This file contains the degree, closeness, betweenness, eigenvector, and PageRank centrality scores for the top five distinct nodes by each of these metrics in the GBPN (Table 1) and the ten most significant mc_GBPN by highest modularity score (Tables 2-11). Each node is given a label describing the diseases, genes, proteins, treatments, etc. that it contains.

Table 1. Most influential nodes by centrality scores in the GBPN.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer	7745	10613	-	-	-	-

Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196	7939	-	-	-	-
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms); DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)	12833	7359	-	-	-	-
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3	16872	4795	-	-	-	-

Gene: FTL						
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy **Genes:** NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex	1748	4440	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
135 nodes in the GBPN have the highest possible closeness centrality score of 1. See the full list here.						
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family	11196	-	-	470306.932357	-	-

Protein Member 1 (synonyms); GCH1						
Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency; Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod 1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments :** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent); S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin	6002	-	-	282123.707632	-	-

(Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate); Ozanezumab; DIACETYL(N(4)-METHYLTHIOSEMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNABINOL (THC); Pterostilbene; EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCUCU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids; Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO-DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim;						

LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate; AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD; ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED						

SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS OLFACTORY NEURAL PROGENITORS						
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282	-	-	197100.26484	-	-
Autosomal Dominant Inheritance	140310	-	-	177000.729632	-	-
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HY	7745	-	-	173646.715076	-	-

DROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
PAGERANK TOP NODES						
Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency; Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments:** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent); S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral	6002	-	-	-	0.002879	-

Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin (Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate); Ozanezumab; DIACETYL(N(4)-METHYLTHIOSEMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNABINOL (THC); Pterostilbene; EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCUCU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids; Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO						

-DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim; LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate; AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD; ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL						

STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS OLFACTORY NEURAL PROGENITORS						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196	-	-	-	0.001289	-
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive	3282	-	-	-	0.000931	-

Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)	7745	-	-	-	0.000846	-
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel	1748	-	-	-	0.000841	-

Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy **Genes:** NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex						
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196	-	-	-	-	1
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA	7745	-	-	-	-	0.939506

Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Abnormal Reflexes (both Hyperreflexia and Hyporeflexia)	98105	-	-	-	-	0.471401
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282	-	-	-	-	0.461937

Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms); DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)	12833	-	-	-	-	0.447028

Table 2. Most influential nodes by centrality scores in modularity class 0 of mc_GBPN, which contains 140 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms)	7745.0	9142	-	-	-	-

Proteins: ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Diseases/Conditions: Autosomal Dominant Leukodystrophy with Autonomic Disease; Adult-Onset Autosomal Dominant Demyelinating Leukodystrophy; Autosomal Dominant or Late-Onset Type Hypomyelinating Leukodystrophy 1; Multiple Sclerosis-Like Disorder **Genes:** LMNB1 WT ALLELE	16586.0	2222	-	-	-	-
Muscle Spasticity	99665.0	773	-	-	-	-
Paraparesis	6501.0	726	-	-	-	-
Cognitive Decline/Impairment	99165.0	706	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Abnormal Eye	69415.0	-	1	-	-	-
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders;	7745.0	-	0.695	-	-	-

Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Diseases/Conditions: Autosomal Dominant Leukodystrophy with Autonomic Disease; Adult-Onset Autosomal Dominant Demyelinating Leukodystrophy; Autosomal Dominant or Late-Onset Type Hypomyelinating Leukodystrophy 1; Multiple Sclerosis-Like Disorder **Genes:** LMNB1 WT ALLELE	16586.0	-	0.560484	-	-	-
Progressive Disorder	204801.0	-	0.5	-	-	-

Muscle Spasticity	99665.0	-	0.486014	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)	7745.0	-	-	14468.646645	-	-
Diseases/Conditions: Autosomal Dominant Leukodystrophy with Autonomic Disease; Adult-Onset Autosomal Dominant Demyelinating Leukodystrophy; Autosomal	16586.0	-	-	8420.011527	-	-

Dominant or Late-Onset Type Hypomyelinating Leukodystrophy 1; Multiple Sclerosis-Like Disorder **Genes:** LMNB1 WT ALLELE						
Paraparesis	6501.0	-	-	4354.509995	-	-
Muscle Spasticity	99665.0	-	-	404.967405	-	-
Cerebromedullospinal Disconnection (Locked-In Syndrome)	9892.0	-	-	303.234255	-	-
PAGERANK TOP NODES						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP **Compounds:** VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4	7745.0	-	-	-	0.011462	-

Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Paraparesis	6501.0	-	-	-	0.005064	-
Facial Abnormality	179402.0	-	-	-	0.004333	-
Diseases/Conditions: Autosomal Dominant Leukodystrophy with Autonomic Disease; Adult-Onset Autosomal Dominant Demyelinating Leukodystrophy; Autosomal Dominant or Late-Onset Type Hypomyelinating Leukodystrophy 1; Multiple Sclerosis-Like Disorder **Genes:** LMNB1 WT ALLELE	16586.0	-	-	-	0.004241	-
ABCD1 Gene	2597636	-	-	-	0.003252	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: X-linked Adrenoleukodystrophy; Diffuse Cerebral Sclerosis of Schilder; Peroxisomal Disorders; Leucodistrofia; Adrenocortical Hypofunction; ACYL-COA Oxidase Deficiency; Encephalitis Periaxialis Concentrica; Canavan Disease **Genes:** ABCD1 WT Allele; ABC42; AMN; ACOX1; ECK2921/JW2892/FBA/FDA/FBAA (all synonyms); ECK1408/JW1412 (synonyms) **Proteins:** ADLP	7745.0	-	-	-	-	1

Compounds: VK-0214 (drug to treat X-ALD); Propanoic Acid; 2,2-DIMETHYL-,1,1'-[[[[4-[[4-HYDROXY-3-(PHENYLMETHYL)PHENYL]METHYL]-3,5-DIMETHYLPHENOXY]METHYL]PHOSPHINYLIDENE]BIS(OXYMETHYLENE)] ESTER; Ethylenediamine; Generation 4 Hydroxyl-Terminated Polyamidoamine Dendrimer Containing an Ethylene Diamene (EDA) Core, Amidoamine Repate Units, and 64 Hydroxyl End Groups (SMP:00516)						
Attention Deficit-Hyperactivity Disorder (ADHD)	20690.0	-	-	-	-	0.369354
Vision impairment or loss	112590.0	-	-	-	-	0.33333
Hearing Impairment	86506.0	-	-	-	-	0.27995
Dementias, Amentia	94760.0	-	-	-	-	0.267873

Table 3. Most influential nodes by centrality scores in modularity class 12 of mc_GBPN, which contains 209 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration;	11196.0	3034	-	-	-	-

Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1						
Diseases/Conditions: Paroxysmal Exertion-Induced Dyskinesia; Paroxysmal Exercise-Induced Dystonia (DYT18, GLUT1 Deficiency); Dystonia 9; Susceptibility to Idiopathic Generalized Epilepsy (EIG12); Stomatin-Deficient Cryohydrocytosis with Neurologic Defects **Genes:** SLC2A1; PEA15/HMAT1/HUMMAT1H/MAT1/MAT1H (synonyms); OCA2/BOCA/PED/P/Oculocutaneous Albinism II/Pink-Eyed Dilution/EYCL2/EYCL3/BEY1/BEY2/HCL3/SHEP1 (synonyms); D15S12; HTLVR **Proteins:** GLUT1	16457.0	2363	-	-	-	-
Diseases/Conditions: Spinocerebellar Ataxia 27 (SCA27) **Genes:** FGF14/FHF4	14825.0	1979	-	-	-	-
Spinocerebellar Ataxia 10	16277.0	1654	-	-	-	-
Diseases/Conditions: Spinocerebellar Ataxia 14	14597.0	1545	-	-	-	-

Gene: PRKCG						
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196.0	-	0.619048	-	-	-
Eye Movement Disorders	34532.0	-	0.468468	-	-	-
Dysarthria	64331.0	-	0.455142	-	-	-
Cerebellar Atrophy	98649.0	-	0.453159	-	-	-
Diseases/Conditions: Paroxysmal Exertion-Induced Dyskinesia; Paroxysmal Exercise-Induced Dystonia (DYT18, GLUT1 Deficiency); Dystonia 9; Susceptibility to Idiopathic Generalized Epilepsy (EIG12); Stomatin-Deficient Cryohydrocytosis with Neurologic Defects **Genes:** SLC2A1; PEA15/HMAT1/HUMMAT1H/MAT1/MAT1H (synonyms); OCA2/BOCA/PED/P/Oculocutan	16457.0	-	0.448276	-	-	-

eous Albinism II/Pink-Eyed Dilution/EYCL2/EYCL3/BEY1/BEY2/HCL3/SHEP1 (synonyms); D15S12; HTLVR **Proteins:** GLUT1						
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196.0	-	-	29327.977985	-	-
Diseases/Conditions: Paroxysmal Exertion-Induced Dyskinesia; Paroxysmal Exercise-Induced Dystonia (DYT18, GLUT1 Deficiency); Dystonia 9; Susceptibility to Idiopathic Generalized Epilepsy (EIG12); Stomatin-Deficient Cryohydrocytosis with Neurologic Defects **Genes:** SLC2A1; PEA15/HMAT1/HUMMAT1H/MAT1/MAT1H (synonyms); OCA2/BOCA/PED/P/Oculocutaneous Albinism II/Pink-Eyed	16457.0	-	-	12662.744274	-	-

Dilution/EYCL2/EYCL3/BEY1/BEY2/HCL3/SHEP1 (synonyms); D15S12; HTLVR **Proteins:** GLUT1						
Diseases/Conditions: Spinocerebellar Ataxia 27 (SCA27) **Genes:** FGF14/FHF4	14825.0	-	-	7740.613862	-	-
Diseases/Conditions: Spinocerebellar Ataxia 14 **Gene:** PRKCG	14597.0	-	-	6791.924766	-	-
Chiari Malformation	7919.0	-	-	5336.143675	-	-
PAGERANK TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder; Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1	11196.0	-	-	-	0.011451	-
Chiari Malformation	7919.0	-	-	-	0.004068	-
Diseases/Conditions: Paroxysmal Exertion-Induced Dyskinesia; Paroxysmal	16457.0	-	-	-	0.004033	-

Exercise-Induced Dystonia (DYT18, GLUT1 Deficiency); Dystonia 9; Susceptibility to Idiopathic Generalized Epilepsy (EIG12); Stomatin-Deficient Cryohydrocytosis with Neurologic Defects **Genes:** SLC2A1; PEA15/HMAT1/HUMMAT1H/MAT1/MAT1H (synonyms); OCA2/BOCA/PED/P/Oculocutaneous Albinism II/Pink-Eyed Dilution/EYCL2/EYCL3/BEY1/BEY2/HCL3/SHEP1 (synonyms); D15S12; HTLVR **Proteins:** GLUT1						
Diseases/Conditions: Spinocerebellar Ataxia 14 **Gene:** PRKCG	14597.0	-	-	-	0.00321	-
Disease/Condition: Spinocerebellar Ataxia 40 **Compound:** 6-BROMO-8-METHYLAMINOIMIDAZO(1,2-A)PYRAZINE-2-CARBONITRILE	18629.0	-	-	-	0.003154	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Involuntary and Abnormal Movements (Ataxias; Choreas; Dyskinesias; Dyssynergia; Dystonias; Ballismus; Hemiballism); Torticollis; Rubral Tremor; Brain Degeneration; Central Nervous System Degenerative Disorder;	11196.0	-	-	-	-	1

Cerebellar Dysmetria; Segawa Syndrome **Genes:** SETX/SCAR1/AOA2/KIAA0625/ALS4/BA479K20.2 (synonyms); WASF1/WAVE1/WASP Family Protein Member 1 (synonyms); GCH1						
Diseases/Conditions: Paroxysmal Exertion-Induced Dyskinesia; Paroxysmal Exercise-Induced Dystonia (DYT18, GLUT1 Deficiency); Dystonia 9; Susceptibility to Idiopathic Generalized Epilepsy (EIG12); Stomatin-Deficient Cryohydrocytosis with Neurologic Defects **Genes:** SLC2A1; PEA15/HMAT1/HUMMAT1H/MAT1/MAT1H (synonyms); OCA2/BOCA/PED/P/Oculocutaneous Albinism II/Pink-Eyed Dilution/EYCL2/EYCL3/BEY1/BEY2/HCL3/SHEP1 (synonyms); D15S12; HTLVR **Proteins:** GLUT1	16457.0	-	-	-	-	0.645021
Diseases/Conditions: Spinocerebellar Ataxia 27 (SCA27) **Genes:** FGF14/FHF4	14825.0	-	-	-	-	0.540776
Spinocerebellar Ataxia 10	16277.0	-	-	-	-	0.500544
Eye Movement Disorders	34532.0	-	-	-	-	0.401547

Table 4. Most influential nodes by centrality scores in modularity class 38 of mc_GBPN, which contains 132 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Disease/Condition: Progressive Myoclonus Epilepsy **Gene:** NHLRC1 **Drug:** Metformin	11691.0	2743	-	-	-	-
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282.0	2327	-	-	-	-
Diseases/Conditions: Epilepsy Progressive Myoclonic Type 3; CLN14 Disease **Gene:** KCTD7	3288.0	1579	-	-	-	-
Diseases/Conditions: Idiopathic Intracranial Hypertension (False Brain Tumor); Vitamin D Hypersensitivity **Drug:** Exenatide	6102.0	1055	-	-	-	-

Autosomal Recessive Inheritance	140249.0	687	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Disease/Condition: Progressive Myoclonic Epilepsy 1B **Genes:** PRICKLE1	5353974	-	1	-	-	-
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282.0	-	0.555085	-	-	-
Disease/Condition: Progressive Myoclonus Epilepsy **Gene:** NHLRC1 **Drug:** Metformin	11691.0	-	0.479853	-	-	-
Autosomal Recessive Inheritance	140249.0	-	0.474638	-	-	-
Rare Non-neoplastic Disorder	1988270	-	0.451724	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive	3282.0	-	-	9175.543707	-	-

Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)						
Disease/Condition: Progressive Myoclonus Epilepsy **Gene:** NHLRC1 **Drug:** Metformin	11691.0	-	-	6087.322262	-	-
Diseases/Conditions: Epilepsy Progressive Myoclonic Type 3; CLN14 Disease **Gene:** KCTD7	3288.0	-	-	6066.169333	-	-
Autosomal Recessive Inheritance	140249.0	-	-	2050.491119	-	-
Rare Non-neoplastic Disorder	1988270	-	-	1259.881951	-	-
PAGERANK TOP NODES						
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282.0	-	-	-	0.014253	-
Diseases/Conditions: Epilepsy Progressive Myoclonic Type 3; CLN14 Disease	3288.0	-	-	-	0.010603	-

Gene: KCTD7						
Disease/Condition: Progressive Myoclonus Epilepsy **Gene:** NHLRC1 **Drug:** Metformin	11691.0	-	-	-	0.007742	-
Potassium Channel Tetramerization Domain-Containing Protein 7 (KCTD7)	5339270	-	-	-	0.003195	-
Intellectual Disability	54617.0	-	-	-	0.002714	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Epilepsies; Seizures; Action Myoclonus Renal Failure Syndrome; Dentatorubral-Pallidoluysian Atrophies; Atypical Inclusion Body Disease; Biotin Responsive Encephalopathy; May White Syndrome **Genes:** CSTB/STFB/CST6/PME/Cystatin B/Stefin B)/EPM1 (synonyms)	3282.0	-	-	-	-	1
Disease/Condition: Progressive Myoclonus Epilepsy **Gene:** NHLRC1 **Drug:** Metformin	11691.0	-	-	-	-	0.974664
Autosomal Recessive Inheritance	140249.0	-	-	-	-	0.367225
Diseases/Conditions: Epilepsy Progressive Myoclonic Type 3; CLN14 Disease	3288.0	-	-	-	-	0.321674

Gene: KCTD7						
Skin Photosensitivity; Chronic Actinic Dermatitis	209060.0	-	-	-	-	0.22832

Table 5. Most influential nodes by centrality scores in modularity class 27 of mc_GBPN, which contains 156 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency; Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod 1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments :** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent);	6002.0	2738	-	-	-	-

S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin (Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate); Ozanezumab; DIACETYL(N(4)-METHYLTHIOSEMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNABINOL (THC); Pterostilbene; EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCUCU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids;						

Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO-DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim; LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate; AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD; ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING						

HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS OLFACTORY NEURAL PROGENITORS						
DCTN1; PRPH; SOD1; NEFH Gene (Synonyms)	5378089	150	-	-	-	-
Post Transplant Acute Limbic Encephalitis; Skin Paleness	131867	117	-	-	-	-
Early Childhood Onset	855067	81	-	-	-	-
Spasticity of Facial Muscles	62679	75	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
135 nodes in modularity class 27 have the highest possible closeness centrality score of 1. See the full list here.						
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency;	6002.0	-	-	15494	-	-

Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod 1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments :** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent); S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin (Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate); Ozanezumab; DIACETYL(N(4)-METHYLTHIOS EMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNA BINOL (THC); Pterostilbene;						

EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCU CU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids; Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO -DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim; LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate; AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD;						

ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS OLFACTORY NEURAL PROGENITORS						
Muscle Weakness	160866.0	-	-	154	-	-
All other nodes in the modularity class have a betweenness centrality score of 0.						
PAGERANK TOP NODES						

Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency; Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod 1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments :** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent); S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin (Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate);	6002.0	-	-	-	0.040059	-

Ozanezumab; DIACETYL(N(4)-METHYLTHIOSEMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNABINOL (THC); Pterostilbene; EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCUCU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids; Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO-DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim; LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate;						

AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD; ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS						

OLFACTORY NEURAL PROGENITORS						
Fatigable Weakness of Swallowing Muscles	128667.0	-	-	-	0.004912	-
Fatigable Weakness of Bulbar Muscles	128455.0	-	-	-	0.00425	-
DCTN1; PRPH; SOD1; NEFH Gene (Synonyms)	5366496	-	-	-	0.00402	-
Abnormal Respiration	160420	-	-	-	0.002597	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Amyotrophic Lateral Sclerosis (ALS); Juvenile Primary Lateral Sclerosis; Infantile-Onset Ascending Spastic Paralysis; Charcot Disease; Dementia with ALS; Anterior Horn Cell Disease; Motor Neuron Diseases; Acid-Labile Subunit Definiciency; Aran-Duchenne Muscular Atrophy; ALS-Polyglucosen Bodies **Genes:** SOD1/ALS1/IPOA/STAHP/hSod 1/HEL-S-44/Homodimer (synonyms); ALS2/KIAA1563 (synonyms); IGFALS **Proteins:** Ciliary Neurotrophic Factor; IGFBP **Drugs/Compounds/Treatments :** Mescasermin Rinfabate; Orgotein for injection, ALS; Clenbuterol (Spiropent); S-[+]-Apomorphine; IPLEX; ETR019 (Superoxide Dismutase, Gliadin); Valine; Riluzole Oral	6002.0	-	-	-	-	1

Soluble Film (ROSF); Antilymphocyte Serum (Antilymphocyte Globulin); Tegoprubart (AT-1501); Toralizumab; Humanized Anti-CD40LG IGG1, Kappa Monoclonal Antibody with Heavy Chain C220S/C226S/C229S/P238S Substitutions to Attenuate Effector Function; Rocephin (Ceftriaxone Sodium); Isoleucine; Copaxone Protirelin Injection, GM-603 (Glatiramer Acetate); Ozanezumab; DIACETYL(N(4)-METHYLTHIOSEMICARBAZONATO) COPPER (II); Telbermin; Branched Chain Amino Acids; Anti-Nogo-A Monoclonal Antibody; Cannabidiol; DELTA-9-TETRAHYDROCANNABINOL (THC); Pterostilbene; EPI-589; Threostat; Neurontin (Gabapentin); Mescamerin; Rilutek (Riluzole); Nicotinamide and Pterostilbene; Oxaloacetic Acid; L-Threonine; LSP-GR3 (2'-O-METHYL PHOSPHOROTHIOATE 5'-GCUAGGUUUACGGGACCUCU-3'); Smilagenin; Cogane; Teglutik; Olesoxime; Nuedexta (Dextromethorphan Hydrobromide/Quinidine Sulfate); Oxime; 4-CHOLEST-EN-3-ONE; Noscapine; Acthar Gel (Repository Corticortropin Injection); Oligopeptide Containing 6 Amino Acids; Levosimedan; Sarsasapogenin; Talampanel; HYDROCINNAMATE-[ORN-PRO						

-DCHA-TRP-ARG](CH3COO); DL-3-N-BUTYLPHTHALIDE; Cyclosporin (Mitogard); Arimoclomol; BIS-CHOLINE TETRATHIOMOLYBDATE; SODIUM CHLORITE; Tirasemtiv; Leucine; Ibudilast; Creatine; Creapure; SODIUM PHENYLBUTYRATE; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; Filgrastim; LACTOBACILLUS PLANTARUM; Edaravone; Dexpramipexole; Procysteine; Masitinib Mesylate; AEOL-10150; HER-902; TAUROURSODEOXYCHOLIC ACID DIHYDRATE; NI-204; AUTOLOGOUS ADIPOSE DERIVED MESENCHYMAL STROMAL CELLS; MONONUCLEAR ENRICHED FRACTION OF HUMAN UMBILICAL CORD BLOOD; ELECTROKINETICALLY ALTERED SALINE SOLUTION WITH AN ELEVATED DISSOLVED OXYGEN CONCENTRATION; Enzumestrocel; U-CORD-CELL(R); ANTISENSE OLIGONUCLEOTIDE INHIBITOR OF THE EXPRESSION OF SUPEROXIDE DISMUTASE 1 GENE; ALLOGENEIC MOTOR NEURON PROGENITOR CELLS DERIVED FROM HUMAN EMBRYONIC STEM CELLS; DNA PLASMID VECTOR (PCK-HGFX7) EXPRESSING HUMAN HEPATOCYTE GROWTH FACTOR; NurOwn; Hsp70; HUTC; MESENCHYMAL						

STROMAL CELLS SECRETING NEUROTROPHIC FACTORS; CAPRINE HYPERIMMUNE SERUM AGAINST HIV LYSATE; NDX-Peptides; EX-VIVO EXPANDED AUTOLOGOUS BONE MARROW-DERIVED MESENCHYMAL STEM CELLS; RECOMBINANT HUMAN ANTIBODY DIRECTED AGAINST HUMAN MISFOLDED SUPEROXIDE DISMUTASE 1; Phosphorothioate Oligonucleotide; AUTOLOGOUS OLFACTORY NEURAL PROGENITORS						
Skin paleness; Clammy Skin; Posttransplant Acute Limbic Encephalitis	131867.0	-	-	-	-	0.446347
DCTN1; PRPH; SOD1; NEFH Gene (Synonyms)	5366496	-	-	-	-	0.349915
Spasticity of Facial Muscles	62679	-	-	-	-	0.300003
Spastic Quadreparesis	98084	-	-	-	-	0.300003

Table 6. Most influential nodes by centrality scores in modularity class 21 of mc_GBPN, which contains 94 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor	12833.0	4805	-	-	-	-

Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms); DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)						
Diseases/Conditions: Frontotemporal Dementia; Semantic Dementia; Hereditary Dysphasic Disinhibition Dementia; Multiple System Tauopathy with Presenile Dementia; Primary Progressive Aphasia; Disinhibition-Dementia-Parkinsonism-Amyotrophy Complex; Wilhelmsen-Lynch Disease; Susceptibility to Late-Onset Parkinson Disease; Progresssive Supranuclear Palsy 1; Familial Alzheimer's Disease 3; MAPT-Related Disorders; Pallidopontonigral Degeneration; Cardiomyopathy, Dilated 1U; Neuronal Ceroid Lipofuscinosis 11 **Genes:** MAPT/FTDP-17/MTBT1 (synonyms); PSEN1/PS1/S182 (synonyms); GRN/GEP/GP88/PEPI/PGRN/CLN11/PCDGF (synonyms) **Proteins:** Acrogranin; 88-KD Glycoprotein; Granulin; Progranulin; Epithelins;	11996.0	710	-	-	-	-

Proepithelin; PC Cell-Derived Growth Factor; Microtubule-Associated Protein Tau						
Diseases/Conditions: Progressive Supranuclear Palsy; Pneumothorax; Hereditary Prostate Cancer 13 **Genes:** STXBP3/UNC-18C (synonyms); HRSP12/Perchloric Acid-Soluble Protein, 14.5-KD (synonyms); USP6/TRE-2 (synonyms); REG1A; PSPN; MSMB/PSP57/PSP/MSPB/IGBF/PRPS/PSP-94/PN44/MSP/RP11-481A12.1 (synonyms) **Proteins:** MUNC18C; Platelet SEC1; UK114; Parathyroid Secretory Protein/CGA (synonyms); UNC18, C. ELEGANS, HOMOLOG OF, 3; Pancreatic Stone Protein (PSP)/Lithostathine-1-alpha islet cells regeneration factor (ICRF)/ islet of Langerhans regenerating protein (REG) (synonyms); BPIFA2/C20ORF70/SPLUNC2/BA49G10.1 (synonyms); P19 **Drugs/Compounds:** Tideglusib; Tolfenamic Acid; TPI-287; 4-BENZYL-2-(A-NAPHTYL)-1,2,4-THIADIAZOLIDINE-3,5-DIONE; Chromostatin; Catestatin; Pancreastatin; Phenolsulfonphthalein/Phenol Red (synonyms); ASN120290; AZP-2006 DISULFATE; ABBV-8E12; MK-8719; TPI-287; BMS-986168; MCD-386CR;	10835.0	468	-	-	-	-

MNI-958; 5-(3-ETHYL-1,2,4-OXADIAZOL-5-YL)-1,4,5,6-TETRAHYDROPYRIMIDINE HYDROCHLORIDE; ANTI-ETAU HUMANIZED IGG4 MONOCLONAL ANTIBODY; COMPETITIVE AND REVERSIBLE SMALL MOLECULE INHIBITOR OF THE O-LINKED-B-N-ACETYLGLUCOSAMINIDASE ENZYME, N-(3-(4-(3-(DIISOBUTYLAMINO)PROPYL)PIPERAZIN-1-YL)PROPYL)-1H-BENZO[D]IMIDAZOL-2-AMINE DISULPHATE SALT; 5B-20-EPOXY-1B,2A,4A,7B,9A,10A,13A-HEPTAHYDROXY-4,10-DIACETATE-2-BENZOATE-(1S)-7,9-ACROLEIN ACETAL-11(15-1)-ABEOTAXANE; (2'R,3'S)-2'-HYDROXY-N-CARBOXY-3'-AMINO-5'-METHYL-HEXANOIC,N-TERT-BUTYL ESTER, 13 ESTER						
Tremors	81523.0	463	-	-	-	-
Muscle Rigidity	206738.0	395	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Speech Impairment	189539.0	-	1	-	-	-
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms);	12833.0	-	0.758621	-	-	-

DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)						
Reading Disability	128804.0	-	0.666667	-	-	-
Amnesic Aphasia; Anomic Aphasia	81384.0	-	0.666667	-	-	-
Diseases/Conditions: Progressive Supranuclear Palsy; Pneumothorax; Hereditary Prostate Cancer 13 **Genes:** STXBP3/UNC-18C (synonyms); HRSP12/Perchloric Acid-Soluble Protein, 14.5-KD (synonyms); USP6/TRE-2 (synonyms); REG1A; PSPN; MSMB/PSP57/PSP/MSPB/IGBF/PRPS/PSP-94/PN44/MSP/RP11-481A12.1 (synonyms) **Proteins:** MUNC18C; Platelet SEC1; UK114; Parathyroid Secretory Protein/CGA (synonyms); UNC18, C. ELEGANS, HOMOLOG OF, 3; Pancreatic Stone Protein (PSP)/Lithostathine-1-alpha islet cells regeneration factor (ICRF)/ islet of Langerhans regenerating protein (REG) (synonyms); BPIFA2/C20ORF70/SPLUNC2/BA49G10.1 (synonyms); P19 **Drugs/Compounds:** Tideglusib; Tolfenamic Acid; TPI-287; 4-BENZYL-2-(A-NAPHTYL)-1,2,4-THIADIAZOLIDINE-3,5-DIONE; Chromostatin; Catestatin;	10835.0	-	0.586667	-	-	-

Pancreastatin; Phenolsulfonphthalein/Phenol Red (synonyms); ASN120290; AZP-2006 DISULFATE; ABBV-8E12; MK-8719; TPI-287; BMS-986168; MCD-386CR; MNI-958; 5-(3-ETHYL-1,2,4-OXADIAZOL-5-YL)-1,4,5,6-TETRAHYDROPYRIMIDINE HYDROCHLORIDE; ANTI-ETAU HUMANIZED IGG4 MONOCLONAL ANTIBODY; COMPETITIVE AND REVERSIBLE SMALL MOLECULE INHIBITOR OF THE O-LINKED-B-N-ACETYLGLUCOSAMINIDASE ENZYME, N-(3-(4-(3-(DIISOBUTYLAMINO)PROPYL)PIPERAZIN-1-YL)PROPYL)-1H-BENZO[D]IMIDAZOL-2-AMINE DISULPHATE SALT; 5B-20-EPOXY-1B,2A,4A,7B,9A,10A,13A-HEPTAHYDROXY-4,10-DIACETATE-2-BENZOATE-(1S)-7,9-ACROLEIN ACETAL-11(15-1)-ABEOTAXANE; (2'R,3'S)-2'-HYDROXY-N-CARBOXY-3'-AMINO-5'-METHYL-HEXANOIC,N-TERT-BUTYL ESTER, 13 ESTER						
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms);	12833.0	-	-	6034.204278	-	-

DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)						
Diseases/Conditions: Progressive Supranuclear Palsy; Pneumothorax; Hereditary Prostate Cancer 13 **Genes:** STXBP3/UNC-18C (synonyms); HRSP12/Perchloric Acid-Soluble Protein, 14.5-KD (synonyms); USP6/TRE-2 (synonyms); REG1A; PSPN; MSMB/PSP57/PSP/MSPB/IGBF/PRPS/PSP-94/PN44/MSP/RP11-481A12.1 (synonyms) **Proteins:** MUNC18C; Platelet SEC1; UK114; Parathyroid Secretory Protein/CGA (synonyms); UNC18, C. ELEGANS, HOMOLOG OF, 3; Pancreatic Stone Protein (PSP)/Lithostathine-1-alpha islet cells regeneration factor (ICRF)/ islet of Langerhans regenerating protein (REG) (synonyms); BPIFA2/C20ORF70/SPLUNC2/BA49G10.1 (synonyms); P19 **Drugs/Compounds:** Tideglusib; Tolfenamic Acid; TPI-287; 4-BENZYL-2-(A-NAPHTYL)-1,2,4-THIADIAZOLIDINE-3,5-DIONE; Chromostatin; Catestatin; Pancreastatin; Phenolsulfonphthalein/Phenol Red (synonyms); ASN120290; AZP-2006 DISULFATE;	10835.0	-	-	3018.106921	-	-

ABBV-8E12; MK-8719; TPI-287; BMS-986168; MCD-386CR; MNI-958; 5-(3-ETHYL-1,2,4-OXADIAZOL-5-YL)-1,4,5,6-TETRAHYDROPYRIMIDINE HYDROCHLORIDE; ANTI-ETAU HUMANIZED IGG4 MONOCLONAL ANTIBODY; COMPETITIVE AND REVERSIBLE SMALL MOLECULE INHIBITOR OF THE O-LINKED-B-N-ACETYLGLUCOSAMINIDASE ENZYME, N-(3-(4-(3-(DIISOBUTYLAMINO)PROPYL)PIPERAZIN-1-YL)PROPYL)-1H-BENZO[D]IMIDAZOL-2-AMINE DISULPHATE SALT; 5B-20-EPOXY-1B,2A,4A,7B,9A,10A,13A-HEPTAHYDROXY-4,10-DIACETATE-2-BENZOATE-(1S)-7,9-ACROLEIN ACETAL-11(15-1)-ABEOTAXANE; (2'R,3'S)-2'-HYDROXY-N-CARBOXY-3'-AMINO-5'-METHYL-HEXANOIC,N-TERT-BUTYL ESTER, 13 ESTER						
Diseases/Conditions: Frontotemporal Dementia; Semantic Dementia; Hereditary Dysphasic Disinhibition Dementia; Multiple System Tauopathy with Presenile Dementia; Primary Progressive Aphasia; Disinhibition-Dementia-Parkinsonism-Amyotrophy Complex; Wilhelmsen-Lynch Disease; Susceptibility to Late-Onset Parkinson Disease; Progresssive Supranuclear Palsy 1; Familial Alzheimer’s Disease 3;	11996.0	-	-	396.045509	-	-

MAPT-Related Disorders; Pallidopontonigral Degeneration; Cardiomyopathy, Dilated 1U; Neuronal Ceroid Lipofuscinosis 11 **Genes:** MAPT/FTDP-17/MTBT1 (synonyms); PSEN1/PS1/S182 (synonyms); GRN/GEP/GP88/PEPI/PGRN/CLN11/PCDGF (synonyms) **Proteins:** Acrogranin; 88-KD Glycoprotein; Granulin; Progranulin; Epithelins; Proepithelin; PC Cell-Derived Growth Factor; Microtubule-Associated Protein Tau						
Weight Loss	75726.0	-	-	52.734878	-	-
Apathy	169420.0	-	-	36.521739	-	-
PAGERANK TOP NODES						
Diseases/Conditions: Progressive Supranuclear Palsy; Pneumothorax; Hereditary Prostate Cancer 13 **Genes:** STXBP3/UNC-18C (synonyms); HRSP12/Perchloric Acid-Soluble Protein, 14.5-KD (synonyms); USP6/TRE-2 (synonyms); REG1A; PSPN; MSMB/PSP57/PSP/MSPB/IGBF/PRPS/PSP-94/PN44/MSP/RP11-481A12.1 (synonyms) **Proteins:** MUNC18C; Platelet SEC1; UK114; Parathyroid Secretory Protein/CGA (synonyms); UNC18, C.	10835.0	-	-	-	0.01373	-

ELEGANS, HOMOLOG OF, 3; Pancreatic Stone Protein (PSP)/Lithostathine-1-alpha islet cells regeneration factor (ICRF)/ islet of Langerhans regenerating protein (REG) (synonyms); BPIFA2/C20ORF70/SPLUNC2/BA49G10.1 (synonyms); P19 **Drugs/Compounds:** Tideglusib; Tolfenamic Acid; TPI-287; 4-BENZYL-2-(A-NAPHTYL)-1,2,4-THIADIAZOLIDINE-3,5-DIONE; Chromostatin; Catestatin; Pancreastatin; Phenolsulfonphthalein/Phenol Red (synonyms); ASN120290; AZP-2006 DISULFATE; ABBV-8E12; MK-8719; TPI-287; BMS-986168; MCD-386CR; MNI-958; 5-(3-ETHYL-1,2,4-OXADIAZOL-5-YL)-1,4,5,6-TETRAHYDROPYRIMIDINE HYDROCHLORIDE; ANTI-ETAU HUMANIZED IGG4 MONOCLONAL ANTIBODY; COMPETITIVE AND REVERSIBLE SMALL MOLECULE INHIBITOR OF THE O-LINKED-B-N-ACETYLGLUCOSAMINIDASE ENZYME, N-(3-(4-(3-(DIISOBUTYLAMINO)PROPYL)PIPERAZIN-1-YL)PROPYL)-1H-BENZO[D]IMIDAZOL-2-AMINE DISULPHATE SALT; 5B-20-EPOXY-1B,2A,4A,7B,9A,10A,13A-HEPTAHYDROXY-4,10-DIACETATE-2-BENZOATE-(1S)-7,9-ACROLEIN ACETAL-11(15-1)-ABEOTAXANE; (2'R,3'S)-2'-HYDROXY-N-CARBOXY-3'-AMINO-5'-METHYL-HEX						

ANOIC,N-TERT-BUTYL ESTER, 13 ESTER						
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms); DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)	12833.0	-	-	-	0.013706	-
Speech Impairment	189539.0	-	-	-	0.008005	-
Reading Disability	128804.0	-	-	-	0.006867	-
Amnesic Aphasia; Anomic Aphasia	81384.0	-	-	-	0.006867	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Parkinsonism; Perry Syndrome; Distal Hereditary Motor Neuropathy Type VIIB; Susceptibility to Amyotrophic Lateral Sclerosis (ALS) **Gene:** FBXO7/FBX7/FBX (synonyms); DCTN1/P150(GLUED), DROSOPHILA, HOMOLOG OF **Drug:** MPTP (causes permanent symptoms of Parkinson's Disease)	12833.0	-	-	-	-	1
Tremors	81523.0	-	-	-	-	0.49799

Diseases/Conditions: Frontotemporal Dementia; Semantic Dementia; Hereditary Dysphasic Disinhibition Dementia; Multiple System Tauopathy with Presenile Dementia; Primary Progressive Aphasia; Disinhibition-Dementia-Parkinsonism-Amyotrophy Complex; Wilhelmsen-Lynch Disease; Susceptibility to Late-Onset Parkinson Disease; Progresssive Supranuclear Palsy 1; Familial Alzheimer's Disease 3; MAPT-Related Disorders; Pallidopontonigral Degeneration; Cardiomyopathy, Dilated 1U; Neuronal Ceroid Lipofuscinosis 11 **Genes:** MAPT/FTDP-17/MTBT1 (synonyms); PSEN1/PS1/S182 (synonyms); GRN/GEP/GP88/PEPI/PGRN/CLN11/PCDGF (synonyms) **Proteins:** Acrogranin; 88-KD Glycoprotein; Granulin; Progranulin; Epithelins; Proepithelin; PC Cell-Derived Growth Factor; Microtubule-Associated Protein Tau	11996.0	-	-	-	-	0.485211
Muscle Rigidity	206738.0	-	-	-	-	0.461473
Bradykinesia/Antiorthostatic Hypokinesias (Slow Movements)	206646.0	-	-	-	-	0.369923

Table 7. Most influential nodes by centrality scores in modularity class 14 of mc_GBPN, which contains 58 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Abnormal Reflexes (both Hyperreflexia and Hyporeflexia)	98105.0	1880	-	-	-	-
Extensor Plantar Reflexes	170345.0	1699	-	-	-	-
Diseases/Conditions: Spastic Paraplegia 10, Autosomal Dominant; Hereditary Spastic Paraplegia Caused by Mutation in KIF5A; Susceptibility to Amyotrophic Lateral Sclerosis 25; Neonatal Myoclonus, Intractable **Gene:** KIF5A/MY050/NKHC/D12S1889 (synonyms) **Protein:** Kinesin, Heavy Chain, Neuron-Specific	13849.0	1599	-	-	-	-
Autosomal Dominant Inheritance	140310.0	957	-	-	-	-
Disease/Conditions: Trigeminal Neuralgia; Epileptiform Neuralgias; Syndrome of Paroxysmal Facial Pain **Drugs/Treatments:** L-Baclofen; Raxatrigine; Dehydrated Alcohol Injection; Intranasal Carbon Dioxide, HYDROCHLORIDE|(5R)-5-(4-{[2-FLUOROPHENYL)METHYL]OX	11341.0	489	-	-	-	-

Y}PHENYL)-L-PROLINAMIDE, HYDROCHLORIDE						
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Spastic Paraplegia 10, Autosomal Dominant; Hereditary Spastic Paraplegia Caused by Mutation in KIF5A; Susceptibility to Amyotrophic Lateral Sclerosis 25; Neonatal Myoclonus, Intractable **Gene:** KIF5A/MY050/NKHC/D12S1889 (synonyms) **Protein:** Kinesin, Heavy Chain, Neuron-Specific	13849.0	-	0.564356	-	-	-
Autosomal Dominant Inheritance	140310.0	-	0.542857	-	-	-
Hereditary Motor and Sensory Neuropathy Type 5; Hereditary Spastic Paraplegia	13020.0	-	0.463415	-	-	-
Abnormal Reflexes (both Hyperreflexia and Hyporeflexia)	98105.0	-	0.448819	-	-	-
Extensor Plantar Reflexes	170345.0	-	0.445312	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Spastic Paraplegia 10, Autosomal Dominant; Hereditary Spastic Paraplegia Caused by Mutation in KIF5A; Susceptibility to Amyotrophic Lateral Sclerosis 25; Neonatal Myoclonus, Intractable	13849.0	-	-	2003.822735	-	-

Gene: KIF5A/MY050/NKHC/D12S1889 (synonyms) **Protein:** Kinesin, Heavy Chain, Neuron-Specific						
Autosomal Dominant Inheritance	140310.0	-	-	1485.028158	-	-
Disease/Conditions: Trigeminal Neuralgia; Epileptiform Neuralgias; Syndrome of Paroxysmal Facial Pain **Drugs/Treatments:** L-Baclofen; Raxatrigine; Dehydrated Alcohol Injection; Intranasal Carbon Dioxide, HYDROCHLORIDE|(5R)-5-(4-{[2-FLUOROPHENYL)METHYL]OXY}PHENYL)-L-PROLINAMIDE, HYDROCHLORIDE	11341.0	-	-	921	-	-
Morgagni-Stewart-Morel Syndrome	12359.0	-	-	442.463645	-	-
Congenital Nervous System Disorder	95831.0	-	-	168	-	-
PAGERANK TOP NODES						
Congenital Nervous System Disorder	95831.0	-	-	-	0.015793	-
Diseases/Conditions: Spastic Paraplegia 10, Autosomal Dominant; Hereditary Spastic Paraplegia Caused by Mutation in KIF5A; Susceptibility to Amyotrophic Lateral Sclerosis 25; Neonatal Myoclonus, Intractable	13849.0	-	-	-	0.014052	-

Gene: KIF5A/MY050/NKHC/D12S1889 (synonyms) **Protein:** Kinesin, Heavy Chain, Neuron-Specific						
Morgagni-Stewart-Morel Syndrome	12359.0	-	-	-	0.007619	-
KIF5A Gene	5343604	-	-	-	0.006849	-
Autosomal Dominant Inheritance	140310.0	-	-	-	0.005734	-
EIGENVECTOR CENTRALITY TOP NODES						
Abnormal Reflexes (both Hyperreflexia and Hyporeflexia)	98105.0	-	-	-	-	1
Extensor Plantar Reflexes	170345.0	-	-	-	-	0.94848
Autosomal Dominant Inheritance	140310.0	-	-	-	-	0.59795
Pyramidal Tract Signs	149311.0	-	-	-	-	0.318759
Diseases/Conditions: Spastic Paraplegia 10, Autosomal Dominant; Hereditary Spastic Paraplegia Caused by Mutation in KIF5A; Susceptibility to Amyotrophic Lateral Sclerosis 25; Neonatal Myoclonus, Intractable **Gene:** KIF5A/MY050/NKHC/D12S1889 (synonyms) **Protein:** Kinesin, Heavy Chain, Neuron-Specific	13849.0	-	-	-	-	0.249164

Table 8. Most influential nodes by centrality scores in modularity class 22 of mc_GBPN, which contains 65 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3 **Gene:** FTL	16872.0	2713	-	-	-	-
Diseases/Conditions: Hypomyelinating Leukodystrophy 6 **Genes:** TUBB4A; TUBB5	15292.0	1109	-	-	-	-
Difficulty Swallowing	132121.0	429	-	-	-	-
Dysphonia	185786.0	270	-	-	-	-
Generalized Dystonia; Dystonia 12; Ziehen-Oppenheim Disease; Torsion Dystonia	43481.0	260	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3 **Gene:** FTL	16872.0	-	0.615385	-	-	-
Difficulty Swallowing	132121.0	-	0.507937	-	-	-
Dysphonia	185786.0	-	0.507937	-	-	-
Diseases/Conditions: Hypomyelinating Leukodystrophy 6 **Genes:** TUBB4A; TUBB5	15292.0	-	0.441379	-	-	-
Disease/Condition: Eyelid	28744.0	-	0.441379	-	-	-

Spasms; Susceptibility to Attention Deficit-Hyperactivity Disorder (ADHD) **Dopamine Receptors:** D1B; D5						
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3 **Gene:** FTL	16872.0	-	-	3039.371275	-	-
Diseases/Conditions: Hypomyelinating Leukodystrophy 6 **Genes:** TUBB4A; TUBB5	15292.0	-	-	1618.628725	-	-
Difficulty Swallowing	132121.0	-	-	967.106962	-	-
Dysphonia	185786.0	-	-	349.994891	-	-
Disease/Condition: Eyelid Spasms; Susceptibility to Attention Deficit-Hyperactivity Disorder (ADHD) **Dopamine Receptors:** D1B; D5	28744.0	-	-	95.898148	-	-
PAGERANK TOP NODES						
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3 **Gene:** FTL	16872.0	-	-	-	0.012261	-
Diseases/Conditions: Hypomyelinating Leukodystrophy 6 **Genes:** TUBB4A; TUBB5	15292.0	-	-	-	0.007803	-
Diseases/Conditions:	5351118.0	-	-	-	0.003964	-

Hyperferritinemia With or Without Cataract (HRFTC) **Gene:** FTL						
Diseases/Conditions: Dystonia 4 (Hereditary Whispering Dystonia) **Genes:** TUBB4A	5355806	-	-	-	0.003788	-
Disease/Condition: Neuroaxonal Dystrophy; Neurodegeneration with Brain Iron Accumulation (NBIA, PLA2G6-related; NBIA2A) **Gene:** PLA2G6	34398.0	-	-	-	0.003002	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Ferritin-related Neurodegeneration; NBIA3 **Gene:** FTL	16872.0	-	-	-	-	1
Difficulty Swallowing	132121.0	-	-	-	-	0.538345
Disease/Condition: Eyelid Spasms; Susceptibility to Attention Deficit-Hyperactivity Disorder (ADHD) **Dopamine Receptors:** D1B; D5	28744.0	-	-	-	-	0.425709
Mood Swings	94864.0	-	-	-	-	0.38744
Dysphonia	185786.0	-	-	-	-	0.379988

Table 9. Most influential nodes by centrality scores in modularity class 16 of mc_GBPN, which contains 61 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Rett Syndrome (Cerebroatrophic Hyperammonemia); Severe Neonatal Encephalopathy due to MECP2 Mutation; MRXS13; MECP2-related Disorders **Gene:** MECP2/PPMX/RTS/RTT (synonyms) **Protein:** Methyl-CPG-Binding Protein 2	6256.0	1436	-	-	-	-
Methyl-CpG-Binding Protein 2 (MECP2)	5390213	164	-	-	-	-
Disease/Condition: X-Linked Syndromic Intellectual Development Disorder 13 (MRXS13) **Gene:** MECP2	5370370	160	-	-	-	-
Disease/Condition: Angelman Syndrome **Gene:** UBE3A	5384905	160	-	-	-	-
MECP2 Gene	5391315	158	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Rett Syndrome (Cerebroatrophic	6256.0	-	1	-	-	-

Hyperammonemia); Severe Neonatal Encephalopathy due to MECP2 Mutation; MRXS13; MECP2-related Disorders **Gene:** MECP2/PPMX/RTS/RTT (synonyms) **Protein:** Methyl-CPG-Binding Protein 2						
Disease/Condition: Developmental and Epileptic Encephalopathy 2 (DEE2) **Gene:** CDKL5	5366170	-	1	-	-	-
FOXG1 Gene	2594349	-	1	-	-	-
CDKL5 Gene	5366160	-	1	-	-	-
MECP2 Gene	5391325	-	0.674157	-	-	-
Neurodevelopmental Abnormality	79806	-	0.508475	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Rett Syndrome (Cerebroatrophic Hyperammonemia); Severe Neonatal Encephalopathy due to MECP2 Mutation; MRXS13; MECP2-related Disorders **Gene:** MECP2/PPMX/RTS/RTT (synonyms) **Protein:** Methyl-CPG-Binding Protein 2	6256.0	-	-	1478.62663	-	-
Methyl-CpG-Binding Protein 2 (MECP2)	5390213	-	-	2.37337	-	-
All other nodes in the modularity class have a betweenness centrality score of 0.						

PAGERANK TOP NODES						
Diseases/Conditions: Rett Syndrome (Cerebroatrophic Hyperammonemia); Severe Neonatal Encephalopathy due to MECP2 Mutation; MRXS13; MECP2-related Disorders **Gene:** MECP2/PPMX/RTS/RTT (synonyms) **Protein:** Methyl-CPG-Binding Protein 2	6256.0	-	-	-	0.015366	-
Neonatal Severe Encephalopathy Due to MECP2 Mutations	2597382	-	-	-	0.011456	-
Rett Syndrome (Atypical; Zappella Variant; Preserved Speech Variant)	2598816	-	-	-	0.009846	-
Disease/Condition: Rett Syndrome, Congenital Variant **Gene:** FOXG1	2599785	-	-	-	0.009176	-
MECP2 Gene	2599832	-	-	-	0.008854	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Rett Syndrome (Cerebroatrophic Hyperammonemia); Severe Neonatal Encephalopathy due to MECP2 Mutation; MRXS13; MECP2-related Disorders **Gene:** MECP2/PPMX/RTS/RTT (synonyms) **Protein:** Methyl-CPG-Binding Protein 2	6256.0	-	-	-	-	1
Neonatal Severe	2597382	-	-	-	-	0.888547

Encephalopathy Due to MECP2 Mutations						
Rett Syndrome (Atypical; Zappella Variant; Preserved Speech Variant)	2598816	-	-	-	-	0.846917
MECP2 Gene	2599832	-	-	-	-	0.815885
X-Linked Dominant Inheritance	143257	-	-	-	-	0.651789

Table 10. Most influential nodes by centrality scores in modularity class 2 of mc_GBPN, which contains 52 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Myoclonic Dystonia/Dystonia 11; Alcohol-Responsive Dystonia; Drug-Induced Myoclonus; Myoclonus-Dystonia Syndrome caused by mutation in SGCE; Palatal/Oculopalatal Myoclonus; Upper/Lower Extremity Myoclonus; Eyelid Myoclonus; Intention Myoclonus; Nocturnal/Sleep Myoclonus; Segmental Myoclonus; Myoclonus Simplex; Polymyoclonus **Genes:** SGCE/ESG (synonyms)	10251.0	1840	-	-	-	-
Obsessive Compulsive Disorder	22650.0	911	-	-	-	-
Clinical Depression	21304.0	473	-	-	-	-

Anxiety	169845.0	462	-	-	-	-
Agoraphobia	35849.0	183	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Myoclonic Dystonia/Dystonia 11; Alcohol-Responsive Dystonia; Drug-Induced Myoclonus; Myoclonus-Dystonia Syndrome caused by mutation in SGCE; Palatal/Oculopalatal Myoclonus; Upper/Lower Extremity Myoclonus; Eyelid Myoclonus; Intention Myoclonus; Nocturnal/Sleep Myoclonus; Segmental Myoclonus; Myoclonus Simplex; Polymyoclonus **Genes:** SGCE/ESG (synonyms)	10251.0	-	0.666667	-	-	-
Obsessive Compulsive Disorder	22650.0	-	0.541176	-	-	-
Agoraphobia	35849.0	-	0.479167	-	-	-
Anxiety	169845.0	-	0.474227	-	-	-
Clinical Depression	21304.0	-	0.469388	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Myoclonic Dystonia/Dystonia 11; Alcohol-Responsive Dystonia; Drug-Induced Myoclonus; Myoclonus-Dystonia Syndrome caused by mutation in SGCE; Palatal/Oculopalatal Myoclonus; Upper/Lower Extremity Myoclonus; Eyelid Myoclonus; Intention Myoclonus; Nocturnal/Sleep Myoclonus; Segmental Myoclonus;	10251.0	-	-	1414.957233	-	-

Myoclonus Simplex; Polymyoclonus **Genes:** SGCE/ESG (synonyms)						
Obsessive Compulsive Disorder	22650.0	-	-	509.16536	-	-
Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcus Infections (PANDAS)	10546.0	-	-	405.93985	-	-
Agoraphobia	35849.0	-	-	121.892338	-	-
Clinical Depression	21304.0	-	-	49.044741	-	-
PAGERANK TOP NODES						
Diseases/Conditions: Myoclonic Dystonia/Dystonia 11; Alcohol-Responsive Dystonia; Drug-Induced Myoclonus; Myoclonus-Dystonia Syndrome caused by mutation in SGCE; Palatal/Oculopalatal Myoclonus; Upper/Lower Extremity Myoclonus; Eyelid Myoclonus; Intention Myoclonus; Nocturnal/Sleep Myoclonus; Segmental Myoclonus; Myoclonus Simplex; Polymyoclonus **Genes:** SGCE/ESG (synonyms)	10251.0	-	-	-	0.015945	-
Agoraphobia	35849.0	-	-	-	0.013776	-
Abnormal Fear/Anxiety-Related Behavior	79360.0	-	-	-	0.008274	-
Obsessive Compulsive Disorder	22650.0	-	-	-	0.006439	-
Sarcoglycan, Epsilon	5337712	-	-	-	0.006352	-
EIGENVECTOR CENTRALITY TOP NODES						

Diseases/Conditions: Myoclonic Dystonia/Dystonia 11; Alcohol-Responsive Dystonia; Drug-Induced Myoclonus; Myoclonus-Dystonia Syndrome caused by mutation in SGCE; Palatal/Oculopalatal Myoclonus; Upper/Lower Extremity Myoclonus; Eyelid Myoclonus; Intention Myoclonus; Nocturnal/Sleep Myoclonus; Segmental Myoclonus; Myoclonus Simplex; Polymyoclonus **Genes:** SGCE/ESG (synonyms)	10251.0	-	-	-	-	1
Obsessive Compulsive Disorder	22650.0	-	-	-	-	0.92378
Clinical Depression	21304.0	-	-	-	-	0.644809
Anxiety	169845.0	-	-	-	-	0.632267
Agoraphobia	35849.0	-	-	-	-	0.256571

Table 11. Most influential nodes by centrality scores in modularity class 17 of mc_GBPN, which contains 75 nodes.

Top Nodes	Top Node IDs	Degree	Closeness	Betweenness	PageRank	Eigenvector
DEGREE CENTRALITY TOP NODES						
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy	1748.0	2283	-	-	-	-

Genes: NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex						
Cerebrovascular Disease; Anterior Choroidal Artery Infarction; Stroke; Apoplexy	35059.0	441	-	-	-	-
Abnormal Gait	98027.0	298	-	-	-	-
Lower Back Pain	166585.0	156	-	-	-	-
Leukoencephalopathy; CACH Syndromes; White Matter Diseases	81147.0	127	-	-	-	-
CLOSENESS CENTRALITY TOP NODES						
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy **Genes:** NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex	1748.0	-	0.970588	-	-	-

Autosomal Dominant Cerebral Arteriopathy	5389889	-	0.540984	-	-	-
NOTCH3 Gene	5389171	-	0.536585	-	-	-
Cerebral Infarction	35059	-	0.519685	-	-	-
Impaired Gait	5384043	-	0.519685	-	-	-
BETWEENNESS CENTRALITY TOP NODES						
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy **Genes:** NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex	1748.0	-	-	3445.012412	-	-
Cerebrovascular Disease; Anterior Choroidal Artery Infarction; Stroke; Apoplexy	35059.0	-	-	243.201621	-	-
Abnormal Gait	98027.0	-	-	119.013854	-	-
Recurrent Subcortical Infarcts	148057.0	-	-	1.804021	-	-
Autosomal Dominant Cerebral Arteriopathy	5384037	-	-	0.82656	-	-
PAGERANK TOP NODES						

Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy **Genes:** NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex	1748.0	-	-	-	0.027648	-
Cerebrovascular Disease; Anterior Choroidal Artery Infarction; Stroke; Apoplexy	35059.0	-	-	-	0.012185	-
NOTCH3 Gene	5384025	-	-	-	0.006859	-
HTRA1 Gene	5343992	-	-	-	0.005377	-
Abnormal Gait	98027.0	-	-	-	0.003655	-
EIGENVECTOR CENTRALITY TOP NODES						
Diseases/Conditions: Cadasil Syndrome; Carasil Syndrome; IMF2; Brain Small Vessel Disease; Retinal Arteriolar Tortuosity; Infantile Hemiparesis; Age-related Macular Degeneration; COL4A1-related Familial Vascular Leukoencephalopathy	1748.0	-	-	-	-	1

Genes: NOTCH3; COL4A1; HTRA1/PRSS11/ARMD7/CARASIL/L56/ORF480 (synonyms) **Drugs/Compounds:** Cerebrolysin (Peptide Fraction Derived from Porcine Brain Protein); Palm Tocotrienol Complex						
Cerebrovascular Disease; Anterior Choroidal Artery Infarction; Stroke; Apoplexy	35059.0	-	-	-	-	0.76495
Abnormal Gait	98027.0	-	-	-	-	0.487053
Lower Back Pain	166585.0	-	-	-	-	0.280835
Leukoencephalopathy; CACH Syndromes; White Matter Diseases	81147.0	-	-	-	-	0.224274