

Table S1. The agents targeting immunity-associated pathways^[a].

Agent	Target	Pathway	Immunity association
FONTOLIZUMAB	IFNG	Allograft rejection	Direct
FUMARIC ACID	IFNG	Allograft rejection	Direct
CRX-191	IFNG	Allograft rejection	Direct
OLSALAZINE	IFNG	Allograft rejection	Direct
GLUCOSAMINE	IFNG	Allograft rejection	Direct
CARBAMAZEPINE	HLA-A	Allograft rejection	Direct
3-INDOLEBUTYRIC ACID	HLA-A	Allograft rejection	Direct
ABACAVIR	HLA-B	Allograft rejection	Direct
PHENYTOIN	HLA-B	Allograft rejection	Direct
CARBAMAZEPINE	HLA-B	Allograft rejection	Direct
N-FORMYLMETHIONINE	HLA-B	Allograft rejection	Direct
ASPIRIN	IL4	Allograft rejection	Direct
MVA-MUC1-IL2	IL2	Allograft rejection	Direct
(1H-INDOL-3-YL)-(2-MERCAPTO-ETHOXYIMINO)-ACETIC ACID	IL2	Allograft rejection	Direct
2-[2-(2-CYCLOHEXYL-2-GUANIDINO-ACETYLAMINO)-ACETYLAMINO]-N-(3-MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Allograft rejection	Direct
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3-PIPERIDINYL]-1-OXOETHYL]-4-(PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Allograft rejection	Direct
SP4160	IL2	Allograft rejection	Direct
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B-CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Allograft rejection	Direct
SP2456	IL2	Allograft rejection	Direct
5-[2,3-DICHLORO-4-(5-{1-[2-(2-GUANIDINO-4-METHYL-PENTANOYLAMINO)-ACETYL]-PIPERIDIN-4-YL}-1-METHYL-1H-PYRAZOL-3-YL)-PHENOXYMETHYL]-FURAN-2-CARBOXYLIC ACID	IL2	Allograft rejection	Direct
GLATIRAMER ACETATE	HLA-DRB1	Allograft rejection	Direct
USTEKINUMAB	IL12B	Allograft rejection	Direct
5-MERCAPTO-2-NITRO-BENZOIC ACID	IL12B	Allograft rejection	Direct
ALPHA-D-MANNOSE	IL12B	Allograft rejection	Direct
AMRINONE	TNF	Allograft rejection	Direct
INFLIXIMAB	TNF	Allograft rejection	Direct
THALIDOMIDE	TNF	Allograft rejection	Direct

CLENBUTEROL	TNF	Allograft rejection	Direct
ADALIMUMAB	TNF	Allograft rejection	Direct
ETANERCEPT	TNF	Allograft rejection	Direct
CHLOROQUINE	TNF	Allograft rejection	Direct
PRANLUKAST	TNF	Allograft rejection	Direct
GLUCOSAMINE	TNF	Allograft rejection	Direct
CERTOLIZUMAB PEGOL	TNF	Allograft rejection	Direct
GOLIMUMAB	TNF	Allograft rejection	Direct
CARBAMAZEPINE	TNF	Allograft rejection	Direct
ABACAVIR	TNF	Allograft rejection	Direct
LENALIDOMIDE	TNF	Allograft rejection	Direct
GENZ29155	TNF	Allograft rejection	Direct
CYTOFAB	TNF	Allograft rejection	Direct
CERTOLIZUMAB	TNF	Allograft rejection	Direct
RDP58	TNF	Allograft rejection	Direct
AN0128	TNF	Allograft rejection	Direct
ART621	TNF	Allograft rejection	Direct
CELASTROL	TNF	Allograft rejection	Direct
TALACTOFERRIN ALFA	TNF	Allograft rejection	Direct
RDP-58	TNF	Allograft rejection	Direct
PENTOXIFYLLINE	TNF	Allograft rejection	Direct
IP-751	TNF	Allograft rejection	Direct
CRX-191	TNF	Allograft rejection	Direct
PIRFENIDONE	TNF	Allograft rejection	Direct
TGAAC-94	TNF	Allograft rejection	Direct
AMOXICILLIN	HLA-DQB1	Allograft rejection	Direct
CLAVULANATE	HLA-DQB1	Allograft rejection	Direct
INSULIN, PORCINE	HLA-DQB1	Allograft rejection	Direct
INSULIN, PORCINE	HLA-DQA2	Allograft rejection	Direct
INTERFERON BETA-1A	HLA-DQA1	Allograft rejection	Direct
INTERFERON BETA-1B	HLA-DQA1	Allograft rejection	Direct
CARBAMAZEPINE	HLA-A	Antigen processing and presentation	Direct
3-INDOLEBUTYRIC ACID	HLA-A	Antigen processing and presentation	Direct
ABACAVIR	HLA-B	Antigen processing and presentation	Direct
PHENYTOIN	HLA-B	Antigen processing and presentation	Direct
CARBAMAZEPINE	HLA-B	Antigen processing and presentation	Direct
N-FORMYLMETHIONINE	HLA-B	Antigen processing and presentation	Direct
INFLIXIMAB	LTA	Antigen processing and presentation	Direct
ETANERCEPT	LTA	Antigen processing and presentation	Direct
ADALIMUMAB	LTA	Antigen processing and presentation	Direct
CARBAMAZEPINE	LTA	Antigen processing and presentation	Direct
ANTI-LT ALPHA	LTA	Antigen processing and presentation	Direct
GLATIRAMER ACETATE	HLA-DRB1	Antigen processing and presentation	Direct

AMOXICILLIN	HLA-DQB1	Antigen processing and presentation	Direct
CLAVULANATE	HLA-DQB1	Antigen processing and presentation	Direct
INSULIN, PORCINE	HLA-DQB1	Antigen processing and presentation	Direct
INSULIN, PORCINE	HLA-DQA2	Antigen processing and presentation	Direct
ADENOSINE-5'-DIPHOSPHATE	TAP1	Antigen processing and presentation	Direct
INTERFERON BETA-1A	HLA-DQA1	Antigen processing and presentation	Direct
INTERFERON BETA-1B	HLA-DQA1	Antigen processing and presentation	Direct
ASPIRIN	IL4	Asthma	Indirect
GLATIRAMER ACETATE	HLA-DRB1	Asthma	Indirect
AMRINONE	TNF	Asthma	Indirect
INFLIXIMAB	TNF	Asthma	Indirect
THALIDOMIDE	TNF	Asthma	Indirect
CLENBUTEROL	TNF	Asthma	Indirect
ADALIMUMAB	TNF	Asthma	Indirect
ETANERCEPT	TNF	Asthma	Indirect
CHLOROQUINE	TNF	Asthma	Indirect
PRANLUKAST	TNF	Asthma	Indirect
GLUCOSAMINE	TNF	Asthma	Indirect
CERTOLIZUMAB PEGOL	TNF	Asthma	Indirect
GOLIMUMAB	TNF	Asthma	Indirect
CARBAMAZEPINE	TNF	Asthma	Indirect
ABACAVIR	TNF	Asthma	Indirect
LENALIDOMIDE	TNF	Asthma	Indirect
GENZ29155	TNF	Asthma	Indirect
CYTOFAB	TNF	Asthma	Indirect
CERTOLIZUMAB	TNF	Asthma	Indirect
RDP58	TNF	Asthma	Indirect
AN0128	TNF	Asthma	Indirect
ART621	TNF	Asthma	Indirect
CELASTROL	TNF	Asthma	Indirect
TALACTOFERRIN ALFA	TNF	Asthma	Indirect
RDP-58	TNF	Asthma	Indirect
PENTOXIFYLLINE	TNF	Asthma	Indirect
IP-751	TNF	Asthma	Indirect
CRX-191	TNF	Asthma	Indirect
PIRFENIDONE	TNF	Asthma	Indirect
TGAAC-94	TNF	Asthma	Indirect
AMOXICILLIN	HLA-DQB1	Asthma	Indirect
CLAVULANATE	HLA-DQB1	Asthma	Indirect
INSULIN, PORCINE	HLA-DQB1	Asthma	Indirect
INSULIN, PORCINE	HLA-DQA2	Asthma	Indirect
INTERFERON BETA-1A	HLA-DQA1	Asthma	Indirect
INTERFERON BETA-1B	HLA-DQA1	Asthma	Indirect

CARBAMAZEPINE	HLA-A	Autoimmune thyroid disease	Direct
3-INDOLEBUTYRIC ACID	HLA-A	Autoimmune thyroid disease	Direct
ABACAVIR	HLA-B	Autoimmune thyroid disease	Direct
PHENYTOIN	HLA-B	Autoimmune thyroid disease	Direct
CARBAMAZEPINE	HLA-B	Autoimmune thyroid disease	Direct
N-FORMYLMETHIONINE	HLA-B	Autoimmune thyroid disease	Direct
ASPIRIN	IL4	Autoimmune thyroid disease	Direct
MVA-MUC1-IL2	IL2	Autoimmune thyroid disease	Direct
(1H-INDOL-3-YL)-(2-MERCAPTO-ETHOXYIMINO)-ACETIC ACID	IL2	Autoimmune thyroid disease	Direct
2-[2-(2-CYCLOHEXYL-2-GUANIDINO-ACETYLAMINO)-ACETYLAMINO]-N-(3-MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Autoimmune thyroid disease	Direct
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3-PIPERIDINYL]-1-OXOETHYL]-4-(PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Autoimmune thyroid disease	Direct
SP4160	IL2	Autoimmune thyroid disease	Direct
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B-CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Autoimmune thyroid disease	Direct
SP2456	IL2	Autoimmune thyroid disease	Direct
5-[2,3-DICHLORO-4-(5-{1-[2-(2-GUANIDINO-4-METHYL-PENTANOYLAMINO)-ACETYL]-PIPERIDIN-4-YL}-1-METHYL-1H-PYRAZOL-3-YL)-PHENOXYMETHYL]-FURAN-2-CARBOXYLIC ACID	IL2	Autoimmune thyroid disease	Direct
GLATIRAMER ACETATE	HLA-DRB1	Autoimmune thyroid disease	Direct
AMOXICILLIN	HLA-DQB1	Autoimmune thyroid disease	Direct
CLAVULANATE	HLA-DQB1	Autoimmune thyroid disease	Direct
INSULIN, PORCINE	HLA-DQB1	Autoimmune thyroid disease	Direct
INSULIN, PORCINE	HLA-DQA2	Autoimmune thyroid disease	Direct
INTERFERON BETA-1A	HLA-DQA1	Autoimmune thyroid disease	Direct
INTERFERON BETA-1B	HLA-DQA1	Autoimmune thyroid disease	Direct
FONTOLIZUMAB	IFNG	Cytokine-cytokine receptor interaction	Direct
FUMARIC ACID	IFNG	Cytokine-cytokine receptor interaction	Direct
CRX-191	IFNG	Cytokine-cytokine receptor interaction	Direct
OLSALAZINE	IFNG	Cytokine-cytokine receptor interaction	Direct
GLUCOSAMINE	IFNG	Cytokine-cytokine receptor interaction	Direct
TINZAPARIN	CXCL12	Cytokine-cytokine receptor interaction	Direct
HEPARIN DISACCHARIDE III-S	CCL5	Cytokine-cytokine receptor interaction	Direct
HEPARIN DISACCHARIDE I-S	CCL5	Cytokine-cytokine receptor interaction	Direct
6-[3-(4-MORPHOLINYL)PROPYL]-2-(3-	TNFRSF1A	Cytokine-cytokine receptor interaction	Direct

NITROPHENYL)-5-THIOXO-5,6,- DIHYDRO-7H- THIENOL[2',3':4,5]PYRROLO[1,2- C]IMIDAZOL-7-ONE			
ASPIRIN	IL4	Cytokine-cytokine receptor interaction	Direct
MVA-MUC1-IL2	IL2	Cytokine-cytokine receptor interaction	Direct
(1H-INDOL-3-YL)-(2-MERCAPTO- ETHOXYIMINO)-ACETIC ACID	IL2	Cytokine-cytokine receptor interaction	Direct
2-[2-(2-CYCLOHEXYL-2-GUANIDINO- ACETYLAMINO)-ACETYLAMINO]-N-(3- MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Cytokine-cytokine receptor interaction	Direct
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3- PIPERIDINYL]-1-OXOETHYL]-4- (PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Cytokine-cytokine receptor interaction	Direct
SP4160	IL2	Cytokine-cytokine receptor interaction	Direct
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B- CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Cytokine-cytokine receptor interaction	Direct
SP2456	IL2	Cytokine-cytokine receptor interaction	Direct
5-[2,3-DICHLORO-4-(5-{1-[2-(2- GUANIDINO-4-METHYL- PENTANOYLAMINO)-ACETYL]- PIPERIDIN-4-YL}-1-METHYL-1H- PYRAZOL-3-YL)-PHENOXYMETHYL]- FURAN-2-CARBOXYLIC ACID	IL2	Cytokine-cytokine receptor interaction	Direct
INTERFERON GAMMA-1B	IFNGR1	Cytokine-cytokine receptor interaction	Direct
TOCILIZUMAB	IL6R	Cytokine-cytokine receptor interaction	Direct
SAR153191	IL6R	Cytokine-cytokine receptor interaction	Direct
ALPHA-D-MANNOSE	IL6R	Cytokine-cytokine receptor interaction	Direct
INFLIXIMAB	LTA	Cytokine-cytokine receptor interaction	Direct
ETANERCEPT	LTA	Cytokine-cytokine receptor interaction	Direct
ADALIMUMAB	LTA	Cytokine-cytokine receptor interaction	Direct
CARBAMAZEPINE	LTA	Cytokine-cytokine receptor interaction	Direct
ANTI-LT ALPHA	LTA	Cytokine-cytokine receptor interaction	Direct
USTEKINUMAB	IL12B	Cytokine-cytokine receptor interaction	Direct
5-MERCAPTO-2-NITRO-BENZOIC ACID	IL12B	Cytokine-cytokine receptor interaction	Direct
ALPHA-D-MANNOSE	IL12B	Cytokine-cytokine receptor interaction	Direct
AMRINONE	TNF	Cytokine-cytokine receptor interaction	Direct
INFLIXIMAB	TNF	Cytokine-cytokine receptor interaction	Direct
THALIDOMIDE	TNF	Cytokine-cytokine receptor interaction	Direct
CLENBUTEROL	TNF	Cytokine-cytokine receptor interaction	Direct
ADALIMUMAB	TNF	Cytokine-cytokine receptor interaction	Direct
ETANERCEPT	TNF	Cytokine-cytokine receptor interaction	Direct

CHLOROQUINE	TNF	Cytokine-cytokine receptor interaction	Direct
PRANLUKAST	TNF	Cytokine-cytokine receptor interaction	Direct
GLUCOSAMINE	TNF	Cytokine-cytokine receptor interaction	Direct
CERTOLIZUMAB PEGOL	TNF	Cytokine-cytokine receptor interaction	Direct
GOLIMUMAB	TNF	Cytokine-cytokine receptor interaction	Direct
CARBAMAZEPINE	TNF	Cytokine-cytokine receptor interaction	Direct
ABACAVIR	TNF	Cytokine-cytokine receptor interaction	Direct
LENALIDOMIDE	TNF	Cytokine-cytokine receptor interaction	Direct
GENZ29155	TNF	Cytokine-cytokine receptor interaction	Direct
CYTOFAB	TNF	Cytokine-cytokine receptor interaction	Direct
CERTOLIZUMAB	TNF	Cytokine-cytokine receptor interaction	Direct
RDP58	TNF	Cytokine-cytokine receptor interaction	Direct
AN0128	TNF	Cytokine-cytokine receptor interaction	Direct
ART621	TNF	Cytokine-cytokine receptor interaction	Direct
CELASTROL	TNF	Cytokine-cytokine receptor interaction	Direct
TALACTOFERRIN ALFA	TNF	Cytokine-cytokine receptor interaction	Direct
RDP-58	TNF	Cytokine-cytokine receptor interaction	Direct
PENTOXIFYLLINE	TNF	Cytokine-cytokine receptor interaction	Direct
IP-751	TNF	Cytokine-cytokine receptor interaction	Direct
CRX-191	TNF	Cytokine-cytokine receptor interaction	Direct
PIRFENIDONE	TNF	Cytokine-cytokine receptor interaction	Direct
TGAAC-94	TNF	Cytokine-cytokine receptor interaction	Direct
RISEDRONATE	IL1B	Cytokine-cytokine receptor interaction	Direct
TILUDRONATE	IL1B	Cytokine-cytokine receptor interaction	Direct
BISPHOSPHONATES	IL1B	Cytokine-cytokine receptor interaction	Direct
ETIDRONIC ACID	IL1B	Cytokine-cytokine receptor interaction	Direct
CLODRONATE	IL1B	Cytokine-cytokine receptor interaction	Direct
CANAKINUMAB	IL1B	Cytokine-cytokine receptor interaction	Direct
K-832	IL1B	Cytokine-cytokine receptor interaction	Direct
RILONACEPT	IL1B	Cytokine-cytokine receptor interaction	Direct
AMG108	IL1B	Cytokine-cytokine receptor interaction	Direct
CELASTROL	IL1B	Cytokine-cytokine receptor interaction	Direct
IBUDILAST	IL1B	Cytokine-cytokine receptor interaction	Direct
GALLIUM NITRATE	IL1B	Cytokine-cytokine receptor interaction	Direct
GLUCOSAMINE	IL1B	Cytokine-cytokine receptor interaction	Direct
MINOCYCLINE	IL1B	Cytokine-cytokine receptor interaction	Direct
ETANERCEPT	TNFRSF1B	Cytokine-cytokine receptor interaction	Direct
INTERFERON GAMMA-1B	IFNGR2	Cytokine-cytokine receptor interaction	Direct
TUMOR NECROSIS FACTOR ALPHA (TNF-ALPHA) INHIBITORS	IL6	Cytokine-cytokine receptor interaction	Direct
GINSENG	IL6	Cytokine-cytokine receptor interaction	Direct
ALD518	IL6	Cytokine-cytokine receptor interaction	Direct
IBOCTADEKIN + DOXIL	IL18	Cytokine-cytokine receptor interaction	Direct

IBOCTADEKIN & RITUXIMAB	IL18	Cytokine-cytokine receptor interaction	Direct
IL-18BP	IL18	Cytokine-cytokine receptor interaction	Direct
RS-504393	CCL2	Cytokine-cytokine receptor interaction	Direct
MCP-1	CCL2	Cytokine-cytokine receptor interaction	Direct
DANAZOL	CCL2	Cytokine-cytokine receptor interaction	Direct
MIMOSINE	CCL2	Cytokine-cytokine receptor interaction	Direct
CYCLOPHOSPHAMIDE	IL8	Cytokine-cytokine receptor interaction	Direct
BEVACIZUMAB	IL8	Cytokine-cytokine receptor interaction	Direct
ANAKINRA	IL1R1	Cytokine-cytokine receptor interaction	Direct
RILONACEPT	IL1A	Cytokine-cytokine receptor interaction	Direct
FONTOLIZUMAB	IFNG	Graft-versus-host disease	Direct
FUMARIC ACID	IFNG	Graft-versus-host disease	Direct
CRX-191	IFNG	Graft-versus-host disease	Direct
OLSALAZINE	IFNG	Graft-versus-host disease	Direct
GLUCOSAMINE	IFNG	Graft-versus-host disease	Direct
CARBAMAZEPINE	HLA-A	Graft-versus-host disease	Direct
3-INDOLEBUTYRIC ACID	HLA-A	Graft-versus-host disease	Direct
ABACAVIR	HLA-B	Graft-versus-host disease	Direct
PHENYTOIN	HLA-B	Graft-versus-host disease	Direct
CARBAMAZEPINE	HLA-B	Graft-versus-host disease	Direct
N-FORMYLMETHIONINE	HLA-B	Graft-versus-host disease	Direct
MVA-MUC1-IL2	IL2	Graft-versus-host disease	Direct
(1H-INDOL-3-YL)-(2-MERCAPTO-ETHOXYIMINO)-ACETIC ACID	IL2	Graft-versus-host disease	Direct
2-[2-(2-CYCLOHEXYL-2-GUANIDINO-ACETYLAMINO)-ACETYLAMINO]-N-(3-MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Graft-versus-host disease	Direct
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3-PIPERIDINYL]-1-OXOETHYL]-4-(PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Graft-versus-host disease	Direct
SP4160	IL2	Graft-versus-host disease	Direct
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B-CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Graft-versus-host disease	Direct
SP2456	IL2	Graft-versus-host disease	Direct
5-[2,3-DICHLORO-4-(5-{1-[2-(2-GUANIDINO-4-METHYL-PENTANOYLAMINO)-ACETYL]-PIPERIDIN-4-YL}-1-METHYL-1H-PYRAZOL-3-YL)-PHENOXYMETHYL]-FURAN-2-CARBOXYLIC ACID	IL2	Graft-versus-host disease	Direct
GLATIRAMER ACETATE	HLA-DRB1	Graft-versus-host disease	Direct
AMRINONE	TNF	Graft-versus-host disease	Direct

INFLIXIMAB	TNF	Graft-versus-host disease	Direct
THALIDOMIDE	TNF	Graft-versus-host disease	Direct
CLENBUTEROL	TNF	Graft-versus-host disease	Direct
ADALIMUMAB	TNF	Graft-versus-host disease	Direct
ETANERCEPT	TNF	Graft-versus-host disease	Direct
CHLOROQUINE	TNF	Graft-versus-host disease	Direct
PRANLUKAST	TNF	Graft-versus-host disease	Direct
GLUCOSAMINE	TNF	Graft-versus-host disease	Direct
CERTOLIZUMAB PEGOL	TNF	Graft-versus-host disease	Direct
GOLIMUMAB	TNF	Graft-versus-host disease	Direct
CARBAMAZEPINE	TNF	Graft-versus-host disease	Direct
ABACAVIR	TNF	Graft-versus-host disease	Direct
LENALIDOMIDE	TNF	Graft-versus-host disease	Direct
GENZ29155	TNF	Graft-versus-host disease	Direct
CYTOFAB	TNF	Graft-versus-host disease	Direct
CERTOLIZUMAB	TNF	Graft-versus-host disease	Direct
RDP58	TNF	Graft-versus-host disease	Direct
AN0128	TNF	Graft-versus-host disease	Direct
ART621	TNF	Graft-versus-host disease	Direct
CELASTROL	TNF	Graft-versus-host disease	Direct
TALACTOFERRIN ALFA	TNF	Graft-versus-host disease	Direct
RDP-58	TNF	Graft-versus-host disease	Direct
PENTOXIFYLLINE	TNF	Graft-versus-host disease	Direct
IP-751	TNF	Graft-versus-host disease	Direct
CRX-191	TNF	Graft-versus-host disease	Direct
PIRFENIDONE	TNF	Graft-versus-host disease	Direct
TGAAC-94	TNF	Graft-versus-host disease	Direct
RISEDRONATE	IL1B	Graft-versus-host disease	Direct
TILUDRONATE	IL1B	Graft-versus-host disease	Direct
BISPHOSPHONATES	IL1B	Graft-versus-host disease	Direct
ETIDRONIC ACID	IL1B	Graft-versus-host disease	Direct
CLODRONATE	IL1B	Graft-versus-host disease	Direct
CANAKINUMAB	IL1B	Graft-versus-host disease	Direct
K-832	IL1B	Graft-versus-host disease	Direct
RILONACEPT	IL1B	Graft-versus-host disease	Direct
AMG108	IL1B	Graft-versus-host disease	Direct
CELASTROL	IL1B	Graft-versus-host disease	Direct
IBUDILAST	IL1B	Graft-versus-host disease	Direct
GALLIUM NITRATE	IL1B	Graft-versus-host disease	Direct
GLUCOSAMINE	IL1B	Graft-versus-host disease	Direct
MINOCYCLINE	IL1B	Graft-versus-host disease	Direct
AMOXICILLIN	HLA-DQB1	Graft-versus-host disease	Direct
CLAVULANATE	HLA-DQB1	Graft-versus-host disease	Direct

INSULIN, PORCINE	HLA-DQB1	Graft-versus-host disease	Direct
TUMOR NECROSIS FACTOR ALPHA (TNF-ALPHA) INHIBITORS	IL6	Graft-versus-host disease	Direct
GINSENG	IL6	Graft-versus-host disease	Direct
ALD518	IL6	Graft-versus-host disease	Direct
INSULIN, PORCINE	HLA-DQA2	Graft-versus-host disease	Direct
INTERFERON BETA-1A	HLA-DQA1	Graft-versus-host disease	Direct
INTERFERON BETA-1B	HLA-DQA1	Graft-versus-host disease	Direct
RILONACEPT	IL1A	Graft-versus-host disease	Direct
ASPIRIN	IL4	Hematopoietic cell lineage	Indirect
TOCILIZUMAB	IL6R	Hematopoietic cell lineage	Indirect
SAR153191	IL6R	Hematopoietic cell lineage	Indirect
ALPHA-D-MANNOSE	IL6R	Hematopoietic cell lineage	Indirect
GLATIRAMER ACETATE	HLA-DRB1	Hematopoietic cell lineage	Indirect
AMRINONE	TNF	Hematopoietic cell lineage	Indirect
INFLIXIMAB	TNF	Hematopoietic cell lineage	Indirect
THALIDOMIDE	TNF	Hematopoietic cell lineage	Indirect
CLENBUTEROL	TNF	Hematopoietic cell lineage	Indirect
ADALIMUMAB	TNF	Hematopoietic cell lineage	Indirect
ETANERCEPT	TNF	Hematopoietic cell lineage	Indirect
CHLOROQUINE	TNF	Hematopoietic cell lineage	Indirect
PRANLUKAST	TNF	Hematopoietic cell lineage	Indirect
GLUCOSAMINE	TNF	Hematopoietic cell lineage	Indirect
CERTOLIZUMAB PEGOL	TNF	Hematopoietic cell lineage	Indirect
GOLIMUMAB	TNF	Hematopoietic cell lineage	Indirect
CARBAMAZEPINE	TNF	Hematopoietic cell lineage	Indirect
ABACAVIR	TNF	Hematopoietic cell lineage	Indirect
LENALIDOMIDE	TNF	Hematopoietic cell lineage	Indirect
GENZ29155	TNF	Hematopoietic cell lineage	Indirect
CYTOFAB	TNF	Hematopoietic cell lineage	Indirect
CERTOLIZUMAB	TNF	Hematopoietic cell lineage	Indirect
RDP58	TNF	Hematopoietic cell lineage	Indirect
AN0128	TNF	Hematopoietic cell lineage	Indirect
ART621	TNF	Hematopoietic cell lineage	Indirect
CELASTROL	TNF	Hematopoietic cell lineage	Indirect
TALACTOFERRIN ALFA	TNF	Hematopoietic cell lineage	Indirect
RDP-58	TNF	Hematopoietic cell lineage	Indirect
PENTOXIFYLLINE	TNF	Hematopoietic cell lineage	Indirect
IP-751	TNF	Hematopoietic cell lineage	Indirect
CRX-191	TNF	Hematopoietic cell lineage	Indirect
PIRFENIDONE	TNF	Hematopoietic cell lineage	Indirect
TGAAC-94	TNF	Hematopoietic cell lineage	Indirect
RISEDRONATE	IL1B	Hematopoietic cell lineage	Indirect

TILUDRONATE	IL1B	Hematopoietic cell lineage	Indirect
BISPHOSPHONATES	IL1B	Hematopoietic cell lineage	Indirect
ETIDRONIC ACID	IL1B	Hematopoietic cell lineage	Indirect
CLODRONATE	IL1B	Hematopoietic cell lineage	Indirect
CANAKINUMAB	IL1B	Hematopoietic cell lineage	Indirect
K-832	IL1B	Hematopoietic cell lineage	Indirect
RILONACEPT	IL1B	Hematopoietic cell lineage	Indirect
AMG108	IL1B	Hematopoietic cell lineage	Indirect
CELASTROL	IL1B	Hematopoietic cell lineage	Indirect
IBUDILAST	IL1B	Hematopoietic cell lineage	Indirect
GALLIUM NITRATE	IL1B	Hematopoietic cell lineage	Indirect
GLUCOSAMINE	IL1B	Hematopoietic cell lineage	Indirect
MINOCYCLINE	IL1B	Hematopoietic cell lineage	Indirect
TUMOR NECROSIS FACTOR ALPHA (TNF-ALPHA) INHIBITORS	IL6	Hematopoietic cell lineage	Indirect
GINSENG	IL6	Hematopoietic cell lineage	Indirect
ALD518	IL6	Hematopoietic cell lineage	Indirect
FLUTICASONE PROPIONATE	CD14	Hematopoietic cell lineage	Indirect
ANAKINRA	IL1R1	Hematopoietic cell lineage	Indirect
RILONACEPT	IL1A	Hematopoietic cell lineage	Indirect
TINZAPARIN	CXCL12	Intestinal immune network for IgA production	Direct
ASPIRIN	IL4	Intestinal immune network for IgA production	Direct
MVA-MUC1-IL2	IL2	Intestinal immune network for IgA production	Direct
(1H-INDOL-3-YL)-(2-MERCAPTO-ETHOXYIMINO)-ACETIC ACID	IL2	Intestinal immune network for IgA production	Direct
2-[2-(2-CYCLOHEXYL-2-GUANIDINO-ACETYLAMINO)-ACETYLAMINO]-N-(3-MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Intestinal immune network for IgA production	Direct
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3-PIPERIDINYL]-1-OXOETHYL]-4-(PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Intestinal immune network for IgA production	Direct
SP4160	IL2	Intestinal immune network for IgA production	Direct
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B-CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Intestinal immune network for IgA production	Direct
SP2456	IL2	Intestinal immune network for IgA production	Direct
5-[2,3-DICHLORO-4-(5-{1-[2-(2-GUANIDINO-4-METHYL-	IL2	Intestinal immune network for IgA production	Direct

PENTANOYLAMINO)-ACETYL]- PIPERIDIN-4-YL}-1-METHYL-1H- PYRAZOL-3-YL)-PHENOXYMETHYL]- FURAN-2-CARBOXYLIC ACID			
GLATIRAMER ACETATE	HLA-DRB1	Intestinal immune network for IgA production	Direct
AMOXICILLIN	HLA-DQB1	Intestinal immune network for IgA production	Direct
CLAVULANATE	HLA-DQB1	Intestinal immune network for IgA production	Direct
INSULIN, PORCINE	HLA-DQB1	Intestinal immune network for IgA production	Direct
TUMOR NECROSIS FACTOR ALPHA (TNF- ALPHA) INHIBITORS	IL6	Intestinal immune network for IgA production	Direct
GINSENG	IL6	Intestinal immune network for IgA production	Direct
ALD518	IL6	Intestinal immune network for IgA production	Direct
INSULIN, PORCINE	HLA-DQA2	Intestinal immune network for IgA production	Direct
INTERFERON BETA-1A	HLA-DQA1	Intestinal immune network for IgA production	Direct
INTERFERON BETA-1B	HLA-DQA1	Intestinal immune network for IgA production	Direct
OSPA LIPOPROTEIN	TLR2	Toll-like receptor signaling pathway	Direct
S-(DIMETHYLARSENIC)CYSTEINE	TLR2	Toll-like receptor signaling pathway	Direct
HEPARIN DISACCHARIDE III-S	CCL5	Toll-like receptor signaling pathway	Direct
HEPARIN DISACCHARIDE I-S	CCL5	Toll-like receptor signaling pathway	Direct
RESATORVID	TLR4	Toll-like receptor signaling pathway	Direct
MYRISTIC ACID	TLR4	Toll-like receptor signaling pathway	Direct
3-HYDROXY-MYRISTIC ACID	TLR4	Toll-like receptor signaling pathway	Direct
FOLIC ACID	TLR4	Toll-like receptor signaling pathway	Direct
METHOTREXATE	TLR4	Toll-like receptor signaling pathway	Direct
CPG 52364	TLR9	Toll-like receptor signaling pathway	Direct
IMO-2125	TLR9	Toll-like receptor signaling pathway	Direct
IMO-2055	TLR9	Toll-like receptor signaling pathway	Direct
AGATOLIMOD	TLR9	Toll-like receptor signaling pathway	Direct
TLR9 AGONIST	TLR9	Toll-like receptor signaling pathway	Direct
IMO-3100	TLR9	Toll-like receptor signaling pathway	Direct
AVE0675	TLR9	Toll-like receptor signaling pathway	Direct
IMO-2134	TLR9	Toll-like receptor signaling pathway	Direct
CHLOROQUINE	TLR9	Toll-like receptor signaling pathway	Direct
HYDROXYCHLOROQUINE	TLR9	Toll-like receptor signaling pathway	Direct

PF-3512676	TLR9	Toll-like receptor signaling pathway	Direct
USTEKINUMAB	IL12B	Toll-like receptor signaling pathway	Direct
5-MERCAPTO-2-NITRO-BENZOIC ACID	IL12B	Toll-like receptor signaling pathway	Direct
ALPHA-D-MANNOSE	IL12B	Toll-like receptor signaling pathway	Direct
RISPERIDONE	AKT1	Toll-like receptor signaling pathway	Direct
MK2206	AKT1	Toll-like receptor signaling pathway	Direct
GSK2126458	AKT1	Toll-like receptor signaling pathway	Direct
AZD4547	AKT1	Toll-like receptor signaling pathway	Direct
PERIFOSINE	AKT1	Toll-like receptor signaling pathway	Direct
GDC-0068	AKT1	Toll-like receptor signaling pathway	Direct
EVEROLIMUS	AKT1	Toll-like receptor signaling pathway	Direct
AFURESERTIB HYDROCHLORIDE	AKT1	Toll-like receptor signaling pathway	Direct
AZD5363	AKT1	Toll-like receptor signaling pathway	Direct
N/A	AKT1	Toll-like receptor signaling pathway	Direct
TRICIRIBINE	AKT1	Toll-like receptor signaling pathway	Direct
AS703569	AKT1	Toll-like receptor signaling pathway	Direct
MK-2206	AKT1	Toll-like receptor signaling pathway	Direct
INOSITOL 1,3,4,5-TETRAKISPHOSPHATE	AKT1	Toll-like receptor signaling pathway	Direct
ADENOSINE TRIPHOSPHATE	AKT1	Toll-like receptor signaling pathway	Direct
ARSENIC TRIOXIDE	AKT1	Toll-like receptor signaling pathway	Direct
5-(5-CHLORO-7H-PYRROLO[2,3-D]PYRIMIDIN-4-YL)-4,5,6,7-TETRAHYDRO-1H-IMIDAZO[4,5-C]PYRIDINE	AKT1	Toll-like receptor signaling pathway	Direct
N-[2-(5-METHYL-4H-1,2,4-TRIAZOL-3-YL)PHENYL]-7H-PYRROLO[2,3-D]PYRIMIDIN-4-AMINE	AKT1	Toll-like receptor signaling pathway	Direct
ARQ092	AKT1	Toll-like receptor signaling pathway	Direct
NELFINAVIR	AKT1	Toll-like receptor signaling pathway	Direct
AMRINONE	TNF	Toll-like receptor signaling pathway	Direct
INFLIXIMAB	TNF	Toll-like receptor signaling pathway	Direct
THALIDOMIDE	TNF	Toll-like receptor signaling pathway	Direct
CLENBUTEROL	TNF	Toll-like receptor signaling pathway	Direct
ADALIMUMAB	TNF	Toll-like receptor signaling pathway	Direct
ETANERCEPT	TNF	Toll-like receptor signaling pathway	Direct
CHLOROQUINE	TNF	Toll-like receptor signaling pathway	Direct
PRANLUKAST	TNF	Toll-like receptor signaling pathway	Direct
GLUCOSAMINE	TNF	Toll-like receptor signaling pathway	Direct
CERTOLIZUMAB PEGOL	TNF	Toll-like receptor signaling pathway	Direct
GOLIMUMAB	TNF	Toll-like receptor signaling pathway	Direct
CARBAMAZEPINE	TNF	Toll-like receptor signaling pathway	Direct
ABACAVIR	TNF	Toll-like receptor signaling pathway	Direct
LENALIDOMIDE	TNF	Toll-like receptor signaling pathway	Direct

GENZ29155	TNF	Toll-like receptor signaling pathway	Direct
CYTOFAB	TNF	Toll-like receptor signaling pathway	Direct
CERTOLIZUMAB	TNF	Toll-like receptor signaling pathway	Direct
RDP58	TNF	Toll-like receptor signaling pathway	Direct
AN0128	TNF	Toll-like receptor signaling pathway	Direct
ART621	TNF	Toll-like receptor signaling pathway	Direct
CELASTROL	TNF	Toll-like receptor signaling pathway	Direct
TALACTOFERRIN ALFA	TNF	Toll-like receptor signaling pathway	Direct
RDP-58	TNF	Toll-like receptor signaling pathway	Direct
PENTOXIFYLLINE	TNF	Toll-like receptor signaling pathway	Direct
IP-751	TNF	Toll-like receptor signaling pathway	Direct
CRX-191	TNF	Toll-like receptor signaling pathway	Direct
PIRFENIDONE	TNF	Toll-like receptor signaling pathway	Direct
TGAAC-94	TNF	Toll-like receptor signaling pathway	Direct
RISEDRONATE	IL1B	Toll-like receptor signaling pathway	Direct
TILUDRONATE	IL1B	Toll-like receptor signaling pathway	Direct
BISPHOSPHONATES	IL1B	Toll-like receptor signaling pathway	Direct
ETIDRONIC ACID	IL1B	Toll-like receptor signaling pathway	Direct
CLODRONATE	IL1B	Toll-like receptor signaling pathway	Direct
CANAKINUMAB	IL1B	Toll-like receptor signaling pathway	Direct
K-832	IL1B	Toll-like receptor signaling pathway	Direct
RILONACEPT	IL1B	Toll-like receptor signaling pathway	Direct
AMG108	IL1B	Toll-like receptor signaling pathway	Direct
CELASTROL	IL1B	Toll-like receptor signaling pathway	Direct
IBUDILAST	IL1B	Toll-like receptor signaling pathway	Direct
GALLIUM NITRATE	IL1B	Toll-like receptor signaling pathway	Direct
GLUCOSAMINE	IL1B	Toll-like receptor signaling pathway	Direct
MINOCYCLINE	IL1B	Toll-like receptor signaling pathway	Direct
IMIQUIMOD	TLR8	Toll-like receptor signaling pathway	Direct
SURECN254984	TLR8	Toll-like receptor signaling pathway	Direct
CPG 52364	TLR8	Toll-like receptor signaling pathway	Direct
RESIQUIMOD	TLR8	Toll-like receptor signaling pathway	Direct
TUMOR NECROSIS FACTOR ALPHA (TNF-ALPHA) INHIBITORS	IL6	Toll-like receptor signaling pathway	Direct
GINSENG	IL6	Toll-like receptor signaling pathway	Direct
ALD518	IL6	Toll-like receptor signaling pathway	Direct
FLUTICASONE PROPIONATE	CD14	Toll-like receptor signaling pathway	Direct
CYCLOPHOSPHAMIDE	IL8	Toll-like receptor signaling pathway	Direct
BEVACIZUMAB	IL8	Toll-like receptor signaling pathway	Direct
FONTOLIZUMAB	IFNG	Type I diabetes mellitus	Indirect
FUMARIC ACID	IFNG	Type I diabetes mellitus	Indirect
CRX-191	IFNG	Type I diabetes mellitus	Indirect
OLSALAZINE	IFNG	Type I diabetes mellitus	Indirect

GLUCOSAMINE	IFNG	Type I diabetes mellitus	Indirect
CARBAMAZEPINE	HLA-A	Type I diabetes mellitus	Indirect
3-INDOLEBUTYRIC ACID	HLA-A	Type I diabetes mellitus	Indirect
ABACAVIR	HLA-B	Type I diabetes mellitus	Indirect
PHENYTOIN	HLA-B	Type I diabetes mellitus	Indirect
CARBAMAZEPINE	HLA-B	Type I diabetes mellitus	Indirect
N-FORMYLMETHIONINE	HLA-B	Type I diabetes mellitus	Indirect
MVA-MUC1-IL2	IL2	Type I diabetes mellitus	Indirect
(1H-INDOL-3-YL)-(2-MERCAPTO-ETHOXYIMINO)-ACETIC ACID	IL2	Type I diabetes mellitus	Indirect
2-[2-(2-CYCLOHEXYL-2-GUANIDINO-ACETYLAMINO)-ACETYLAMINO]-N-(3-MERCAPTO-PROPYL)-PROPIONAMIDE	IL2	Type I diabetes mellitus	Indirect
(R)-N-[2-[1-(AMINOIMINOMETHYL)-3-PIPERIDINYL]-1-OXOETHYL]-4-(PHENYLETHYNYL)-L-PHENYLALANINE METHYLESTER	IL2	Type I diabetes mellitus	Indirect
SP4160	IL2	Type I diabetes mellitus	Indirect
3-MERCAPTO-1-(1,3,4,9-TETRAHYDRO-B-CARBOLIN-2-YL)-PROPAN-1-ONE	IL2	Type I diabetes mellitus	Indirect
SP2456	IL2	Type I diabetes mellitus	Indirect
5-[2,3-DICHLORO-4-(5-{1-[2-(2-GUANIDINO-4-METHYL-PENTANOYLAMINO)-ACETYL]-PIPERIDIN-4-YL}-1-METHYL-1H-PYRAZOL-3-YL)-PHENOXYMETHYL]-FURAN-2-CARBOXYLIC ACID	IL2	Type I diabetes mellitus	Indirect
INFLIXIMAB	LTA	Type I diabetes mellitus	Indirect
ETANERCEPT	LTA	Type I diabetes mellitus	Indirect
ADALIMUMAB	LTA	Type I diabetes mellitus	Indirect
CARBAMAZEPINE	LTA	Type I diabetes mellitus	Indirect
ANTI-LT ALPHA	LTA	Type I diabetes mellitus	Indirect
GLATIRAMER ACETATE	HLA-DRB1	Type I diabetes mellitus	Indirect
USTEKINUMAB	IL12B	Type I diabetes mellitus	Indirect
5-MERCAPTO-2-NITRO-BENZOIC ACID	IL12B	Type I diabetes mellitus	Indirect
ALPHA-D-MANNOSE	IL12B	Type I diabetes mellitus	Indirect
AMRINONE	TNF	Type I diabetes mellitus	Indirect
INFLIXIMAB	TNF	Type I diabetes mellitus	Indirect
THALIDOMIDE	TNF	Type I diabetes mellitus	Indirect
CLENBUTEROL	TNF	Type I diabetes mellitus	Indirect
ADALIMUMAB	TNF	Type I diabetes mellitus	Indirect
ETANERCEPT	TNF	Type I diabetes mellitus	Indirect
CHLOROQUINE	TNF	Type I diabetes mellitus	Indirect

PRANLUKAST	TNF	Type I diabetes mellitus	Indirect
GLUCOSAMINE	TNF	Type I diabetes mellitus	Indirect
CERTOLIZUMAB PEGOL	TNF	Type I diabetes mellitus	Indirect
GOLIMUMAB	TNF	Type I diabetes mellitus	Indirect
CARBAMAZEPINE	TNF	Type I diabetes mellitus	Indirect
ABACAVIR	TNF	Type I diabetes mellitus	Indirect
LENALIDOMIDE	TNF	Type I diabetes mellitus	Indirect
GENZ29155	TNF	Type I diabetes mellitus	Indirect
CYTOFAB	TNF	Type I diabetes mellitus	Indirect
CERTOLIZUMAB	TNF	Type I diabetes mellitus	Indirect
RDP58	TNF	Type I diabetes mellitus	Indirect
AN0128	TNF	Type I diabetes mellitus	Indirect
ART621	TNF	Type I diabetes mellitus	Indirect
CELASTROL	TNF	Type I diabetes mellitus	Indirect
TALACTOFERRIN ALFA	TNF	Type I diabetes mellitus	Indirect
RDP-58	TNF	Type I diabetes mellitus	Indirect
PENTOXIFYLLINE	TNF	Type I diabetes mellitus	Indirect
IP-751	TNF	Type I diabetes mellitus	Indirect
CRX-191	TNF	Type I diabetes mellitus	Indirect
PIRFENIDONE	TNF	Type I diabetes mellitus	Indirect
TGAAC-94	TNF	Type I diabetes mellitus	Indirect
RISEDRONATE	IL1B	Type I diabetes mellitus	Indirect
TILUDRONATE	IL1B	Type I diabetes mellitus	Indirect
BISPHOSPHONATES	IL1B	Type I diabetes mellitus	Indirect
ETIDRONIC ACID	IL1B	Type I diabetes mellitus	Indirect
CLODRONATE	IL1B	Type I diabetes mellitus	Indirect
CANAKINUMAB	IL1B	Type I diabetes mellitus	Indirect
K-832	IL1B	Type I diabetes mellitus	Indirect
RILONACEPT	IL1B	Type I diabetes mellitus	Indirect
AMG108	IL1B	Type I diabetes mellitus	Indirect
CELASTROL	IL1B	Type I diabetes mellitus	Indirect
IBUDILAST	IL1B	Type I diabetes mellitus	Indirect
GALLIUM NITRATE	IL1B	Type I diabetes mellitus	Indirect
GLUCOSAMINE	IL1B	Type I diabetes mellitus	Indirect
MINOCYCLINE	IL1B	Type I diabetes mellitus	Indirect
AMOXICILLIN	HLA-DQB1	Type I diabetes mellitus	Indirect
CLAVULANATE	HLA-DQB1	Type I diabetes mellitus	Indirect
INSULIN, PORCINE	HLA-DQB1	Type I diabetes mellitus	Indirect
INSULIN, PORCINE	HLA-DQA2	Type I diabetes mellitus	Indirect
INTERFERON BETA-1A	HLA-DQA1	Type I diabetes mellitus	Indirect
INTERFERON BETA-1B	HLA-DQA1	Type I diabetes mellitus	Indirect
RILONACEPT	IL1A	Type I diabetes mellitus	Indirect

[a] From the DAVID (<http://david.abcc.ncifcrf.gov/>).