

MeSH Tree Structures - 2008

G4 - BIOLOGIC, CYTOLOGIC, AND IMMUNOLOGIC PHENOMENA

Biological Phenomena, Cell Phenomena, and Immunity

Biological Phenomena, Cell Phenomena, and Immunity

Biological Phenomena

Adaptation, Biological

Adaptation, Physiological

Acclimatization

Allostasis

Estivation

Hibernation

Biogenesis

Eutrophication

Evolution

Evolution, Molecular

Genetic Speciation

Phylogeny

Extinction, Biological

Fluid Shifts

Host-Pathogen Interactions

Host-Parasite Interactions

Microbiologic Phenomena

Antibiosis

Bacterial Physiology

Bacterial Adhesion

Bacterial Translocation

Bacteriolysis

Nitrogen Fixation

Drug Resistance, Microbial

Drug Resistance, Bacterial

beta-Lactam Resistance

Cephalosporin Resistance

Penicillin Resistance

Ampicillin Resistance

Methicillin Resistance

Chloramphenicol Resistance

Drug Resistance, Multiple, Bacterial

Kanamycin Resistance

Tetracycline Resistance

Trimethoprim Resistance

Vancomycin Resistance

Drug Resistance, Fungal

Drug Resistance, Multiple, Fungal

Drug Resistance, Viral

Drug Resistance, Multiple, Viral

Germ-Free Life

Specific Pathogen-Free Organisms

Hemadsorption

Microbial Viability

Nitrogen Fixation

Transformation, Bacterial

Viral Physiology

Antibody-Dependent Enhancement

Cell Transformation, Viral

Cytopathogenic Effect, Viral

Hemagglutination, Viral

Inclusion Bodies, Viral

Viral Interference

G4			
G4.185			
G4.185.57			
G4.185.57.500		G7.62	
G4.185.57.500.133		G7.62.	
G4.185.57.500.274			
G4.185.57.500.415		G7.62.	
G4.185.57.500.592		G7.62.	G7.315.
G4.185.194			
G4.185.320			
G4.185.349		G5.265	
G4.185.349.250		G5.265.	
G4.185.349.350		G5.265.	
G4.185.349.605		G13.697	L1.100.
G4.185.355			
G4.185.379			
G4.185.420			
G4.185.420.400			
G4.185.515			
G4.185.515.70			
G4.185.515.120			
G4.185.515.120.100			
G4.185.515.120.105			
G4.185.515.120.120			
G4.185.515.120.600		G4.185.	G6.184.
		G6.535.	
G4.185.515.286		G12.392.	
G4.185.515.286.347		G12.392.	
G4.185.515.286.347.500		G12.392.	
G4.185.515.286.347.500.175		G12.392.	
G4.185.515.286.347.500.600		G12.392.	
G4.185.515.286.347.500.600.50		G12.392.	
G4.185.515.286.347.500.600.525		G12.392.	
G4.185.515.286.347.750		G12.392.	
G4.185.515.286.347.812		G12.392.	G12.392.
G4.185.515.286.347.875		G12.392.	
G4.185.515.286.347.937		G12.392.	
G4.185.515.286.347.968		G12.392.	
G4.185.515.286.347.984		G12.392.	
G4.185.515.286.383		G12.392.	
G4.185.515.286.383.500		G12.392.	G12.392.
G4.185.515.286.420		G12.392.	
G4.185.515.286.420.500		G12.392.	G12.392.
G4.185.515.372			
G4.185.515.372.676			
G4.185.515.423			
G4.185.515.620			
G4.185.515.671		G4.185.	G6.184.
		G6.535.	
G4.185.515.870		E5.393.	G5.760.
		G5.760.	
G4.185.515.880			
G4.185.515.880.40		G4.610.	
G4.185.515.880.210		C4.697.	C23.550.
G4.185.515.880.225		E1.450.	
G4.185.515.880.420			
G4.185.515.880.450		A11.284.	
G4.185.515.880.910			

G4 - BIOLOGIC, CYTOLOGIC, AND IMMUNOLOGIC PHENOMENA

Biological Phenomena, Cell Phenomena, and Immunity

Biological Phenomena

Microbiologic Phenomena

Viral Physiology

Virus Attachment

Virus Attachment

Virus Inactivation

Virus Integration

Lysogeny

Virus Internalization

Virus Latency

Virus Replication

Virus Activation

Virus Assembly

Virus Shedding

Virulence

Pigmentation

Eye Color

Hair Color

Skin Pigmentation

Recovery of Function

Regeneration

Bone Remodeling

Bone Regeneration

Osseointegration

Liver Regeneration

Nerve Regeneration

Wound Healing

Fracture Healing

Remission, Spontaneous

Neoplasm Regression, Spontaneous

Symbiosis

Tissue Survival

Cell Physiology

Cell Adhesion

Cell Aging

Erythrocyte Aging

Cell Communication

Autocrine Communication

Bystander Effect

Embryonic Induction

Paracrine Communication

Quorum Sensing

Signal Transduction

Mechanotransduction, Cellular

Cell Compartmentation

Chromosome Positioning

Cell Count

Blood Cell Count

Erythrocyte Count

Reticulocyte Count

Leukocyte Count

Lymphocyte Count

CD4 Lymphocyte Count

CD4-CD8 Ratio

	G4.185.515.880.918		
	G4.185.515.880.926	E5.200.	
	G4.185.515.880.930	G5.930	
	G4.185.515.880.930.500	G5.930.	
	G4.185.515.880.932		
	G4.185.515.880.935		
	G4.185.515.880.941	G6.184.	
	G4.185.515.880.941.940		
	G4.185.515.880.941.950	G6.184.	
	G4.185.515.880.960		
	G4.185.515.910		
	G4.185.672	E1.370.	
	G4.185.672.360	G11.697.	
	G4.185.672.490	G10.795.	
	G4.185.672.890	E1.370.	G10.795.
	G4.185.712		
	G4.185.753		
	G4.185.753.150	G11.427.	
	G4.185.753.150.150	G11.427.	
	G4.185.753.150.150.570	G11.427.	
	G4.185.753.468	G10.261.	
	G4.185.753.611	G11.561.	
	G4.185.753.891		
	G4.185.753.891.500		
	G4.185.800		
	G4.185.800.500	C4.697.	C23.550.
	G4.185.848		
	G4.185.908		
	G4.335	G7.382	
	G4.335.117		
	G4.335.119		
	G4.335.119.260	G9.188.	
	G4.335.122		
	G4.335.122.100		
	G4.335.122.155		
	G4.335.122.300	G4.335.	G7.574.
		G7.574.	G8.520.
	G4.335.122.600		
	G4.335.122.700		
	G4.335.122.850	G4.335.	G6.184.
	G4.335.122.850.580	G4.335.	G6.184.
	G4.335.125		
	G4.335.125.180		
	G4.335.130	E5.200.	
	G4.335.130.107	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.330	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.330.725	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.595	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.595.500	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.595.500.150	E1.450.	E5.200.
		G9.188.	
	G4.335.130.107.595.500.150.160	E1.450.	E5.200.
		G4.610.	G9.188.

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Cell Physiology

Cell Count

Blood Cell Count

Platelet Count

Platelet Count

G4.335.130.107.740

E1.450.

E1.450.

E5.200.

G9.188.

Sperm Count

G4.335.130.870

E1.450.

E5.200.

Cell Cycle

G4.335.134

G7.382.

Cell Division

G4.335.134.220

G4.335.

G5.105

G7.382.

G7.382.

G7.574.

Cell Nucleus Division

G4.335.134.220.220

G5.105.

G7.382.

Anaphase

G4.335.134.220.220.500

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Chromosome Segregation

G4.335.134.220.220.625

G5.105.

G7.382.

Meiosis

G4.335.134.220.220.687

G5.105.

G7.382.

Meiotic Prophase I

G4.335.134.220.220.687.444

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Chromosome Pairing

G4.335.134.220.220.687.444.299

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Synaptonemal Complex

G4.335.134.220.220.687.444.299.500

A11.284.

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Pachytene Stage

G4.335.134.220.220.687.444.600

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Metaphase

G4.335.134.220.220.750

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Mitosis

G4.335.134.220.220.781

G5.105.

G7.382.

Anaphase

G4.335.134.220.220.781.50

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Metaphase

G4.335.134.220.220.781.625

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Prometaphase

G4.335.134.220.220.781.812

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Prophase

G4.335.134.220.220.781.906

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Telophase

G4.335.134.220.220.781.953

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Prometaphase

G4.335.134.220.220.812

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Prophase

G4.335.134.220.220.875

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Meiotic Prophase I

G4.335.134.220.220.875.500

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

Chromosome Pairing

G4.335.134.220.220.875.500.299

G4.335.

G5.105.

G5.105.

G7.382.

G7.382.

G4 - BIOLOGIC, CYTOLOGIC, AND IMMUNOLOGIC PHENOMENA

Biological Phenomena, Cell Phenomena, and Immunity

Cell Physiology

Cell Cycle

Cell Division

Cell Nucleus Division

Prophase

Synaptonemal Complex

	G4.335.134.220.220.875.500.299.500		A11.284. G4.335. G5.105. G7.382. G7.382.
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Pachytene Stage

	G4.335.134.220.220.875.500.600		G14.160. G4.335. G5.105. G7.382.
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Telophase

	G4.335.134.220.220.937		G4.335. G5.105. G7.382.
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Cytokinesis

	G4.335.134.220.250		G7.382.
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Interphase

	G4.335.134.500		G7.382.
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G0 Phase

	G4.335.134.500.300		G7.382.
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G1 Phase

	G4.335.134.500.320		G7.382.
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G2 Phase

	G4.335.134.500.340		G7.382.
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S Phase

	G4.335.134.500.800		G5.200. G7.382.
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Cell Death

Apoptosis

	G4.335.139		
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Anoikis

	G4.335.139.160		
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Autophagy

	G4.335.139.160.60		
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Necrosis

	G4.335.139.399		G4.335.
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DNA Degradation, Necrotic

	G4.335.139.638		C23.550.
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Cell Dedifferentiation

	G4.335.139.638.200		C23.550. G5.180.
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Cell Differentiation

	G4.335.145		G7.382.
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Adipogenesis

	G4.335.151		G7.382.
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Embryonic Induction

	G4.335.151.149		G7.382.
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Gametogenesis

	G4.335.151.300		G4.335. G7.574. G8.520.
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Oogenesis

	G4.335.151.650		G7.382. G8.520.
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Vitellogenesis

	G4.335.151.650.249		G7.382. G8.520.
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Spermatogenesis

	G4.335.151.650.249.880		G7.382. G8.520.
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Sperm Maturation

	G4.335.151.650.624		G7.382. G8.520.
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Hematopoiesis

	G4.335.151.650.624.700		G7.382. G8.520.
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Erythroipoiesis

	G4.335.151.825		G9.188.
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Hematopoiesis, Extramedullary

	G4.335.151.825.414		G9.188.
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Leukopoiesis

	G4.335.151.825.463		G9.188.
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Lymphopoiesis

	G4.335.151.825.597		G9.188.
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Myelopoiesis

	G4.335.151.825.597.500		G9.188.
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Thrombopoiesis

	G4.335.151.825.750		G9.188.
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Cell Fusion

	G4.335.151.825.798		G9.188.
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Cell Growth Processes

	G4.335.217		E5.200.
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Cell Enlargement

	G4.335.233		G7.382. G7.574.
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Cell Proliferation

	G4.335.233.500		G7.382. G7.574.
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Cell Division

	G4.335.233.750		G7.382. G7.574.
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	G4.335.233.750.500		G4.335. G5.105. G7.382. G7.382.
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Cell Membrane Permeability

	G4.335.250		G7.574. G6.535.
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Cell Movement

	G4.335.283		
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Cell Aggregation

	G4.335.283.251		
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Cell Migration Inhibition

	G4.335.283.337		
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Chemotaxis

	G4.335.283.424		
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Chemotaxis, Leukocyte

	G4.335.283.424.233		
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Leukocyte Rolling

	G4.335.283.424.233.500		
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Ovum Transport

	G4.335.283.700		G8.520.
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Sperm Motility

	G4.335.283.750		G8.520.
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Sperm Transport

	G4.335.283.800		G8.520.
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Cell Polarity

	G4.335.300		
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Cell Respiration

	G4.335.305		
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Cell Hypoxia

	G4.335.305.300		
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G4 - BIOLOGIC, CYTOLOGIC, AND IMMUNOLOGIC PHENOMENA

Biological Phenomena, Cell Phenomena, and Immunity

Cell Physiology

Cell Respiration

Respiratory Burst

Respiratory Burst

Cell Shape

Cell Size

Cell Survival

Cell Transdifferentiation

Contact Inhibition

Cytoplasmic Streaming

Axonal Transport

DNA Packaging

Chromatin Assembly and Disassembly

Endocytosis

Phagocytosis

Autophagy

Pinocytosis

Exocytosis

Cell Degranulation

Ion Channel Gating

Lymphocyte Cooperation

Membrane Fusion

Mitochondrial Swelling

Organelle Shape

Cell Nucleus Shape

Organelle Size

Cell Nucleus Size

Mitochondrial Size

Receptor Aggregation

Immunologic Capping

Receptor Cross-Talk

Signal Transduction

Ion Channel Gating

MAP Kinase Signaling System

Mechanotransduction, Cellular

Phototransduction

Second Messenger Systems

Calcium Signaling

Synaptic Transmission

Immunity

Antibody-Dependent Enhancement

Antibody Diversity

Antibody Formation

Antibody Specificity

Organ Specificity

Species Specificity

Antigen-Antibody Reactions

Agglutination

Hemagglutination

Sperm Agglutination

Antibody Affinity

Antigenic Modulation

Binding Sites, Antibody

Cross Reactions

Hemolysis

Immunologic Capping

Passive Cutaneous Anaphylaxis

Rh Isoimmunization

	G4.335.305.620	G6.535.	
	G4.335.309	G7.382.	
	G4.335.313	G7.382.	
	G4.335.316		
	G4.335.335	G7.382.	
	G4.335.355		
	G4.335.418	G6.535.	
	G4.335.418.40	G6.535.	G11.561.
	G4.335.452	G5.192	
	G4.335.452.95	G5.192.	G5.315.
	G4.335.487		
	G4.335.487.350	G4.610.	G9.188.
	G4.335.487.350.91	G4.335.	
	G4.335.487.370		
	G4.335.532		
	G4.335.532.160		
	G4.335.591	G4.335.	G6.184.
	G4.335.650	G4.610.	
	G4.335.670		
	G4.335.723		
	G4.335.750		
	G4.335.750.270		
	G4.335.760		
	G4.335.760.160		
	G4.335.760.560		
	G4.335.857		
	G4.335.857.612	G4.610.	
	G4.335.862		
	G4.335.880	G4.335.	G6.184.
	G4.335.880.400	G4.335.	G6.184.
	G4.335.880.560	G6.184.	
	G4.335.880.580	G4.335.	G6.184.
	G4.335.880.700	G6.184.	G11.697.
	G4.335.880.800	G6.184.	
	G4.335.880.800.100	G6.184.	G6.184.
		G6.535.	
	G4.335.880.850	G6.184.	G11.561.
	G4.610		
	G4.610.40	G4.185.	
	G4.610.51	G4.610.	G13.920.
	G4.610.71		
	G4.610.106		
	G4.610.106.493		
	G4.610.106.759	G4.875	
	G4.610.143		
	G4.610.143.100		
	G4.610.143.100.200		
	G4.610.143.100.700		
	G4.610.143.125		
	G4.610.143.140		
	G4.610.143.232	D12.776.	D12.776.
		D12.776.	G6.184.
	G4.610.143.281		
	G4.610.143.545	C23.550.	
	G4.610.143.612	G4.335.	
	G4.610.143.754	E1.370.	E1.450.
		E5.478.	
	G4.610.143.780	C15.378.	C20.188.

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Biological Phenomena, Cell Phenomena, and Immunity

Immunity

Autoimmunity

Autoimmunity	G4.610.192		
CD4-CD8 Ratio	G4.610.248	E1.450. G4.335.	E5.200. G9.188.
Complement Activation	G4.610.255		
Complement Pathway, Alternative	G4.610.255.695		
Complement Pathway, Classical	G4.610.255.698		
Complement Pathway, Mannose-Binding Lectin	G4.610.255.849		
Cross-Priming	G4.610.260	G4.610.	
Cytotoxicity, Immunologic	G4.610.270		
Antibody-Dependent Cell Cytotoxicity	G4.610.270.70		
Macrophage Activation	G4.610.270.500		
Dose-Response Relationship, Immunologic	G4.610.300		
Histamine Release	G4.610.431		
HIV Seronegativity	G4.610.440		
Immune Tolerance	G4.610.484		
Clonal Anergy	G4.610.484.100		
Clonal Deletion	G4.610.484.120		
Self Tolerance	G4.610.484.800		
Tachyphylaxis	G4.610.484.910	G12.454.	
Transplantation Tolerance	G4.610.484.955		
Immunity, Active	G4.610.519		
Immunity, Cellular	G4.610.555		
Antigen Presentation	G4.610.555.70		
Immunologic Surveillance	G4.610.555.412		
Lymphocyte Activation	G4.610.555.545	E1.450.	E5.478.
Cross-Priming	G4.610.555.545.150	G4.610.	
Transplantation Immunology	G4.610.555.714		
Graft vs Host Reaction	G4.610.555.714.402		
Graft vs Tumor Effect	G4.610.555.714.402.320		
Graft vs Leukemia Effect	G4.610.555.714.402.320.320		
Histocompatibility	G4.610.555.714.519		
Histocompatibility, Maternal-Fetal	G4.610.555.714.519.500		
Host vs Graft Reaction	G4.610.555.714.545		
Graft Rejection	G4.610.555.714.545.328		
Graft Survival	G4.610.555.714.545.340		
Immunity, Herd	G4.610.562		
Immunity, Maternally-Acquired	G4.610.570		
Immunity, Mucosal	G4.610.573		
Immunity, Natural	G4.610.575		
Blood Bactericidal Activity	G4.610.575.204	G9.188.	G9.188.
Phagocytosis	G4.610.575.809	G4.335.	G9.188.
Immunocompetence	G4.610.612		
Immunocompromised Host	G4.610.619		
Radiation Chimera	G4.610.619.500	B1.50.	
Immunogenetics	G4.610.626	G1.273.	H1.158.
Antibody Diversity	G4.610.626.51	G4.610.	G13.920.
Antigenic Variation	G4.610.626.73	G13.920.	
Gene Rearrangement, B-Lymphocyte	G4.610.626.320	G5.330.	
Gene Rearrangement, B-Lymphocyte, Heavy Chain	G4.610.626.320.501	G5.330.	
Immunoglobulin Class Switching	G4.610.626.320.501.450	G5.330.	
Gene Rearrangement, B-Lymphocyte, Light Chain	G4.610.626.320.601	G5.330.	
Gene Rearrangement, T-Lymphocyte	G4.610.626.325	G5.330.	
Gene Rearrangement, alpha-Chain T-Cell Antigen Receptor	G4.610.626.325.111	G5.330.	
Gene Rearrangement, beta-Chain T-Cell Antigen Receptor	G4.610.626.325.211	G5.330.	
Gene Rearrangement, delta-Chain T-Cell Antigen Receptor	G4.610.626.325.261	G5.330.	
Gene Rearrangement, gamma-Chain T-Cell Antigen Receptor	G4.610.626.325.311	G5.330.	
Genes, Immunoglobulin	G4.610.626.398	G14.340.	

G4 - BIOLOGIC, CYTOLOGIC, AND IMMUNOLOGIC PHENOMENA

Biological Phenomena, Cell Phenomena, and Immunity

Immunity

Immunogenetics

Immunoglobulin Allotypes

Immunoglobulin Allotypes	G4.610.626.454	D12.776. D12.776.	D12.776.
Immunoglobulin Gm Allotypes	G4.610.626.454.586	D12.776. D12.776. D12.776. D12.776. D12.776.	D12.776. D12.776. D12.776. D12.776.
Immunoglobulin Km Allotypes	G4.610.626.454.587	D12.776. D12.776. D12.776.	D12.776. D12.776. D12.776.
Immunoglobulin Idiotypes	G4.610.626.510	D12.776. D12.776.	D12.776. D23.50.
Major Histocompatibility Complex	G4.610.626.580	G14.340.	
Genes, MHC Class I	G4.610.626.580.595	G14.340.	
Genes, MHC Class II	G4.610.626.580.600	G14.340.	
Minor Histocompatibility Loci	G4.610.626.590	G14.340.	
Minor Lymphocyte Stimulatory Loci	G4.610.626.600	G14.340.	
Somatic Hypermutation, Immunoglobulin	G4.610.626.820	G5.600.	
Immunologic Memory	G4.610.662		
Lymphocyte Cooperation	G4.610.749	G4.335.	
Neuroimmunomodulation	G4.610.795	G11.561.	
Neutrophil Activation	G4.610.810		
Neutrophil Infiltration	G4.610.857		
T-Cell Antigen Receptor Specificity	G4.610.900		
Tumor Escape	G4.610.905		
Plant Physiology	G4.742		
Germination	G4.742.300		
Gravity Perception	G4.742.450	F2.463.	G11.561.
Photosynthesis	G4.742.600	G6.535. G6.535.	G6.535. H1.181.
Plant Diseases	G4.742.675		
Plant Tumors	G4.742.675.700		
Plant Infertility	G4.742.745		
Plant Transpiration	G4.742.750		
Tropism	G4.742.800	G7.574.	
Gravitropism	G4.742.800.400	G7.574.	
Phototropism	G4.742.800.700	G7.574.	
Species Specificity	G4.875	G4.610.	