

Supplementary materials

Table S1: List of the enriched terms in disease ontology (DO) for the differentially expressed immuno-inflammation-related genes;

ID	Description	Gene	BgRa	pvalue	p.adjust	qvalue	geneID	Count
		Ratio	tio					
DOID:229	female reproductive system disease	44921	421/10312	1.06E-10	1.06E-10	2.91E-08	SOCS3/ADM/SLPI/MMP9/PI3/AQP9/IL2RB/FASLG/TGFBR3/KLRC1/CXCL5/KLRD1	12
DOID:526	human immunodeficiency virus infectious disease	44830	222/10312	1.92E-09	1.92E-09	2.65E-07	SOCS3/SLPI/IL2RB/FASLG/PRF1/GNLY/KLRC1/GZMB/HLA-DQA1	9
DOID:1602	lymphadenitis	44738	70/10312	1.63E-08	1.63E-08	1.12E-06	S100A12/SOCS3/ADM/MMP9/PRF1/GZMB	6

DOID:36			113/1	2.92E-0	2.92E-0	8.94E-0			
27	aortic aneurysm	44738	0312	7	7	6	ADM/MMP9/FASLG/PRF1/GZMB/HLA-DQA1	6	
DOID:52			116/1	3.41E-0	3.41E-0	9.40E-0			
0	aortic disease	44738	0312	7	7	6	ADM/MMP9/FASLG/PRF1/GZMB/HLA-DQA1	6	
DOID:75			121/1	4.38E-0	4.38E-0	1.00E-0			
	lymphatic system disease	44738	0312	7	7	5	S100A12/SOCS3/ADM/MMP9/PRF1/GZMB	6	
DOID:30	chronic obstructive pulmonary		304/1	5.12E-0	5.12E-0	1.00E-0	ADM/SLPI/MMP9/PI3/FASLG/TGFBR3/CXCL5/GZ		
83	disease	44799	0312	7	7	5	MB	8	
DOID:23			305/1	5.25E-0	5.25E-0	1.00E-0	ADM/SLPI/MMP9/PI3/FASLG/TGFBR3/CXCL5/GZ		
20	obstructive lung disease	44799	0312	7	7	5	MB	8	

DOID:12			235/1	1.33E-0	1.33E-0	1.93E-0		
47	blood coagulation disease		44768				ADM/MMP9/FASLG/F2R/PRF1/THBS1/HLA-DQA1	7
			0312	6	6	5		
DOID:10			359/1	1.80E-0	1.80E-0	2.48E-0	SOCS3/ADM/NRG1/MMP9/FASLG/PRF1/CBLB/HL	
4	bacterial infectious disease		44799				A-DQA1	8
			0312	6	6	5		
DOID:19			364/1	2.00E-0	2.00E-0	2.55E-0	S100A12/SOCS3/ADM/NRG1/MMP9/FASLG/PDGF	
36	atherosclerosis		44799				D/RORA	8
			0312	6	6	5		
DOID:23	arteriosclerotic	cardiovascular	365/1	2.04E-0	2.04E-0	2.55E-0	S100A12/SOCS3/ADM/NRG1/MMP9/FASLG/PDGF	
48	disease		44799				D/RORA	8
			0312	6	6	5		
DOID:23			411/1	4.94E-0	4.94E-0	5.92E-0	S100A12/SOCS3/ADM/NRG1/MMP9/FASLG/PDGF	
49	arteriosclerosis		44799				D/RORA	8
			0312	6	6	5		

DOID:11				188/1	5.76E-0	5.76E-0	6.62E-0			
612	polycystic ovary syndrome			44738					SOCS3/ADM/SLPI/MMP9/AQP9/TGFBR3	6
				0312	6	6	5			
DOID:00	primary	bacterial	infectious	295/1	6.02E-0	6.02E-0	6.64E-0		SOCS3/NRG1/MMP9/FASLG/PRF1/CBLB/HLA-DQ	
50338	disease			44768						7
				0312	6	6	5	A1		
DOID:10				306/1	7.66E-0	7.66E-0	8.12E-0		ADM/MMP9/FASLG/XCL1/PDGFD/PRF1/HLA-DQA	
952	nephritis			44768						7
				0312	6	6	5	1		
DOID:14				199/1	7.99E-0	7.99E-0	8.16E-0			
14	ovarian dysfunction			44738					SOCS3/ADM/SLPI/MMP9/AQP9/TGFBR3	6
				0312	6	6	5			
DOID:15				20/10	1.58E-0	1.58E-0	0.0001			
80	diffuse scleroderma			44646					XCL1/CXCL5/HLA-DQA1	3
				312	5	5	55305			

DOID:11	adult	respiratory	distress	67/10	2.19E-0	2.19E-0	0.0002		
394			44677					MMP9/PI3/FASLG/CXCL5	4
	syndrome			312	5	5	078		
DOID:29				240/1	2.33E-0	2.33E-0	0.0002		
21			44738					ADM/MMP9/XCL1/PDGFD/PRF1/HLA-DQA1	6
	glomerulonephritis			0312	5	5	13774		
DOID:00				143/1	2.49E-0	2.49E-0	0.0002		
80599			44707					SLPI/IL2RB/THBS1/CXCL5/GZMB	5
	Coronavirus infectious disease			0312	5	5	21271		
DOID:33				72/10	2.91E-0	2.91E-0	0.0002		
26			44677					ADM/MMP9/FASLG/PRF1	4
	purpura			312	5	5	50615		
DOID:43	autoimmune	disease	of the	74/10	3.24E-0	3.24E-0	0.0002		
8			44677					MMP9/IL2RB/GZMB/HLA-DQA1	4
	nervous system			312	5	5	69322		

DOID:00 60056	hypersensitivity reaction disease	44707	152/1 0312	3.34E-0 5	3.34E-0 5	0.0002 69322	ADM/MMP9/FASLG/CXCL5/HLA-DQA1	5
DOID:00 80809	chronic asthma	44677	75/10 312	3.42E-0 5	3.42E-0 5	0.0002 69322	SLPI/MMP9/XCL1/HLA-DQA1	4
DOID:86 5	vasculitis	44707	154/1 0312	3.55E-0 5	3.55E-0 5	0.0002 72248	MMP9/KLRC1/CXCL5/KLRD1/GZMB	5
DOID:11 00	ovarian disease	44738	261/1 0312	3.73E-0 5	3.73E-0 5	0.0002 78165	SOCS3/ADM/SLPI/MMP9/AQP9/TGFBR3	6
DOID:22 13	hemorrhagic disease	44677	78/10 312	3.99E-0 5	3.99E-0 5	0.0002 89628	ADM/MMP9/FASLG/PRF1	4

DOID:10		416/1	5.58E-0	5.58E-0	0.0003			
534	stomach cancer	44768	0312	5	5	90878	SLPI/MMP9/FASLG/F2R/CBLB/CXCL5/HLA-DQA1	7
DOID:52		417/1	5.67E-0	5.67E-0	0.0003			
95	intestinal disease	44768	0312	5	5	90878	S100A12/SOCS3/NRG1/MMP9/AQP9/FASLG/PRF	7
DOID:11		31/10	6.10E-0	6.10E-0	0.0004			
123	Henoch-Schoenlein purpura	44646	312	5	5	10573	ADM/MMP9/HLA-DQA1	3
DOID:90		32/10	6.72E-0	6.72E-0	0.0004			
65	leishmaniasis	44646	312	5	5	31252	IL2RB/FASLG/HLA-DQA1	3
DOID:98		32/10	6.72E-0	6.72E-0	0.0004			
09	hypersensitivity vasculitis	44646	312	5	5	31252	ADM/MMP9/HLA-DQA1	3

DOID:15	hypersensitivity reaction type III	35/10	8.83E-0	8.83E-0	0.0005		
		44646				ADM/MMP9/HLA-DQA1	3
57	disease	312	5	5	53344		
DOID:10	pre-eclampsia	309/1	9.56E-0	9.56E-0	0.0005		
		44738				SOCS3/ADM/MMP9/AQP9/FASLG/F2R	6
591		0312	5	5	8608		
DOID:97	type 1 diabetes mellitus	192/1	0.0001	0.0001	0.0006		
		44707				MMP9/FASLG/PRF1/CBLB/HLA-DQA1	5
44		0312	01643	01643	09393		
DOID:11	respiratory failure	102/1	0.0001	0.0001	0.0006		
		44677				MMP9/PI3/FASLG/CXCL5	4
162		0312	14109	14109	69575		
DOID:39	tuberculosis	201/1	0.0001	0.0001	0.0006		
		44707				SOCS3/NRG1/MMP9/FASLG/PRF1	5
9		0312	26153	26153	98308		

DOID:55		7/103	0.0001	0.0001	0.0006			
9	acute pyelonephritis	44618	12	27385	27385	98308	ADM/MMP9	2
DOID:55		202/1	0.0001	0.0001	0.0006			
17	stomach carcinoma	44707	0312	29134	29134	98308	MMP9/FASLG/F2R/CBLB/HLA-DQA1	5
DOID:97		202/1	0.0001	0.0001	0.0006			
4	upper respiratory tract disease	44707	0312	29134	29134	98308	ADM/MMP9/FASLG/CXCL5/HLA-DQA1	5
DOID:12		110/1	0.0001	0.0001	0.0008			
894	Sjogren's syndrome	44677	0312	52914	52914	01939	MMP9/FASLG/THBS1/HLA-DQA1	4
DOID:67		337/1	0.0001	0.0001	0.0008			
13	cerebrovascular disease	44738	0312	54113	54113	01939	ADM/NRG1/SLPI/MMP9/FASLG/HLA-DQA1	6

DOID:13				113/1	0.0001	0.0001	0.0008		
241	Behcet's disease		44677	0312	6967	6967	6654	MMP9/KLRC1/KLRD1/GZMB	4
DOID:12	newborn respiratory distress		44646	44/10	0.0001	0.0001	0.0008		
716	syndrome		312	75972	75972	82384		MMP9/PI3/FASLG	3
DOID:15				218/1	0.0001	0.0001	0.0009		
20	colon carcinoma		44707	0312	84621	84621	09223	FASLG/F2R/PRF1/CXCL5/HLA-DQA1	5
DOID:34				220/1	0.0001	0.0001	0.0009		
54	brain infarction		44707	0312	92668	92668	29561	ADM/NRG1/SLPI/MMP9/HLA-DQA1	5
DOID:47				352/1	0.0001	0.0001	0.0009		
66	embryoma		44738	0312	95492	95492	29561	SLPI/MMP9/AQP9/IL2RB/FASLG/PDGFD	6

DOID:43		47/10	0.0002	0.0002	0.0010			
7	myasthenia gravis	44646	312	14369	14369	00642	IL2RB/GZMB/HLA-DQA1	3
DOID:10		9/103	0.0002	0.0002	0.0010			
854	salivary gland disease	44618	12	17697	17697	00642	SLPI/MMP9	2
DOID:15		238/1	0.0002	0.0002	0.0012			
75	rheumatic disease	44707	0312	77789	77789	16053	MMP9/XCL1/THBS1/CXCL5/HLA-DQA1	5
DOID:41		238/1	0.0002	0.0002	0.0012			
8	systemic scleroderma	44707	0312	77789	77789	16053	MMP9/XCL1/THBS1/CXCL5/HLA-DQA1	5
DOID:41		238/1	0.0002	0.0002	0.0012			
9	scleroderma	44707	0312	77789	77789	16053	MMP9/XCL1/THBS1/CXCL5/HLA-DQA1	5

DOID:68		378/1	0.0002	0.0002	0.0012			
8	embryonal cancer	44738	0312	87733	87733	39901	SLPI/MMP9/AQP9/IL2RB/FASLG/PDGFD	6
DOID:23		246/1	0.0003	0.0003	0.0013			
77	multiple sclerosis	44707	0312	23712	23712	73482	MMP9/FASLG/PRF1/GZMB/HLA-DQA1	5
DOID:00		11/10	0.0003	0.0003	0.0013			
50827	rheumatic heart disease	44618	312	31562	31562	85475	MMP9/HLA-DQA1	2
DOID:30		254/1	0.0003	0.0003	0.0015			
82	interstitial lung disease	44707	0312	75202	75202	44429	MMP9/FASLG/F2R/CXCL5/GZMB	5
DOID:00		58/10	0.0004	0.0004	0.0015			
80811	extrinsic asthma	44646	312	00496	00496	94152	SLPI/MMP9/XCL1	3

DOID:94		58/10	0.0004	0.0004	0.0015			
15	allergic asthma	44646	312	00496	00496	94152	SLPI/MMP9/XCL1	3
DOID:21		403/1	0.0004	0.0004	0.0015			
9	colon cancer	44738	0312	06016	06016	94152	MMP9/FASLG/F2R/PRF1/CXCL5/HLA-DQA1	6
DOID:32		259/1	0.0004	0.0004	0.0015			
13	demyelinating disease	44707	0312	10403	10403	94152	MMP9/FASLG/PRF1/GZMB/HLA-DQA1	5
DOID:86		285/1	0.0006	0.0006	0.0024			
92	myeloid leukemia	44707	0312	35529	35529	18541	SOCS3/MMP9/FASLG/CBLB/HLA-DQA1	5
DOID:29		439/1	0.0006	0.0006	0.0024			
94	germ cell cancer	44738	0312	40175	40175	18541	SLPI/MMP9/AQP9/IL2RB/FASLG/PDGFD	6

DOID:23		441/1	0.0006	0.0006	0.0024			
94	ovarian cancer	44738	0312	55745	55745	43888	NRG1/MMP9/FASLG/F2R/THBS1/HLA-DQA1	6
DOID:12		16/10	0.0007	0.0007	0.0026			
895	keratoconjunctivitis sicca	44618	312	1782	1782	39562	MMP9/FASLG	2
DOID:28		168/1	0.0007	0.0007	0.0027			
25	nose disease	44677	0312	6799	6799	86889	ADM/MMP9/CXCL5/HLA-DQA1	4
DOID:91		17/10	0.0008	0.0008	0.0029			
46	visceral leishmaniasis	44618	312	12269	12269	09288	IL2RB/HLA-DQA1	2
DOID:35		76/10	0.0008	0.0008	0.0031			
87	pancreatic ductal carcinoma	44646	312	85426	85426	30658	MMP9/FASLG/THBS1	3

DOID:27	parasitic	protozoa	infectious	178/1	0.0009	0.0009	0.0032			
89	disease			44677	0312	53351	53351	92167	NRG1/IL2RB/FASLG/HLA-DQA1	4
DOID:85				78/10	0.0009	0.0009	0.0032			
52	chronic myeloid leukemia			44646	312	5498	5498	92167	SOCS3/FASLG/HLA-DQA1	3
DOID:10				19/10	0.0010	0.0010	0.0034			
930	borderline personality disorder			44618	312	18147	18147	57166	NRG1/MMP9	2
DOID:40				80/10	0.0010	0.0010	0.0034			
29	gastritis			44646	312	27913	27913	57166	SLPI/MMP9/FASLG	3
DOID:14				183/1	0.0010	0.0010	0.0035			
85	cystic fibrosis			44677	0312	56983	56983	12106	SLPI/MMP9/PI3/FASLG	4

DOID:21	malignant ovarian surface	44707	321/1	0.0010	0.0010	0.0035	MMP9/FASLG/F2R/THBS1/HLA-DQA1	5
51	epithelial-stromal neoplasm		0312	87305	87305	2785		
DOID:40	ovarian carcinoma	44707	321/1	0.0010	0.0010	0.0035	MMP9/FASLG/F2R/THBS1/HLA-DQA1	5
01			0312	87305	87305	2785		
DOID:00	COVID-19	44646	82/10	0.0011	0.0011	0.0035	IL2RB/THBS1/GZMB	3
80600			312	0429	0429	39891		
DOID:10	pleural tuberculosis	44618	20/10	0.0011	0.0011	0.0035	MMP9/FASLG	2
6			312	29522	29522	39891		
DOID:85	chronic fatigue syndrome	44618	20/10	0.0011	0.0011	0.0035	PRF1/HLA-DQA1	2
44			312	29522	29522	39891		

DOID:00			22/10	0.0013	0.0013	0.0040		
50127	sinusitis	44618	312	69012	69012	24194	MMP9/CXCL5	2
DOID:13			22/10	0.0013	0.0013	0.0040		
52	paranasal sinus disease	44618	312	69012	69012	24194	MMP9/CXCL5	2
DOID:15			22/10	0.0013	0.0013	0.0040		
10	personality disorder	44618	312	69012	69012	24194	NRG1/MMP9	2
DOID:30			22/10	0.0013	0.0013	0.0040		
87	gingivitis	44618	312	69012	69012	24194	ADM/MMP9	2
DOID:21			338/1	0.0013	0.0013	0.0040		
52	ovary epithelial cancer	44707	0312	69075	69075	24194	MMP9/FASLG/F2R/THBS1/HLA-DQA1	5

DOID:76	stomach disease	44646	89/10	0.0013	0.0013	0.0040	SLPI/MMP9/FASLG	3
			312	99621	99621	24194		
DOID:37	pulmonary fibrosis	44677	198/1	0.0014	0.0014	0.0040	MMP9/FASLG/F2R/CXCL5	4
70			0312	1538	1538	24194		
DOID:48	bile duct adenocarcinoma	44677	198/1	0.0014	0.0014	0.0040	SOCS3/MMP9/FASLG/THBS1	4
96			0312	1538	1538	24194		
DOID:49	cholangiocarcinoma	44677	198/1	0.0014	0.0014	0.0040	SOCS3/MMP9/FASLG/THBS1	4
47			0312	1538	1538	24194		
DOID:00	breast lobular carcinoma	44618	24/10	0.0016	0.0016	0.0045	MMP9/FASLG	2
50938			312	30643	30643	42566		

DOID:34		24/10	0.0016	0.0016	0.0045		
57	invasive lobular carcinoma	44618	312	30643	30643	42566	MMP9/FASLG 2
DOID:13		208/1	0.0016	0.0016	0.0046		
98	parasitic infectious disease	44677	0312	96979	96979	01599	NRG1/IL2RB/FASLG/HLA-DQA1 4
DOID:48		208/1	0.0016	0.0016	0.0046		
97	bile duct carcinoma	44677	0312	96979	96979	01599	SOCS3/MMP9/FASLG/THBS1 4
DOID:60		355/1	0.0017	0.0017	0.0046		
00	congestive heart failure	44707	0312	01889	01889	01599	ADM/NRG1/MMP9/FASLG/THBS1 5
DOID:46		209/1	0.0017	0.0017	0.0046		
06	bile duct cancer	44677	0312	27134	27134	04369	SOCS3/MMP9/FASLG/THBS1 4

DOID:00			25/10	0.0017	0.0017	0.0046		
50598	extrapulmonary tuberculosis	44618	312	69694	69694	04369	MMP9/FASLG	2
DOID:13			25/10	0.0017	0.0017	0.0046		
133	HELLP syndrome	44618	312	69694	69694	04369	ADM/FASLG	2
DOID:94			25/10	0.0017	0.0017	0.0046		
70	bacterial meningitis	44618	312	69694	69694	04369	MMP9/CXCL5	2
DOID:13			98/10	0.0018	0.0018	0.0046		
19	brain cancer	44646	312	46562	46562	72132	MMP9/AQP9/FASLG	3
DOID:14			98/10	0.0018	0.0018	0.0046		
250	Down syndrome	44646	312	46562	46562	72132	MMP9/THBS1/GNLY	3

DOID:75		98/10	0.0018	0.0018	0.0046		
0	peptic ulcer disease	44646	312	46562	46562	72132	MMP9/FASLG/GZMB 3
DOID:11		26/10	0.0019	0.0019	0.0047		
400	pyelonephritis	44618	312	14202	14202	56007	ADM/MMP9 2
DOID:27		26/10	0.0019	0.0019	0.0047		
44	pyelitis	44618	312	14202	14202	56007	ADM/MMP9 2
DOID:10		27/10	0.0020	0.0020	0.0050		
247	pleurisy	44618	312	6414	6414	3777	MMP9/FASLG 2
DOID:13		27/10	0.0020	0.0020	0.0050		
001	carotid stenosis	44618	312	6414	6414	3777	MMP9/FASLG 2

DOID:10			28/10	0.0022	0.0022	0.0052		
140	dry eye syndrome	44618	312	1948	1948	76805	MMP9/FASLG	2
DOID:39			28/10	0.0022	0.0022	0.0052		
62	thyroid gland follicular carcinoma	44618	312	1948	1948	76805	MMP9/THBS1	2
DOID:79			28/10	0.0022	0.0022	0.0052		
9	varicose veins	44618	312	1948	1948	76805	MMP9/FASLG	2
DOID:14			29/10	0.0023	0.0023	0.0055		
00	lacrimal apparatus disease	44618	312	80199	80199	62998	MMP9/FASLG	2
DOID:47			29/10	0.0023	0.0023	0.0055		
24	brain edema	44618	312	80199	80199	62998	MMP9/F2R	2

DOID:13			31/10	0.0027	0.0027	0.0062		
129	severe pre-eclampsia	44618	312	17664	17664	98345	ADM/FASLG	2
DOID:63			113/1	0.0027	0.0027	0.0063		
3	myositis	44646	0312	72342	72342	71524	MMP9/THBS1/HLA-DQA1	3
DOID:10			32/10	0.0028	0.0028	0.0065		
588	adrenoleukodystrophy	44618	312	94359	94359	42898	ADM/MMP9	2
DOID:27			32/10	0.0028	0.0028	0.0065		
99	bronchiolitis obliterans	44618	312	94359	94359	42898	MMP9/GZMB	2
DOID:11			34/10	0.0032	0.0032	0.0073		
713	diabetic angiopathy	44618	312	63545	63545	1749	ADM/FASLG	2

DOID:12			123/1	0.0035	0.0035	0.0078		
236	primary biliary cholangitis	44646	0312	24006	24006	37771	MMP9/GNLY/HLA-DQA1	3
DOID:14			36/10	0.0036	0.0036	0.0080		
83	gingival disease	44618	312	53623	53623	61045	ADM/MMP9	2
DOID:35			127/1	0.0038	0.0038	0.0083		
25	middle cerebral artery infarction	44646	0312	56337	56337	74515	NRG1/SLPI/MMP9	3
DOID:42			37/10	0.0038	0.0038	0.0083		
51	conjunctival disease	44618	312	56432	56432	74515	SOCS3/MMP9	2
DOID:00			262/1	0.0039	0.0039	0.0084		
50589	inflammatory bowel disease	44677	0312	18501	18501	42822	S100A12/SOCS3/FASLG/PRF1	4

DOID:29	hypersensitivity reaction type IV	44646	130/1	0.0041	0.0041	0.0088	FASLG/CXCL5/HLA-DQA1	3
16	disease		0312	17773	17773	03398		
DOID:12	respiratory syncytial virus	44618	39/10	0.0042	0.0042	0.0089	MMP9/GZMB	2
73	infectious disease		312	77466	77466	94742		
DOID:15	head and neck carcinoma	44677	269/1	0.0043	0.0043	0.0089	SOCS3/MMP9/FASLG/F2R	4
42			0312	05117	05117	94742		
DOID:46	biliary tract cancer	44677	269/1	0.0043	0.0043	0.0089	SOCS3/MMP9/FASLG/THBS1	4
07			0312	05117	05117	94742		
DOID:12	aplastic anemia	44646	133/1	0.0043	0.0043	0.0090	FASLG/PRF1/HLA-DQA1	3
449			0312	89804	89804	34789		

DOID:14		133/1	0.0043	0.0043	0.0090			
43	cerebral degeneration	44646	0312	89804	89804	34789	ADM/MMP9/FASLG	3
DOID:10		40/10	0.0044	0.0044	0.0091			
976	membranous glomerulonephritis	44618	312	95641	95641	84077	MMP9/HLA-DQA1	2
DOID:11		276/1	0.0047	0.0047	0.0094			
934	head and neck cancer	44677	0312	16936	16936	9941	SOCS3/MMP9/FASLG/F2R	4
DOID:36		41/10	0.0047	0.0047	0.0094			
83	lung benign neoplasm	44618	312	18886	18886	9941	MMP9/FASLG	2
DOID:98		42/10	0.0049	0.0049	0.0098			
6	alopecia areata	44618	312	47178	47178	5336	FASLG/HLA-DQA1	2

DOID:12 05	allergic disease	44646	139/1 0312	0.0049 66169	0.0049 66169	0.0098 5336	SOCS3/ADM/HLA-DQA1	3
DOID:28 93	cervix carcinoma	44646	140/1 0312	0.0050 6647	0.0050 6647	0.0099 09781	SOCS3/SLPI/MMP9	3
DOID:87 19	in situ carcinoma	44646	140/1 0312	0.0050 6647	0.0050 6647	0.0099 09781	SOCS3/MMP9/FASLG	3
DOID:32 6	ischemia	44707	464/1 0312	0.0054 18594	0.0054 18594	0.0104 5069	ADM/MMP9/FASLG/F2R/THBS1	5
DOID:15 32	pleural disease	44618	44/10 312	0.0054 18802	0.0054 18802	0.0104 5069	MMP9/FASLG	2

DOID:13		46/10	0.0059	0.0059	0.0112			
375	temporal arteritis	44618	312	10315	10315	41398	MMP9/CXCL5	2
DOID:52		46/10	0.0059	0.0059	0.0112			
5	central nervous system vasculitis	44618	312	10315	10315	41398	MMP9/CXCL5	2
DOID:00		47/10	0.0061	0.0061	0.0115			
60074	ductal carcinoma in situ	44618	312	63468	63468	63399	SOCS3/MMP9	2
DOID:86		47/10	0.0061	0.0061	0.0115			
6	vein disease	44618	312	63468	63468	63399	MMP9/FASLG	2
DOID:94		48/10	0.0064	0.0064	0.0119			
71	meningitis	44618	312	2152	2152	66133	MMP9/CXCL5	2

DOID:10			49/10	0.0066	0.0066	0.0123		
24	leprosy	44618	312	84446	84446	72482	CBLB/HLA-DQA1	2
DOID:89			158/1	0.0070	0.0070	0.0129		
47	diabetic retinopathy	44646	0312	85145	85145	38509	ADM/MMP9/THBS1	3
DOID:10			51/10	0.0072	0.0072	0.0129		
73	renal hypertension	44618	312	24824	24824	38509	ADM/MMP9	2
DOID:10			51/10	0.0072	0.0072	0.0129		
808	gastric ulcer	44618	312	24824	24824	38509	MMP9/FASLG	2
DOID:11			51/10	0.0072	0.0072	0.0129		
130	secondary hypertension	44618	312	24824	24824	38509	ADM/MMP9	2

DOID:87			51/10	0.0072	0.0072	0.0129		
91	breast carcinoma in situ	44618	312	24824	24824	38509	SOCS3/MMP9	2
DOID:13			161/1	0.0074	0.0074	0.0132		
580	cholestasis	44646	0312	61773	61773	76635	ADM/F2R/HLA-DQA1	3
DOID:78			53/10	0.0077	0.0077	0.0136		
0	placenta disease	44618	312	84408	84408	16267	MMP9/AQP9	2
DOID:88	parasitic helminthiasis infectious	44618	53/10	0.0077	0.0077	0.0136		
3	disease	44618	312	84408	84408	16267	FASLG/HLA-DQA1	2
DOID:49			319/1	0.0078	0.0078	0.0136		
05	pancreatic carcinoma	44677	0312	43858	43858	16267	SOCS3/MMP9/FASLG/THBS1	4

DOID:55		164/1	0.0078	0.0078	0.0136			
2	pneumonia	44646	0312	50142	50142	16267	SLPI/MMP9/CXCL5	3
DOID:49		54/10	0.0080	0.0080	0.0139			
61	bone marrow disease	44618	312	71343	71343	0188	SOCS3/MMP9	2
DOID:24		166/1	0.0081	0.0081	0.0139			
62	retinal vascular disease	44646	0312	15621	15621	0188	ADM/MMP9/THBS1	3
DOID:00		167/1	0.0082	0.0082	0.0140			
60058	lymphoma	44646	0312	5034	5034	45412	MMP9/PRF1/HLA-DQA1	3
DOID:47		55/10	0.0083	0.0083	0.0141			
	prostate disease	44618	312	63008	63008	49874	PDGFD/CXCL5	2

DOID:00 60071	pre-malignant neoplasm	44646	169/1 0312	0.0085 23752	0.0085 23752	0.0143 33909	SOCS3/MMP9/FASLG	3
DOID:65 7	adenoma	44677	344/1 0312	0.0101 77295	0.0101 77295	0.0170 10854	ADM/MMP9/FASLG/THBS1	4
DOID:10 70	primary open angle glaucoma	44618	62/10 312	0.0105 3511	0.0105 3511	0.0172 9448	MMP9/FASLG	2
DOID:49 71	myelofibrosis	44618	62/10 312	0.0105 3511	0.0105 3511	0.0172 9448	SOCS3/THBS1	2
DOID:98 7	alopecia	44618	62/10 312	0.0105 3511	0.0105 3511	0.0172 9448	FASLG/HLA-DQA1	2

DOID:50				354/1	0.0112	0.0112	0.0181		
82	liver cirrhosis		44677	0312	2539	2539	56423	MMP9/PDGFD/GNLY/HLA-DQA1	4
DOID:43				187/1	0.0112	0.0112	0.0181		
62	cervical cancer		44646	0312	26542	26542	56423	SOCS3/SLPI/MMP9	3
DOID:29	severe	acute	respiratory	65/10	0.0115	0.0115	0.0181		
45	syndrome		44618	312	34608	34608	56423	SLPI/CXCL5	2
DOID:29				65/10	0.0115	0.0115	0.0181		
86	IgA glomerulonephritis		44618	312	34608	34608	56423	MMP9/XCL1	2
DOID:36				191/1	0.0118	0.0118	0.0181		
20	central nervous system cancer		44646	0312	87251	87251	56423	MMP9/AQP9/FASLG	3

DOID:30			192/1	0.0120	0.0120	0.0181		
42	allergic contact dermatitis	44646	0312	55887	55887	56423	SOCS3/MMP9/PTGDR	3
DOID:90			192/1	0.0120	0.0120	0.0181		
74	systemic lupus erythematosus	44646	0312	55887	55887	56423	MMP9/FASLG/PRF1	3
DOID:00			193/1	0.0122	0.0122	0.0181		
80014	chromosomal disease	44646	0312	25912	25912	56423	MMP9/THBS1/GNLY	3
DOID:00			5/103	0.0125	0.0125	0.0181		
50748	marginal zone B-cell lymphoma	44587	12	45682	45682	56423	HLA-DQA1	1
DOID:10			5/103	0.0125	0.0125	0.0181		
303	sialadenitis	44587	12	45682	45682	56423	SLPI	1

DOID:10			5/103	0.0125	0.0125	0.0181		
310	viral meningitis	44587	12	45682	45682	56423	MMP9	1
DOID:10			5/103	0.0125	0.0125	0.0181		
824	malignant hypertension	44587	12	45682	45682	56423	ADM	1
DOID:11			5/103	0.0125	0.0125	0.0181		
121	pulpitis	44587	12	45682	45682	56423	MMP9	1
DOID:12			5/103	0.0125	0.0125	0.0181		
859	choreatic disease	44587	12	45682	45682	56423	HLA-DQA1	1
DOID:13			5/103	0.0125	0.0125	0.0181		
336	congenital toxoplasmosis	44587	12	45682	45682	56423	HLA-DQA1	1

DOID:27 03	synovitis	44587	5/103 12	0.0125 45682	0.0125 45682	0.0181 56423	MMP9	1
DOID:42 50	conjunctivochalasis	44587	5/103 12	0.0125 45682	0.0125 45682	0.0181 56423	MMP9	1
DOID:53 30	dental pulp disease	44587	5/103 12	0.0125 45682	0.0125 45682	0.0181 56423	MMP9	1
DOID:84 63	corneal ulcer	44587	5/103 12	0.0125 45682	0.0125 45682	0.0181 56423	MMP9	1
DOID:27 73	contact dermatitis	44646	195/1 0312	0.0125 70132	0.0125 70132	0.0181 56423	SOCS3/MMP9/PTGDR	3

DOID:41		195/1	0.0125	0.0125	0.0181			
38	bile duct disease	44646	0312	70132	70132	56423	ADM/F2R/HLA-DQA1	3
DOID:38		68/10	0.0125	0.0125	0.0181			
29	pituitary adenoma	44618	312	74362	74362	56423	MMP9/FASLG	2
DOID:60		68/10	0.0125	0.0125	0.0181			
009	pituitary gland benign neoplasm	44618	312	74362	74362	56423	MMP9/FASLG	2
DOID:97		197/1	0.0129	0.0129	0.0183			
41	biliary tract disease	44646	0312	19927	19927	80922	ADM/F2R/HLA-DQA1	3
DOID:33		69/10	0.0129	0.0129	0.0183			
71	chondrosarcoma	44618	312	29786	29786	80922	MMP9/F2R	2

DOID:34			69/10	0.0129	0.0129	0.0183		
07	carotid artery disease	44618	312	29786	29786	80922	MMP9/FASLG	2
DOID:88			198/1	0.0130	0.0130	0.0185		
57	lupus erythematosus	44646	0312	9692	9692	23039	MMP9/FASLG/PRF1	3
DOID:35			200/1	0.0134	0.0134	0.0189		
26	cerebral infarction	44646	0312	55106	55106	32534	NRG1/SLPI/MMP9	3
DOID:40			201/1	0.0136	0.0136	0.0190		
74	pancreatic adenocarcinoma	44646	0312	36303	36303	90095	SOCS3/MMP9/THBS1	3
DOID:11			205/1	0.0143	0.0143	0.0197		
15	sarcoma	44646	0312	75154	75154	47304	NRG1/MMP9/THBS1	3

DOID:45			74/10	0.0147	0.0147	0.0197		
35	hypotrichosis	44618	312	72182	72182	47304	FASLG/HLA-DQA1	2
DOID:55	head and neck squamous cell		208/1	0.0149	0.0149	0.0197		
20	carcinoma	44646	0312	44105	44105	47304	SOCS3/MMP9/F2R	3
DOID:63			208/1	0.0149	0.0149	0.0197		
0	genetic disease	44646	0312	44105	44105	47304	MMP9/THBS1/GNLY	3
DOID:00			6/103	0.0150	0.0150	0.0197		
80177	hepatic veno-occlusive disease	44587	12	36592	36592	47304	MMP9	1
DOID:12			6/103	0.0150	0.0150	0.0197		
42	globe disease	44587	12	36592	36592	47304	SLPI	1

DOID:13			6/103	0.0150	0.0150	0.0197		
714	anodontia		44587				MMP9	1
			12	36592	36592	47304		
DOID:14	autoimmune	polyendocrine	6/103	0.0150	0.0150	0.0197		
040	syndrome		44587				HLA-DQA1	1
			12	36592	36592	47304		
DOID:46			6/103	0.0150	0.0150	0.0197		
92	endophthalmitis		44587				SLPI	1
			12	36592	36592	47304		
DOID:57	pulmonary	sclerosing	6/103	0.0150	0.0150	0.0197		
66	hemangioma		44587				MMP9	1
			12	36592	36592	47304		
DOID:64			6/103	0.0150	0.0150	0.0197		
6	viral encephalitis		44587				MMP9	1
			12	36592	36592	47304		

DOID:84			6/103	0.0150	0.0150	0.0197		
88	polyhydramnios	44587	12	36592	36592	47304	AQP9	1
DOID:86			6/103	0.0150	0.0150	0.0197		
49	tongue cancer	44587	12	36592	36592	47304	KLRC1	1
DOID:53			77/10	0.0159	0.0159	0.0208		
5	sleep disorder	44618	312	29036	29036	20191	MMP9/HLA-DQA1	2
DOID:13			78/10	0.0163	0.0163	0.0212		
141	uveitis	44618	312	2309	2309	34606	ADM/HLA-DQA1	2
DOID:34			79/10	0.0167	0.0167	0.0216		
51	skin carcinoma	44618	312	21325	21325	50543	MMP9/THBS1	2

DOID:00	paroxysmal	nocturnal		7/103	0.0175	0.0175	0.0222		
			44587					HLA-DQA1	1
60284	hemoglobinuria			12	2146	2146	79537		
DOID:00				7/103	0.0175	0.0175	0.0222		
	meningococcal meningitis		44587					MMP9	1
80176				12	2146	2146	79537		
DOID:58				7/103	0.0175	0.0175	0.0222		
	endometrioid ovary carcinoma		44587					MMP9	1
28				12	2146	2146	79537		
DOID:42				81/10	0.0175	0.0175	0.0222		
	hair disease		44618					FASLG/HLA-DQA1	2
1				312	30254	30254	79537		
DOID:00	respiratory	system	benign	82/10	0.0179	0.0179	0.0226		
			44618					MMP9/FASLG	2
50621	neoplasm			312	40903	40903	96845		

DOID:10			83/10	0.0183	0.0183	0.0230		
67	open-angle glaucoma	44618	312	55646	55646	10427	MMP9/FASLG	2
DOID:34			83/10	0.0183	0.0183	0.0230		
5	uterine disease	44618	312	55646	55646	10427	MMP9/AQP9	2
DOID:63	acquired	immunodeficiency	85/10	0.0191	0.0191	0.0239		
5	syndrome	44618	312	97331	97331	43702	SLPI/FASLG	2
DOID:10			229/1	0.0192	0.0192	0.0239		
36	chronic leukemia	44646	0312	85482	85482	43702	SOCS3/F2R/HLA-DQA1	3
DOID:00	hemophagocytic		8/103	0.0200	0.0200	0.0239		
50120	lymphohistiocytosis	44587	12	003	003	43702	PRF1	1

DOID:00	CAKUT	44587	8/103	0.0200	0.0200	0.0239	MMP9	1
80205			12	003	003	43702		
DOID:01	dilated cardiomyopathy 1H	44587	8/103	0.0200	0.0200	0.0239	HLA-DQA1	1
10429			12	003	003	43702		
DOID:14	fragile X syndrome	44587	8/103	0.0200	0.0200	0.0239	MMP9	1
261			12	003	003	43702		
DOID:40	bladder urothelial carcinoma	44587	8/103	0.0200	0.0200	0.0239	FASLG	1
06			12	003	003	43702		
DOID:47	mesangial proliferative	44587	8/103	0.0200	0.0200	0.0239	PDGFD	1
83	glomerulonephritis		12	003	003	43702		

DOID:49			8/103	0.0200	0.0200	0.0239		
5	sclerosing hemangioma	44587	12	003	003	43702	MMP9	1
DOID:84			8/103	0.0200	0.0200	0.0239		
40	ileus	44587	12	003	003	43702	MMP9	1
DOID:34			87/10	0.0200	0.0200	0.0239		
80	uveal disease	44618	312	55135	55135	43702	ADM/HLA-DQA1	2
DOID:63			88/10	0.0204	0.0204	0.0243		
64	migraine	44618	312	90029	90029	57475	ADM/MMP9	2
DOID:10			90/10	0.0213	0.0213	0.0252		
579	leukodystrophy	44618	312	71693	71693	96515	ADM/MMP9	2

DOID:10		92/10	0.0222	0.0222	0.0253			
608	celiac disease	44618	312	69054	69054	63193	FASLG/HLA-DQA1	2
DOID:00		9/103	0.0224	0.0224	0.0253			
50697	chorioamnionitis	44587	12	73125	73125	63193	MMP9	1
DOID:10		9/103	0.0224	0.0224	0.0253			
456	tonsillitis	44587	12	73125	73125	63193	FASLG	1
DOID:12		9/103	0.0224	0.0224	0.0253			
510	retinal ischemia	44587	12	73125	73125	63193	MMP9	1
DOID:14		9/103	0.0224	0.0224	0.0253			
05	primary angle-closure glaucoma	44587	12	73125	73125	63193	MMP9	1

DOID:19			9/103	0.0224	0.0224	0.0253		
96	rectum adenocarcinoma	44587	12	73125	73125	63193	MMP9	1
DOID:38			9/103	0.0224	0.0224	0.0253		
92	insulinoma	44587	12	73125	73125	63193	ADM	1
DOID:51			9/103	0.0224	0.0224	0.0253		
19	ovarian cyst	44587	12	73125	73125	63193	MMP9	1
DOID:66	autoimmune lymphoproliferative		9/103	0.0224	0.0224	0.0253		
88	syndrome	44587	12	73125	73125	63193	FASLG	1
DOID:89	subacute	sclerosing	9/103	0.0224	0.0224	0.0253		
70	panencephalitis	44587	12	73125	73125	63193	MMP9	1

DOID:98				9/103	0.0224	0.0224	0.0253		
40	esotropia		44587	12	73125	73125	63193	MMP9	1
DOID:83				243/1	0.0225	0.0225	0.0253		
98	osteoarthritis		44646	0312	31616	31616	63193	MMP9/FASLG/TGFBR3	3
DOID:37	cervical	squamous	cell	93/10	0.0227	0.0227	0.0254		
44	carcinoma		44618	312	23569	23569	75289	SOCS3/MMP9	2
DOID:11				246/1	0.0232	0.0232	0.0259		
054	urinary bladder cancer		44646	0312	64059	64059	75638	MMP9/FASLG/THBS1	3
DOID:57				247/1	0.0235	0.0235	0.0261		
6	proteinuria		44646	0312	11102	11102	45622	ADM/THBS1/HLA-DQA1	3

DOID:27			248/1	0.0237	0.0237	0.0263		
23	dermatitis	44646	0312	59591	59591	15844	SOCS3/MMP9/PTGDR	3
DOID:38			97/10	0.0245	0.0245	0.0266		
1	arthropathy	44618	312	80031	80031	59596	SLPI/MMP9	2
DOID:00	primary progressive multiple		10/10	0.0249	0.0249	0.0266		
50784	sclerosis	44587	312	3995	3995	59596	MMP9	1
DOID:00			10/10	0.0249	0.0249	0.0266		
80883	vitamin D-dependent rickets	44587	312	3995	3995	59596	CXCL5	1
DOID:13			10/10	0.0249	0.0249	0.0266		
317	hyperinsulinemic hypoglycemia	44587	312	3995	3995	59596	TGFBR3	1

DOID:18 03	neuritis	44587	10/10 312	0.0249 3995	0.0249 3995	0.0266 59596	FASLG	1
DOID:42 33	clear cell sarcoma	44587	10/10 312	0.0249 3995	0.0249 3995	0.0266 59596	NRG1	1
DOID:44 18	cutaneous fibrous histiocytoma	44587	10/10 312	0.0249 3995	0.0249 3995	0.0266 59596	MMP9	1
DOID:46 44	epidermolysis bullosa simplex	44587	10/10 312	0.0249 3995	0.0249 3995	0.0266 59596	MMP9	1
DOID:96 51	systolic heart failure	44587	10/10 312	0.0249 3995	0.0249 3995	0.0266 59596	MMP9	1

DOID:40			101/1	0.0264	0.0264	0.0282		
79	heart valve disease	44618	0312	96955	96955	146	MMP9/HLA-DQA1	2
DOID:53	pituitary gland disease	44618	102/1	0.0269	0.0269	0.0282		
			0312	8548	8548	76327	MMP9/FASLG	2
DOID:00	autoimmune disease of central		11/10	0.0274	0.0274	0.0282		
60004	nervous system	44587	312	00789	00789	76327	MMP9	1
DOID:39	pancreatic cystadenoma	44587	11/10	0.0274	0.0274	0.0282		
18			312	00789	00789	76327	ADM	1
DOID:85	chronic ulcer of skin	44587	11/10	0.0274	0.0274	0.0282		
49			312	00789	00789	76327	MMP9	1

DOID:85			11/10	0.0274	0.0274	0.0282		
68	infectious mononucleosis	44587	312	00789	00789	76327	FASLG	1
DOID:85			11/10	0.0274	0.0274	0.0282		
74	lichen disease	44587	312	00789	00789	76327	MMP9	1
DOID:88			11/10	0.0274	0.0274	0.0282		
69	neuromyelitis optica	44587	312	00789	00789	76327	MMP9	1
DOID:92			11/10	0.0274	0.0274	0.0282		
01	lichen planus	44587	312	00789	00789	76327	MMP9	1
DOID:12			103/1	0.0274	0.0274	0.0282		
361	Graves' disease	44618	0312	77683	77683	76327	FASLG/HLA-DQA1	2

DOID:94 08	acute myocardial infarction	44618	105/1 0312	0.0284 73038	0.0284 73038	0.0290 90709	MMP9/PRF1	2
DOID:40 3	mouth disease	44646	266/1 0312	0.0284 80026	0.0284 80026	0.0290 90709	ADM/SLPI/MMP9	3
DOID:44 50	renal cell carcinoma	44677	472/1 0312	0.0291 23064	0.0291 23064	0.0295 12098	MMP9/FASLG/THBS1/TGFBR3	4
DOID:87 0	neuropathy	44677	472/1 0312	0.0291 23064	0.0291 23064	0.0295 12098	S100A12/NRG1/MMP9/FASLG	4
DOID:00 80745	polymyositis	44587	12/10 312	0.0298 55655	0.0298 55655	0.0295 12098	MMP9	1

DOID:10			12/10	0.0298	0.0298	0.0295		
80	filariasis	44587	312	55655	55655	12098	HLA-DQA1	1
DOID:14			12/10	0.0298	0.0298	0.0295		
256	adult-onset Still's disease	44587	312	55655	55655	12098	FASLG	1
DOID:15			12/10	0.0298	0.0298	0.0295		
86	rheumatic fever	44587	312	55655	55655	12098	HLA-DQA1	1
DOID:89			12/10	0.0298	0.0298	0.0295		
86	narcolepsy	44587	312	55655	55655	12098	HLA-DQA1	1
DOID:91			12/10	0.0298	0.0298	0.0295		
64	achalasia	44587	312	55655	55655	12098	HLA-DQA1	1

DOID:99			12/10	0.0298	0.0298	0.0295		
65	toxoplasmosis	44587	312	55655	55655	12098	HLA-DQA1	1
DOID:00			480/1	0.0307	0.0307	0.0302		
60084	cell type benign neoplasm	44677	0312	32224	32224	70085	ADM/MMP9/FASLG/THBS1	4
DOID:10			110/1	0.0310	0.0310	0.0303		
124	corneal disease	44618	0312	24379	24379	41125	SLPI/MMP9	2
DOID:87			110/1	0.0310	0.0310	0.0303		
78	Crohn's disease	44618	0312	24379	24379	41125	S100A12/PRF1	2
DOID:15			111/1	0.0315	0.0315	0.0306		
64	fungal infectious disease	44618	0312	45281	45281	16009	SLPI/MMP9	2

DOID:00	aspirin-induced	respiratory		13/10	0.0323	0.0323	0.0306		
			44587					HLA-DQA1	1
80822	disease			312	04563	04563	16009		
DOID:10				13/10	0.0323	0.0323	0.0306		
	lepomatous leprosy		44587					HLA-DQA1	1
887				312	04563	04563	16009		
DOID:12				13/10	0.0323	0.0323	0.0306		
	Vogt-Koyanagi-Harada disease		44587					HLA-DQA1	1
297				312	04563	04563	16009		
DOID:13	persistent	fetal	circulation		13/10	0.0323	0.0323	0.0306	
			44587					ADM	1
042	syndrome			312	04563	04563	16009		
DOID:13				13/10	0.0323	0.0323	0.0306		
	obstructive jaundice		44587					ADM	1
603				312	04563	04563	16009		

DOID:20			13/10	0.0323	0.0323	0.0306		
89	constipation	44587	312	04563	04563	16009	AQP9	1
DOID:29			13/10	0.0323	0.0323	0.0306		
88	antiphospholipid syndrome	44587	312	04563	04563	16009	HLA-DQA1	1
DOID:97			13/10	0.0323	0.0323	0.0306		
79	bowel dysfunction	44587	312	04563	04563	16009	AQP9	1
DOID:00			114/1	0.0331	0.0331	0.0311		
60060	non-Hodgkin lymphoma	44618	0312	28902	28902	82943	PRF1/HLA-DQA1	2
DOID:34			114/1	0.0331	0.0331	0.0311		
1	peripheral vascular disease	44618	0312	28902	28902	82943	ADM/FASLG	2

DOID:34		493/1	0.0334	0.0334	0.0313			
59	breast carcinoma	44677	0312	59675	59675	87164	SOCS3/MMP9/FASLG/F2R	4
DOID:11		116/1	0.0342	0.0342	0.0314			
335	sarcoidosis	44618	0312	01884	01884	19679	CXCL5/HLA-DQA1	2
DOID:42		498/1	0.0345	0.0345	0.0314			
3	myopathy	44677	0312	46018	46018	19679	MMP9/THBS1/CBLB/HLA-DQA1	4
DOID:11		14/10	0.0347	0.0347	0.0314			
294	arteriovenous malformation	44587	312	47527	47527	19679	MMP9	1
DOID:12		14/10	0.0347	0.0347	0.0314			
1	vaginal disease	44587	312	47527	47527	19679	PI3	1

DOID:16			14/10	0.0347	0.0347	0.0314		
57	ventricular septal defect	44587	312	47527	47527	19679	MMP9	1
DOID:21			14/10	0.0347	0.0347	0.0314		
13	coccidiosis	44587	312	47527	47527	19679	HLA-DQA1	1
DOID:21			14/10	0.0347	0.0347	0.0314		
70	vaginitis	44587	312	47527	47527	19679	PI3	1
DOID:33			14/10	0.0347	0.0347	0.0314		
85	bacterial vaginosis	44587	312	47527	47527	19679	PI3	1
DOID:57			14/10	0.0347	0.0347	0.0314		
1	median neuropathy	44587	312	47527	47527	19679	NRG1	1

DOID:57	mononeuritis of upper limb and	44587	14/10	0.0347	0.0347	0.0314		
2	mononeuritis multiplex		312	47527	47527	19679	NRG1	1
DOID:58	hemoglobinuria	44587	14/10	0.0347	0.0347	0.0314		
2			312	47527	47527	19679	HLA-DQA1	1
DOID:37	gastric adenocarcinoma	44618	119/1	0.0358	0.0358	0.0322		
17			0312	36826	36826	98756	F2R/HLA-DQA1	2
DOID:11	sciatic neuropathy	44618	120/1	0.0363	0.0363	0.0326		
446			0312	88522	88522	89157	NRG1/MMP9	2
DOID:00	brain glioma	44587	15/10	0.0371	0.0371	0.0330		
60108			312	8456	8456	81	FASLG	1

DOID:31	keratoacanthoma	44587	15/10	0.0371	0.0371	0.0330	THBS1	1
49			312	8456	8456	81		
DOID:84	intestinal obstruction	44587	15/10	0.0371	0.0371	0.0330	MMP9	1
37			312	8456	8456	81		
DOID:00	autoimmune disease of	44618	122/1	0.0375	0.0375	0.0331	FASLG/HLA-DQA1	2
60005	endocrine system		0312	01873	01873	49429		
DOID:34	pancreatic ductal	44618	122/1	0.0375	0.0375	0.0331	SOCS3/MMP9	2
98	adenocarcinoma		0312	01873	01873	49429		
DOID:00	autoimmune disease of	44618	123/1	0.0380	0.0380	0.0332	FASLG/HLA-DQA1	2
60031	gastrointestinal tract		0312	63491	63491	19969		

DOID:12			123/1	0.0380	0.0380	0.0332		
528	lesion of sciatic nerve	44618	0312	63491	63491	19969	NRG1/MMP9	2
DOID:18			123/1	0.0380	0.0380	0.0332		
24	status epilepticus	44618	0312	63491	63491	19969	SOCS3/MMP9	2
DOID:94			123/1	0.0380	0.0380	0.0332		
73	mononeuritis of lower limb	44618	0312	63491	63491	19969	NRG1/MMP9	2
DOID:22			124/1	0.0386	0.0386	0.0335		
18	blood platelet disease	44618	0312	28378	28378	00944	F2R/THBS1	2
DOID:44			124/1	0.0386	0.0386	0.0335		
48	macular degeneration	44618	0312	28378	28378	00944	MMP9/RORA	2

DOID:00	gastrointestinal system benign	44618	125/1	0.0391	0.0391	0.0338		
50624	neoplasm		0312	96517	96517	87106	ADM/FASLG	2
DOID:00	biliary tract benign neoplasm	44587	16/10	0.0396	0.0396	0.0340		
50625			312	15676	15676	36095	FASLG	1
DOID:11	primary hyperparathyroidism	44587	16/10	0.0396	0.0396	0.0340		
202			312	15676	15676	36095	ADM	1
DOID:11	hypertrophic cardiomyopathy	44618	127/1	0.0403	0.0403	0.0345		
984			0312	42472	42472	52886	ADM/MMP9	2
DOID:10	pelvic inflammatory disease	44587	17/10	0.0420	0.0420	0.0356		
03			312	40889	40889	03343	MMP9	1

DOID:10			17/10	0.0420	0.0420	0.0356		
964	cholesteatoma of middle ear	44587	312	40889	40889	03343	MMP9	1
DOID:89			17/10	0.0420	0.0420	0.0356		
29	atrophic gastritis	44587	312	40889	40889	03343	FASLG	1
DOID:30			130/1	0.0420	0.0420	0.0356		
68	glioblastoma	44618	0312	85326	85326	03343	MMP9/AQP9	2
DOID:85			132/1	0.0432	0.0432	0.0364		
77	ulcerative colitis	44618	0312	62962	62962	87674	SOCS3/FASLG	2
DOID:11			18/10	0.0444	0.0444	0.0368		
729	Lyme disease	44587	312	60212	60212	21797	MMP9	1

DOID:12			18/10	0.0444	0.0444	0.0368		
337	varicocele	44587	312	60212	60212	21797	FASLG	1
DOID:13			18/10	0.0444	0.0444	0.0368		
550	angle-closure glaucoma	44587	312	60212	60212	21797	MMP9	1
DOID:91			18/10	0.0444	0.0444	0.0368		
11	cutaneous leishmaniasis	44587	312	60212	60212	21797	FASLG	1
DOID:95			18/10	0.0444	0.0444	0.0368		
63	bronchiectasis	44587	312	60212	60212	21797	MMP9	1
DOID:97			18/10	0.0444	0.0444	0.0368		
42	pelvic varices	44587	312	60212	60212	21797	FASLG	1

DOID:23	brain ischemia	44646	318/1	0.0447	0.0447	0.0369	MMP9/FASLG/F2R	3
16			0312	35834	35834	39138		
DOID:23	anemia	44646	319/1	0.0450	0.0450	0.0371	FASLG/PRF1/HLA-DQA1	3
55			0312	86074	86074	17208		
DOID:11	osteoporosis	44618	136/1	0.0456	0.0456	0.0372	MMP9/THBS1	2
476			0312	5534	5534	52255		
DOID:18	mononeuritis	44618	136/1	0.0456	0.0456	0.0372	NRG1/MMP9	2
02			0312	5534	5534	52255		
DOID:28	endometrial carcinoma	44618	136/1	0.0456	0.0456	0.0372	MMP9/TGFBR3	2
71			0312	5534	5534	52255		

DOID:00			137/1	0.0462	0.0462	0.0374		
80011	bone resorption disease	44618	0312	61061	61061	14409	MMP9/THBS1	2
DOID:10			137/1	0.0462	0.0462	0.0374		
825	essential hypertension	44618	0312	61061	61061	14409	ADM/MMP9	2
DOID:11			137/1	0.0462	0.0462	0.0374		
88	mononeuropathy	44618	0312	61061	61061	14409	NRG1/MMP9	2
DOID:48	male reproductive system disease	44646	324/1	0.0468	0.0468	0.0374	FASLG/PDGFD/CXCL5	3
DOID:86			138/1	0.0468	0.0468	0.0374		
18	oral cavity cancer	44618	0312	69796	69796	70325	MMP9/KLRC1	2

DOID:00			19/10	0.0468	0.0468	0.0374		
50548	hereditary sensory neuropathy	44587	312	7366	7366	70325	S100A12	1
DOID:14			19/10	0.0468	0.0468	0.0374		
654	prostatitis	44587	312	7366	7366	70325	CXCL5	1
DOID:00			139/1	0.0474	0.0474	0.0377		
60122	integumentary system cancer	44618	0312	81527	81527	3748	MMP9/THBS1	2
DOID:41			139/1	0.0474	0.0474	0.0377		
59	skin cancer	44618	0312	81527	81527	3748	MMP9/THBS1	2
DOID:13	acute	proliferative	20/10	0.0492	0.0492	0.0377		
138	glomerulonephritis	44587	312	81247	81247	94287	MMP9	1

DOID:13			20/10	0.0492	0.0492	0.0377		
139	crescentic glomerulonephritis	44587	312	81247	81247	94287	MMP9	1
DOID:23	relapsing-remitting	multiple	20/10	0.0492	0.0492	0.0377		
78	sclerosis	44587	312	81247	81247	94287	MMP9	1
DOID:29	membranoproliferative		20/10	0.0492	0.0492	0.0377		
20	glomerulonephritis	44587	312	81247	81247	94287	PRF1	1
DOID:33			20/10	0.0492	0.0492	0.0377		
02	chordoma	44587	312	81247	81247	94287	MMP9	1
DOID:33			20/10	0.0492	0.0492	0.0377		
03	notochordal cancer	44587	312	81247	81247	94287	MMP9	1

DOID:46			20/10	0.0492	0.0492	0.0377		
77	keratitis	44587	312	81247	81247	94287	MMP9	1
DOID:91			20/10	0.0492	0.0492	0.0377		
82	pemphigus	44587	312	81247	81247	94287	HLA-DQA1	1
DOID:92			20/10	0.0492	0.0492	0.0377		
82	ocular hypertension	44587	312	81247	81247	94287	MMP9	1
DOID:93			20/10	0.0492	0.0492	0.0377		
60	intrinsic asthma	44587	312	81247	81247	94287	HLA-DQA1	1
DOID:00			142/1	0.0493	0.0493	0.0377		
80524	thyroid gland adenocarcinoma	44618	0312	34528	34528	94287	MMP9/THBS1	2

DOID:00	differentiated thyroid gland	44618	142/1	0.0493	0.0493	0.0377	MMP9/THBS1	2
80525	carcinoma		0312	34528	34528	94287		
DOID:12	Huntington's disease	44618	142/1	0.0493	0.0493	0.0377	MMP9/FASLG	2
858			0312	34528	34528	94287		

Table S2: Results for the ingenuity pathway analysis (IPA) of biomarkers;

Ingenuity Canonical Pathways	-log(p-value)	Ratio	z-score	Molecules
		0.01	-1.63	
CTLA4 Signaling in Cytotoxic T Lymphocytes	1.66	61	3	CBLB,HLA-DQA1,TRDV3,TRGC2,TRGV9,YES1
Pathogen Induced Cytokine Storm Signaling	3.76	0.02	0.333	CXCL5,FASLG,GZMB,HLA-DQA1,PRF1,SOCS3,TBX21,TLR5,XCL1

Pathway		65			
			0.02		
ID1 Signaling Pathway	2.2	5	0.447	CDKN1C,GSPT1,MMP9,TGFBR3,YES1	
			0.01		
Neuroinflammation Signaling Pathway	1.47	63	0.447	FASLG,HLA-DQA1,MMP9,TGFBR3,TLR5	
Pulmonary Fibrosis Idiopathic Signaling			0.01		
Pathway	1.94	86	0.816	ADAMTS1,F2R,MMP9,PDGFD,TGFBR3,THBS1	
			0.03		
Natural Killer Cell Signaling	3.86	63	1	FASLG,IL2RB,KLRB1,KLRC1,KLRC2,KLRC3,KLRD1	
			0.01		
Breast Cancer Regulation by Stathmin1	1.68	37	1.414	ADGRG1,AVPR1A,F2R,MMP9,P2RY12,PTGDR,S1PR5,TUBB1	
			0.01	ADGRG1,ATP5F1C,AVPR1A,F2R,FCGR1BP,MMP9,P2RY12,PTGDR,S100A1	
S100 Family Signaling Pathway	2.36	47	1.508	2,S1PR5,SMAD7	

Crosstalk between Dendritic Cells and		0.04			
Natural Killer Cells	2.7	4	2	FASLG,IL2RB,KLRD1,PRF1	
Cytotoxic T Lymphocyte-mediated Apoptosis		0.02			
of Target Cells	2.71	69	2	FASLG,GZMB,PRF1,TRDV3,TRGC2,TRGV9	
Neuroprotective Role of THOP1 in		0.03			
Alzheimer's Disease	2.38	57	2	GZMA,GZMB,MMP9,PRSS23	
		0.02			
Type I Diabetes Mellitus Signaling	3.38	63	2	FASLG,GZMB,HLA-DQA1,PRF1,SOCS3,TRDV3,TRGC2,TRGV9	
Systemic Lupus Erythematosus In T Cell		0.01			
Signaling Pathway	2.01	72	2.236	FASLG,HLA-DQA1,RHOBTB1,TRDV3,TRGC2,TRGV9,YES1	
		0.01		ADGRG1,AVPR1A,F2R,IL2RB,MMP9,P2RY12,PTGDR,S1PR5,SOCS3,TGFB	
FAK Signaling	2.97	57	3.051	R3,TRDV3,TRGC2,TRGV9	

Table S3: Correlation analysis of eight biomarkers and 22 immune cell gene sets;

gene	immune_cells	cor	p.value
ADM	B cells naive	-0.049321894	0.728417923
ADM	B cells memory	-0.238126097	0.089138592
ADM	Plasma cells	0.183799497	0.192123802
ADM	T cells CD8	0.066196731	0.64102979
ADM	T cells CD4 naive	-0.361902404	0.008381648
ADM	T cells CD4 memory resting	-0.032719156	0.817884076
ADM	T cells CD4 memory activated	-0.117068513	0.408509711
ADM	T cells follicular helper	-0.154870294	0.272961488
ADM	T cells regulatory (Tregs)	0.232753734	0.096813305
ADM	T cells gamma delta	-0.256121607	0.066843523
ADM	NK cells resting	-0.043827882	0.757692136
ADM	NK cells activated	-0.010206885	0.942748731

ADM	Monocytes	0.21819547	0.120191259
ADM	Macrophages M0	0.630869231	5.35E-07
ADM	Macrophages M1	0.112641289	0.426580046
ADM	Macrophages M2	-0.340668509	0.01346255
ADM	Dendritic cells resting	0.009284594	0.947914453
ADM	Dendritic cells activated	0.096814232	0.494750373
ADM	Mast cells resting	-0.098299468	0.488122516
ADM	Mast cells activated	0.222828149	0.112328969
ADM	Eosinophils	0.116138035	0.412270439
ADM	Neutrophils	0.674166053	4.28E-08
CBLB	B cells naive	0.130404907	0.356817164
CBLB	B cells memory	0.173322576	0.219150636
CBLB	Plasma cells	-0.036645149	0.796472647

CBLB	T cells CD8	0.04440937	0.754576934
CBLB	T cells CD4 naive	0.184392556	0.190668426
CBLB	T cells CD4 memory resting	0.101190105	0.475357404
CBLB	T cells CD4 memory activated	0.274234924	0.049141624
CBLB	T cells follicular helper	-0.089839401	0.526488449
CBLB	T cells regulatory (Tregs)	-0.098551787	0.487001177
CBLB	T cells gamma delta	0.413345735	0.002321445
CBLB	NK cells resting	-0.096113332	0.497894258
CBLB	NK cells activated	0.193331578	0.169677935
CBLB	Monocytes	-0.533877705	4.58E-05
CBLB	Macrophages M0	-0.39138224	0.004116276
CBLB	Macrophages M1	0.070726989	0.618310506
CBLB	Macrophages M2	0.110985204	0.433453935

CBLB	Dendritic cells resting	-0.206886635	0.141132061
CBLB	Dendritic cells activated	0.089128466	0.529779128
CBLB	Mast cells resting	0.19050012	0.176136289
CBLB	Mast cells activated	-0.199901968	0.155357825
CBLB	Eosinophils	-0.061050669	0.667237677
CBLB	Neutrophils	-0.388746583	0.004398015
FASLG	B cells naive	-0.128429056	0.364212458
FASLG	B cells memory	0.010722255	0.939863163
FASLG	Plasma cells	0.184765975	0.189756097
FASLG	T cells CD8	0.313820733	0.023478973
FASLG	T cells CD4 naive	-0.207649654	0.139638887
FASLG	T cells CD4 memory resting	0.028530749	0.840872424
FASLG	T cells CD4 memory activated	0.293758762	0.034539915

FASLG	T cells follicular helper	-0.034023103	0.810757213
FASLG	T cells regulatory (Tregs)	-0.268895134	0.053909817
FASLG	T cells gamma delta	-0.090858881	0.521787345
FASLG	NK cells resting	0.463444867	0.000540121
FASLG	NK cells activated	0.228048735	0.103946962
FASLG	Monocytes	-0.38951463	0.004314216
FASLG	Macrophages M0	-0.332139041	0.01614617
FASLG	Macrophages M1	0.149980208	0.288576808
FASLG	Macrophages M2	0.292840525	0.035135081
FASLG	Dendritic cells resting	-0.083246634	0.557386936
FASLG	Dendritic cells activated	-0.039118208	0.783059982
FASLG	Mast cells resting	-0.099043484	0.484819893
FASLG	Mast cells activated	0.017575875	0.901576596

FASLG	Eosinophils	-0.115531549	0.414732363
FASLG	Neutrophils	-0.058329495	0.681259418
MMP9	B cells naive	0.115479858	0.414942582
MMP9	B cells memory	-0.428667103	0.001521187
MMP9	Plasma cells	0.016812285	0.905832889
MMP9	T cells CD8	-0.105001161	0.458802908
MMP9	T cells CD4 naive	-0.201755282	0.151484283
MMP9	T cells CD4 memory resting	-0.212904143	0.129674682
MMP9	T cells CD4 memory activated	-0.159847682	0.257653599
MMP9	T cells follicular helper	-0.065563857	0.644230409
MMP9	T cells regulatory (Tregs)	0.166252606	0.238820308
MMP9	T cells gamma delta	-0.230352007	0.100405793
MMP9	NK cells resting	-0.0113876	0.936139024

MMP9	NK cells activated	-0.013802374	0.922634735
MMP9	Monocytes	0.216653763	0.122898311
MMP9	Macrophages M0	0.781479023	8.11E-12
MMP9	Macrophages M1	0.004245696	0.976169125
MMP9	Macrophages M2	-0.105888733	0.454992975
MMP9	Dendritic cells resting	-0.03796098	0.789328698
MMP9	Dendritic cells activated	0.062847803	0.658038389
MMP9	Mast cells resting	0.013975618	0.921666681
MMP9	Mast cells activated	0.172590554	0.221133185
MMP9	Eosinophils	0.237930218	0.089409803
MMP9	Neutrophils	0.658416375	1.13E-07
NRG1	B cells naive	0.020170131	0.887137248
NRG1	B cells memory	-0.107858178	0.446601095

NRG1	Plasma cells	-0.05041124	0.722657325
NRG1	T cells CD8	-0.152182092	0.281474827
NRG1	T cells CD4 naive	-0.028602113	0.84047958
NRG1	T cells CD4 memory resting	0.148896026	0.292116391
NRG1	T cells CD4 memory activated	0.162453698	0.249873716
NRG1	T cells follicular helper	-0.088619899	0.532139319
NRG1	T cells regulatory (Tregs)	0.021769395	0.878253684
NRG1	T cells gamma delta	-0.061064348	0.667167471
NRG1	NK cells resting	-0.32882434	0.017305642
NRG1	NK cells activated	-0.277174977	0.046666427
NRG1	Monocytes	0.408494462	0.002643221
NRG1	Macrophages M0	0.172689189	0.220865324
NRG1	Macrophages M1	0.085093337	0.548646304

NRG1	Macrophages M2	-0.238370282	0.088801396
NRG1	Dendritic cells resting	0.226788183	0.105925317
NRG1	Dendritic cells activated	-0.078398771	0.580639972
NRG1	Mast cells resting	0.184499632	0.190406501
NRG1	Mast cells activated	0.16783478	0.234316989
NRG1	Eosinophils	0.034432202	0.808524344
NRG1	Neutrophils	-0.066192932	0.64104898
PI3	B cells naive	0.065234982	0.645896154
PI3	B cells memory	-0.222587952	0.112726698
PI3	Plasma cells	0.088862253	0.531013943
PI3	T cells CD8	-0.063742048	0.653479402
PI3	T cells CD4 naive	-0.121006705	0.392813489
PI3	T cells CD4 memory resting	0.093498634	0.509712798

PI3	T cells CD4 memory activated	0.127515063	0.367664577
PI3	T cells follicular helper	-0.010548428	0.94083634
PI3	T cells regulatory (Tregs)	0.180680501	0.199908288
PI3	T cells gamma delta	-0.122900006	0.385395437
PI3	NK cells resting	-0.279774635	0.044563441
PI3	NK cells activated	0.019641073	0.890079137
PI3	Monocytes	0.211255769	0.132741123
PI3	Macrophages M0	0.405686189	0.002847024
PI3	Macrophages M1	0.0234207	0.869096623
PI3	Macrophages M2	-0.438520708	0.001146949
PI3	Dendritic cells resting	0.02908414	0.83782711
PI3	Dendritic cells activated	0.106965117	0.450395831
PI3	Mast cells resting	0.143501794	0.310145912

PI3	Mast cells activated	-0.01678489	0.905985638
PI3	Eosinophils	0.153154967	0.27837386
PI3	Neutrophils	0.284638912	0.040836807
RORA	B cells naive	0.069896071	0.622451984
RORA	B cells memory	0.202770131	0.149393646
RORA	Plasma cells	-0.011558468	0.935182836
RORA	T cells CD8	0.18820816	0.181492785
RORA	T cells CD4 naive	0.094201301	0.506522787
RORA	T cells CD4 memory resting	0.080217444	0.571865104
RORA	T cells CD4 memory activated	0.331636721	0.016317504
RORA	T cells follicular helper	-0.062876567	0.657891555
RORA	T cells regulatory (Tregs)	-0.055731986	0.694744371
RORA	T cells gamma delta	0.278104031	0.045905764

RORA	NK cells resting	-0.025506414	0.857555047
RORA	NK cells activated	0.259842439	0.062843561
RORA	Monocytes	-0.544039134	3.06E-05
RORA	Macrophages M0	-0.447915766	0.000869273
RORA	Macrophages M1	-0.039516048	0.780908004
RORA	Macrophages M2	0.0697815	0.62302394
RORA	Dendritic cells resting	-0.137463096	0.331156355
RORA	Dendritic cells activated	0.081424038	0.56607739
RORA	Mast cells resting	0.160487834	0.255727596
RORA	Mast cells activated	-0.144226994	0.30768145
RORA	Eosinophils	-0.008557745	0.951987019
RORA	Neutrophils	-0.329182656	0.017176985
SH2D1B	B cells naive	-0.150810925	0.285883771

SH2D1B	B cells memory	0.14864115	0.292952584
SH2D1B	Plasma cells	0.086736676	0.540923815
SH2D1B	T cells CD8	0.071978079	0.612096956
SH2D1B	T cells CD4 naive	-0.197887495	0.159650362
SH2D1B	T cells CD4 memory resting	0.071126037	0.616325729
SH2D1B	T cells CD4 memory activated	0.046620515	0.74276687
SH2D1B	T cells follicular helper	0.004730784	0.973447277
SH2D1B	T cells regulatory (Tregs)	-0.178826235	0.204640713
SH2D1B	T cells gamma delta	-0.187447603	0.183295902
SH2D1B	NK cells resting	0.496166049	0.000183505
SH2D1B	NK cells activated	-0.027425525	0.846961356
SH2D1B	Monocytes	-0.228658928	0.102999587
SH2D1B	Macrophages M0	-0.205746461	0.143385433

SH2D1B	Macrophages M1	0.074103526	0.601602849
SH2D1B	Macrophages M2	0.172231973	0.222108872
SH2D1B	Dendritic cells resting	0.060879176	0.668118095
SH2D1B	Dendritic cells activated	-0.137677191	0.33039654
SH2D1B	Mast cells resting	-0.203830299	0.14723253
SH2D1B	Mast cells activated	0.10936135	0.440253937
SH2D1B	Eosinophils	-0.080161688	0.572133212
SH2D1B	Neutrophils	0.0112402	0.936963954

Table S4: List of 590 miRNA targets of the biomarkers obtained from miRDB database;

miRNA	Symbol
hsa-mir-379-3p	ADM
hsa-mir-380-3p	ADM

hsa-mir-411-3p	ADM
hsa-mir-1238-3p	ADM
hsa-mir-670-3p	ADM
hsa-mir-5697	ADM
hsa-mir-6780a-3p	ADM
hsa-mir-3924	ADM
hsa-mir-11401	ADM
hsa-mir-410-3p	ADM
hsa-mir-7111-3p	ADM
hsa-mir-302f	ADM
hsa-mir-4670-3p	ADM
hsa-mir-3121-3p	ADM
hsa-mir-4666a-3p	ADM

hsa-mir-4325	ADM
hsa-mir-6881-3p	ADM
hsa-mir-3978	ADM
hsa-mir-3675-3p	ADM
hsa-mir-6886-3p	ADM
hsa-mir-374c-5p	ADM
hsa-mir-655-3p	ADM
hsa-mir-4524a-3p	ADM
hsa-mir-4495	ADM
hsa-mir-3059-5p	ADM
hsa-mir-938	ADM
hsa-mir-365a-3p	ADM
hsa-mir-26b-5p	ADM

hsa-mir-26a-5p	ADM
hsa-mir-338-5p	ADM
hsa-mir-365b-3p	ADM
hsa-mir-1297	ADM
hsa-mir-4465	ADM
hsa-mir-4282	CBLB
hsa-mir-4701-5p	CBLB
hsa-mir-548f-5p	CBLB
hsa-mir-6894-5p	CBLB
hsa-mir-588	CBLB
hsa-mir-3678-3p	CBLB
hsa-mir-3646	CBLB
hsa-mir-6824-5p	CBLB

hsa-mir-557	CBLB
hsa-mir-3120-3p	CBLB
hsa-mir-302a-5p	CBLB
hsa-mir-548o-3p	CBLB
hsa-mir-1323	CBLB
hsa-mir-548aw	CBLB
hsa-mir-576-5p	CBLB
hsa-mir-548x-5p	CBLB
hsa-mir-3200-5p	CBLB
hsa-mir-548g-5p	CBLB
hsa-mir-548as-3p	CBLB
hsa-mir-3681-3p	CBLB
hsa-mir-9985	CBLB

hsa-mir-548aj-5p	CBLB
hsa-mir-3129-5p	CBLB
hsa-mir-181c-5p	CBLB
hsa-mir-181d-5p	CBLB
hsa-mir-4262	CBLB
hsa-mir-5093	CBLB
hsa-mir-181a-5p	CBLB
hsa-mir-181b-5p	CBLB
hsa-mir-4776-3p	CBLB
hsa-mir-199a-3p	CBLB
hsa-mir-507	CBLB
hsa-mir-199b-3p	CBLB
hsa-mir-621	CBLB

hsa-mir-4709-5p	CBLB
hsa-mir-875-3p	CBLB
hsa-mir-324-3p	CBLB
hsa-mir-590-3p	CBLB
hsa-mir-3910	CBLB
hsa-mir-8067	CBLB
hsa-mir-29a-5p	CBLB
hsa-mir-301a-3p	CBLB
hsa-mir-12124	CBLB
hsa-mir-301b-3p	CBLB
hsa-mir-3666	CBLB
hsa-mir-128-3p	CBLB
hsa-mir-4295	CBLB

hsa-mir-130a-3p	CBLB
hsa-mir-216a-3p	CBLB
hsa-mir-130b-3p	CBLB
hsa-mir-5680	CBLB
hsa-mir-589-3p	CBLB
hsa-mir-27a-3p	CBLB
hsa-mir-513a-5p	CBLB
hsa-mir-27b-3p	CBLB
hsa-mir-19a-3p	CBLB
hsa-mir-944	CBLB
hsa-mir-19b-3p	CBLB
hsa-mir-6761-5p	CBLB
hsa-mir-4680-5p	CBLB

hsa-mir-4533	CBLB
hsa-mir-6508-5p	CBLB
hsa-mir-607	CBLB
hsa-mir-340-5p	CBLB
hsa-mir-1299	CBLB
hsa-mir-454-3p	CBLB
hsa-mir-154-3p	CBLB
hsa-mir-10522-5p	CBLB
hsa-mir-487a-3p	CBLB
hsa-mir-4797-3p	CBLB
hsa-mir-1843	CBLB
hsa-mir-4322	CBLB
hsa-mir-4802-5p	CBLB

hsa-mir-4276	CBLB
hsa-mir-4265	CBLB
hsa-mir-6794-3p	CBLB
hsa-mir-7855-5p	CBLB
hsa-mir-6069	CBLB
hsa-mir-4296	CBLB
hsa-mir-8054	CBLB
hsa-mir-4422	CBLB
hsa-mir-1257	CBLB
hsa-mir-548k	CBLB
hsa-mir-548av-5p	CBLB
hsa-mir-450b-5p	CBLB
hsa-mir-30a-5p	CBLB

hsa-mir-30c-5p	CBLB
hsa-mir-30b-5p	CBLB
hsa-mir-30d-5p	CBLB
hsa-mir-30e-5p	CBLB
hsa-mir-449c-5p	CBLB
hsa-mir-34b-5p	CBLB
hsa-mir-3064-3p	CBLB
hsa-mir-3680-3p	CBLB
hsa-mir-2682-5p	CBLB
hsa-mir-6073	CBLB
hsa-mir-129-5p	CBLB
hsa-mir-6732-3p	CBLB
hsa-mir-3714	CBLB

hsa-mir-23a-3p	CBLB
hsa-mir-9983-3p	CBLB
hsa-mir-6128	CBLB
hsa-mir-23c	CBLB
hsa-mir-548p	CBLB
hsa-mir-23b-3p	CBLB
hsa-mir-548an	CBLB
hsa-mir-4775	CBLB
hsa-mir-3133	CBLB
hsa-mir-4773	CBLB
hsa-mir-148a-3p	CBLB
hsa-mir-152-3p	CBLB
hsa-mir-95-5p	CBLB

hsa-mir-148b-3p	CBLB
hsa-mir-3163	CBLB
hsa-mir-6887-3p	FASLG
hsa-mir-15b-3p	FASLG
hsa-mir-4691-5p	FASLG
hsa-mir-6792-3p	FASLG
hsa-mir-92a-3p	FASLG
hsa-mir-363-3p	FASLG
hsa-mir-6811-3p	FASLG
hsa-mir-25-3p	FASLG
hsa-mir-32-5p	FASLG
hsa-mir-92b-3p	FASLG
hsa-mir-367-3p	FASLG

hsa-mir-659-5p	FASLG
hsa-mir-4458	FASLG
hsa-let-7d-5p	FASLG
hsa-mir-4474-3p	FASLG
hsa-mir-4503	FASLG
hsa-mir-24-3p	FASLG
hsa-mir-586	FASLG
hsa-mir-4269	FASLG
hsa-mir-219a-1-3p	FASLG
hsa-mir-6715b-5p	FASLG
hsa-let-7f-5p	FASLG
hsa-mir-4500	FASLG
hsa-let-7b-5p	FASLG

hsa-let-7g-5p	FASLG
hsa-mir-98-5p	FASLG
hsa-let-7a-5p	FASLG
hsa-let-7i-5p	FASLG
hsa-mir-214-5p	FASLG
hsa-let-7e-5p	FASLG
hsa-let-7c-5p	FASLG
hsa-mir-12129	FASLG
hsa-mir-6740-3p	FASLG
hsa-mir-6514-3p	FASLG
hsa-mir-1258	FASLG
hsa-mir-4424	FASLG
hsa-mir-5579-3p	FASLG

hsa-mir-149-5p	FASLG
hsa-mir-6873-3p	FASLG
hsa-mir-7853-5p	FASLG
hsa-mir-105-5p	FASLG
hsa-mir-590-5p	FASLG
hsa-mir-21-5p	FASLG
hsa-mir-8485	FASLG
hsa-mir-6734-3p	MMP9
hsa-mir-548j-5p	NRG1
hsa-mir-548c-5p	NRG1
hsa-mir-361-3p	NRG1
hsa-mir-548b-5p	NRG1
hsa-mir-3202	NRG1

hsa-mir-548ad-5p	NRG1
hsa-mir-548d-5p	NRG1
hsa-mir-548h-5p	NRG1
hsa-mir-548a-5p	NRG1
hsa-mir-548i	NRG1
hsa-mir-548as-5p	NRG1
hsa-mir-548w	NRG1
hsa-mir-548ab	NRG1
hsa-mir-548ay-5p	NRG1
hsa-mir-548o-5p	NRG1
hsa-mir-3942-5p	NRG1
hsa-mir-548ap-5p	NRG1
hsa-mir-548ar-5p	NRG1

hsa-mir-548au-5p	NRG1
hsa-mir-548y	NRG1
hsa-mir-548ar-3p	NRG1
hsa-mir-548ae-5p	NRG1
hsa-mir-548am-5p	NRG1
hsa-mir-548aq-5p	NRG1
hsa-mir-548ak	NRG1
hsa-mir-548bb-5p	NRG1
hsa-mir-4427	NRG1
hsa-mir-4665-5p	NRG1
hsa-mir-4760-3p	NRG1
hsa-mir-186-5p	NRG1
hsa-mir-1275	NRG1

hsa-mir-5698	NRG1
hsa-mir-3671	NRG1
hsa-mir-7111-5p	NRG1
hsa-mir-569	NRG1
hsa-mir-3182	NRG1
hsa-mir-552-3p	NRG1
hsa-mir-323a-5p	NRG1
hsa-mir-329-5p	NRG1
hsa-mir-559	NRG1
hsa-mir-200c-3p	NRG1
hsa-mir-4310	NRG1
hsa-mir-429	NRG1
hsa-mir-3143	NRG1

hsa-mir-4697-5p	NRG1
hsa-mir-200b-3p	NRG1
hsa-mir-152-5p	NRG1
hsa-mir-6124	NRG1
hsa-mir-625-5p	NRG1
hsa-mir-942-3p	NRG1
hsa-mir-4448	NRG1
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hsa-mir-4999-5p	NRG1
hsa-mir-935	NRG1
hsa-mir-4723-5p	NRG1
hsa-mir-500a-3p	NRG1
hsa-mir-12123	NRG1

hsa-mir-1228-3p	NRG1
hsa-mir-7108-5p	NRG1
hsa-mir-6870-5p	NRG1
hsa-mir-3192-5p	NRG1
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hsa-mir-452-3p	NRG1
hsa-mir-4272	NRG1
hsa-mir-183-5p	NRG1
hsa-mir-4540	NRG1
hsa-mir-126-5p	NRG1
hsa-mir-936	NRG1

hsa-mir-568	NRG1
hsa-mir-4662a-3p	NRG1
hsa-mir-539-3p	NRG1
hsa-mir-4639-3p	NRG1
hsa-mir-485-3p	NRG1
hsa-mir-222-5p	NRG1
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hsa-mir-196a-1-3p	NRG1
hsa-mir-4778-3p	NRG1
hsa-mir-4504	NRG1
hsa-mir-5692a	NRG1
hsa-mir-4318	NRG1
hsa-mir-10527-5p	NRG1

hsa-mir-758-3p	NRG1
hsa-mir-4666b	NRG1
hsa-mir-6830-3p	NRG1
hsa-mir-4699-3p	NRG1
hsa-mir-5187-3p	NRG1
hsa-mir-4645-3p	NRG1
hsa-mir-3920	NRG1
hsa-mir-137-3p	NRG1
hsa-mir-6875-3p	NRG1
hsa-mir-3689b-3p	PI3
hsa-mir-3689c	PI3
hsa-mir-3689a-3p	PI3
hsa-mir-6780a-5p	PI3

hsa-mir-6779-5p	PI3
hsa-mir-1273h-5p	PI3
hsa-mir-30b-3p	PI3
hsa-mir-7106-5p	PI3
hsa-mir-1301-5p	RORA
hsa-mir-517-5p	RORA
hsa-mir-3611	RORA
hsa-mir-6502-5p	RORA
hsa-mir-1236-3p	RORA
hsa-mir-497-5p	RORA
hsa-mir-4796-3p	RORA
hsa-mir-135a-5p	RORA
hsa-mir-4433b-5p	RORA

hsa-mir-424-5p	RORA
hsa-mir-200a-5p	RORA
hsa-mir-4263	RORA
hsa-mir-520f-3p	RORA
hsa-mir-200b-5p	RORA
hsa-mir-3934-3p	RORA
hsa-mir-6510-5p	RORA
hsa-mir-1324	RORA
hsa-mir-3622b-3p	RORA
hsa-mir-3622a-3p	RORA
hsa-mir-6504-3p	RORA
hsa-mir-10399-5p	RORA
hsa-mir-6739-3p	RORA

hsa-mir-10524-5p	RORA
hsa-mir-4731-3p	RORA
hsa-mir-6508-3p	RORA
hsa-mir-29c-3p	RORA
hsa-mir-29a-3p	RORA
hsa-mir-3153	RORA
hsa-mir-6797-3p	RORA
hsa-mir-29b-3p	RORA
hsa-mir-323b-3p	RORA
hsa-mir-8063	RORA
hsa-mir-372-3p	RORA
hsa-mir-9718	RORA
hsa-mir-5011-3p	RORA

hsa-mir-520e-3p	RORA
hsa-mir-1250-3p	RORA
hsa-mir-8087	RORA
hsa-mir-6083	RORA
hsa-mir-628-5p	RORA
hsa-mir-4641	RORA
hsa-mir-520b-3p	RORA
hsa-mir-520c-3p	RORA
hsa-mir-302c-3p	RORA
hsa-mir-520d-3p	RORA
hsa-mir-6832-3p	RORA
hsa-mir-12132	RORA
hsa-mir-3688-5p	RORA

hsa-mir-6797-5p	RORA
hsa-mir-302a-3p	RORA
hsa-mir-520a-3p	RORA
hsa-mir-1249-5p	RORA
hsa-mir-302d-3p	RORA
hsa-mir-302b-3p	RORA
hsa-mir-6838-5p	RORA
hsa-mir-5007-3p	RORA
hsa-mir-329-3p	RORA
hsa-mir-502-3p	RORA
hsa-mir-6733-5p	RORA
hsa-mir-421	RORA
hsa-mir-501-3p	RORA

hsa-mir-362-3p	RORA
hsa-mir-15b-5p	RORA
hsa-mir-539-5p	RORA
hsa-mir-4786-3p	RORA
hsa-mir-16-5p	RORA
hsa-mir-4801	RORA
hsa-mir-8074	RORA
hsa-mir-4717-3p	RORA
hsa-mir-4677-5p	RORA
hsa-mir-15a-5p	RORA
hsa-mir-195-5p	RORA
hsa-mir-6739-5p	RORA
hsa-mir-7159-5p	RORA

hsa-mir-219a-2-3p	RORA
hsa-mir-1229-3p	RORA
hsa-let-7a-2-3p	RORA
hsa-mir-381-3p	RORA
hsa-mir-3150b-3p	RORA
hsa-mir-4784	RORA
hsa-mir-581	RORA
hsa-mir-4646-5p	RORA
hsa-let-7g-3p	RORA
hsa-mir-671-5p	RORA
hsa-mir-204-3p	RORA
hsa-mir-133a-5p	RORA
hsa-mir-300	RORA

hsa-mir-889-3p	RORA
hsa-mir-6806-5p	RORA
hsa-mir-130b-5p	RORA
hsa-mir-548at-5p	RORA
hsa-mir-4778-5p	RORA
hsa-mir-1281	RORA
hsa-mir-570-3p	RORA
hsa-mir-1178-3p	RORA
hsa-mir-3620-3p	RORA
hsa-mir-4753-3p	RORA
hsa-mir-208b-5p	RORA
hsa-mir-548ao-5p	RORA
hsa-mir-4491	RORA

hsa-mir-3185	RORA
hsa-mir-195-3p	RORA
hsa-mir-548g-3p	RORA
hsa-mir-4657	RORA
hsa-mir-3162-5p	RORA
hsa-mir-208a-5p	RORA
hsa-mir-548ax	RORA
hsa-mir-3147	RORA
hsa-mir-12116	RORA
hsa-mir-12125	RORA
hsa-mir-3149	RORA
hsa-mir-1284	RORA
hsa-mir-2116-5p	RORA

hsa-mir-3668	RORA
hsa-mir-3148	RORA
hsa-mir-16-2-3p	RORA
hsa-mir-33a-3p	RORA
hsa-let-7a-3p	RORA
hsa-mir-98-3p	RORA
hsa-mir-6079	RORA
hsa-mir-3158-3p	RORA
hsa-mir-708-5p	RORA
hsa-mir-4273	RORA
hsa-mir-6836-5p	RORA
hsa-mir-4277	RORA
hsa-mir-4789-3p	RORA

hsa-mir-28-5p	RORA
hsa-mir-107	RORA
hsa-mir-6132	RORA
hsa-mir-20a-3p	RORA
hsa-mir-103a-3p	RORA
hsa-mir-148a-5p	RORA
hsa-mir-494-3p	RORA
hsa-mir-6515-5p	RORA
hsa-let-7b-3p	RORA
hsa-mir-5694	RORA
hsa-mir-633	RORA
hsa-mir-12120	RORA
hsa-mir-513b-3p	RORA

hsa-mir-3973	RORA
hsa-mir-610	RORA
hsa-mir-7151-3p	RORA
hsa-mir-3085-5p	RORA
hsa-mir-302e	RORA
hsa-mir-603	RORA
hsa-mir-19b-2-5p	RORA
hsa-mir-7850-5p	RORA
hsa-mir-1290	RORA
hsa-mir-1276	RORA
hsa-mir-4777-5p	RORA
hsa-mir-2052	RORA
hsa-mir-6867-5p	RORA

hsa-mir-7156-5p	RORA
hsa-mir-19b-1-5p	RORA
hsa-mir-4711-5p	RORA
hsa-mir-19a-5p	RORA
hsa-let-7f-1-3p	RORA
hsa-mir-1207-3p	RORA
hsa-mir-3065-5p	RORA
hsa-mir-6499-3p	RORA
hsa-mir-302c-5p	RORA
hsa-mir-4676-3p	RORA
hsa-mir-6835-3p	RORA
hsa-mir-892c-3p	RORA
hsa-mir-3154	RORA

hsa-mir-1248	RORA
hsa-mir-320a-5p	RORA
hsa-mir-3139	RORA
hsa-mir-4311	RORA
hsa-mir-452-5p	RORA
hsa-mir-3128	RORA
hsa-mir-5693	RORA
hsa-mir-6833-5p	RORA
hsa-mir-4729	RORA
hsa-mir-548l	RORA
hsa-mir-1279	RORA
hsa-mir-5590-3p	RORA
hsa-mir-510-3p	RORA

hsa-mir-142-5p	RORA
hsa-mir-651-5p	RORA
hsa-mir-3662	RORA
hsa-mir-3944-5p	RORA
hsa-mir-3691-5p	RORA
hsa-mir-7157-5p	RORA
hsa-mir-6500-3p	RORA
hsa-mir-6784-3p	RORA
hsa-mir-6862-3p	RORA
hsa-mir-3168	RORA
hsa-mir-518a-5p	RORA
hsa-mir-527	RORA
hsa-mir-8084	RORA

hsa-mir-4644	RORA
hsa-mir-205-5p	RORA
hsa-mir-543	RORA
hsa-mir-561-3p	RORA
hsa-mir-4728-3p	RORA
hsa-mir-185-5p	RORA
hsa-mir-8078	RORA
hsa-mir-4668-5p	RORA
hsa-mir-147b-5p	RORA
hsa-mir-323a-3p	RORA
hsa-mir-6817-3p	RORA
hsa-mir-577	RORA
hsa-mir-506-5p	RORA

hsa-mir-4799-5p	RORA
hsa-mir-526b-3p	RORA
hsa-mir-576-3p	RORA
hsa-mir-4261	RORA
hsa-mir-548t-3p	RORA
hsa-mir-106b-5p	RORA
hsa-mir-144-3p	RORA
hsa-mir-548c-3p	RORA
hsa-mir-548aa	RORA
hsa-mir-520d-5p	RORA
hsa-mir-524-5p	RORA
hsa-let-7c-3p	RORA
hsa-mir-20b-5p	RORA

hsa-mir-106a-5p	RORA
hsa-mir-548ap-3p	RORA
hsa-mir-93-5p	RORA
hsa-mir-17-5p	RORA
hsa-mir-20a-5p	RORA
hsa-mir-7154-5p	RORA
hsa-mir-519d-3p	RORA
hsa-mir-651-3p	RORA
hsa-mir-5580-3p	RORA
hsa-mir-5584-3p	RORA
hsa-mir-3918	RORA
hsa-mir-6757-3p	RORA
hsa-mir-6856-5p	RORA

hsa-mir-32-3p	RORA
hsa-mir-7848-3p	RORA
hsa-mir-8056	RORA
hsa-mir-5586-3p	RORA
hsa-mir-4306	RORA
hsa-mir-5692c	RORA
hsa-mir-376c-5p	RORA
hsa-mir-10a-5p	RORA
hsa-mir-548d-3p	RORA
hsa-mir-7110-3p	RORA
hsa-mir-33b-5p	RORA
hsa-mir-33a-5p	RORA
hsa-mir-130a-5p	RORA

hsa-mir-656-3p	RORA
hsa-mir-10b-5p	RORA
hsa-mir-5692b	RORA
hsa-mir-548bb-3p	RORA
hsa-mir-3688-3p	RORA
hsa-mir-369-3p	RORA
hsa-mir-125a-5p	RORA
hsa-mir-376b-5p	RORA
hsa-mir-143-5p	RORA
hsa-mir-125b-5p	RORA
hsa-mir-548h-3p	RORA
hsa-mir-548ae-3p	RORA
hsa-mir-548aq-3p	RORA

hsa-mir-548ac	RORA
hsa-let-7f-2-3p	RORA
hsa-mir-548ah-3p	RORA
hsa-mir-3941	RORA
hsa-mir-548j-3p	RORA
hsa-mir-548am-3p	RORA
hsa-mir-4319	RORA
hsa-mir-2054	RORA
hsa-mir-1185-1-3p	RORA
hsa-mir-4694-3p	RORA
hsa-mir-12135	RORA
hsa-mir-6758-5p	RORA
hsa-mir-1185-2-3p	RORA

hsa-mir-12136	RORA
hsa-mir-374b-5p	RORA
hsa-mir-548z	RORA
hsa-mir-1277-5p	RORA
hsa-mir-335-3p	RORA
hsa-mir-18b-5p	RORA
hsa-mir-374a-5p	RORA
hsa-mir-4752	RORA
hsa-mir-8068	RORA
hsa-mir-4698	RORA
hsa-mir-548x-3p	RORA
hsa-mir-18a-5p	RORA
hsa-mir-101-3p	RORA

hsa-mir-4735-3p	RORA
hsa-mir-548aj-3p	RORA
hsa-mir-3613-3p	RORA
hsa-mir-4795-3p	RORA
hsa-mir-5011-5p	RORA
hsa-mir-190a-3p	RORA
hsa-mir-548e-5p	RORA
hsa-mir-548m	RORA
hsa-mir-1252-3p	SH2D1B
hsa-mir-3529-3p	SH2D1B
hsa-mir-6845-3p	SH2D1B
hsa-mir-203a-3p	SH2D1B
hsa-mir-4803	SH2D1B

hsa-mir-12117	SH2D1B
hsa-mir-628-3p	SH2D1B
hsa-mir-4425	SH2D1B

Table S5: List of the Top-5 miRNA targets of the biomarkers;

miRNA	Symbol
hsa-miR-26a-5p	ADM
hsa-miR-338-5p	ADM
hsa-miR-365b-3p	ADM
hsa-miR-1297	ADM
hsa-miR-4465	ADM
hsa-miR-1297	CBLB

hsa-miR-30e-5p	CBLB
hsa-miR-148a-3p	CBLB
hsa-miR-152-3p	CBLB
hsa-miR-95-5p	CBLB
hsa-miR-148b-3p	CBLB
hsa-miR-3163	CBLB
hsa-miR-7853-5p	FASLG
hsa-miR-105-5p	FASLG
hsa-miR-590-5p	FASLG
hsa-miR-21-5p	FASLG
hsa-miR-8485	FASLG
hsa-miR-6734-3p	MMP9
hsa-miR-548ak	NRG1

hsa-miR-548bb-5p	NRG1
hsa-miR-95-5p	NRG1
hsa-miR-4645-3p	NRG1
hsa-miR-3920	NRG1
hsa-miR-137-3p	NRG1
hsa-miR-6875-3p	NRG1
hsa-miR-3163	NRG1
hsa-miR-6780a-5p	PI3
hsa-miR-6779-5p	PI3
hsa-miR-1273h-5p	PI3
hsa-miR-30b-3p	PI3
hsa-miR-7106-5p	PI3
hsa-miR-33a-3p	RORA

hsa-miR-2052	RORA
hsa-miR-95-5p	RORA
hsa-miR-3163	RORA
hsa-miR-548c-3p	RORA
hsa-miR-338-5p	RORA
hsa-miR-137-3p	RORA
hsa-miR-8485	RORA
hsa-miR-548e-5p	RORA
hsa-miR-30e-5p	RORA
hsa-miR-548m	RORA
hsa-miR-548ak	RORA
hsa-miR-548bb-5p	RORA
hsa-miR-3163	SH2D1B

hsa-miR-628-3p	SH2D1B
hsa-miR-33a-3p	SH2D1B
hsa-miR-548c-3p	SH2D1B
hsa-miR-4425	SH2D1B
hsa-miR-2052	SH2D1B

Table S6: List of the potential therapeutic drugs against the biomarkers obtained from the Drug–Gene Interaction Database.

gene	Drug	Interaction Type & Directionality	Sources	PMIDs	Query Score	Interaction Score
ADM	ALTEPLASE	n/a	NCI	10848972	0.91	0.93
ADM	PAROXETINE	n/a	PharmGKB	19636336	0.36	0.74
ADM	INDOMETHACIN	n/a	NCI	10830296	0.25	0.5
ADM	INSULIN	n/a	NCI	12668590	0.17	0.35

CBL B	FLUOROURACIL	n/a	JAX-CKB	24351824	0.08	0.59
MMP 9	BEVACIZUMAB	n/a	CIViC	26921265	0.28	0.33
NRG 1	AFATINIB	n/a	CIViC	31068372 28950338 29802158 29169524 28502724	2.58	1.55
NRG 1	PERTUZUMAB	n/a	CIViC	29802158	1.08	0.64
NRG 1	ALTEPLASE	n/a	NCI	11679632	0.91	0.27
NRG 1	BUPIVACAINE	n/a	NCI	17294200	0.86	0.52
NRG	LAPATINIB	n/a	CIViC	25691057 21840482	0.48	0.29

1							
NRG	PROGESTERON	n/a	NCI	12529413 10597237	0.39	0.12	
1	E						
NRG	ISOPROTEREN	n/a	NCI	14732742	0.31	0.18	
1	OL						
NRG	CETUXIMAB	n/a	CIViC	21900593	0.3	0.18	
1			PharmGKB				
NRG	PANITUMUMAB	n/a	PharmGKB	None found	0.2	0.12	
1							
NRG	COLCHICINE	n/a	NCI	7666195	0.19	0.11	
1							
NRG	NICOTINE	n/a	NCI	18784291	0.18	0.11	
1							

NRG							
1	ERLOTINIB	n/a	CIViC	29802158	0.18	0.11	
NRG							
1	VINCRIStINE	n/a	NCI	17999741	0.15	0.09	
NRG							
1	TAMOXIFEN	n/a	NCI	18283314	0.15	0.09	
NRG							
1	ASPIRIN	n/a	NCI	10921413	0.12	0.07	
NRG							
1	CARBOPLATIN	n/a	CIViC	23390248	0.11	0.07	
NRG							
1	GEMCITABINE	n/a	CIViC	23390248	0.11	0.06	
NRG							
1	DEXAMETHASO	n/a	NCI	7599067	0.1	0.06	

1	NE						
NRG							
1	PACLITAXEL	n/a	CIViC	23390248	0.09	0.05	
NRG							
1	CISPLATIN	n/a	CIViC	23390248	0.06	0.04	
PI3	PROGESTERON	n/a	NCI	14521952	0.26	1.85	
	E						
ROR							
A	MELATONIN	n/a	NCI	8702678 12595746	0.5	2.38	
ROR							
A	CITALOPRAM	n/a	PharmGKB	19846067	0.26	1.25	