
Congenital nephrotic syndrome finnish type	Laminin	Prostate (Neoplasia)	TRPV2
COQ2	LMNA Lamin C Prelamin A	Pulmonary hypertension	TRPV4
Denys Drash syndrome	LMX1B	SCARB2	TRPV5
Early onset familial nephrotic syndrome	Mammary gland (Neoplasia)	Schimke immunoosseous dysplasia	TRPV6
Epstein s syndrome	Mandibuloacral dysplasia	Sebastian s syndrome	WT1
Fechtner s syndrome	May Hegglin anomaly	SMARCALI	ZMPSTE24
Frasier s syndrome	MYH9	St John s wort	
Galloway Mowat s syndrome	Nail patella syndrome	Steroid resistant nephrotic syndrome	
GMS1	Natural products	SRN1	
		TRPC1	

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11 the systemic circulation.**

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TRPC7

13194

TRPC7

Natural products	TRPC3	TRPC7	
St John s wort	TRPC6	TRPV6	

2010 Simple 2,4-diacylphloroglucinols as classic transient receptor potential-6 activators--
identification of a novel pharmacophore.

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TRPM protein family

13195

TRPM Protein Familie

Ion channel (TRP Family)	TRPM protein family		
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TRPM1

13196

TRPM1

Ion channel (TRP Family)	Skin (Neoplasia Melanoma)	TRPM8	
Neoplasia (Tumor biology and immunology)	TRPM1	TRPV6	
Prostate (Neoplasia)	TRPM2		

2007 TRP channels in cancer.

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TRPM2

13197

TRPM2

Blood vessels (Permeability)	CD38	TRPM1	
CADPR	Neutrophils	TRPM2	

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TRPM3

13198

TRPM3

Cell volume	Osmosensor	TRPV4	
Mefenamic acid	TRPM3		

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Heart (Physiology)	Ion channel (TRP Family)	TRPM4	
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TRPM5

13200

TRPM5

Cajal Interstitial cells of Cajal	Mechanotransduction	TRPM6	TRPV6
Calcium (Physiology Intestines)	TRPA1	TRPM7	
	TRPC4	TRPV1	
Ion channel (TRP Family)	TRPM5	TRPV4	
Magnesium (Physiology Intestines)			

2011 **TRP channels in the digestive system.**

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Acidosis (metabolic)	Diuretic agents (Thiazides)	Magnesium (Hypermagnesuria)	TRPM5
Alkalosis (metabolic)			TRPM6
alpha Kinase family	Gentamicin	Magnesium (Hypomagnesemia)	TRPM7
ATP13A4	Glucocorticoids		
Cajal Interstitial cells of Cajal	Hypomagnesemia with hypercalciuria familiar	Magnesium (Physiology Intestines)	TRPP2
Calbindin D28k	Ion channel (Calcium)	Magnesium (Physiology Kidney)	TRPV4
Calbindin D9k	Ion channel (Magnesium)	Mechanotransduction	TRPV5
Calcium (Hypercalciuria)	Ion channel (TRP Family)	Methods of experimental Nephrology	TRPV6
Calcium (Physiology Intestines)	Kidney (FSGS)	Osmosensor	Urine (Acid)
Calcium (Physiology renal)	Kidney (Inherited diseases)	Tacrolimus FK506	
Claudin16	Kidney (Polycystic kidney disease)	Transporter (Sodium and proton)	
Cnnm2	Kidney (Tubulus Proximal)	TRPA1	
	Kidney (Tubulus TALH)	TRPC4	
		TRPC6	

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alpha Kinase family	Ion channel (TRP Family)	TRPC4	TRPV4
Arterial hypertension (BASKET)	Magnesium (Physiology Intestines)	TRPC6	TRPV5
Cajal Interstitial cells of Cajal	Magnesium (Physiology Kidney)	TRPM5	TRPV6
Calcium (Physiology Intestines)	Mammary gland (Neoplasia)	TRPM6	
Calcium (Physiology renal)	Mechanotransduction	TRPM7	
Ion channel (Calcium)	TRPA1	TRPM8	
Ion channel (Magnesium)	TRPC1	TRPV1	

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Analgesics agents and analgetic effects	Prostate (Neoplasia)	TRPM1	TRPV4
Cannabis	Skin (Neoplasia Melanoma)	TRPM7	TRPV6
Ion channel (TRP Family)	TRPA1	TRPM8	
Mammary gland (Neoplasia)	TRPC1	TRPV1	
Neoplasia (Tumor biology and immunology)	TRPC6	TRPV2	

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TRPML1

13204

TRPML1

Mucopolipidosis ML4	TRPML1	TRPML3	
Mucopolipin	TRPML2		

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TRPML2

13205

TRPML2

Mucolipin	TRPML2		
TRPML1	TRPML3		

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TRPML3

13206

TRPML3

Mucopolipidosis ML4	TRPML1	TRPML3	
Mucopolipin	TRPML2		

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2009 TRPMLs: in sickness and in health.

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Calcium (Physiology renal)	Kidney (Polycystic kidney disease)	Protein kinase G	TRPP2
Cilia	Kidney (Tubulus Collecting Duct)	Signal transduction Urinary flow	TRPV4
Hypomagnesemia with hypercalciuria familiar	Osmosensor	Structure determination at molecular level and finer	TRPV5
Ion channel (TRP Family)	PKD1	TRPC6	
Kidney (FSGS)	PKD2	TRPM6	

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12 Hydroxyeicosatetraenoic acid	Camphor ttTRPV1	L733060 ttNeurokinin1	Resiniferatoxin ttTRPV1
12 s HPETE	Cannabis	Laser (Medical aspects)	RP67580 ttNeurokinin1
2 4 dinitrofluorobenzene	Capsaicin	Liver (Steatohepatosis)	SB366791 ttTRPV1
2 Arachidonoylglycerol	Cardiorenal syndrome	LJO 328	SIRS (Systemic inflammatory response syndrome)
A425619 ttTRPV1	Cell migration	Lung (Pathology)	
Acidosis (BASKET)	CGRP8 37 ttCGRP	Magnesium (Physiology Intestines)	Skin (Barrier)
ADH AVP Vasopressin	Chemosensation	Mechanotransduction	Skin (Hyperemia)
AMG9810 ttTRPV1	Cilia	Methods of experimental Nephrology	SLIGRL ttPAR2
Analgesics agents and analgetic effects	Deoxycorticosterone		Smooth muscle
Anandamide	Dysphagia	N oleoyldopamine	SNAP25
Antiinflammatory compounds	Endocannabinoid	N Palmitoyl vanillamide palvanil	Sodium (Physiology Kidney)
Arachidonoyl serotonin	Endoplasmic reticulum (BASKET)	Nav1 7	Somatostatin
Arterial hypertension (BASKET)	Endothelin	Nerve (Physiology)	STIM1
AS1928370 ttTRPV1	Endotoxin	Nervous system (Inherited diseases)	STOML3
ASIC acid sensitive ion channels	Endovanilloid	Neurodegeneration	Substance P
Asthma (BASKET)	ERS UFR (Inflammation)	Nonivamide	Synovia (BASKET)
Atopic dermatitis	ERSNA efferent renal sympathetic nervous activity	NR1C1 PPAR alpha	Tetrabutylammonium tt PotassiumChannels
ATP	Fatty acid amide hydrolase	Nucleus supraopticus	TGF beta
Autonomous nervous system (Afferents pulmonary)	Fibrosis	Obesity (BASKET)	Thermosensation
Autonomous nervous system (Afferents visceral)	Gastroesophageal reflux disease	ORAI1 CRACM1	Trigeminal nerve (Neuralgia)
Bardet Biedl syndrome	H89 ttPKA	Organum vasculosum laminae terminalis	TRPA1
BayK 8644 ttCalciumLtypechannel	Hemodialysis (Vascular access)	Osmosensor	TRPC4
BBS2	Histamine	P2X7	TRPM5
BBS4	Inflammation (BASKET)	PAC14028 ttTRPV1	TRPM6
Bladder (Neoplasia)	Ion channel (BASKET)	PAF	TRPM7
Bladder (Physiology)	Ion channel (Calcium)	Pain (Neurophysiology)	TRPM8
Blood vessels	Ion channel (Sodium)	Palmitoylethanolamide	TRPV1
	Ion channel (TRP Family)	PAR2	TRPV2
	Irritable bowel	Parkinson s disease	TRPV3
		Pelvis (Kidney)	TRPV4
		Peptide tags	TRPV5

(Physiology)	syndrome	Periaquaeductal gray	TRPV6
Blood vessels (Resistance artery)	Ischemia reperfusion	pH (extracellular)	UCP2
Blood vessels (Vasoconstriction)	Ischemic preconditioning	PKC epsilon V1 2 ttPKCepsilon	Ultraviolet radiation (Toxicology)
Blood vessels (Vasodilation)	Itching	Poly Lys ttPIP2 scavenger	URB597 ttFAAH
Botulinus toxin (Therapeutic use)	Kidney (Fibrosis)	Protein phosphatase2A	Vanilloids
BQ123 ttEndothelinETA	Kidney (Glomerular filtration rate)	RAAS (Renin)	Water (Physiology renal)
BQ788 ttEndothelinETB	Kidney (Inherited diseases)	Receptor (Cannabinoid)	
Cajal Interstitial cells of Cajal	Kidney (Nerves afferent)	Receptor (Neurokinin1)	
Calcitonin gene related peptide	Kidney (Pressure natriuresis)		
Calcium (Capacitative transport)	Kidney (Principal cells)		
Calcium (Intracellular)			
Calcium (Physiology Intestines)			

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Blood vessels (Physiology)	NFATc1	SKF96365	TRPV4
Calcium (Intracellular)	Nucleus supraopticus	ttCalciumStoreop	TRPV5
Cannabis	Osteoclasts	TRPA1	TRPV6
Diabetes insipidus (central)	Paraventricular nucleus	TRPC6	
Ion channel (TRP Family)	Probenecid	TRPM8	
Liver (Cirrhosis)	Prostate (Neoplasia)	TRPV1	
		TRPV2	

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Addiction (Drugs of abuse)	Ion channel (TRP Family)	Thermosensation	TRPV4
Analgesics agents and analgetic effects	Keratocyte	TRPA1	TRPV5
ATP	Natural products	TRPV1	TRPV6
Autonomous nervous system (Afference cutaneous)	Resolvin D1	TRPV2	

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4alpha Phorbol 12 13 didecanoate ttTRPV4	Charcot Marie Tooth disease type 2C	Laser (Medical aspects)	Protein kinase C epsilon
AARS	Chondrocyte	Liver (Cirrhosis)	Protein kinase G
AB159908 ttTRPV4	Cilia	Lung (Pathology)	Pulmonary edema
AC6	CNS (Astrocyte)	Lung (Physiology)	Pulmonary hypertension
Acetylcholine	CNS (Circumventricular organs)	Lyn	Receptor (AngiotensinII AT1)
Acidosis (BASKET)	CNS (Development)	Macrophages	Receptor (Inositol trisphosphate)
ADH AVP Vasopressin	Connexin43	Magnesium (Physiology Intestines)	Receptor (P2X)
Adherens junction	COPD	MAP7	Receptor (P2Y)
AIP4	CYP2C9	Mast cells	Receptor (Progesterone)
AKAP79	Cystic fibrosis	Maxi K	Receptor (Purines and Pyrimidines)
Allodynia	Cytochrome P450 epoxygenase	Mechanotransduction	Receptor (Ryanodine)
Analgesics agents and analgetic effects	Dantrolene ttRyR1 ttRyR3	MEF2c	Receptor (RyR2)
Anandamide	DCTN1	Megalencephalic leukoencephalopathy with subcortical cysts	Resolvin D1
Angiogenesis	Dimethylallyl pyrophosphate	Merkel cells	Ryanodine ttRyR
Annexin A2	DYNC1H1	Metatropic dysplasia	Salivary gland (Physiology)
Antiinflammatory compounds	Endothelial dysfunction	Methods of biochemical experimentation	Serotonin
AQP2	Epithelium (Transport)	Methyl arachidonyl fluorophosphonate ttPLA2	SETX
AQP4 Aquaporin4	Epoxyeicosatrienoic acid EET	MFN2	SIADH
AQP5	Esophagus (Physiology)	Miconazole ttTRPV4	Signal transduction Temperature
Arachidonyl trifluoromethyl ketone ttPLA2	Eye (Glaucoma)	MLC1	Signal transduction Urinary flow
Asthma (BASKET)	Eye and orbita (Anatomy)	MS PPOH ttEpoxygenase	Skin (Barrier)
ATP	Familial digital arthropathy brachydactyly	Multiple sclerosis	Smooth muscle
ATP7A	Fibrocystin	Muscle (Physiology)	Sodium (Hyponatremia)
Autonomous nervous system (Afference cutaneous)	Focal adhesion	Musculoskeletal system (Genetic diseases)	Sodium (Salt)
Autonomous nervous system (Afferents visceral)	Gap junction	N methylsulfonyl 2 2 propynyloxy benzenhexanamide ttP450epoxygenase	Spinal muscular atrophy congenital distal
Autonomous nervous system (various reflexes)	GARS	Natural products	Spinal muscular atrophy scapuloperoneal
beta Arrestin	Glucose (Hyperglycemia)	NEFL	Spondyloepiphyseal dysplasia Maroteaux type Pseudo Morquio syndrome type 2
	Go6976 ttPKCalpha		

beta Catenin	GSK1016790A ttTRPV4	Nervous system (Inherited diseases)	Spondylometaphyseal dysplasia Kozlowski type
beta cell (Pancreas)	HC030031 ttTRPA1	NFATc1	STIM1
Biliary system (Cholangiocyte)	HC067047 ttTRPV4	Nucleus supraopticus	Structure determination at molecular level and finer
Biliary system (Malformation)	Histamine	Obesity (BASKET)	Substance P
BKCa	HSPB1	Organum vasculosum laminae terminalis	Synovia (BASKET)
Bladder (Physiology)	HSPB3	OS9	Thermoregulation
Blood vessels (Permeability)	HspB8	OSM9	Thermosensation
Blood vessels (Physiology)	Hydrogen peroxide H2O2	Osmopressor response	Tight junction
Blood vessels (Resistance artery)	Hypacusis	Osmosensor	TRPA1
Blood vessels (Shear stress)	Hypomagnesemia with hypercalciuria familiar	Osteoarthritis	TRPC1
Blood vessels (Vasoconstriction)	IAPP islet amyloid polypeptide	Osteoclasts	TRPC4
Blood vessels (Vasodilation)	Iberiotoxin ttBKalphaChannel	Ovary (Physiology)	TRPC6
Brachyolmia	IGHMBP2	Overactive bladder	TRPM3
BSCL2 Seipin	Inflammation (BASKET)	Oxygen (Hypoxia)	TRPM5
Butamben	Inflammatory bowel diseases	P selectin	TRPM6
Caffeine ttRyR	Integrin	P2Y12	TRPM7
Cajal Interstitial cells of Cajal	Ion channel (BASKET)	Paclitaxel	TRPM8
Calcitonin gene related peptide	Ion channel (Calcium T Type)	PACOCF3 ttPLA2	TRPP2
Calcium (Capacitative transport)	Ion channel (Potassium)	PACSIN3	TRPV1
Calcium (Endoplasmic reticulum)	Ion channel (TRP Family)	PAR2	TRPV2
Calcium (Hypercalcemia)	Ischemia reperfusion	PAR4	TRPV3
Calcium (Intracellular)	Ischemic preconditioning	Parastremmatic dysplasia	TRPV4
Calcium (Physiology Intestines)	Kidney (FSGS)	PDE5	TRPV5
Calcium (Physiology renal)	Kidney (Inherited diseases)	Peptide tags	TRPV6
Calcium (sarcoplasmic reticulum)	Kidney (Intercalated cell)	Peroxyntirite	Tubulin
Calcium (Spark)	Kidney (Physiology)	pH (extracellular)	Ubiquitin
	Kidney (Polycystic kidney disease)	Phospholipase A2	Urothelium
	Kidney (Principal cells)	PKD1	Vasoactive intestinal peptide
	Kidney (Tubulus ascending thin limb)	PKD2	Ventilation (Barotrauma)
		PLEKHG5	Water (Neurophysiology)
		Potassium (Physiology renal)	Water (Physiology renal)
		Propargyloxyphenyl	WNK1

Calcium (Sparklets)	Kidney (Tubulus CCD)	hexanoic acid ttP450epoxygenase	WNK4
Calmodulin dependent protein kinase	Kidney (Tubulus CNT)	Protein (ptm S nitrosylation)	Xestospongion C ttIP3R
Calmodulin	Kidney (Tubulus Collecting Duct)	Protein kinase C alpha	
Calsenilin KCNIP3 CSEN DREAM	Kidney (Tubulus Distal Convolutod)		
Cannabis	Kidney (Tubulus TALH)		
CD98 4F2HC			
Cell volume			
Cephalgia (BASKET)			
CGMP			

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1 oleoyl acetyl sn glycerol ttPKC	Endoglycosidase F	Kv1 2	RANKL
17 beta Estradiol	Estrogen	Kv1 3	Rapamycin
4F2 LAT	Familial hyperkalemic hypertension	Kv1 4	Receptor (RXR)
80K H	FGF23	Kv1 5	Receptor (Vitamin D)
Acidosis (metabolic)	FKBP52	Lithocholic acid	Ronacaleret ttCASR
Alkalosis (metabolic)	Furosemide Frusemide	Magnesium (Hypermagnesiuria)	Ruthenium red
Annexin2	Galectin1	Magnesium (Hypomagnesiemia)	S100A10
ASCT2	Gantamicin	Magnesium (Physiology Kidney)	S100g
ASIC1	Gentamicin	Maxi K	SCN5A
ATP	Gitelman s syndrome	Membrane potential	SGK1
ATP13A4	Glucocorticoids	Methods of experimental Nephrology	SGK3
beta Glucuronidase	GluR6	Mineralocorticoids	SLC12A3 NCC
Bradykinin	GLUT1	mTORC2	SLC26A4 Pendrin
BSPRY	GSK3	NaDC	SLC2A4 GLUT4
Calb1	GST pull down assay	NaPiIIB	SLC5A1 SGLT1
Calbindin D28k	Hearing (Neurophysiology)	NCC	SMIT
Calbindin D9k	Hypercalciuria idiopathic	NCX1	SN1
Calcification	Hypomagnesemia with hypercalciuria familial	Nedd4 2	Spp1
Calcium (Hypercalciemia)	Ion channel (BASKET)	Nephrolithiasis	Syntaxin6
Calcium (Hypercalciuria)	Ion channel (Calcium)	NHE3	Tacrolimus FK506
Calcium (Hypocalciuria)	Ion channel (Magnesium)	NHERF2	Testosterone
Calcium (Physiology Intestines)	Ion channel (Sodium ENaC)	NHERF4	TIF1alpha
Calcium (Physiology renal)	Ion channel (TRP	NKCC2	Tissue transglutaminase
			Transporter (Calcium)
			Transporter (Chloride and bicarbonate)

Calmodulin	Family)	NPT2c	TRPC6
Car2	JE049 ttBradykinin	Osmosensor	TRPM6
CASR	Kallikrein	Osteocalcin	TRPM7
Cell volume	KCNQ1	Osteoclasts	TRPP2
CFTR ABCC7	KCNQ2	Osteopontin	TRPV1
Chlorothiazide	KCNQ3	Parvalbumin	TRPV2
Ciclosporin ttMPT	KCNQ4	Pendred s syndrome	TRPV3
Claudin16	KCNQ5	PepT2	TRPV4
Claudin2	Kidney (FSGS)	Peptide tags	TRPV5
CLCN2 CIC2	Kidney (Intercalated cell)	pH (extracellular)	TRPV6
Cnnm2	Kidney (Polycystic kidney disease)	pH (Intracellular)	Urine (Acid)
Curcumin	Kidney (Principal cells)	Phosphomannomutase 2 PMM2	Ussing chamber
Cyp24a1	Kidney (Tubulus CCD)	PMCA1b	Vitamin D
Cysteine scanning mutagenesis	Kidney (Tubulus CNT)	Pro Urine	Vitamin D3 (Calcitriol)
Diuretic agents (Thiazides)	Kidney (Tubulus Collecting Duct)	Prostate (Anatomy)	Volume contraction ECV
Docosahexaenoic acid	Kidney (Tubulus Distal Convoluted)	Protein (Transport)	VSOAC
EAAT1	Kidney (Tubulus MCD)	Protein kinase A	WNK3
EAAT2	Kidney (Tubulus Proximal)	Protein kinase C	WNK4
EAAT3	Kidney (Tubulus TALH)	PTH (Parathyroid hormone)	
EAAT4	Kidney (Tubulus)	Pthlh	
EAAT5	Kidney (Tubulus)	RAAS (Renin)	
Econazole	Kir1 1 ROMK	RAB11A	
	Klotho		
	Kv1 1		

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2007
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1 alpha hydroxylase	EAAT3	Mammary gland (Neoplasia)	RANKL
17 beta Estradiol	EAAT4	Mechanotransduction	Rapamycin
1alpha dihydroxycholecalciferol	EAAT5	Methods of genetic diagnosis	Receptor (RXR)
2 Aminoethoxydiphenyl borate	Econazole	MgATP	Receptor (Vitamin D)
20 Epi 1 25 dihydroxyvitamin D3	Edelfosine ttPLC	Mineralocorticoids	RGS2
25 hydroxycholecalciferol	EGTA ttCalciumchelator	mTORC2	RhoA associated coiled coil forming kinase
4F2 LAT	Endoglycosidase F	NaDC	Runx2
Aldosterone (Pseudohypoaldosteronism)	Estrogen	NaPiIIb	Ruthenium red
Ankyrin repeat	Fatty acids (Omega3)	Natural products	S100A10
Annexin2	Fatty acids (Omega6)	NCC	S100g
ASCT2	FGF23	NCX1	SCN5A
ASIC1	Forskolin	Nedd4 2	SGK1
ATP	Fura2	Neoplasia (Tumor biology and immunology)	SGK3
Avene Thermal Spring Water	Furosemide Frusemide	Nephrolithiasis	Skin (Neoplasia Melanoma)
B cell (Immunology)	G Protein coupled receptor	NewPort Green DCF	SLC26A4 Pendrin
BAPTA AM ttCa2i	Gantamicin	NFAT	SLC2A4 GLUT4
beta Glucuronidase	Gentamicin	NHE3	SLC5A1 SGLT1
Bone (Physiology)	Glucocorticoids	NHERF2	SMIT
Bone Sialoprotein	GluR6	NHERF4	SN1
BSPRY	GLUT1	Nipsnap1	Spinophilin
BTP2 3 5 bis trifluoromethyl pyrazole derivative ttTRPC3 ttTRPC5	GSK3	Nipsnap2	Spp1
Cajal Interstitial cells of	Hearing (Neurophysiology)	NKCC2	Src
	IK Ca1	Npt2a	St John s wort
	In vivo chromatin immunoprecipitation	NPT2c	

Cajal	analysis	OCRL1	STAT5
Calb1	Interleukin10	Osteoblasts	Stomach (Neoplasia)
Calbindin D28k	Ion channel (BASKET)	Osteocalcin	Tamoxifen
Calbindin D9k	Ion channel (Calcium L type)	Osteoclasts	TIF1alpha
Calcification	Ion channel (Calcium)	Osteopontin	Transporter (Calcium)
Calcineurin	Ion channel (Magnesium)	Osterix	Transporter (Chloride and bicarbonate)
Calcium (Capacitative transport)	Ion channel (Potassium)	PDZK2	
Calcium (Chelator)	Ion channel (Sodium ENaC)	Pendred s syndrome	TRPA1
Calcium (Endoplasmic reticulum)	Ion channel (TRP Family)	PepT2	TRPC1
Calcium (Hypercalciuria)	KCNQ1	Peptide tags	TRPC3
Calcium (Indicator)	KCNQ2	PHEX	TRPC4
Calcium (Intracellular)	KCNQ3	Phosphatidylinositol 4 5 bisphosphate 5 phosphatase	TRPC6
Calcium (Physiology Intestines)	KCNQ4	Phosphatidylinositol 4 5 bisphosphate	TRPC7
Calcium (Physiology renal)	KCNQ5	Phosphatidylinositol 4 kinase	TRPM1
Calmodulin	Keratinocyte	Phosphatidylinositol phosphate	TRPM5
Calphostin C	Keratocyte	Phospholipase C	TRPM6
Capsaicin	Kidney (Intercalated cell)	Phosphomannomutase 2 PMM2	TRPM7
Car2	Kidney (Principal cells)	PIP5K3 PIKfyve	TRPM8
CASR	Kidney (Tubulus CCD)	PMCA1	TRPV1
Cell volume	Kidney (Tubulus CNT)	PMCA1b	TRPV2
CFTR ABCC7	Kidney (Tubulus Distal Convoluted)	Pregnancy (Physiology)	TRPV3
Chlorothiazide	Kidney (Tubulus MCD)	Pro Urine	TRPV4
Chromatin immunoprecipitation	Kir1 1 ROMK	Progesterone	TRPV5
Claudin15 CLDN15	Klotho	Prolactin (BASKET)	TRPV6
Claudin2	Kv1 1	Prostate (Anatomy)	U73122 ttPLC
Claudin3	Kv1 2	Prostate (Neoplasia)	Ubiquitin
CLCN2 CIC2	Kv1 3	Protein (protein binding)	Ussing chamber
Curcumin	Kv1 4	Protein (Transport)	Vitamin D
CYP24A1 1 25 hydroxyvitamin d3 24 hydroxylase	Kv1 5	Protein kinase A	Vitamin D3 (Calcitriol)
Cyp24a1	Lithocholic acid	Protein kinase B Akt	VSOAC
CYP27B1 25OHD 1alpha hydroxylase	Lowe s syndrome	Protein kinase C betaII	WNK3
	LRP5 LDL Receptor		WNK4
			Wortmannin

Cysteine scanning mutagenesis	Related Protein5 Arrow	PSGR	
Dent s syndrome	Magnesium (Hypermagnesiuria)	Pthlh	
Diuretic agents (Thiazides)	Magnesium (Physiology Intestines)	RAB11A	
Docosahexaenoic acid	Magnesium (Physiology Kidney)		
EAAT1			
EAAT2			

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Trpzip2

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Trpzip2

Protein (folding)	Trpzip2		
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TRU016 ttCD37

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TRU016 ttCD37

Alemtuzumab ttCD52	CD20	GA101 ttCD20	Ofatumumab ttCD20
Blinatumomab ttCD19	CD37	Leukemia (chronic lymphatic)	TRU016 ttCD37
CD19	Flavopiridole	Lumiliximab ttCD23	

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Truncus Arteriosus

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Trypanosoma brucei

Trypanosoma brucei			
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Acanthamoeba	Echinococcosis	Leishmaniasis	Plasmodium knowlesi
Apicomplexan parasites	Entamoeba	Malaria	Regulatory T cell
Apolipoprotein LI	Giardia lamblia	Methylglyoxal	Rhoptries
Balamuthia mandrillaris	Haptoglobin related protein	Microneme	Schistosoma
CD163	Haptoglobin	Microsporidiosis	Sparganosis
Chagas disease	Heart (Cardiomyopathy BASKET)	Naegleria fowleri	Trypanosomiasis Sleeping disease
CNS (Infection)	Heme oxygenase	Paragonimiasis	

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Tryptamine

13219

Tryptamin

beta Phenylethylamine	Octopamine	Syneprhine	
Ergotamine	Phenethylamine	Tryptamine	
Hallucinogenes	Receptor (Biogenic Amines TA1 TAR1)	Tyramine	

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Tryptase

13220

Tryptase

Carboxypeptidase A	Chymase	Tryptase	
CathepsinC	Mast cells		

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Tryptophan 2 3 dioxygenase

13221

Tryptophan 2 3 dioxygenase

IDO Indoleamine oxygenase	Tryptophan 2 3 dioxygenase		
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2008 **Exploring the mechanism of tryptophan 2,3-dioxygenase.**
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Amino acid (Aromatic)	Phenylalanine hydroxylase	Tetrahydrobiopterin	
Aromatic L amino acid decarboxylase	Phenylketonuria	Tryptophan hydroxylase	
Dopamine	Serotonin	Tyrosine hydroxylase	

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Tryptophan tryptophylquinone TTQ

13223

Tryptophan Tryptophylquinone TTQ

Enzyme structure and chemistry	MauG	Tryptophan tryptophylquinone TTQ	
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Enzyme structure and chemistry	Heme dioxygenases	Tryptophan	
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TSAP6

13225

TSAP6

AMP activated protein kinase	DRAM	Protein kinase B Akt	TSC2 Tuberin
Autophagy	Endosom	PTEN MMAC1 TEP1	
Caveolin and caveoles	IGFBP3	Sestrin1	
Cell Secretion (Exosomes)	MTOR	Sestrin2	
Chmp4C	P53	TSAP6	

2010 p53 regulation of the IGF-1/AKT/mTOR pathways and the endosomal compartment.

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AMP activated protein kinase	MTOR	PI3K	TSC1 Hamartin
Cell polarity	mTORC1	Pmel17	TSC2 Tuberin
LKB1	Neuron (Axon)	RHEB	Tuberous sclerosis
Lymphangioleiomyomatosis	P53	SAD	

2004 A patient with TSC1 germline mutation whose clinical phenotype was limited to lymphangioleiomyomatosis.

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AMP activated protein kinase	IGFBP3	Pmel17	TSAP6
Autophagy	LKB1	Polycystin	TSC1 Hamartin
Caveolin and caveoles	Lymphangi leiomyomatosis	Protein kinase B Akt	TSC2 Tuberin
Cell polarity	MTOR	PTEN MMAC1 TEP1	Tuberous sclerosis
Cell Secretion (Exosomes)	mTORC1	RHEB	
Chmp4C	Neuron (Axon)	SAD	
DRAM	P53	Sestrin1	
Endosom	PI3K	Sestrin2	

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TSE diseases			
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TSG6

13229

TSG6

Inflammation (BASKET)	Inter alpha inhibitor	TSG6	
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2003 TSG-6: a multifunctional protein associated with inflammation.

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Thyroid (Neoplasia)	TSH		
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TSLC1 IGSF4

13231

TSLC1 IGSF4

TSLC1 IGSF4			
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**TSLP Thymic stromal
lymphopoietin**

13232

**TSLP Thymic stromal
lymphopoietin**

Asthma (BASKET)	Epithelium (Immunology)	Interleukin4	T cell (Th2)
Atopic dermatitis	Interleukin15	Interleukin7	TSLP Thymic stromal lymphopoietin
Basophils	Interleukin21	Interleukin9	
Common cytokine receptor gamma chain	Interleukin25	OX40	
Dendritic cell (Immunology)	Interleukin17E	OX40L	
	Interleukin33		

2010 Thymic stromal lymphopoietin.

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Tspan12

13233

Tspan12

Angiogenesis	Frizzled4	Norrin	
Eye (Retina BASKET)	LRP5 LDL Receptor Related Protein5 Arrow	Tspan12	

2010 The Norrin/Frizzled4 signaling pathway in retinal vascular development and disease.

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TSPO

13234

TSPO

Brain injury	TSPO		
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Tsutsugamushi s disease

13235

Tsutsugamushi Erkrankung

Tsutsugamushi s disease			
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[1](#) [\[8593201\] J Korean Med Sci 10\(4\):227-38 \(1995\)](#)

TT virus			
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TTDA

13237

TTDA

TFIIH Trichothiodystrophy	TTDA XPB	XPB	
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2009 Trichothiodystrophy view from the molecular basis of DNA repair/transcription factor
TFIIH.

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TTF1 NKX2 1

13238

TTF1 NKX2 1

Brain lung thyroid syndrome	TTF1 NKX2 1		
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2009 Five new TTF1/NKX2.1 mutations in brain-lung-thyroid syndrome: rescue by PAX8 synergism in one case.
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TTP (RNA binding protein)

13239

TTP (RNA binding protein)

HuR	TTP (RNA binding protein)		
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Tub

13240

Tub

Tub	TULP2		
TULP1	TULP3		

2002 The tubby-like proteins, a family with roles in neuronal development and function.

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Tubby mouse

13241

Tubby Maus

Agouti	Krox20 Egr2	Obesity (BASKET)	Zucker rat
Arcuate nucleus	Leptin	Otsuka Long Evans	
Db mouse	Neuropeptide Y	Tokushima fatty rat	
Dorsomedial nucleus	Nutrition (Neuroendocrinology)	OLETF rat	
Koletsky rat	ob ob mouse	Paraventricular nuclei	
		Tubby mouse	
		Ventromedial nucleus	

2006 Neuropeptide Y in normal eating and in genetic and dietary-induced obesity.

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Tubby protein domain

13242

Tubby Proteindomaene

ANTH protein domain	C2 protein domain	Lipid binding proteins	Tubby protein domain
BAR protein domain	ENTH protein domain	PDZ protein domain	
Biomembranes (BASKET)	FERM protein domain	PH protein domain	
C1 protein domain	FYVE protein domain	PX protein domain	

2009 **Lipid binding domains: more than simple lipid effectors.**

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Abdominal cocoon	Flow cytometry	Lipoxin	Pneumocystis carinii Pneumocystis jirovicii
Adalimumab tTNFalpha	Foam cell	Liver (Diseases)	Polymyositis
Adenosine deaminase	FoxP3	Lung (Lipoid pneumonia)	Poncet s disease
Aids	Gastrointestinal stromal cell tumor GIST	Lung (Toxicology)	Pseudolymphoma (Lymphomatoid granulomatosis)
Antigen presentation and processing	Granulomatous diseases	Lung and bronchial system (Neoplasia)	Pseudolymphoma (Plasma cell granuloma)
Apoptosis	Heart (Cardiomyopathy dilated)	Lymphoma (BASKET)	Sarcoidosis
Arthritis (rheumatoid)	HIF1alpha und HIF1 (BASKET)	Lymphoma (Hodgkin)	Silicone
Autophagy	Histoplasmosis	Macrophages	Silicosis
B cell (Immunology)	Immune reconstitution	MTOR	Slack skin disease
Bacillus calmette guerin	Inflammation resolution	Mycobacterium avium	T cell (Th17)
Bartonella henselae	Interferon gamma	Neoplasia (Tumor biology and immunology)	Testis (Neoplasia Seminoma)
Calcium (Hypercalcemia)	Interleukin17	Osteoarthritis	Testis (Neoplasia)
Candida (BASKET)	Interleukin23	Ovary (Neoplasia)	Tomosynthesis
Coccidioidomycosis	Interleukin24 MDA7	Oxygen (Hypoxia)	Tuberculosis
Crohn s disease	Intracellular pathogens	Paracoccidiomycosis	Unfolded protein response
Cryptococcosis	Langerhans cell histiocytosis	Pericarditis	Wegener s granulomatosis
Fat necrosis subcutaneous of the newborn	Lepira	Pericardium (Effusion and tamponade)	

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Angelman s syndrome	Fragile X syndrome	Neuroigin3 NLGN3	Thalidomide
Autism	Glycolysis	Neuroigin4 NLGN4	TSC1 Hamartin
Bone (CT)	HOXA1	NRXN1 Neurexin1	TSC2 Tuberin
Catch22	Kidney (Neoplasm)	Phenylketonuria	Tuberous sclerosis
CMV	Lymphangi leiomyomatosis	PTEN MMAC1 TEP1	Valproic acid
Cornelia de Lange syndrome	MECP2	Rapamycin	Von Hippel Lindau syndrome
Down s syndrome	Neoplasia (Tumor biology and immunology)	Rett s syndrome	
Epilepsy (BASKET)	Neuroendocrine system (Neoplasia)	Rubella	
Everolimus	Neurofibromatosis	SHANK3	

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42

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Tubulin

13245

Tubulin

AHSP	Collagen	Microtubuli	Tubulin
Annexin A2	Huntingtin	P47	
Chaperone	HYPK	TRPV4	

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Morphogenesis (Development)	Tubulogenesis (Development)	Wnt beta Catenin TCF	
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Tudor

13247

Tudor

Argonaute	PRMT5	Tudor	
PIWI	RNA (piRNA)		

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TUG

13248

TUG

ACAP1 Cell secretion (Granule secretion) Clathrin	GGA Insulin (BASKET) IRAP	LRP1 SLC2A4 GLUT4 Sortilin	TUG Ubc9
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Bacteria (Pili)	Host pathogen interaction	MIRNA 155	RNA (MicroRNA)
Biological warfare	Inflammasome	Pyrin	Tularemia
Endotoxin	Intracellular pathogens	Pyroptosome	

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TULP1

13250

TULP1

Tub TULP1	TULP2 TULP3		
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TULP2

13251

TULP2

Tub	TULP2		
TULP1	TULP3		

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TULP3

13252

TULP3

Tub	TULP2		
TULP1	TULP3		

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CNS (MRT)	Tumefactive demyelination		
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ECRG4	Lung and bronchial system (Neoplasia NSCLC)	Ras	
Grb2		Tnk1 Kos1	
HDAC1	Maspin	Tumor suppressor	
	Neoplasia (Carcinogenesis)		

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Tungiasis

13255

Tungiasis

Tungiasis			
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Tungsten

13256

Wolfram

Enzyme structure and chemistry	Molybdenum	Tungsten	
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Tunicamycin

13257

Tunicamycin

A23187 Calpain Dithiothreitol	ERS UFR (Induced Mediators) ERS UFR (Inducers experimental) PON2 Paraoxonase2	Thapsigargin Tunicamycin	
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Cytonemes	Tunneling nanotube		
Prions and associated diseases	Virus (BASKET)		

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Aorta and great vessels (Aneurysm) Catch22	CNS (Development) Fragile X syndrome	Turner s syndrome Williams syndrome	
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Turtle

13260

Schildkroete

Navigation (small scale)	Turtle		
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History of medicine	Tuskegee (Ethics)		
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Diabetes mellitus (Involvement kidney)	Systemic lupus erythematosus	TWEAK Fn14	
Kidney (Disease models)	TRAIL APO2		

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Pregnancy (Selective fetal reduction)	Prenatal therapy	Twin to twin transfusion syndrome	
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Twinfilin

13264

Twinfilin

Actin	Twinfilin		
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Cytokinesis KLHDC8B	Lymphoma (Hodgkin) Twinning		
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Bmi1	Head (Development)	Neoplasia (Tumor biology and immunology)	Twist
Epithelio mesenchymal transition	Mammary gland (Development)	Polycomb	
Extremities (Development)	Mammary gland (Neoplasia)	SNAIL	
Gli3	Neoplasia (Invasion and metastasis)	Stem cell (Neoplasia)	

2008 Regulation of cancer cell survival, migration, and invasion by Twist: AKT2 comes to interplay.

¹ [18281467] Cancer Res 68(4):957-60 (2008)

2004 Twist induces an epithelial-mesenchymal transition to facilitate tumor metastasis.

² [15640618] Cancer Biol Ther 3(11):1058-9 (2004)

2002 Twist functions in mouse development.

³ [12141426] Int J Dev Biol 46(4):401-13 (2002)

2011 Direct activation of Bmi1 by Twist1: implications in cancer stemness, epithelial-mesenchymal transition, and clinical significance.

⁴ [21733352] Chang Gung Med J 34(3):229-38 (2011)

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⁵ [16651402] Cancer Res 66(9):4549-52 (2006)

2010 Key signalling nodes in mammary gland development and cancer. The Snail1-Twist1 conspiracy in malignant breast cancer progression.

⁶ [20594364] Breast Cancer Res 12(3):206 (2010)

Twist1

13267

Twist1

Epithelio mesenchymal transition	MSX2	SOX9	Twist2
Heart (Development)	Saethre Chotzen syndrome	TBX20	
MSX1	Scleraxis	Twist1	

2011 Redundant or separate entities?--roles of Twist1 and Twist2 as molecular switches during gene transcription.

¹ [20935057] Nucleic Acids Res 39(4):1177-86 (2011)

2008 Phosphoregulation of Twist1 provides a mechanism of cell fate control.

² [18855684] Curr Med Chem 15(25):2641-7 (2008)

2010 Transcriptional regulation of heart valve progenitor cells.

³ [20039031] Pediatr Cardiol 31(3):414-21 (2010)

Twist2

13268

Twist2

Twist1	Twist2		
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2011 Redundant or separate entities?--roles of Twist1 and Twist2 as molecular switches during gene transcription.

¹ [20935057] Nucleic Acids Res 39(4):1177-86 (2011)

Ask1	Etoposide	P38MAPK	
Ceramide	Inflammation (BASKET)	Thioredoxin	
Diabetes mellitus (Involvement eye)	JNK	Txnip	

2008 Ceramide induces p38 MAPK and JNK activation through a mechanism involving a
 1 thioredoxin-interacting protein-mediated pathway.
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2012 TXNIP links innate host defense mechanisms to oxidative stress and inflammation in
 2 retinal Muller glia under chronic hyperglycemia: implications for diabetic retinopathy.
 [22474421] Exp Diabetes Res 2012():438238 (2012)

Tyk2

13270

Tyk2

Immunodeficiency (Inherited)	Tyk2		
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2006 Human tyk2 kinase deficiency: another primary immunodeficiency syndrome.

1 [17098200] *Immunity* 25(5):695-7 (2006)

Tylosin

13271

Tylosin

Tylosin			
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2008 **Control of tylosin biosynthesis in *Streptomyces fradiae*.**

1 [\[18852501\]](#) J Microbiol Biotechnol 18(9):1485-91 (2008)

Cardiovascular risk	Type D personality		
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2005 Type D personality: the heart, stress, and cortisol.

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2010 Type D personality in the general population: a systematic review of health status, mechanisms of disease, and work-related problems.

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Paratyphus	Typhus		
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2009 Typhus and other rickettsioses: emerging infections in Germany.

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2007 Immunological, cellular and molecular events in typhoid fever.

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1992 Improvement in survival from typhoid ileal perforation. Results of 221 operative cases.

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2005 Remember typhoid fever as a cause of acute nephritic syndrome even in Japan.

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2011 Multidrug-resistant typhoid fever: a review.

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Tyramine

13274

Tyramin

beta Phenylethylamine Octopamine	Receptor (Biogenic Amines TA1 TAR1) Synephrine	Tryptamine Tyramine	
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2007 Trace amine-associated receptor 1-Family archetype or iconoclast?

1 [17888514] Pharmacol Ther 116(3):355-90 (2007)

TYRO3

13275

TYRO3

AXL MER	TL1A TYRO3		
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2008 **Immunobiology of the TAM receptors.**
1 [\[18421305\] Nat Rev Immunol 8\(5\):327-36 \(2008\)](#)

Tyrosinase

13276

Tyrosinase

Tyrosinase			
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2009 **An updated review of tyrosinase inhibitors.**
1 [\[19582213\] Int J Mol Sci 10\(6\):2440-75 \(2009\)](#)

Amino acid (Aromatic)	Phenylalanine hydroxylase	Tetrahydrobiopterin	
Aromatic L amino acid decarboxylase	Phenylketonuria	Tryptophan hydroxylase	
Dopamine	Serotonin	Tyrosine hydroxylase	

2004 Tyrosine hydroxylase phosphorylation: regulation and consequences.

1 [15569247] J Neurochem 91(5):1025-43 (2004)

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Neoplasia (Carcinogenesis)	Neoplasia (Fusion oncogenes)	Tyrosine kinase (BASKET)	
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1998 The Croonian Lecture 1997. The phosphorylation of proteins on tyrosine: its role in cell growth and disease.

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Personalized medicine RET	Thyroid (Neoplasia medullary thyroid cancer) Tyrosine kinase (Inhibitors)		
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2010 Anti-angiogenic tyrosine kinase inhibitors: what is their mechanism of action?

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2007 PTEN-mediated resistance to epidermal growth factor receptor kinase inhibitors.

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2010 Molecular mechanisms of acquired resistance to tyrosine kinase targeted therapy.

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2011 How to Treat a Signal? Current Basis for RET-Genotype-Oriented Choice of Kinase Inhibitors for the Treatment of Medullary Thyroid Cancer.

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Insulin (resistance)	Tyrosine phosphatase		
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2007 Proteomic approaches to studying protein tyrosine phosphatases.

1 [\[17460790\]](#) Mol Biosyst 3(5):308-16 (2007)

2003 Protein tyrosine phosphatases: the quest for negative regulators of insulin action.

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2002 Protein-tyrosine phosphatases: emerging targets for therapeutic intervention in type 2 diabetes and related states of insulin resistance.

4 [\[12050202\]](#) J Clin Endocrinol Metab 87(6):2474-80 (2002)

Tyrosine

13281

Tyrosin

Catecholamines	Phenylalanine	Tyrosine	
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1996 Tyrosine and its catabolites: from disease to cancer.

1 [8790725] Acta Biochim Pol 43(1):209-16 (1996)

2007 Tyrosine, phenylalanine, and catecholamine synthesis and function in the brain.

2 [17513421] J Nutr 137(6 Suppl 1):1539S-1547S; discussion 1548S (2007)

Adenine phosphoribosyl transferase	Fructose intolerance	Neonatal screening	Succinylacetone
c14CoS mice	Fumarylacetoacetate hydrolase	Nephrolithiasis	Tyrosinemia
Cystinosis	Lesch Nyhan syndrome	Oxalosis	Wilson s disease
Cystinuria	Liver (Neoplasia Hepatoblastoma)	Phosphoribosylpyrophosphate synthetase	Xanthine
Fanconi s syndrome	Mitochondria (Mitochondriopathy)	Succinylacetoacetate	

2003 Animal models reveal pathophysiologies of tyrosinemias.

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2010 Nephrolithiasis related to inborn metabolic diseases.

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2008 Enhancing newborn screening for tyrosinemia type I.

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2007 Animal models of tyrosinemia.

4 [17513424] J Nutr 137(6 Suppl 1):1556S-1560S; discussion 1573S-1575S (2007)

Tyrosyl DNA phosphodiesterase

13283

Tyrosyl DNA phosphodiesterase

DNA (Repair and Toxicology)	Tyrosyl DNA phosphodiesterase		
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2008 Tyrosyl-DNA phosphodiesterase as a target for anticancer therapy.

1 [18473723] Anticancer Agents Med Chem 8(4):381-9 (2008)

Tyrphostin

13284

Tyrphostin

Tyrphostin			
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1992 Tyrphostins: tyrosine kinase blockers as novel antiproliferative agents and dissectors
of signal transduction.
1 [1426765] FASEB J 6(14):3275-82 (1992)

17 beta hydroxysteroid dehydrogenase	Adrenoleukodystrophy X linked	Fatty acids (oxidation)	PEX19
ABCD1	Adrenoleukodystrophy	HACL1 2 Hydroxyacyl CoA lyase 1	PEX2
ABCD2	Adrenomyeloneuropathy	HAO2 Hydroxyacid oxidase 2 long chain	PEX26
ABCD3 GCP60 PAP7 GOCAP1 GOLPH1	ALDH3A2 Aldehyde dehydrogenase3A2	HSD17B4	PEX3
ACAA1 Acetyl CoA acyltransferase1	alpha Oxidation	HSDL2 Hydroxysteroid dehydrogenase like2	PEX5
ACAD11 Acyl CoA dehydrogenase11	AMACR	Hypercholanemia familial	PEX6
ACNAT1 Acyl CoA amino acid N acyltransferase	BAAT	Ichthyosis prematurity syndrome FATP4 deficiency ACSVL5 deficiency	PHYH
ACOT12 Acyl CoA thioesterase12	beta oxidation	IDH1 Isocitrate dehydrogenase1 NADP soluble	Phytanic acid
ACOT2 Acyl CoA thioesterase2	CAT Catalase	MFP1	Pristanic acid
ACOT4 Acyl CoA thioesterase4	CRAT Carnitine acetyltransferase	NUDT12 Nudix type motif12	PTS1
ACOT6 Acyl CoA thioesterase6	CROT Carnitine O octanoyltransferase	NUDT7 Nudix type motif 7	PTS2
ACOT8 Acyl CoA thioesterase8	D bifunctional protein deficiency MFP2 deficiency SCPx deficiency	OMIM p603850	Racemase deficiency
ACOX1 Acyl CoA oxidase1a 1b	DECR2 2 4 Dienoyl CoA reductase 2 peroxisomal	PECI Peroxisomal d3 d2 enoyl CoA isomerase	Refsum s disease
ACOX2 Acyl CoA oxidase2	DHRS4 Dehydrogenase reductase SDR family 4	Peroxisomes	Rhizomelic chondrodysplasia punctata
ACOX3 Acyl CoA oxidase3	DNML1	PEX1	SCP2
ACOXI	ECH1 Enoyl CoA hydratase 1 peroxisomal	PEX10	SLC27A2
ACOXL Acyl CoA oxidase like	EHHADH Enoyl CoA hydratase 3 hydroxyacyl CoA dehydrogenase	PEX12	SLC27A4 FATP4
ACSL1 Acyl CoA synthetase long chain1	FAR1 Fatty acyl CoA reductase1	PEX13	TYSND1
ACSL4 Acyl CoA synthetase long chain4	FAR2 Fatty acyl CoA reductase2	PEX14	Zellweger s syndrome
Adrenoleukodystrophy pseudoneonatal ACOX1 deficiency		PEX16	

2010 Biochemistry and genetics of inherited disorders of peroxisomal fatty acid metabolism.

1 [20558530] J Lipid Res 51(10):2863-95 (2010)

Early afterdepolarization Heart (Electrocardiography)	Heart (Torsade de pointes) M cell	U wave	
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2008 The enigmatic sixth wave of the electrocardiogram: the U wave.
1 [18810715] Cardiol J 15(5):408-21 (2008)

2005 The patient U wave.
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1995 The U wave and the M cell.
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2002 Early afterdepolarizations, U waves, and torsades de pointes.
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2004 When u say "U Waves," what do u mean?
5 [14764163] Pacing Clin Electrophysiol 27(2):145-7 (2004)

U37883A

13287

U37883A

Ion channel (Potassium)	U37883A		
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2006 **Pharmacological Profile of U-37883A, a Channel Blocker of Smooth Muscle-Type ATP-Sensitive K Channels.**

¹ [16939631] Cardiovasc Drug Rev 24(1):25-32 (2006)

U46619 ttThromboxanreceptor

13288

U46619 ttThromboxanreceptor

Blood vessels (Vasodilation) Epoxyeicosatrienoic acid EET	Receptor (Thromboxane) U46619 ttThromboxanreceptor		
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2009 Epoxyeicosatrienoic acids function as selective, endogenous antagonists of native
thromboxane receptors: identification of a novel mechanism of vasodilation.
1 [18836067] J Pharmacol Exp Ther 328(1):231-9 (2009)

U73122 ttPLC

13289

U73122 ttPLC

2 APB ttIP3R AMP activated protein kinase BAPTA AM ttCa2i Calmodulin dependent protein kinase	Chemoprevention Conjugated linoleic acid Edelfosine ttPLC ERS UFR (Apoptosis)	Phospholipase C STO 609 ttCaMKK TRPV6 U73122 ttPLC	
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2011 Conjugated linoleic acid-induced apoptosis in mouse mammary tumor cells is mediated by both G protein coupled receptor-dependent activation of the AMP-activated protein kinase pathway and by oxidative stress.
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2009 Phospholipase C-mediated regulation of transient receptor potential vanilloid 6 channels: implications in active intestinal Ca²⁺ transport.
2 [19073818] Mol Pharmacol 75(3):608-16 (2009)

UAP56

13290

UAP56

RNA (nRNA BASKET)	UAP56		
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2009 UAP56- a key player with surprisingly diverse roles in pre-mRNA splicing and nuclear export.

¹ [19403039] BMB Rep 42(4):185-8 (2009)

UBA1

13291

UBA1

PYZD4409 ttUBA1	Ubiquitin		
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2010 The ubiquitin-activating enzyme E1 as a therapeutic target for the treatment of
1 leukemia and multiple myeloma.
[20075161] Blood 115(11):2251-9 (2010)

Ubc3 Cdc34

13292

Ubc3 Cdc34

Cell cycle (BASKET)	Protein kinase B Akt	UbcH10	Ubiquitin
Chk1	Ubc3 Cdc34	UbcH7	

2009 Ubiquitin control of S phase: a new role for the ubiquitin conjugating enzyme, UbcH7.

1 [19664228] Cell Div 4(-):17 (2009)

Ubc9

13293

Ubc9

ACAP1	GGA	LRP1	TUG
Cell secretion (Granule secretion)	Insulin (BASKET)	SLC2A4 GLUT4	Ubc9
Clathrin	IRAP	Sortilin	

2010 Biogenesis and regulation of insulin-responsive vesicles containing GLUT4.

1 [20417083] Curr Opin Cell Biol 22(4):506-12 (2010)

UbcH10

13294

UbcH10

Cell cycle (BASKET)	Protein kinase B Akt	UbcH10	Ubiquitin
Chk1	Ubc3 Cdc34	UbcH7	

2009 Ubiquitin control of S phase: a new role for the ubiquitin conjugating enzyme, UbcH7.

1 [19664228] Cell Div 4(-):17 (2009)

UbcH7

13295

UbcH7

Cell cycle (BASKET)	Protein kinase B Akt	UbcH10	Ubiquitin
Chk1	Ubc3 Cdc34	UbcH7	

2009 Ubiquitin control of S phase: a new role for the ubiquitin conjugating enzyme, UbcH7.

1 [19664228] Cell Div 4(-):17 (2009)

UBE3A

13296

UBE3A

Angelman s syndrome	Epilepsy (BASKET)	GABRD	Ion channel (Chloride)
Autosomal dominant epilepsy with febrile seizures plus	GABRA1	GABRE	KCC3
	GABRA4	GABRG2	Receptor (GABA A)
Autosomal dominant Juvenile Myoclonic Epilepsy	GABRA5	GABRG3	Transporter (Chloride and potassium)
	GABRA6	GABRP	UBE3A
Childhood absence epilepsy	GABRB3	Heart (Coronary heart disease Main stenosis)	
CLCN2 CIC2			
Dravet s syndrome			

2010 Mutations affecting GABAergic signaling in seizures and epilepsy.

1 [20352446] Pflugers Arch 460(2):505-23 (2010)

Ubiquilin1

13297

Ubiquilin1

Ubiquilin1	Unfolded protein response		
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2009 An emerging role for Ubiquilin 1 in regulating protein quality control system and in disease pathogenesis.
¹ [19772837] Discov Med 8(40):18-22 (2009)

Enzyme structure and chemistry	Photosynthesis	Ubiquinone	
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2000 Ubiquinone. Biosynthesis of quinone ring and its isoprenoid side chain. Intracellular localization.

¹ [11051212] *Acta Biochim Pol* 47(2):469-80 (2000)

2002 Biosynthesis, bioproduction and novel roles of ubiquinone.

² [16233343] *J Biosci Bioeng* 94(6):511-7 (2002)

2008 Modification of quinone electrochemistry by the proteins in the biological electron transfer chains: examples from photosynthetic reaction centers.

³ [18979192] *J Bioenerg Biomembr* 40(5):509-19 (2008)

Tolerance (Immunology)	Ubiquitin ligase Itch		
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2007 The E3 ubiquitin ligase Itch in T cell activation, differentiation, and tolerance.

1 [17433711] Semin Immunol 19(3):197-205 (2007)

AIP4	E3 ubiquitin ligase	Nervous System (Pathology)	TRAF3
Alcohol	Endoplasmic reticulum (associated degradation)	NFKB	TRAF6
alpha Crystallin	ERS UFR (Apoptosis)	p27Kip1	TRIM32
AMP activated protein kinase	ESCRT	P53	TRPC4
BCA2	Fbw7 Sel10 hCdc4 Ago	Proteasome (BASKET)	TRPV4
Bortezomib ttProteasom	FBX4	Protein kinase B Akt	TRPV6
BRCA1	H2A	Pupylation	Ubc3 Cdc34
Cbl	HDM2	PYZD4409 ttUBA1	UbcH10
Cell cyle (BASKET)	IAPP islet amyloid polypeptide	RBX1	UbcH7
Chk1	Interleukin24 MDA7	RNF5	Ubiquitin
CRL4Cd2	Ischemia reperfusion	SCF (betaTRCP)	UCH L1
CUL4 Cullin4	LUBAC linear ubiquitin chain assembly complex	SMURF1	WD40 protein domain
Cullins	MARCH protein family	SMURF2	Wnt beta Catenin TCF
Cyclin D1	MTOR	Synapse	XRN185
DDB1	Multivesicular bodies	Synoviolin	
Diabetes mellitus (Beta cell decay)	Nedd4 2	TRAF	
DUB	Nervous system (Neurodegeneration)	TRAF2	

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