

Supplementary Tables

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Table S1. Population, Drug Use and Demographic Data

Parameter	Value
Sample Size	854
Country (%)	
Belgium	70 (8.2)
Bulgaria	70 (8.2)
Croatia	56 (6.6)
Finland	35 (4.1)
France	70 (8.2)
Germany	70 (8.2)
Hungary	21 (2.5)
Italy	70 (8.2)
Netherlands	63 (7.4)
Norway	70 (8.2)
Poland	70 (8.2)
Portugal	70 (8.2)
Spain	70 (8.2)
Sweden	49 (5.7)
Year (Range)	2000:2019
Anomaly (%)	
Chromosomal	122 (14.3)
Down Syndrome	122 (14.3)
Edward syndrome/trisomy 18	122 (14.3)
Genetic syndromes + microdeletions	122 (14.3)
Klinefelter syndrome	122 (14.3)
Patau syndrome/trisomy 13	122 (14.3)
Turner syndrome	122 (14.3)

Anomaly_Rate (mean (SD))	10.24 (14.03)
Tobacco (mean (SD))	22.76 (5.45)
Alcohol (p.c.L/Yr) (mean (SD))	10.77 (1.82)
Amphetamines (% Use) (median [IQR])	0.60 [0.30, 0.80]
Cocaine (% Use) (median [IQR])	0.71 [0.40, 1.20]
Last_Month_Cannabis (% Use) (mean (SD))	0.04 (0.02)
Cannabis_Herb_THC_Content (%) (mean (SD))	0.09 (0.04)
Cannabis_Resin_THC_Content (%) (mean (SD))	0.16 (0.09)
%_Daily_Cannabis_Use (mean (SD))	0.01 (0.01)
%_Daily_Cannabis_Use_Interpolated (mean (SD))	0.01 (0.01)
Last_Month_Cannabis_x_Herb_THC_Content (mean (SD))	0.03 (0.03)
Last_Month_Cannabis_x_Resin_THC_Content (mean (SD))	0.13 (0.12)
Last_Month_Cannabis_x_Herb_THC_Content_x_Daily_Use_Interpolated (median [IQR])	0.02 [0.00, 0.06]
Last_Month_Cannabis_x_Resin_THC_Content_x_Daily_Use_Interpolated (median [IQR])	0.03 [0.01, 0.13]
Trend_in_Daily_Cannabis_Use = Increasing (%)	609 (71.3)
Mean_Annual_Household_Income (mean (SD))	30298.66 (17315.75)

Table S2. Daily Cannabis Use - Raw Data

[illegible]

Table S3. Daily Cannabis Use - Interpolated Data

[illegible]

Table S4. Regression Line Slopes

Anomaly	Substance	Mean Anomaly Rate	Estimate	Std.Error	Sigma	t_statistic	p_Value	E-Value Estimate	E-Value Lower Bound
Genetic syndromes	Daily.Interpol.	5.9209	54.6837	9.3918	0.8815	5.8225	5.53E-08	6.55E+24	3.80642E+16
Edward syndrome	Daily.Interpol.	4.9688	39.6511	8.1134	0.7616	4.8871	3.41E-06	7.55E+20	4.38575E+12
Chromosomal	Daily.Interpol.	35.8047	23.0358	5.0643	0.4754	4.5487	1.37E-05	2.84E+19	1.64891E+11
Down Syndrome	Daily.Interpol.	20.8129	19.0578	4.4071	0.4137	4.3244	3.31E-05	3.23E+18	1.87E+10
Turner syndrome	Daily.Interpol.	1.7968	27.0000	7.2926	0.6845	3.7024	3.32E-04	7.76E+15	4.51E+07
Klinefelter	Daily.Interpol.	0.6084	18.2674	5.0311	0.4722	3.6309	4.26E-04	3.88E+15	2.25E+07
Patau syndrome	Daily.Interpol.	1.7793	24.1206	7.0551	0.6622	3.4189	8.75E-04	4.97E+14	2.89E+06
Genetic syndromes	LMCannabis_Herb	5.9209	15.6419	3.1034	0.8908	5.0402	1.66E-06	1.74E+07	3.53E+04
Genetic syndromes	LM_Cannabis	5.9209	15.5798	3.7939	0.9182	4.1065	7.37E-05	1.02E+07	6.50E+03
Genetic syndromes	Herb	5.9209	10.0478	2.3492	0.9135	4.2771	3.82E-05	4.45E+04	456.72
Chromosomal	LMCannabis_Herb	35.8047	6.2955	1.7442	0.5007	3.6095	4.49E-04	1.86E+05	377.43
Edward syndrome	LMCannabis_Herb	4.9688	9.7114	2.7935	0.8019	3.4764	7.08E-04	1.22E+05	247.40
Down Syndrome	LMCannabis_Herb	20.8129	5.2012	1.5292	0.4390	3.4013	9.12E-04	9.63E+04	194.83
Klinefelter	LMCannabis_Herb	0.6084	5.2172	1.6420	0.4713	3.1774	0.0019	4.74E+04	95.58
Down Syndrome	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	20.8129	2.3272	0.4751	0.4056	4.8985	3.25E-06	369.89	45.54
Chromosomal	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	35.8047	2.6195	0.5532	0.4723	4.7349	6.41E-06	310.61	38.17
Edward syndrome	LM_Cannabis	4.9688	9.1559	3.3741	0.8166	2.7136	0.0076	5.40E+04	34.01
Edward syndrome	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	4.9688	4.1359	0.9014	0.7696	4.5883	1.16E-05	265.61	32.57
Klinefelter	LM_Cannabis	0.6084	5.2968	1.9692	0.4766	2.6898	0.0082	4.94E+04	31.06
Genetic syndromes	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	5.9209	4.8225	1.0864	0.9275	4.4389	2.11E-05	226.42	27.70

Patau syndrome	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	1.7793	2.9541	0.7660	0.6539	3.8567	1.92E-04	121.51	14.65
Turner syndrome	LMCannabis_Herb	1.7968	6.2946	2.4593	0.7060	2.5595	0.0117	6.68E+03	13.03
Klinefelter	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	0.6084	2.0130	0.5530	0.4721	3.6401	4.12E-04	96.35	11.52
Chromosomal	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	35.8047	1.0375	0.1974	0.3694	5.2563	8.60E-07	25.26	9.43
Edward syndrome	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	4.9688	1.7864	0.3612	0.6758	4.9465	3.13E-06	21.66	8.03
Genetic syndromes	LMCannabis_Resin	5.9209	2.6736	0.7047	0.8438	3.7940	2.48E-04	35.24	7.55
Turner syndrome	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	1.7968	2.6440	0.8118	0.6930	3.2570	0.0015	63.88	7.47
Down Syndrome	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	20.8129	0.8706	0.1835	0.3434	4.7435	7.14E-06	19.57	7.22
Chromosomal	LMCannabis_Resin	35.8047	1.2280	0.3399	0.4070	3.6129	4.66E-04	30.64	6.50
Edward syndrome	LMCannabis_Resin	4.9688	2.1258	0.5980	0.7160	3.5549	5.68E-04	29.30	6.20
Chromosomal	Resin	35.8047	1.4387	0.4591	0.4127	3.1340	0.0022	47.23	6.05
Chromosomal	Herb	35.8047	3.2385	1.3231	0.5145	2.4478	0.0158	614.55	5.77
Genetic syndromes	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	5.9209	1.8703	0.4563	0.8539	4.0989	8.57E-05	14.16	5.12
Patau syndrome	LMCannabis_Herb	1.7793	5.4238	2.4275	0.6968	2.2343	0.0273	2.38E+03	4.27
Patau syndrome	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.7793	1.2368	0.3458	0.6472	3.5761	5.44E-04	10.86	3.82
Genetic syndromes	Log(Cocaine)	5.9209	0.7636	0.1002	0.8051	7.6174	6.61E-12	4.17	3.21
Down Syndrome	LMCannabis_Resin	20.8129	0.8596	0.3201	0.3833	2.6853	0.0084	14.88	2.88
Turner syndrome	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.7968	1.1097	0.3598	0.6732	3.0845	0.0026	8.43	2.86
Edward syndrome	Log(Cocaine)	4.9688	0.5400	0.0924	0.7423	5.8418	4.52E-08	3.29	2.48
Chromosomal	Log(Cocaine)	35.8047	0.3167	0.0589	0.4732	5.3748	3.83E-07	3.08	2.31
Down Syndrome	Log(Cocaine)	20.8129	0.2455	0.0527	0.4229	4.6615	8.20E-06	2.78	2.06
Klinefelter	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.6084	0.6802	0.2641	0.4941	2.5759	0.0115	6.46	2.04

Turner syndrome	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.7968	0.3768	0.0835	0.6703	4.5142	1.49E-05	2.72	2.01
Down Syndrome	Herb	20.8129	2.4157	1.1613	0.4516	2.0801	0.0396	259.68	2.01
Klinefelter	Log(Cocaine)	0.6084	0.2203	0.0577	0.4634	3.8186	2.14E-04	2.45	1.77
Genetic syndromes	Resin	5.9209	2.1135	0.9795	0.8805	2.1578	0.0332	17.26	1.75
Patau syndrome	Log(Cocaine)	1.7793	0.2952	0.0844	0.6774	3.4991	6.56E-04	2.34	1.67
Turner syndrome	Herb	1.7968	3.7174	1.8333	0.7129	2.0277	0.0448	229.61	1.65
Down Syndrome	Resin	20.8129	0.8844	0.4322	0.3886	2.0460	0.0433	15.35	1.42
Edward syndrome	Resin	4.9688	1.6669	0.8273	0.7437	2.0149	0.0465	14.86	1.32
Turner syndrome	Resin	1.7968	1.1661	0.5756	0.6892	2.0259	0.0453	8.80	1.29
Patau syndrome	Log(Amphetamine)	1.7793	0.0005	0.0892	0.7112	0.0052	0.9959	1.02	1
Genetic syndromes	Log(Amphetamine)	5.9209	0.0486	0.1229	0.9800	0.3954	0.6933	1.27	1
Klinefelter	LMCannabis_Resin	0.6084	0.3446	0.4157	0.4977	0.8289	0.4090	3.16	1
Patau syndrome	Resin	1.7793	0.8450	0.7766	0.6981	1.0881	0.2790	5.47	1
Patau syndrome	LMCannabis_Resin	1.7793	0.9364	0.5792	0.6935	1.6168	0.1089	6.29	1
Klinefelter	Herb	0.6084	0.7205	1.2604	0.4901	0.5717	0.5686	7.08	1
Turner syndrome	Resin	1.7968	1.1884	0.7729	0.6948	1.5376	0.1272	8.96	1
Edward syndrome	Herb	4.9688	2.7375	2.1491	0.8357	1.2737	0.2052	38.91	1
Patau syndrome	LM_Cannabis	1.7793	2.4006	2.9302	0.7092	0.8192	0.4143	43.03	1
Patau syndrome	Herb	1.7793	2.5272	1.8143	0.7055	1.3929	0.1662	51.59	1
Turner syndrome	LM_Cannabis	1.7968	4.5985	2.9659	0.7178	1.5505	0.1237	679.99	1
Down Syndrome	LM_Cannabis	20.8129	3.2556	1.8757	0.4540	1.7356	0.0852	1.36E+03	1
Chromosomal	LM_Cannabis	35.8047	3.9780	2.1476	0.5198	1.8523	0.0664	2.12E+03	1
Genetic syndromes	Annual_Alcohol	5.9209	-0.0140	0.0488	0.9803	-0.2872	0.7745	1.13	NA
Klinefelter	Tobacco	0.6084	-0.0073	0.0081	0.4891	-0.8950	0.3726	1.13	NA
Turner syndrome	Annual_Alcohol	1.7968	-0.0109	0.0360	0.7247	-0.3027	0.7627	1.13	NA
Genetic syndromes	Tobacco	5.9209	-0.0166	0.0162	0.9764	-1.0225	0.3086	1.14	NA
Down Syndrome	Tobacco	20.8129	-0.0116	0.0076	0.4552	-1.5347	0.1275	1.18	NA

Edward syndrome	Log(Amphetamine)	4.9688	-0.0244	0.1055	0.8411	-0.2310	0.8177	1.19	NA
Chromosomal	Tobacco	35.8047	-0.0198	0.0086	0.5159	-2.3037	0.0230	1.23	NA
Patau syndrome	Tobacco	1.7793	-0.0269	0.0116	0.6957	-2.3209	0.0220	1.23	NA
Turner syndrome	Tobacco	1.7968	-0.0377	0.0116	0.6949	-3.2594	0.0015	1.28	NA
Patau syndrome	Annual_Alcohol	1.7793	-0.0425	0.0352	0.7069	-1.2083	0.2293	1.30	NA
Edward syndrome	Tobacco	4.9688	-0.0504	0.0132	0.7945	-3.8142	2.17E-04	1.31	NA
Chromosomal	Log(Amphetamine)	35.8047	-0.0368	0.0660	0.5265	-0.5574	0.5783	1.33	NA
Chromosomal	Annual_Alcohol	35.8047	-0.0381	0.0260	0.5225	-1.4672	0.1449	1.34	NA
Down Syndrome	Log(Amphetamine)	20.8129	-0.0340	0.0576	0.4590	-0.5908	0.5558	1.34	NA
Klinefelter	Annual_Alcohol	0.6084	-0.0451	0.0241	0.4837	-1.8751	0.0632	1.40	NA
Edward syndrome	Daily.Interpol.	4.9688	-0.0784	0.0412	0.8289	-1.9012	0.0597	1.40	NA
Down Syndrome	Annual_Alcohol	20.8129	-0.0450	0.0225	0.4521	-2.0023	0.0475	1.42	NA
Turner syndrome	Log(Amphetamine)	1.7968	-0.1577	0.0898	0.7158	-1.7572	0.0814	1.74	NA
Klinefelter	Log(Amphetamine)	0.6084	-0.1347	0.0603	0.4809	-2.2331	0.0274	1.90	NA
Klinefelter	Resin	0.6084	-1.0190	0.5465	0.4913	-1.8645	0.0650	12.68	NA

Table S5. Variable Importance Tables from Ranger Random Forrest Regression

- Chromosomal Disorders

Variable	Importance
Income	7.1881
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	3.5107
LM.Cannabis_x_Resin.THC	3.2384
Daily.Interpol.	2.6239
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	2.2387
Tobacco	2.2005
Daily.Interpol.	2.1287
Resin	1.9307
LM.Cannabis_x_Herb.THC	1.8777
Herb	1.7375
LM.Cannabis	1.1745
Alcohol	1.1534
Amphetamines	0.7594

Table S6. Variable Importance Tables from Ranger Random Forrest Regression

- Trisomy 21

Variable	Importance
Income	3.9949
Cocaine	2.3970
LM.Cannabis_x_Resin.THC	2.3596
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	2.2159
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	2.2156
LM.Cannabis_x_Herb.THC	1.9707
Herb	1.6507
Daily.Interpol.	1.6045
Resin	1.4312
Tobacco	1.3743
Alcohol	1.0998
LM.Cannabis	1.0771
Amphetamines	0.6674

Table S7. Variable Importance Tables from Ranger Random Forrest Regression

- Trisomy 18

Variable	Importance
Income	19.8726
Tobacco	7.9246
Daily.Interpol.	7.8947
Cocaine	7.5654
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	7.0033
LM.Cannabis_x_Resin.THC	5.8536
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	5.2141
Resin	4.9771
LM.Cannabis_x_Herb.THC	3.9041
Alcohol	3.8005
Herb	3.5019
LM.Cannabis	2.4866
Amphetamines	1.7892

Table S8. Variable Importance Tables from Ranger Random Forrest Regression

- Trisomy 13

Variable	Importance
Income	9.4436
Tobacco	5.6421
LM.Cannabis_x_Herb.THC	5.3712
Daily.Interpol.	4.9279
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	4.1905
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	4.0741
LM.Cannabis	3.9544
Cocaine	3.9335
Herb	3.7794
Resin	3.6753
LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	3.5738
Amphetamines	2.3969
Alcohol	1.9779

Table S9. Variable Importance Tables from Ranger Random Forrest Regression

- Turner syndrome

Variable	Importance
Resin	12.5864
Tobacco	7.5239
Daily.Interpol.	5.3667
Cocaine	5.1068
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	4.8616
LM.Cannabis_x_Resin.THC	3.8699
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	3.4642
Amphetamines	3.4171
Alcohol	3.1727
Herb	2.8898
Resin	2.6318
LM.Cannabis_x_Herb.THC	2.3259
LM.Cannabis	1.9035

Table S10. Variable Importance Tables from Ranger Random Forrest Regression

- Klinefelters syndrome

Variable	Importance
Income	3.1401
Tobacco	2.6523
Daily.Interpol.	2.5976
LM.Cannabis_x_Herb.THC	2.4446
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	2.3847
Amphetamines	2.2584
LM.Cannabis	2.1803
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.9092
Alcohol	1.6953
Cocaine	1.6753
Resin	1.5971
Herb	1.2411
LM.Cannabis_x_Resin.THC	1.1098

Table S11. Variable Importance Tables from Ranger Random Forrest Regression

- Genetic disorders

Variable	Importance
Income	3.1503
Tobacco	2.5964
Daily.Interpol.	2.5912
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	2.5331
LM.Cannabis_x_Herb.THC	2.5068
Amphetamines	2.2876
LM.Cannabis	2.1333
Cocaine	1.8418
Alcohol	1.7553
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.7461
Resin	1.4309
Herb	1.1989
LM.Cannabis_x_Resin.THC	1.1962

Table S12. Inverse Probability Weighted Panel Regression Models

- Chromosomal Disorders

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
<i>(Rate ~ Tobacco + Alcohol + LM.Cannabis_x_Herb.THc_x_Daily.Interpol. + LM.Cannabis_x_Resin.THc_x_Daily.Interpol. + Daily.Interpol. + LM.Cannabis_x_Resin.THc + Amphetamines + Cocaine + Income)</i>				
Tobacco	0.04 (0.01, 0.07)	0.0056	Adj.R.Squared	0.3619
Alcohol	-0.07 (-0.14, -0.01)	0.0258	Statistic	50.3509
Daily.Interpol.	29.9 (16.26, 43.54)	3.61E-05	Deg.Freedom	6,115
LM.Cannabis_x_Resin.THc	1.22 (0.8, 1.64)	1.36E-07	p-Value	<2.2E-16
Cocaine	-0.37 (-0.59, -0.16)	0.0009		
Income	0 (0, 0)	<2.2E-16		
Interactive				
<i>(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Resin.THc * LM.Cannabis_x_Resin.THc_x_Daily.Interpol. + LM.Cannabis_x_Herb.THc_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)</i>				
Tobacco	0.09 (0.06, 0.13)	6.45E-07	Adj.R.Squared	0.3832
Daily.Interpol.	257 (179.58, 334.42)	2.22E-09	Statistic	49.1932
LM.Cannabis_x_Resin.THc	1.7 (0.48, 2.92)	0.0077	Deg.Freedom	9,112
LM.Cannabis_x_Resin.THc_x_Daily.Interpol.	-1.27 (-2.28, -0.26)	0.0147	p-Value	<2.2E-16
LM.Cannabis_x_Herb.THc_x_Daily.Interpol.	1.05 (0.18, 1.92)	0.0198		
Amphetamines	-0.25 (-0.38, -0.12)	0.0003		
Cocaine	-0.27 (-0.47, -0.07)	0.0090		
Income	0 (0, 0)	1.89E-10		

Tobacco: Daily.Interpol.	-9.1 (-12.14, -6.06)	4.36E-08		
1 Lag				
$(Rate \sim Tobacco,1) * Daily.Interpol.,1) + LM.Cannabis_x_Resin.THCH,1) * LM.Cannabis_x_Resin.THCH_x_Daily.Interpol. + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.,1) + Alcohol,1) + Amphetamines,1) + Cocaine,1) + Income,1))$				
Daily.Interpol.	18.2 (13.14, 23.26)	2.29E-10	Adj.R.Squared	0.4246
LM.Cannabis_x_Resin.THCH	2.98 (2.42, 3.54)	<2.2E-16	Statistic	85.0993
LM.Cannabis_x_Resin.THCH_x_Daily.Interpol.	-0.86 (-1.24, -0.48)	1.96E-05	Deg.Freedom	6,101
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	0.64 (0.32, 0.96)	0.0002	p-Value	<2.2E-16
Amphetamines	-0.17 (-0.28, -0.05)	0.0047		
Income	0 (0, 0)	4.07E-07		
2 Lags				
$(Rate \sim Tobacco + Daily.Interpol. * LM.Cannabis_x_Resin.THCH * LM.Cannabis_x_Resin.THCH_x_Daily.Interpol. + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)$				
Daily.Interpol.	34.6 (28.13, 41.07)	<2.2E-16	Adj.R.Squared	0.3362
LM.Cannabis_x_Resin.THCH	6.76 (5.28, 8.24)	5.57E-14	Statistic	64.3312
LM.Cannabis_x_Resin.THCH_x_Daily.Interpol.	-0.13 (-0.18, -0.08)	9.90E-07	Deg.Freedom	6,87
Amphetamines	-0.26 (-0.43, -0.1)	0.0020	p-Value	<2.2E-16
Income	0 (0, 0)	0.0100		
Daily.Interpol.: LM.Cannabis_x_Resin.THCH	-162 (-212.76, -111.24)	1.38E-08		

Table S13. Inverse Probability Weighted Panel Regression Models

- Genetic Disorders

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
(Rate ~ Tobacco * LM.Cannabis_x_Herb.THCH + Daily.Interpol. + LM.Cannabis + Alcohol + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + Amphetamines + Cocaine + Income)				
LM.Cannabis_x_Herb.THCH	24.9 (15.47, 34.32)	9.55E-07	Adj.R.Squared	0.1412
Daily.Interpol.	9.27 (2.23, 16.31)	0.0111	Statistic	73.6793
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	-0.07 (-0.13, -0.02)	0.0068	Deg.Freedom	5,116
Amphetamines	-0.19 (-0.31, -0.08)	0.0015	p-Value	<2.2E-16
Tobacco: LM.Cannabis_x_Herb.THCH	-0.72 (-1.15, -0.28)	0.0015		
Interactive				
(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Herb.THCH + LM.Cannabis_x_Resin.THCH_x_Daily.Interpol. + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)				
Tobacco	0.14 (0.09, 0.19)	8.32E-08	Adj.R.Squared	0.2602
Daily.Interpol.	545 (421.13, 668.87)	4.38E-14	Statistic	49.9543
LM.Cannabis_x_Herb.THCH	9.5 (2.64, 16.36)	0.0076	Deg.Freedom	8,113
LM.Cannabis_x_Resin.THCH_x_Daily.Interpol.	-2.34 (-3.32, -1.36)	8.86E-06	p-Value	<2.2E-16
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	2.05 (1.2, 2.9)	7.63E-06		
Cocaine	-0.5 (-0.82, -0.18)	0.0024		
Income	0 (0, 0)	4.16E-06		
Tobacco: Daily.Interpol.	-19.7 (-24.46, -14.94)	7.56E-13		
1 Lag				

(Rate ~ Tobacco,1) * LM.Cannabis_x_Herb.THC ,1) +Daily.Interpol.,1) + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. ,1) + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. ,1) + Alcohol,1) + Amphetamines,1) + Cocaine,1) + Income,1))				
Daily.Interpol.	-34.09 (-60.17, -8.02)	0.0119	Adj.R.Squared	0.2975
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.23 (0.39, 2.06)	0.0047	Statistic	56.0412
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	-1.1 (-1.83, -0.38)	0.0036	Deg.Freedom	5,102
Cocaine	0.63 (0.31, 0.95)	0.0002	p-Value	<2.2E-16
Tobacco: LM.Cannabis_x_Herb.THC	0.59 (0.22, 0.96)	0.0023		
2 Lags				
(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Herb.THC +LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)				
Tobacco	0.07 (0.02, 0.12)	0.0092	Adj.R.Squared	0.2558
Daily.Interpol.	271.11 (58.63, 483.59)	0.0142	Statistic	30.9479
LM.Cannabis_x_Herb.THC	11.85 (2.23, 21.47)	0.0178	Deg.Freedom	5,88
Cocaine	0.56 (0.12, 0.99)	0.0133	p-Value	<2.2E-16
Tobacco: Daily.Interpol.	-11.57 (-19.62, -3.53)	0.0060		

Table S14. Inverse Probability Weighted Panel Regression Models

- Trisomy 21

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
(Rate ~ Tobacco + Alcohol + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC + LM.Cannabis_x_Herb.THC + Amphetamines + Cocaine + Income)				
Tobacco	0.03 (0.01, 0.05)	0.0121	Adj.R.Squared	0.3657
Alcohol	-0.07 (-0.12, -0.01)	0.016	Statistic	65.8289
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	-0.06 (-0.11, -0.01)	0.0175	Deg.Freedom	5,116
LM.Cannabis_x_Herb.THC	10.3 (9.12, 11.48)	<2.2E-16	p-Value	<2.2E-16
Income	0 (0, 0)	6.50E-05		
Interactive				
(Rate ~ Tobacco * LM.Cannabis_x_Herb.THC_x_Daily.Interpol. * LM.Cannabis_x_Herb.THC + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. * LM.Cannabis_x_Resin.THC + Alcohol + Herb + Amphetamines + Cocaine + Income)				
Tobacco	0.11 (0.07, 0.15)	7.82E-07	Adj.R.Squared	0.3011
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	-1.56 (-2.13, -0.99)	4.95E-07	Statistic	49.292
LM.Cannabis_x_Herb.THC	43.5 (19.2, 67.8)	0.000628	Deg.Freedom	9,112
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.66 (1.01, 2.31)	2.06E-06	p-Value	<2.2E-16
Amphetamines	-0.16 (-0.27, -0.05)	0.005613		
Income	0 (0, 0)	3.91E-11		
Tobacco: LM.Cannabis_x_Herb.THC	-1.85 (-2.86, -0.84)	0.000507		
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	25.4 (13.54, 37.26)	5.56E-05		
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC	-3.09 (-4.18, -2)	2.04E-07		

2 Lags				
<i>(Rate ~ Tobacco + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. * LM.Cannabis_x_Herb.THC * LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)</i>				
LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.93 (1.38, 2.48)	8.48E-10	Adj.R.Squared	0.244
Amphetamines	-0.22 (-0.37, -0.07)	0.005674	Statistic	48.8577
Cocaine	0.21 (0.12, 0.29)	5.29E-06	Deg.Freedom	5,88
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.:				
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.18 (0.13, 0.23)	1.02E-10	p-Value	<2.2E-16
LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	-12.65 (-19.54, -5.76)	0.000527		

Table S15. Inverse Probability Weighted Panel Regression Models
- Trisomy 18

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
<i>(Rate ~ Tobacco + Alcohol + LM.Cannabis_x_Resin.THC + Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Herb + Amphetamines + Cocaine + Income)</i>				
LM.Cannabis_x_Resin.THC	3.15 (2.3, 4)	4.94E-11	Adj.R.Squared	0.4642
Daily.Interpol.	9.61 (1.3, 17.92)	0.0253	Statistic	71.1521
Herb	-7.03 (-11.62, -2.44)	0.0033	Deg.Freedom	4,117
Income	0 (0, 0)	4.46E-12	p-Value	<2.2E-16
Interactive				
<i>(Rate ~ Tobacco * LM.Cannabis_x_Resin.THC_x_Daily.Interpol. * LM.Cannabis_x_Resin.THC + Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)</i>				
LM.Cannabis_x_Resin.THC	2.06 (1.62, 2.5)	1.65E-15	Adj.R.Squared	0.4674
Daily.Interpol.	16.6 (8.94, 24.26)	4.26E-05	Statistic	67.328
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	-0.09 (-0.18, 0)	0.0421	Deg.Freedom	4,117
Income	0 (0, 0)	5.73E-10	p-Value	<2.2E-16
2 Lags				
<i>(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Resin.THC + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)</i>				
LM.Cannabis_x_Resin.THC	3.23 (2.79, 3.67)	<2.2E-16	Adj.R.Squared	0.3824
Amphetamines	-0.26 (-0.5, -0.02)	0.0353	Statistic	65.9798
Cocaine	0.39 (0.26, 0.52)	7.82E-08	Deg.Freedom	4,89
Income	0 (0, 0)	0.0004	p-Value	<2.2E-16

Table S16. Inverse Probability Weighted Panel Regression Models

- Trisomy 13

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
(Rate ~ Tobacco + Alcohol + Daily.Interpol. + LM.Cannabis_x_Resin.THc_x_Daily.Interpol. + LM.Cannabis_x_Herb.THc + LM.Cannabis_x_Herb.THc_x_Daily.Interpol. + Herb + Amphetamines + Cocaine + Income)				
Daily.Interpol.	74.8 (63.55, 86.05)	< 2e-16	Adj.R.Squared	0.2135
Cocaine	-0.93 (-1.15, -0.72)	1.20E-13	Statistic	75.4717
Income	0 (0, 0)	< 2e-16	Deg.Freedom	3,118
			p-Value	<2.2E-16
Interactive				
(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Herb.THc * LM.Cannabis_x_Resin.THc_x_Daily.Interpol. + LM.Cannabis_x_Herb.THc_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)				
Daily.Interpol.	226 (124.08, 327.92)	2.99E-05	Adj.R.Squared	0.1241
LM.Cannabis_x_Resin.THc_x_Daily.Interpol.	-1.89 (-2.91, -0.87)	0.0004	Statistic	39.6564
LM.Cannabis_x_Herb.THc_x_Daily.Interpol.	1.53 (0.66, 2.4)	0.0008	Deg.Freedom	7,114
Cocaine	-0.91 (-1.22, -0.61)	5.03E-08	p-Value	<2.2E-16
Income	0 (0, 0)	5.64E-10		
Tobacco: Daily.Interpol.	-5.88 (-9.74, -2.02)	0.0034		
LM.Cannabis_x_Herb.THc: LM.Cannabis_x_Resin.THc_x_Daily.Interpol.	7.25 (2.57, 11.93)	0.0030		
2 Lags				

<i>(Rate ~ Tobacco * LM.Cannabis_x_Herb.THC + Daily.Interpol. * LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + Alcohol + Daily.Interpol. + Amphetamines + Cocaine + Income)</i>				
Daily.Interpol.	82.69 (63.64, 101.73)	3.63E-13	Adj.R.Squared	-0.0035
Alcohol	-0.3 (-0.39, -0.21)	2.22E-09	Statistic	28.0323
			Deg.Freedom	3,90
			p-Value	6.83E-13

Table S17. Inverse Probability Weighted Panel Regression Models

- Turner syndrome

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
(Rate ~ Tobacco + Alcohol + Daily.Interpol. + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + LM.Cannabis_x_Resin.THC + Amphetamines + Cocaine + Income)				
Alcohol	0.14 (0.06, 0.22)	0.0007	Adj.R.Squared	0.3223
LM.Cannabis_x_Resin.THC	0.47 (0.15, 0.8)	0.0055	Statistic	10.5331
Amphetamines	-0.26 (-0.45, -0.07)	0.0098	Deg.Freedom	5,116
Cocaine	0.13 (0.02, 0.25)	0.0230	p-Value	5.116.2.35E-08
Income	0 (0, 0)	1.46E-06		
Interactive				
(Rate ~ Tobacco * Daily.Interpol. * LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + LM.Cannabis_x_Resin.THC + Alcohol + Amphetamines + Cocaine + Income)				
Tobacco	0.07 (0.02, 0.12)	0.0119	Adj.R.Squared	0.3333
Daily.Interpol.	165 (90.13, 239.87)	3.35E-05	Statistic	9.9611
Alcohol	0.16 (0.07, 0.25)	0.0006	Deg.Freedom	7,114
Amphetamines	-0.42 (-0.63, -0.21)	0.0002	p-Value	1.16E-09
Cocaine	0.31 (0.02, 0.6)	0.036272		
Income	0 (0, 0)	2.52E-05		
Tobacco: Daily.Interpol.	-7.09 (-10.5, -3.68)	8.76E-05		
2 Lags				

<i>(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Resin.THC * LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Alcohol + Amphetamines + Cocaine + Income)</i>				
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	-0.32 (-0.49, -0.14)	0.0005	Adj.R.Squared	0.1893
Alcohol	0.13 (0.04, 0.23)	0.0065	Statistic	5.9699
Amphetamines	-0.35 (-0.61, -0.1)	0.0083	Deg.Freedom	6,87
Cocaine	0.89 (0.47, 1.31)	7.83E-05	p-Value	2.93E-05
Tobacco: Daily.Interpol.	-2.14 (-3.32, -0.96)	0.0006		
LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	8.82 (5.3, 12.34)	4.16E-06		

Table S18. Inverse Probability Weighted Panel Regression Models

- Klinefelter syndrome

Parameters			Model Parameters	
Term	Estimate (C.I.)	p-Value	Parameter	Value
Additive				
(Rate ~ Tobacco + Alcohol + Daily.Interpol. + LM.Cannabis_x_Herb.THCH + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + LM.Cannabis + Amphetamines + Cocaine + Income)				
Alcohol	-0.06 (-0.11, -0.02)	0.00667	Adj.R.Squared	0.1221
Daily.Interpol.	14.09 (0.33, 27.85)	0.04712	Statistic	59.0404
LM.Cannabis_x_Herb.THCH	8.27 (5.85, 10.69)	8.40E-10	Deg.Freedom	6,115
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	-0.06 (-0.12, -0.01)	0.02155	p-Value	<2.2E-16
Amphetamines	-0.14 (-0.27, -0.01)	0.03372		
Interactive				
(Rate ~ Tobacco * LM.Cannabis_x_Herb.THCH + Daily.Interpol. + LM.Cannabis + Alcohol + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + Amphetamines + Cocaine + Income)				
LM.Cannabis_x_Herb.THCH	24.9 (15.47, 34.32)	9.55E-07	Adj.R.Squared	0.1412
Daily.Interpol.	9.27 (2.23, 16.31)	0.01114	Statistic	73.6793
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	-0.07 (-0.13, -0.02)	0.00682	Deg.Freedom	5,116
Amphetamines	-0.19 (-0.31, -0.08)	0.00145	p-Value	<2.2E-16
Tobacco: LM.Cannabis_x_Herb.THCH	-0.72 (-1.15, -0.28)	0.00149		
2 Lags				
(Rate ~ Tobacco * Daily.Interpol. + LM.Cannabis_x_Herb.THCH + LM.Cannabis + LM.Cannabis_x_Herb.THCH_x_Daily.Interpol. + Alcohol + Daily.Interpol. + Amphetamines + Cocaine + Income)				

Tobacco	-0.03 (-0.06, 0)	0.02575	Adj.R.Squared	0.1479
LM.Cannabis_x_Herb.THCH	17.5 (14.32, 20.68)	<2.2E-16	Statistic	80.2694
LM.Cannabis	-19.3 (-27.22, -11.38)	6.97E-06	Deg.Freedom	7,86
LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	-0.06 (-0.12, 0)	0.04447	p-Value	<2.2E-16
Amphetamines	-0.2 (-0.33, -0.06)	0.00451		
Cocaine	0.66 (0.46, 0.85)	5.52E-09		
Income	0 (0, 0)	8.14E-06		

Table S19. Geospatial Models - Turner syndrome

Parameter Values			Model Parameters		
Parameter	Estimate (C.I.)	p-Value	Parameter	Value	Significance
Additive					
Rate ~ Tobacco + Alcohol + Daily.Interpol. + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + LM.Cannabis_x_Resin.THC + Amphetamines + Cocaine + Income					
Alcohol	0.16 (0.1, 0.22)	1.26E-07	rho	0.2659	0.149
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	2.15 (0.67, 3.63)	0.0044	lambda	-0.3224	0.0369
LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	-4.77 (-8.69, -0.85)	0.0170			
Amphetamines	-0.42 (-0.57, -0.28)	6.13E-09			
Cocaine	0.48 (0.24, 0.72)	6.88E-05			
Income	0 (0, 0)	3.79E-07			
Interactive					
Rate ~ Tobacco + Daily.Interpol. * LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Resin.THC + Alcohol + Amphetamines + Cocaine + Income					
Tobacco	-0.08 (-0.11, -0.05)	2.11E-09	rho	0.4996	1.47E-06
LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	4.26 (2.58, 5.94)	7.19E-07	lambda	-0.50739	1.53E-07
Alcohol	0.2 (0.14, 0.27)	1.71E-09			
Amphetamines	-0.26 (-0.4, -0.13)	0.0001			
Cocaine	0.43 (0.28, 0.59)	4.12E-08			
Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	-109.18 (-156.95, -61.41)	7.48E-06			
2 Lags					

$\text{Rate} \sim \text{Tobacco} * \text{Daily.Interpol.} + \text{LM.Cannabis}_x\text{Resin.THC}_x\text{Daily.Interpol.} + \text{LM.Cannabis}_x\text{Resin.THC} * \text{LM.Cannabis}_x\text{Herb.THC}_x\text{Daily.Interpol.} + \text{Alcohol} + \text{Amphetamines} + \text{Cocaine} + \text{Income}$					
Daily.Interpol.	127 (44.09, 209.91)	0.0027	rho	0.3085	0.0385
Alcohol	0.14 (0.08, 0.21)	2.80E-05	lambda	-0.3886	0.00229
Amphetamines	-0.28 (-0.43, -0.13)	0.0002			
Income	0 (0, 0)	8.16E-08			
Tobacco: Daily.Interpol.	-3.77 (-6.95, -0.59)	0.0199			

Table S20. Geospatial Models - Klinefelter syndrome

Parameter Values			Model Parameters		
Parameter	Estimate (C.I.)	p-Value	Parameter	Value	Significance
<i>Additive</i>					
Rate ~ Tobacco + Alcohol + Daily.Interpol. + LM.Cannabis_x_Resin.THC_x_Daily.Interpol. + LM.Cannabis_x_Herb.THC + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Herb + Amphetamines + Cocaine + Income					
LM.Cannabis_x_Herb.THC	11.9 (7.57, 16.23)	7.27E-08	rho	0.5071	4.02E-05
Income	0 (0, 0)	1.91E-10	lambda	-0.5445	7.53E-06
<i>Interactive</i>					
Rate ~ Tobacco * LM.Cannabis_x_Herb.THC + Daily.Interpol. + LM.Cannabis + Alcohol + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Amphetamines + Cocaine + Income					
Amphetamines	-0.23 (-0.34, -0.12)	3.41E-05	Least Squares		
Cocaine	0.31 (0.2, 0.43)	1.27E-07	S.D.	0.4299	
<i>1 Lag</i>					
Rate ~ Tobacco + Daily.Interpol. + LM.Cannabis_x_Herb.THC + LM.Cannabis + LM.Cannabis_x_Herb.THC_x_Daily.Interpol. + Alcohol + Daily.Interpol. + Amphetamines + Cocaine + Income					
Amphetamines	-0.21 (-0.34, -0.09)	0.0007	Least Squares		
Cocaine	0.31 (0.18, 0.44)	2.38E-06	S.D.	0.4299	

Table S21. E-Values from Panel Models

Anomaly	Term	<i>p</i> -Value	E-Value Estimate	Lower Bound E-Value
Chromosomes	<i>Additive</i>			
	Daily.Interpol.	3.61E-05	2.46E+24	2.67E+13
	LM.Cannabis_x_Resin.THC	1.36E-07	18.49	8.15
	<i>Interactive</i>			
	Daily.Interpol.	2.22E-09	Infinity	Infinity
	LM.Cannabis_x_Resin.THC	0.0077	74.39	4.94
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	0.0198	18.43	2.31
	<i>1 Lag</i>			
	Daily.Interpol.	2.29E-10	2.24E+18	2.18E+13
	LM.Cannabis_x_Resin.THC	<2.2E-16	1.84E+03	510.05
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	0.0002	8.08	3.58
	<i>2 Lags</i>			
	Daily.Interpol.	<2.2E-16	1.81E+31	2.97E+25
	LM.Cannabis_x_Resin.THC	5.57E-14	2.26E+06	1.07E+05
Genetic	<i>Additive</i>			
	LM.Cannabis_x_Herb.THC	9.55E-07	2.54E+22	1.13E+14
	Daily.Interpol.	0.0111	3.38E+08	194.54
	<i>Interactive</i>			
	Daily.Interpol.	4.38E-14	Infinity	Infinity
	LM.Cannabis_x_Herb.THC	0.0076	4.13E+05	61.12
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	7.63E-06	27.40	8.77
	<i>1 Lag</i>			

	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.0047	7.89	2.56
	Tobacco: LM.Cannabis_x_Herb.THC	0.0023	3.40	1.91
	2 Lags			
	Daily.Interpol.	0.0142	6.49E+115	2.92E+25
	LM.Cannabis_x_Herb.THC	0.0178	2.24E+05	17.73
Trisomy 21	Additive			
	LM.Cannabis_x_Herb.THC	<2.2E-16	3.59E+10	5.29E+08
	Interactive			
	LM.Cannabis_x_Herb.THC	0.000628	2.82E+45	2.23E+20
	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	2.06E-06	104.48	21.84
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	5.56E-05	3.98E+26	2.11E+14
	2 Lags			
	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	8.48E-10	86.25	29.18
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.02E-10	2.18	1.90
Trisomy 18	Additive			
	LM.Cannabis_x_Resin.THC	4.94E-11	927.29	176.39
	Daily.Interpol.	0.0253	2.78E+08	25.51
	Interactive			
	LM.Cannabis_x_Resin.THC	1.65E-15	23.77	13.76
	Daily.Interpol.	4.26E-05	1.19E+09	1.06E+05
	2 Lags			
	LM.Cannabis_x_Resin.THC	<2.2E-16	101.56	59.31
Trisomy 13	Additive			
	Daily.Interpol.	< 2e-16	2.20E+40	2.16E+34
	Interactive			
	Daily.Interpol.	2.99E-05	2.17E+129	2.02E+71

	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	0.0008	14.37	4.18
	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.0030	2.76E+04	58.55
	2 Lags			
	Daily.Interpol.	3.63E-13	5.48E+32	1.91E+25
Turners Syn.	Additive			
	LM.Cannabis_x_Resin.THC	0.0055	3.14	1.79
	Interactive			
	Daily.Interpol.	3.35E-05	1.15E+99	2.21E+54
	2 Lags			
	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	4.16E-06	1.18E+05	1.49E+03
Klinefelters	Additive			
	Daily.Interpol.	0.04712	4.11E+12	3.51
	LM.Cannabis_x_Herb.THC	8.40E-10	3.36E+07	2.59E+05
	Interactive			
	LM.Cannabis_x_Herb.THC	9.55E-07	2.53E+22	1.13E+14
	Daily.Interpol.	0.01114	3.38E+08	194.54
	2 Lags			
	LM.Cannabis_x_Herb.THC	<2.2E-16	9.90E+18	4.11E+15

Table S22. E-Values from Geospatial Models

Anomaly	Term	<i>p</i> -Value	E-Value Estimate	Lower Bound E-Value
Chromosomes	<i>Additive</i>			
	Daily.Interpol.	3.61E-05	2.46E+24	2.67E+13
	LM.Cannabis_x_Resin.THCH	1.36E-07	18.49	8.15
	<i>Interactive</i>			
	Daily.Interpol.	2.22E-09	Infinity	Infinity
	LM.Cannabis_x_Resin.THCH	0.0077	74.39	4.94
	LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	0.0198	18.43	2.31
	<i>1 Lag</i>			
	Daily.Interpol.	2.29E-10	2.24E+18	2.18E+13
	LM.Cannabis_x_Resin.THCH	<2.2E-16	1.84E+03	510.05
	LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	0.0002	8.08	3.58
	<i>2 Lags</i>			
	Daily.Interpol.	<2.2E-16	1.81E+31	2.97E+25
	LM.Cannabis_x_Resin.THCH	5.57E-14	2.26E+06	1.07E+05
Genetic	<i>Additive</i>			
	LM.Cannabis_x_Herb.THCH	9.55E-07	2.54E+22	1.13E+14
	Daily.Interpol.	0.0111	3.38E+08	194.54
	<i>Interactive</i>			
	Daily.Interpol.	4.38E-14	Infinity	Infinity
	LM.Cannabis_x_Herb.THCH	0.0076	4.13E+05	61.12
	LM.Cannabis_x_Herb.THCH_x_Daily.Interpol.	7.63E-06	27.40	8.77
	<i>1 Lag</i>			

	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.0047	7.89	2.56
	Tobacco: LM.Cannabis_x_Herb.THC	0.0023	3.40	1.91
	2 Lags			
	Daily.Interpol.	0.0142	6.49E+115	2.92E+25
	LM.Cannabis_x_Herb.THC	0.0178	2.24E+05	17.73
Trisomy 21	Additive			
	LM.Cannabis_x_Herb.THC	<2.2E-16	3.59E+10	5.29E+08
	Interactive			
	LM.Cannabis_x_Herb.THC	0.000628	2.82E+45	2.23E+20
	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	2.06E-06	104.48	21.84
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	5.56E-05	3.98E+26	2.11E+14
	2 Lags			
	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	8.48E-10	86.25	29.18
	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	1.02E-10	2.18	1.90
Trisomy 18	Additive			
	LM.Cannabis_x_Resin.THC	4.94E-11	927.29	176.39
	Daily.Interpol.	0.0253	2.78E+08	25.51
	Interactive			
	LM.Cannabis_x_Resin.THC	1.65E-15	23.77	13.76
	Daily.Interpol.	4.26E-05	1.19E+09	1.06E+05
	2 Lags			
	LM.Cannabis_x_Resin.THC	<2.2E-16	101.56	59.31
Trisomy 13	Additive			
	Daily.Interpol.	< 2e-16	2.20E+40	2.16E+34
	Interactive			
	Daily.Interpol.	2.99E-05	2.17E+129	2.02E+71

	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	0.0008	14.37	4.18
	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	0.0030	2.76E+04	58.55
	2 Lags			
	Daily.Interpol.	3.63E-13	5.48E+32	1.91E+25
Turners Syn.	Additive			
	LM.Cannabis_x_Resin.THC	0.0055	3.14	1.79
	Interactive			
	Daily.Interpol.	3.35E-05	1.15E+99	2.21E+54
	2 Lags			
	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	4.16E-06	1.18E+05	1.49E+03
Klinefelters	Additive			
	Daily.Interpol.	0.04712	4.11E+12	3.51
	LM.Cannabis_x_Herb.THC	8.40E-10	3.36E+07	2.59E+05
	Interactive			
	LM.Cannabis_x_Herb.THC	9.55E-07	2.53E+22	1.13E+14
	Daily.Interpol.	0.01114	3.38E+08	194.54
	2 Lags			
	LM.Cannabis_x_Herb.THC	<2.2E-16	9.90E+18	4.11E+15

Table S23. E-Values Ordered by Anomaly

Anomaly	Regression	Model Type	Term	Group	p-Value	E-Value Estimate	Lower Bound E-Value
Chromosomes	Panel	Interactive	Daily.Interpol.	Daily	2.22E-09	Infinity	Infinity
Chromosomes	Spatial	Interactive	Daily.Interpol.	Daily	2.22E-09	Infinity	Infinity
Chromosomes	Panel	2 Lags	Daily.Interpol.	Daily	<2.2E-16	1.81E+31	2.97E+25
Chromosomes	Spatial	2 Lags	Daily.Interpol.	Daily	<2.2E-16	1.81E+31	2.97E+25
Chromosomes	Panel	Additive	Daily.Interpol.	Daily	3.61E-05	2.46E+24	2.67E+13
Chromosomes	Spatial	Additive	Daily.Interpol.	Daily	3.61E-05	2.46E+24	2.67E+13
Chromosomes	Panel	1 Lag	Daily.Interpol.	Daily	2.29E-10	2.24E+18	2.18E+13
Chromosomes	Spatial	1 Lag	Daily.Interpol.	Daily	2.29E-10	2.24E+18	2.18E+13
Chromosomes	Panel	2 Lags	LM.Cannabis_x_Resin.THC	Herb	5.57E-14	2.26E+06	1.07E+05
Chromosomes	Spatial	2 Lags	LM.Cannabis_x_Resin.THC	Herb	5.57E-14	2.26E+06	1.07E+05
Chromosomes	Panel	1 Lag	LM.Cannabis_x_Resin.THC	Daily	<2.2E-16	1.84E+03	510.05
Chromosomes	Spatial	1 Lag	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	1.84E+03	510.05
Chromosomes	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	1.36E-07	18.49	8.15
Chromosomes	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	1.36E-07	18.49	8.15
Chromosomes	Panel	Interactive	LM.Cannabis_x_Resin.THC	Resin	0.0077	74.39	4.94
Chromosomes	Spatial	Interactive	LM.Cannabis_x_Resin.THC	Resin	0.0077	74.39	4.94
Chromosomes	Panel	1 Lag	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0002	8.08	3.58
Chromosomes	Spatial	1 Lag	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0002	8.08	3.58
Chromosomes	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	0.0198	18.43	2.31

Chromosomes	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	0.0198	18.43	2.31
Genetic	Panel	Interactive	Daily.Interpol.	Daily	4.38E-14	Infinity	Infinity
Genetic	Spatial	Interactive	Daily.Interpol.	Daily	4.38E-14	Infinity	Infinity
Genetic	Panel	2 Lags	Daily.Interpol.	Daily	0.0142	6.49E+115	2.92E+25
Genetic	Spatial	2 Lags	Daily.Interpol.	Daily	0.0142	6.49E+115	2.92E+25
Genetic	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.54E+22	1.13E+14
Genetic	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.54E+22	1.13E+14
Genetic	Panel	Additive	Daily.Interpol.	Daily	0.0111	3.38E+08	194.54
Genetic	Spatial	Additive	Daily.Interpol.	Daily	0.0111	3.38E+08	194.54
Genetic	Panel	Interactive	LM.Cannabis_x_Herb.THC	Resin	0.0076	4.13E+05	61.12
Genetic	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Resin	0.0076	4.13E+05	61.12
Genetic	Panel	2 Lags	LM.Cannabis_x_Herb.THC	Herb	0.0178	2.24E+05	17.73
Genetic	Spatial	2 Lags	LM.Cannabis_x_Herb.THC	Herb	0.0178	2.24E+05	17.73
Genetic	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	7.63E-06	27.40	8.77
Genetic	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	7.63E-06	27.40	8.77
Genetic	Panel	1 Lag	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0047	7.89	2.56
Genetic	Spatial	1 Lag	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0047	7.89	2.56
Genetic	Panel	1 Lag	Tobacco: LM.Cannabis_x_Herb.THC	Herb	0.0023	3.40	1.91
Genetic	Spatial	1 Lag	Tobacco: LM.Cannabis_x_Herb.THC	Herb	0.0023	3.40	1.91
Klinefelters	Panel	2 Lags	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	9.90E+18	4.11E+15
Klinefelters	Spatial	2 Lags	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	9.90E+18	4.11E+15
Klinefelters	Panel	Interactive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.53E+22	1.13E+14
Klinefelters	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.53E+22	1.13E+14
Klinefelters	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	8.40E-10	3.36E+07	2.59E+05

Klinefelters	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	8.40E-10	3.36E+07	2.59E+05
Klinefelters	Panel	Interactive	Daily.Interpol.	Daily	0.01114	3.38E+08	194.54
Klinefelters	Spatial	Interactive	Daily.Interpol.	Daily	0.01114	3.38E+08	194.54
Klinefelters	Panel	Additive	Daily.Interpol.	Daily	0.04712	4.11E+12	3.51
Klinefelters	Spatial	Additive	Daily.Interpol.	Daily	0.04712	4.11E+12	3.51
Trisomy 13	Panel	Interactive	Daily.Interpol.	Daily	2.99E-05	2.17E+129	2.02E+71
Trisomy 13	Spatial	Interactive	Daily.Interpol.	Daily	2.99E-05	2.17E+129	2.02E+71
Trisomy 13	Panel	Additive	Daily.Interpol.	Daily	< 2e-16	2.20E+40	2.16E+34
Trisomy 13	Spatial	Additive	Daily.Interpol.	Daily	< 2e-16	2.20E+40	2.16E+34
Trisomy 13	Panel	2 Lags	Daily.Interpol.	Daily	3.63E-13	5.48E+32	1.91E+25
Trisomy 13	Spatial	2 Lags	Daily.Interpol.	Daily	3.63E-13	5.48E+32	1.91E+25
Trisomy 13	Panel	Interactive	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0030	2.76E+04	58.55
Trisomy 13	Spatial	Interactive	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0030	2.76E+04	58.55
Trisomy 13	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0008	14.37	4.18
Trisomy 13	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0008	14.37	4.18
Trisomy 18	Panel	Interactive	Daily.Interpol.	Daily	4.26E-05	1.19E+09	1.06E+05
Trisomy 18	Spatial	Interactive	Daily.Interpol.	Daily	4.26E-05	1.19E+09	1.06E+05
Trisomy 18	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	4.94E-11	927.29	176.39
Trisomy 18	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	4.94E-11	927.29	176.39
Trisomy 18	Panel	2 Lags	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	101.56	59.31
Trisomy 18	Spatial	2 Lags	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	101.56	59.31
Trisomy 18	Panel	Additive	Daily.Interpol.	Daily	0.0253	2.78E+08	25.51
Trisomy 18	Spatial	Additive	Daily.Interpol.	Daily	0.0253	2.78E+08	25.51

Trisomy 18	Panel	Interactive	LM.Cannabis_x_Resin.THC	Herb	1.65E-15	23.77	13.76
Trisomy 18	Spatial	Interactive	LM.Cannabis_x_Resin.THC	Herb	1.65E-15	23.77	13.76
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Herb.THC	Herb	0.000628	2.82E+45	2.23E+20
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Herb	0.000628	2.82E+45	2.23E+20
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	Daily	5.56E-05	3.98E+26	2.11E+14
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	Daily	5.56E-05	3.98E+26	2.11E+14
Trisomy 21	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	3.59E+10	5.29E+08
Trisomy 21	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	3.59E+10	5.29E+08
Trisomy 21	Panel	2 Lags	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	8.48E-10	86.25	29.18
Trisomy 21	Spatial	2 Lags	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	8.48E-10	86.25	29.18
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	2.06E-06	104.48	21.84
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	2.06E-06	104.48	21.84
Trisomy 21	Panel	2 Lags	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	1.02E-10	2.18	1.90
Trisomy 21	Spatial	2 Lags	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	1.02E-10	2.18	1.90
Turners	Panel	Interactive	Daily.Interpol.	Daily	3.35E-05	1.15E+99	2.21E+54

Turners	Spatial	Interactive	Daily.Interpol.	Daily	3.35E-05	1.15E+99	2.21E+54
Turners	Panel	2 Lags	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	4.16E-06	1.18E+05	1.49E+03
Turners	Spatial	2 Lags	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	4.16E-06	1.18E+05	1.49E+03
Turners	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	0.0055	3.14	1.79
Turners	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	0.0055	3.14	1.79

Table S24. E-Values ordered by group of covariates

Anomaly	Regression	Model Type	Term	Group	p-Value	E-Value Estimate	Lower Bound E-Value
Chromosomes	Panel	Interactive	Daily.Interpol.	Daily	2.22E-09	Infinity	Infinity
Genetic	Panel	Interactive	Daily.Interpol.	Daily	4.38E-14	Infinity	Infinity
Chromosomes	Spatial	Interactive	Daily.Interpol.	Daily	2.22E-09	Infinity	Infinity
Genetic	Spatial	Interactive	Daily.Interpol.	Daily	4.38E-14	Infinity	Infinity
Trisomy 13	Panel	Interactive	Daily.Interpol.	Daily	2.99E-05	2.17E+129	2.02E+71
Trisomy 13	Spatial	Interactive	Daily.Interpol.	Daily	2.99E-05	2.17E+129	2.02E+71
Turners	Panel	Interactive	Daily.Interpol.	Daily	3.35E-05	1.15E+99	2.21E+54
Turners	Spatial	Interactive	Daily.Interpol.	Daily	3.35E-05	1.15E+99	2.21E+54
Trisomy 13	Panel	Additive	Daily.Interpol.	Daily	< 2e-16	2.20E+40	2.16E+34
Trisomy 13	Spatial	Additive	Daily.Interpol.	Daily	< 2e-16	2.20E+40	2.16E+34
Chromosomes	Panel	2 Lags	Daily.Interpol.	Daily	<2.2E-16	1.81E+31	2.97E+25
Chromosomes	Spatial	2 Lags	Daily.Interpol.	Daily	<2.2E-16	1.81E+31	2.97E+25
Genetic	Panel	2 Lags	Daily.Interpol.	Daily	0.0142	6.49E+115	2.92E+25
Genetic	Spatial	2 Lags	Daily.Interpol.	Daily	0.0142	6.49E+115	2.92E+25
Trisomy 13	Panel	2 Lags	Daily.Interpol.	Daily	3.63E-13	5.48E+32	1.91E+25
Trisomy 13	Spatial	2 Lags	Daily.Interpol.	Daily	3.63E-13	5.48E+32	1.91E+25
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	Daily	5.56E-05	3.98E+26	2.11E+14
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Herb.THC	Daily	5.56E-05	3.98E+26	2.11E+14
Chromosomes	Panel	Additive	Daily.Interpol.	Daily	3.61E-05	2.46E+24	2.67E+13
Chromosomes	Spatial	Additive	Daily.Interpol.	Daily	3.61E-05	2.46E+24	2.67E+13

Chromosomes	Panel	1 Lag	Daily.Interpol.	Daily	2.29E-10	2.24E+18	2.18E+13
Chromosomes	Spatial	1 Lag	Daily.Interpol.	Daily	2.29E-10	2.24E+18	2.18E+13
Trisomy 18	Panel	Interactive	Daily.Interpol.	Daily	4.26E-05	1.19E+09	1.06E+05
Trisomy 18	Spatial	Interactive	Daily.Interpol.	Daily	4.26E-05	1.19E+09	1.06E+05
Turners	Panel	2 Lags	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	4.16E-06	1.18E+05	1.49E+03
Turners	Spatial	2 Lags	LM.Cannabis_x_Resin.THC: LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	4.16E-06	1.18E+05	1.49E+03
Chromosomes	Panel	1 Lag	LM.Cannabis_x_Resin.THC	Daily	<2.2E-16	1.84E+03	510.05
Genetic	Panel	Additive	Daily.Interpol.	Daily	0.0111	3.38E+08	194.54
Klinefelters	Panel	Interactive	Daily.Interpol.	Daily	0.01114	3.38E+08	194.54
Genetic	Spatial	Additive	Daily.Interpol.	Daily	0.0111	3.38E+08	194.54
Klinefelters	Spatial	Interactive	Daily.Interpol.	Daily	0.01114	3.38E+08	194.54
Trisomy 13	Panel	Interactive	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0030	2.76E+04	58.55
Trisomy 13	Spatial	Interactive	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0030	2.76E+04	58.55
Trisomy 21	Panel	2 Lags	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	8.48E-10	86.25	29.18
Trisomy 21	Spatial	2 Lags	LM.Cannabis_x_Herb.THC: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	8.48E-10	86.25	29.18
Trisomy 18	Panel	Additive	Daily.Interpol.	Daily	0.0253	2.78E+08	25.51
Trisomy 18	Spatial	Additive	Daily.Interpol.	Daily	0.0253	2.78E+08	25.51
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	2.06E-06	104.48	21.84
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	2.06E-06	104.48	21.84
Genetic	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	7.63E-06	27.40	8.77
Genetic	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	7.63E-06	27.40	8.77
Klinefelters	Panel	Additive	Daily.Interpol.	Daily	0.04712	4.11E+12	3.51
Klinefelters	Spatial	Additive	Daily.Interpol.	Daily	0.04712	4.11E+12	3.51

Genetic	Panel	1 Lag	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0047	7.89	2.56
Genetic	Spatial	1 Lag	LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	0.0047	7.89	2.56
Chromosomes	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	0.0198	18.43	2.31
Chromosomes	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Daily	0.0198	18.43	2.31
Trisomy 21	Panel	2 Lags	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	1.02E-10	2.18	1.90
Trisomy 21	Spatial	2 Lags	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.: LM.Cannabis_x_Resin.THC_x_Daily.Interpol.	Daily	1.02E-10	2.18	1.90
Trisomy 21	Panel	Interactive	LM.Cannabis_x_Herb.THC	Herb	0.000628	2.82E+45	2.23E+20
Trisomy 21	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Herb	0.000628	2.82E+45	2.23E+20
Klinefelters	Panel	2 Lags	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	9.90E+18	4.11E+15
Klinefelters	Spatial	2 Lags	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	9.90E+18	4.11E+15
Genetic	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.54E+22	1.13E+14
Klinefelters	Panel	Interactive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.53E+22	1.13E+14
Genetic	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.54E+22	1.13E+14
Klinefelters	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Herb	9.55E-07	2.53E+22	1.13E+14
Trisomy 21	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	3.59E+10	5.29E+08
Trisomy 21	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	<2.2E-16	3.59E+10	5.29E+08
Klinefelters	Panel	Additive	LM.Cannabis_x_Herb.THC	Herb	8.40E-10	3.36E+07	2.59E+05
Klinefelters	Spatial	Additive	LM.Cannabis_x_Herb.THC	Herb	8.40E-10	3.36E+07	2.59E+05
Chromosomes	Panel	2 Lags	LM.Cannabis_x_Resin.THC	Herb	5.57E-14	2.26E+06	1.07E+05
Chromosomes	Spatial	2 Lags	LM.Cannabis_x_Resin.THC	Herb	5.57E-14	2.26E+06	1.07E+05
Genetic	Panel	2 Lags	LM.Cannabis_x_Herb.THC	Herb	0.0178	2.24E+05	17.73
Genetic	Spatial	2 Lags	LM.Cannabis_x_Herb.THC	Herb	0.0178	2.24E+05	17.73
Trisomy 18	Panel	Interactive	LM.Cannabis_x_Resin.THC	Herb	1.65E-15	23.77	13.76
Trisomy 18	Spatial	Interactive	LM.Cannabis_x_Resin.THC	Herb	1.65E-15	23.77	13.76
Trisomy 13	Panel	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0008	14.37	4.18
Trisomy 13	Spatial	Interactive	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0008	14.37	4.18
Chromosomes	Panel	1 Lag	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0002	8.08	3.58

Chromosomes	Spatial	1 Lag	LM.Cannabis_x_Herb.THC_x_Daily.Interpol.	Herb	0.0002	8.08	3.58
Genetic	Panel	1 Lag	Tobacco: LM.Cannabis_x_Herb.THC	Herb	0.0023	3.40	1.91
Genetic	Spatial	1 Lag	Tobacco: LM.Cannabis_x_Herb.THC	Herb	0.0023	3.40	1.91
Chromosomes	Spatial	1 Lag	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	1.84E+03	510.05
Trisomy 18	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	4.94E-11	927.29	176.39
Trisomy 18	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	4.94E-11	927.29	176.39
Genetic	Panel	Interactive	LM.Cannabis_x_Herb.THC	Resin	0.0076	4.13E+05	61.12
Genetic	Spatial	Interactive	LM.Cannabis_x_Herb.THC	Resin	0.0076	4.13E+05	61.12
Trisomy 18	Panel	2 Lags	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	101.56	59.31
Trisomy 18	Spatial	2 Lags	LM.Cannabis_x_Resin.THC	Resin	<2.2E-16	101.56	59.31
Chromosomes	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	1.36E-07	18.49	8.15
Chromosomes	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	1.36E-07	18.49	8.15
Chromosomes	Panel	Interactive	LM.Cannabis_x_Resin.THC	Resin	0.0077	74.39	4.94
Chromosomes	Spatial	Interactive	LM.Cannabis_x_Resin.THC	Resin	0.0077	74.39	4.94
Turners	Panel	Additive	LM.Cannabis_x_Resin.THC	Resin	0.0055	3.14	1.79
Turners	Spatial	Additive	LM.Cannabis_x_Resin.THC	Resin	0.0055	3.14	1.79

Table S25. Summary of E-Values by Group of Covariates

Group	Number	Mean Minimum E-Value	Median Minimum E-Value	Minimum Minimum E-Value	Maximum Minimum E-Value	Mean E- Value Estimate	Median E- Value Estimate	Minimum E-Value Estimate	Maximum E-Value Estimate
Daily	30	1.47E+306	1.91E+25	3.51	1.10E+307	1.47E+306	1.81E+31	2.78E+08	1.10E+307
Herb	34	1.31E+19	58.55	1.90	2.23E+20	1.66E+44	2.24E+05	2.18	2.82E+45
Resin	22	213.63	21.84	1.79	1490.00	4.86E+04	101.56	3.14	4.13E+05

Table S26. Wilcoxon Tests for Intergroup Comparison of Grouped Covariates

Comparison	W-Statistic	Alternative	<i>p</i> -Value
Lower E-Value, Daily_v_Herb	788	two.sided	1.87E-04
Lower E-Value, Daily_v_Resin	588	two.sided	1.81E-06
Lower E-Value, Herb_v_Resin	464	two.sided	0.1330
E-Value Estimate, Daily_v_Herb	864	two.sided	1.95E-06
E-Value Estimate, Daily_v_Resin	660	two.sided	1.01E-09
E-Value Estimate, Herb_v_Resin	492	two.sided	0.0486

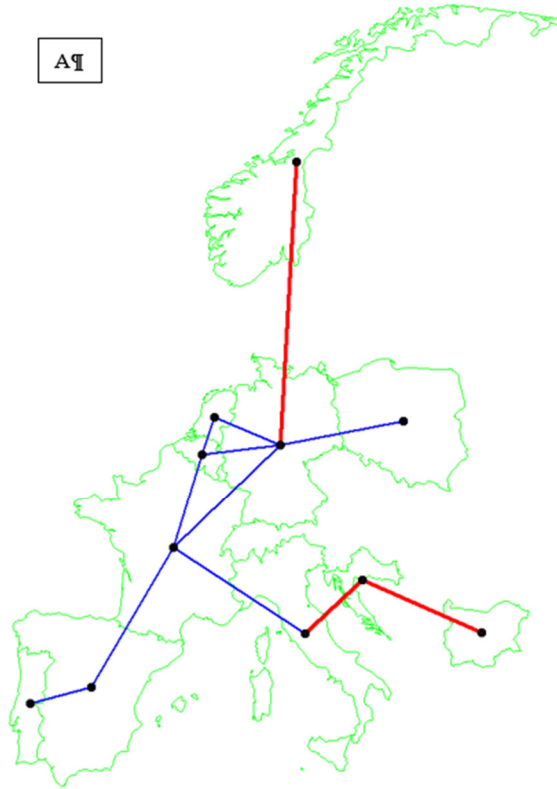
Table S27.Epigenomic Hits for PPP1CC from Schrott Data 2021

Nearest Gene Name	Page	Functional Annotation	Number Genes Identified	<i>p</i> -Value	Bonferroni Adjusted <i>p</i> -Value
PPP1CC	236	Focal Adhesion	39	0.000934	0.226633
PPP1CC	236	Dopaminergic synapse	27	0.001420	0.32431
PPP1CC	236	Long term potentiation	17	0.017678	0.385287
PPP1CC	236	Vascular smooth muscle contraction	25	0.001862	0.400987
PPP1CC	236	Inflammation, TRP channel regulator	22	0.001999	0.423304
PPP1CC	236	cGMP-PKG signalling	30	0.003895	0.658065
PPP1CC	236	Actin cytoskeleton regulation	37	0.004587	0.717564
PPP1CC	237	Hippo signalling	16	0.040247	1.000000
PPP1CC	237	Oxytocin signalling	31	0.044117	1.000000
PPP1CC	237	cAMP signalling	20	0.046734	1.000000
PPP1CC	237	Insulin signalling	54	0.067770	1.000000
PPP1CC	238	Platelet Activation	21	0.079093	1.000000
PPP1CC	238	Cardiomyocyte adrenergic signalling	22	0.079093	1.000000

Supplementary Figure

Edited (Red) Links (Blue) to European Country
Neighbourhood Links for Chromosomal Anomalies Dataset

A



Final Country Neighbourhood Links for
European Chromosomal Anomalies Dataset

B



Figure S1. International spatial links for European Chromosomal dataset (A) edited and (B) final.