

**Supplementary Table 4b: Calculations of Drug score**

Drug	Gene	Category	GeneDegree	Drugs	Transporter	Enzyme	Target	Transporter	Enzyme	Target	Score
Apremilast	ABCB1	Transporter	25	Acalabrutinib	2	1	0	50	10	0	35
Azithromycin	ABCB1	Transporter	25	Acetylcysteine	2	0	1	14	0	2	9
Baricitinib	ABCB1	Transporter	25	Apremilast	1	3	0	25	52	0	42
Chloroquine	ABCB1	Transporter	25	Azithromycin	2	1	0	29	32	0	47
Colchicine	ABCB1	Transporter	25	Baricitinib	6	1	4	54	32	10	44
Dapagliflozin	ABCB1	Transporter	25	Bevacizumab	0	0	4	0	0	8	2
Darunavir	ABCB1	Transporter	25	Chlorhexidine	1	0	0	18	0	0	18
Dexamethasone	ABCB1	Transporter	25	Chloroquine	2	5	2	43	73	4	38
Elbasvir	ABCB1	Transporter	25	Colchicine	2	4	0	43	62	0	37
Favipiravir	ABCB1	Transporter	25	Dapagliflozin	1	9	0	25	95	0	36
Fingolimod	ABCB1	Transporter	25	Darunavir	4	2	0	56	44	0	36
Fluoxetine	ABCB1	Transporter	25	Deferoxamine	0	1	0	0	2	0	2
Fluvoxamine	ABCB1	Transporter	25	Dexamethasone	6	10	3	65	104	7	24
Hydroxychloroquine	ABCB1	Transporter	25	Disulfiram	0	3	1	0	49	2	18
Ibuprofen	ABCB1	Transporter	25	Elbasvir	1	3	0	25	47	0	41
Lopinavir	ABCB1	Transporter	25	Enoxaparin	0	0	2	0	0	4	2
Losartan	ABCB1	Transporter	25	Famotidine	4	1	0	19	14	0	19
Methylprednisolone	ABCB1	Transporter	25	Favipiravir	4	3	0	56	22	0	21

Naproxen	ABCB1	Transporter	25
Prazosin	ABCB1	Transporter	25
Progesterone	ABCB1	Transporter	25
Remdesivir	ABCB1	Transporter	25
Ritonavir	ABCB1	Transporter	25
Sirolimus	ABCB1	Transporter	25
Telmisartan	ABCB1	Transporter	25
Fingolimod	ABCC1	Transporter	4
Ibuprofen	ABCC1	Transporter	4
Progesterone	ABCC1	Transporter	4
Ritonavir	ABCC1	Transporter	4
Azithromycin	ABCC2	Transporter	4
Dexamethasone	ABCC2	Transporter	4
Ritonavir	ABCC2	Transporter	4
Telmisartan	ABCC2	Transporter	4
Ibuprofen	ABCC4	Transporter	2
Remdesivir	ABCC4	Transporter	2
Baricitinib	ABCG2	Transporter	7
Dexamethasone	ABCG2	Transporter	7

Fingolimod	2	1	0	29	7	0	22
Fluoxetine	3	7	5	49	104	11	33
Fluvoxamine	1	7	2	25	100	5	42
Heparin	0	0	3	0	0	6	2
Human interferon beta	1	1	1	18	14	2	34
Hydroxychloroquine	3	3	2	48	57	4	37
Ibuprofen	8	8	3	69	86	7	22
Interferon alfa-2b, recombinant	0	1	1	0	14	2	16
Isotretinoin	1	1	0	18	32	0	50
Ketamine	0	5	6	0	72	15	17
Leflunomide	1	2	1	7	28	2	23
Lopinavir	5	6	0	61	94	0	28
Losartan	3	7	1	50	82	2	30
Metenkefalin	0	0	2	0	0	6	3
Methylprednisolone	2	7	2	43	89	5	37
Naltrexone	0	1	3	0	2	9	5
Naproxen	5	6	2	61	54	5	24
Nicotine	3	10	4	10	126	8	18
Nitric Oxide	0	4	0	0	58	0	15

Leflunomide	ABCG2	Transporter	7
Prazosin	ABCG2	Transporter	7
Progesterone	ABCG2	Transporter	7
Ritonavir	ABCG2	Transporter	7
Telmisartan	ABCG2	Transporter	7
Chloroquine	ACE2	Target	2
Hydroxychloroquine	ACE2	Target	2
Losartan	AGTR1	Target	2
Telmisartan	AGTR1	Target	2
Acalabrutinib	ALB	Transporter	18
Chlorhexidine	ALB	Transporter	18
Chloroquine	ALB	Transporter	18
Colchicine	ALB	Transporter	18
Darunavir	ALB	Transporter	18
Dexamethasone	ALB	Transporter	18
Favipiravir	ALB	Transporter	18
Fluoxetine	ALB	Transporter	18
Human interferon beta	ALB	Transporter	18
Hydroxychloroquine	ALB	Transporter	18
Ibuprofen	ALB	Transporter	18

Prazosin	5	0	1	44	0	3	12
Progesterone	9	10	4	60	102	15	21
Ramipril	1	1	0	2	2	0	4
Remdesivir	5	3	0	41	57	0	27
Ritonavir	10	9	1	83	122	2	24
Ruxolitinib	0	1	2	0	32	6	35
Sarilumab	0	1	5	0	32	10	34
Siltuximab	0	1	0	0	32	0	32
Sirolimus	3	3	1	34	47	2	29
Telmisartan	3	2	2	36	16	4	22
Tocilizumab	0	1	1	0	32	2	34
Tofacitinib	1	2	3	18	44	8	43
Tranexamic Acid	1	0	0	2	0	0	2
Umifenovir	0	8	0	0	98	0	12

Isotretinoin	ALB	Transporter	18
Lopinavir	ALB	Transporter	18
Losartan	ALB	Transporter	18
Methylprednisolone	ALB	Transporter	18
Naproxen	ALB	Transporter	18
Ritonavir	ALB	Transporter	18
Tofacitinib	ALB	Transporter	18
Disulfiram	ALDH2	Target	2
Nitric Oxide	ALDH2	Enzyme	2
Dexamethasone	ANXA1	Target	2
Methylprednisolone	ANXA1	Target	2
Ketamine	BCHE	Target	2
Ramipril	BCHE	Enzyme	2
Fluoxetine	CHRNA2	Target	2
Nicotine	CHRNA2	Target	2
Fluoxetine	CHRNA3	Target	2
Nicotine	CHRNA3	Target	2
Ketamine	CHRNA7	Target	2
Nicotine	CHRNA7	Target	2
Fluoxetine	CHRN4	Target	2
Nicotine	CHRN4	Target	2
Dexamethasone	CYP17A1	Enzyme	3
Progesterone	CYP17A1	Enzyme	3
Progesterone	CYP17A1	Target	3
Chloroquine	CYP1A1	Enzyme	6
Dapagliflozin	CYP1A1	Enzyme	6
Dexamethasone	CYP1A1	Enzyme	6
Fluvoxamine	CYP1A1	Enzyme	6
Nicotine	CYP1A1	Enzyme	6
Progesterone	CYP1A1	Enzyme	6

Apremilast	CYP1A2	Enzyme	14
Dapagliflozin	CYP1A2	Enzyme	14
Famotidine	CYP1A2	Enzyme	14
Fluoxetine	CYP1A2	Enzyme	14
Fluvoxamine	CYP1A2	Enzyme	14
Human interferon beta	CYP1A2	Enzyme	14
Interferon alfa-2b, recombinant	CYP1A2	Enzyme	14
Leflunomide	CYP1A2	Enzyme	14
Lopinavir	CYP1A2	Enzyme	14
Naproxen	CYP1A2	Enzyme	14
Nicotine	CYP1A2	Enzyme	14
Nitric Oxide	CYP1A2	Enzyme	14
Ritonavir	CYP1A2	Enzyme	14
Umifenovir	CYP1A2	Enzyme	14
Methylprednisolone	CYP1B1	Enzyme	2
Progesterone	CYP1B1	Enzyme	2
Apremilast	CYP2A6	Enzyme	6
Dapagliflozin	CYP2A6	Enzyme	6
Dexamethasone	CYP2A6	Enzyme	6
Methylprednisolone	CYP2A6	Enzyme	6
Nicotine	CYP2A6	Enzyme	6
Progesterone	CYP2A6	Enzyme	6
Colchicine	CYP2B6	Enzyme	10
Dexamethasone	CYP2B6	Enzyme	10
Fluoxetine	CYP2B6	Enzyme	10
Fluvoxamine	CYP2B6	Enzyme	10
Ketamine	CYP2B6	Enzyme	10
Lopinavir	CYP2B6	Enzyme	10
Methylprednisolone	CYP2B6	Enzyme	10
Nicotine	CYP2B6	Enzyme	10
Nitric Oxide	CYP2B6	Enzyme	10
Ritonavir	CYP2B6	Enzyme	10
Dexamethasone	CYP2C19	Enzyme	12

Fluoxetine	CYP2C19	Enzyme	12
Fluvoxamine	CYP2C19	Enzyme	12
Ibuprofen	CYP2C19	Enzyme	12
Lopinavir	CYP2C19	Enzyme	12
Losartan	CYP2C19	Enzyme	12
Methylprednisolone	CYP2C19	Enzyme	12
Nicotine	CYP2C19	Enzyme	12
Progesterone	CYP2C19	Enzyme	12
Ritonavir	CYP2C19	Enzyme	12
Telmisartan	CYP2C19	Enzyme	12
Tofacitinib	CYP2C19	Enzyme	12
Chloroquine	CYP2C8	Enzyme	13
Colchicine	CYP2C8	Enzyme	13
Dexamethasone	CYP2C8	Enzyme	13
Favipiravir	CYP2C8	Enzyme	13
Hydroxychloroquine	CYP2C8	Enzyme	13
Ibuprofen	CYP2C8	Enzyme	13
Ketamine	CYP2C8	Enzyme	13
Losartan	CYP2C8	Enzyme	13
Methylprednisolone	CYP2C8	Enzyme	13
Naproxen	CYP2C8	Enzyme	13
Nicotine	CYP2C8	Enzyme	13
Remdesivir	CYP2C8	Enzyme	13
Ritonavir	CYP2C8	Enzyme	13
Dapagliflozin	CYP2C9	Enzyme	14
Fluoxetine	CYP2C9	Enzyme	14
Fluvoxamine	CYP2C9	Enzyme	14
Ibuprofen	CYP2C9	Enzyme	14
Ketamine	CYP2C9	Enzyme	14
Leflunomide	CYP2C9	Enzyme	14
Lopinavir	CYP2C9	Enzyme	14
Losartan	CYP2C9	Enzyme	14
Methylprednisolone	CYP2C9	Enzyme	14
Naproxen	CYP2C9	Enzyme	14

Nicotine	CYP2C9	Enzyme	14
Progesterone	CYP2C9	Enzyme	14
Ritonavir	CYP2C9	Enzyme	14
Umifenovir	CYP2C9	Enzyme	14
Chloroquine	CYP2D6	Enzyme	12
Dapagliflozin	CYP2D6	Enzyme	12
Darunavir	CYP2D6	Enzyme	12
Fluoxetine	CYP2D6	Enzyme	12
Fluvoxamine	CYP2D6	Enzyme	12
Hydroxychloroquine	CYP2D6	Enzyme	12
Lopinavir	CYP2D6	Enzyme	12
Nicotine	CYP2D6	Enzyme	12
Progesterone	CYP2D6	Enzyme	12
Remdesivir	CYP2D6	Enzyme	12
Ritonavir	CYP2D6	Enzyme	12
Umifenovir	CYP2D6	Enzyme	12
Colchicine	CYP2E1	Enzyme	7
Dexamethasone	CYP2E1	Enzyme	7
Disulfiram	CYP2E1	Enzyme	7
Favipiravir	CYP2E1	Enzyme	7
Fingolimod	CYP2E1	Enzyme	7
Nicotine	CYP2E1	Enzyme	7
Umifenovir	CYP2E1	Enzyme	7
Acalabrutinib	CYP3A4	Transporter	32
Apremilast	CYP3A4	Enzyme	32
Azithromycin	CYP3A4	Enzyme	32
Baricitinib	CYP3A4	Enzyme	32
Chloroquine	CYP3A4	Enzyme	32
Colchicine	CYP3A4	Enzyme	32
Dapagliflozin	CYP3A4	Enzyme	32
Darunavir	CYP3A4	Enzyme	32
Dexamethasone	CYP3A4	Enzyme	32
Disulfiram	CYP3A4	Enzyme	32
Elbasvir	CYP3A4	Enzyme	32
Fluoxetine	CYP3A4	Enzyme	32
Fluvoxamine	CYP3A4	Enzyme	32

Hydroxychloroquine	CYP3A4	Enzyme	32
Ibuprofen	CYP3A4	Enzyme	32
Isotretinoin	CYP3A4	Enzyme	32
Ketamine	CYP3A4	Enzyme	32
Lopinavir	CYP3A4	Enzyme	32
Losartan	CYP3A4	Enzyme	32
Methylprednisolone	CYP3A4	Enzyme	32
Nicotine	CYP3A4	Enzyme	32
Nitric Oxide	CYP3A4	Enzyme	32
Progesterone	CYP3A4	Enzyme	32
Remdesivir	CYP3A4	Enzyme	32
Ritonavir	CYP3A4	Enzyme	32
Ruxolitinib	CYP3A4	Enzyme	32
Sarilumab	CYP3A4	Enzyme	32
Siltuximab	CYP3A4	Enzyme	32
Sirolimus	CYP3A4	Enzyme	32
Tocilizumab	CYP3A4	Enzyme	32
Tofacitinib	CYP3A4	Enzyme	32
Umifenovir	CYP3A4	Enzyme	32
Acalabrutinib	CYP3A5	Enzyme	10
Chloroquine	CYP3A5	Enzyme	10
Dexamethasone	CYP3A5	Enzyme	10
Disulfiram	CYP3A5	Enzyme	10
Elbasvir	CYP3A5	Enzyme	10
Fluoxetine	CYP3A5	Enzyme	10
Progesterone	CYP3A5	Enzyme	10
Ritonavir	CYP3A5	Enzyme	10
Sirolimus	CYP3A5	Enzyme	10
Umifenovir	CYP3A5	Enzyme	10
Dexamethasone	CYP3A7	Enzyme	5
Elbasvir	CYP3A7	Enzyme	5
Progesterone	CYP3A7	Enzyme	5
Ritonavir	CYP3A7	Enzyme	5
Sirolimus	CYP3A7	Enzyme	5
Enoxaparin	F10	Target	2
Heparin	F10	Target	2



Bevacizumab	FCGR1A	Target	2
Sarilumab	FCGR1A	Target	2
Bevacizumab	FCGR2A	Target	2
Sarilumab	FCGR2A	Target	2
Bevacizumab	FCGR2B	Target	2
Sarilumab	FCGR2B	Target	2
Bevacizumab	FCGR3A	Target	2
Sarilumab	FCGR3A	Target	2
Heparin	FGF2	Target	2
Sirolimus	FGF2	Target	2
Acetylcysteine	GRIN3A	Target	2
Ketamine	GRIN3A	Target	2
Human interferon beta	IFNAR1	Target	2
Interferon alfa-2b, recombinant	IFNAR1	Target	2
Sarilumab	IL6R	Target	2
Tocilizumab	IL6R	Target	2
Baricitinib	JAK1	Target	3
Ruxolitinib	JAK1	Target	3
Tofacitinib	JAK1	Target	3
Baricitinib	JAK2	Target	3
Ruxolitinib	JAK2	Target	3
Tofacitinib	JAK2	Target	3
Baricitinib	JAK3	Target	2
Tofacitinib	JAK3	Target	2
Fluoxetine	KCNH2	Target	3
Fluvoxamine	KCNH2	Target	3
Prazosin	KCNH2	Target	3
Dexamethasone	NR1I2	Target	2
Ritonavir	NR1I2	Target	2
Dexamethasone	NR3C1	Target	3
Methylprednisolone	NR3C1	Target	3
Progesterone	NR3C1	Target	3
Ketamine	OPRD1	Target	3
Metenkefalin	OPRD1	Target	3
Naltrexone	OPRD1	Target	3

Ketamine	OPRK1	Target	3
Naltrexone	OPRK1	Target	3
Progesterone	OPRK1	Target	3
Ketamine	OPRM1	Target	3
Metenkefalin	OPRM1	Target	3
Naltrexone	OPRM1	Target	3
Darunavir	ORM1	Transporter	6
Fluoxetine	ORM1	Transporter	6
Lopinavir	ORM1	Transporter	6
Prazosin	ORM1	Transporter	6
Progesterone	ORM1	Target	6
Ritonavir	ORM1	Transporter	6
Ibuprofen	PPARG	Target	2
Telmisartan	PPARG	Target	2
Ibuprofen	PTGS1	Target	3
Ketamine	PTGS1	Enzyme	3
Naproxen	PTGS1	Target	3
Ibuprofen	PTGS2	Target	2
Naproxen	PTGS2	Target	2
Baricitinib	PTK2B	Target	2
Leflunomide	PTK2B	Target	2
Enoxaparin	SERPINC 1	Target	2
Heparin	SERPINC 1	Target	2
Progesterone	SLC10A1	Transporter	2
Remdesivir	SLC10A1	Transporter	2
Ramipril	SLC15A2	Transporter	2
Tranexamic Acid	SLC15A2	Transporter	2

Nicotine	SLC22A1	Transporter	3
Prazosin	SLC22A1	Transporter	3
Progesterone	SLC22A1	Transporter	3
Baricitinib	SLC22A2	Transporter	4
Famotidine	SLC22A2	Transporter	4
Nicotine	SLC22A2	Transporter	4
Progesterone	SLC22A2	Transporter	4
Nicotine	SLC22A3	Transporter	3
Prazosin	SLC22A3	Transporter	3
Progesterone	SLC22A3	Transporter	3
Acetylcysteine	SLC22A6	Transporter	7
Baricitinib	SLC22A6	Transporter	7
Famotidine	SLC22A6	Transporter	7
Favipiravir	SLC22A6	Transporter	7
Ibuprofen	SLC22A6	Transporter	7
Losartan	SLC22A6	Transporter	7
Naproxen	SLC22A6	Transporter	7
Baricitinib	SLC22A8	Transporter	6
Dexamethasone	SLC22A8	Transporter	6

Famotidine	SLC22A8	Transporter	6
Favipiravir	SLC22A8	Transporter	6
Ibuprofen	SLC22A8	Transporter	6
Naproxen	SLC22A8	Transporter	6
Famotidine	SLC47A1	Transporter	2
Sirolimus	SLC47A1	Transporter	2
Fluoxetine	SLC6A4	Target	2
Fluvoxamine	SLC6A4	Target	2
Dexamethasone	SLCO1A2	Transporter	5
Hydroxychloroquine	SLCO1A2	Transporter	5
Ibuprofen	SLCO1A2	Transporter	5
Naproxen	SLCO1A2	Transporter	5
Ritonavir	SLCO1A2	Transporter	5
Acetylcysteine	SLCO1B1	Transporter	7
Darunavir	SLCO1B1	Transporter	7
Lopinavir	SLCO1B1	Transporter	7
Progesterone	SLCO1B1	Transporter	7
Remdesivir	SLCO1B1	Transporter	7
Ritonavir	SLCO1B1	Transporter	7
Sirolimus	SLCO1B1	Transporter	7

Baricitinib	SLCO1B3	Transporter	5
Lopinavir	SLCO1B3	Transporter	5
Progesterone	SLCO1B3	Transporter	5
Remdesivir	SLCO1B3	Transporter	5
Ritonavir	SLCO1B3	Transporter	5
Ibuprofen	SLCO2B1	Transporter	2
Ritonavir	SLCO2B1	Transporter	2
Chloroquine	TLR9	Target	2
Hydroxychloroquine	TLR9	Target	2
Losartan	UGT1A1	Enzyme	2
Naltrexone	UGT1A1	Enzyme	2
Ibuprofen	UGT1A3	Enzyme	4
Losartan	UGT1A3	Enzyme	4
Naproxen	UGT1A3	Enzyme	4
Telmisartan	UGT1A3	Enzyme	4
Dapagliflozin	UGT1A9	Enzyme	4
Ibuprofen	UGT1A9	Enzyme	4
Naproxen	UGT1A9	Enzyme	4
Umifenovir	UGT1A9	Enzyme	4
Dapagliflozin	UGT2B4	Enzyme	2
Ibuprofen	UGT2B4	Enzyme	2
Dapagliflozin	UGT2B7	Enzyme	5
Ibuprofen	UGT2B7	Enzyme	5
Losartan	UGT2B7	Enzyme	5
Naproxen	UGT2B7	Enzyme	5
Umifenovir	UGT2B7	Enzyme	5
Deferoxamine	XDH	Enzyme	2
Favipiravir	XDH	Enzyme	2