

S15 Table: A-443654 significantly affects the expression of the selected 163 genes due to “LINCS L1000 Chem Pert down” category in Enrichr. The last number after the - is dose density.

| Term                             | Overlap | P-value                | Adjusted P-value       |
|----------------------------------|---------|------------------------|------------------------|
| LINCS L1000 Chem Pert down       |         |                        |                        |
| LJP006 BT20 24H-A443654-1.11     | 19/117  | $1.22 \times 10^{-19}$ | $1.01 \times 10^{-15}$ |
| LJP006 SKBR3 24H-A443654-3.33    | 16/114  | $1.16 \times 10^{-15}$ | $1.04 \times 10^{-12}$ |
| LJP006 HEPG2 24H-A443654-10      | 14/102  | $1.04 \times 10^{-13}$ | $3.99 \times 10^{-11}$ |
| LJP006 BT20 24H-A443654-3.33     | 13/92   | $5.52 \times 10^{-13}$ | $1.59 \times 10^{-10}$ |
| LJP006 HCC515 24H-A443654-1.11   | 15/145  | $9.24 \times 10^{-13}$ | $2.49 \times 10^{-10}$ |
| LJP006 SKBR3 24H-A443654-1.11    | 13/119  | $1.60 \times 10^{-11}$ | $2.31 \times 10^{-9}$  |
| LJP006 HA1E 24H-A443654-0.04     | 13/139  | $1.16 \times 10^{-10}$ | $1.18 \times 10^{-8}$  |
| LJP006 HA1E 24H-A443654-1.11     | 12/114  | $1.54 \times 10^{-10}$ | $1.49 \times 10^{-8}$  |
| LJP006 HA1E 24H-A443654-0.37     | 13/147  | $2.34 \times 10^{-10}$ | $2.12 \times 10^{-8}$  |
| LJP006 MCF10A 3H-A443654-10      | 11/101  | $6.34 \times 10^{-10}$ | $4.83 \times 10^{-8}$  |
| LJP006 LNCAP 24H-A443654-1.11    | 12/132  | $8.57 \times 10^{-10}$ | $6.19 \times 10^{-8}$  |
| LJP006 PC3 24H-A443654-1.11      | 13/175  | $2.03 \times 10^{-9}$  | $1.27 \times 10^{-7}$  |
| LJP006 LNCAP 24H-A443654-0.12    | 10/86   | $2.04 \times 10^{-9}$  | $1.27 \times 10^{-7}$  |
| LJP006 HCC515 24H-A443654-10     | 11/114  | $2.34 \times 10^{-9}$  | $1.42 \times 10^{-7}$  |
| LJP006 HA1E 24H-A443654-0.12     | 11/125  | $6.25 \times 10^{-9}$  | $3.24 \times 10^{-7}$  |
| LJP006 MCF10A 24H-A443654-0.37   | 10/107  | $1.75 \times 10^{-8}$  | $7.66 \times 10^{-7}$  |
| LJP006 HCC515 24H-A443654-3.33   | 10/111  | $2.49 \times 10^{-8}$  | $1.02 \times 10^{-6}$  |
| LJP006 BT20 24H-A443654-10       | 9/83    | $2.49 \times 10^{-8}$  | $1.02 \times 10^{-6}$  |
| LJP006 HEPG2 24H-A443654-3.33    | 10/117  | $4.13 \times 10^{-8}$  | $1.59 \times 10^{-6}$  |
| LJP006 MDAMB231 3H-A443654-10    | 10/118  | $4.49 \times 10^{-8}$  | $1.71 \times 10^{-6}$  |
| LJP006 HA1E 24H-A443654-3.33     | 8/64    | $4.92 \times 10^{-8}$  | $1.85 \times 10^{-6}$  |
| LJP006 A375 24H-A443654-1.11     | 8/68    | $8.00 \times 10^{-8}$  | $2.78 \times 10^{-6}$  |
| LJP006 A549 24H-A443654-10       | 8/70    | $1.01 \times 10^{-7}$  | $3.36 \times 10^{-6}$  |
| LJP006 MCF10A 3H-A443654-1.11    | 8/72    | $1.26 \times 10^{-7}$  | $4.08 \times 10^{-6}$  |
| LJP006 BT20 24H-A443654-0.04     | 9/112   | $3.41 \times 10^{-7}$  | $9.39 \times 10^{-6}$  |
| LJP006 HME1 24H-A443654-3.33     | 7/57    | $3.94 \times 10^{-7}$  | $1.06 \times 10^{-5}$  |
| LJP006 HS578T 24H-A443654-0.12   | 8/85    | $4.63 \times 10^{-7}$  | $1.20 \times 10^{-5}$  |
| LJP006 HME1 3H-A443654-0.12      | 6/37    | $5.04 \times 10^{-7}$  | $1.29 \times 10^{-5}$  |
| LJP006 HME1 24H-A443654-1.11     | 7/61    | $6.33 \times 10^{-7}$  | $1.56 \times 10^{-5}$  |
| LJP006 HME1 24H-A443654-10       | 6/39    | $6.98 \times 10^{-7}$  | $1.70 \times 10^{-5}$  |
| LJP006 LNCAP 24H-A443654-3.33    | 7/63    | $7.91 \times 10^{-7}$  | $1.89 \times 10^{-5}$  |
| LJP006 PC3 24H-A443654-3.33      | 9/124   | $8.10 \times 10^{-7}$  | $1.93 \times 10^{-5}$  |
| LJP006 HME1 3H-A443654-3.33      | 8/93    | $9.27 \times 10^{-7}$  | $2.17 \times 10^{-5}$  |
| LJP006 HME1 3H-A443654-1.11      | 9/142   | $2.52 \times 10^{-6}$  | $4.99 \times 10^{-5}$  |
| LJP006 HME1 24H-A443654-0.04     | 7/75    | $2.62 \times 10^{-6}$  | $5.16 \times 10^{-5}$  |
| LJP006 MDAMB231 3H-A443654-0.37  | 6/49    | $2.80 \times 10^{-6}$  | $5.46 \times 10^{-5}$  |
| LJP006 SKBR3 24H-A443654-0.04    | 7/77    | $3.13 \times 10^{-6}$  | $6.00 \times 10^{-5}$  |
| LJP006 HS578T 24H-A443654-0.04   | 6/52    | $3.99 \times 10^{-6}$  | $7.41 \times 10^{-5}$  |
| LJP006 HS578T 24H-A443654-0.37   | 8/115   | $4.63 \times 10^{-6}$  | $8.43 \times 10^{-5}$  |
| LJP006 BT20 3H-A443654-1.11      | 6/54    | $4.99 \times 10^{-6}$  | $8.98 \times 10^{-5}$  |
| LJP006 SKBR3 3H-A443654-3.33     | 6/56    | $6.19 \times 10^{-6}$  | $1.07 \times 10^{-4}$  |
| LJP006 SKBR3 3H-A443654-1.11     | 6/56    | $6.19 \times 10^{-6}$  | $1.07 \times 10^{-4}$  |
| LJP006 LNCAP 3H-A443654-1.11     | 6/58    | $7.62 \times 10^{-6}$  | $1.29 \times 10^{-4}$  |
| LJP006 SKBR3 24H-A443654-0.37    | 8/126   | $9.11 \times 10^{-6}$  | $1.49 \times 10^{-4}$  |
| LJP006 MDAMB231 24H-A443654-1.11 | 6/64    | $1.36 \times 10^{-5}$  | $2.10 \times 10^{-4}$  |
| LJP006 MCF7 3H-A443654-10        | 6/66    | $1.62 \times 10^{-5}$  | $2.44 \times 10^{-4}$  |
| LJP006 A549 24H-A443654-0.12     | 7/99    | $1.67 \times 10^{-5}$  | $2.50 \times 10^{-4}$  |
| LJP006 A549 24H-A443654-1.11     | 8/137   | $1.68 \times 10^{-5}$  | $2.51 \times 10^{-4}$  |
| LJP006 HS578T 24H-A443654-1.11   | 6/69    | $2.10 \times 10^{-5}$  | $3.04 \times 10^{-4}$  |
| LJP006 HCC515 24H-A443654-0.12   | 7/106   | $2.60 \times 10^{-5}$  | $3.68 \times 10^{-4}$  |
| LJP006 HCC515 24H-A443654-0.37   | 7/106   | $2.60 \times 10^{-5}$  | $3.67 \times 10^{-4}$  |
| LJP006 MDAMB231 24H-A443654-10   | 5/47    | $3.93 \times 10^{-5}$  | $5.16 \times 10^{-4}$  |
| LJP006 HS578T 3H-A443654-10      | 7/114   | $4.16 \times 10^{-5}$  | $5.44 \times 10^{-4}$  |

S15 Table: (Continued)

|                                  |       |                       |                       |
|----------------------------------|-------|-----------------------|-----------------------|
| LJP006 A549 24H-A443654-0.37     | 8/157 | $4.48 \times 10^{-5}$ | $5.77 \times 10^{-4}$ |
| LJP006 MDAMB231 3H-A443654-1.11  | 6/80  | $4.88 \times 10^{-5}$ | $6.20 \times 10^{-4}$ |
| LJP006 A375 24H-A443654-0.12     | 7/120 | $5.77 \times 10^{-5}$ | $7.18 \times 10^{-4}$ |
| LJP006 SKBR3 3H-A443654-10       | 6/83  | $6.01 \times 10^{-5}$ | $7.42 \times 10^{-4}$ |
| LJP006 BT20 24H-A443654-0.37     | 7/124 | $7.11 \times 10^{-5}$ | $8.51 \times 10^{-4}$ |
| LJP006 HS578T 3H-A443654-3.33    | 7/128 | $8.69 \times 10^{-5}$ | $9.99 \times 10^{-4}$ |
| LJP006 MDAMB231 24H-A443654-0.37 | 6/89  | $8.89 \times 10^{-5}$ | $1.02 \times 10^{-3}$ |
| LJP006 SKBR3 24H-A443654-0.12    | 7/129 | $9.12 \times 10^{-5}$ | $1.04 \times 10^{-3}$ |
| LJP006 PC3 24H-A443654-10        | 6/90  | $9.46 \times 10^{-5}$ | $1.07 \times 10^{-3}$ |
| LJP006 BT20 3H-A443654-3.33      | 4/31  | $1.13 \times 10^{-4}$ | $1.24 \times 10^{-3}$ |
| LJP006 HT29 24H-A443654-1.11     | 7/134 | $1.16 \times 10^{-4}$ | $1.27 \times 10^{-3}$ |
| LJP006 HME1 24H-A443654-0.37     | 6/94  | $1.20 \times 10^{-4}$ | $1.31 \times 10^{-3}$ |
| LJP006 LNCAP 24H-A443654-0.37    | 7/135 | $1.21 \times 10^{-4}$ | $1.32 \times 10^{-3}$ |
| LJP006 SKBR3 3H-A443654-0.12     | 4/32  | $1.28 \times 10^{-4}$ | $1.39 \times 10^{-3}$ |
| LJP006 HME1 3H-A443654-10        | 5/60  | $1.29 \times 10^{-4}$ | $1.39 \times 10^{-3}$ |
| LJP006 A375 24H-A443654-3.33     | 4/35  | $1.83 \times 10^{-4}$ | $1.87 \times 10^{-3}$ |
| LJP006 MCF10A 3H-A443654-0.04    | 4/36  | $2.04 \times 10^{-4}$ | $2.05 \times 10^{-3}$ |
| LJP006 HS578T 3H-A443654-0.37    | 5/68  | $2.33 \times 10^{-4}$ | $2.30 \times 10^{-3}$ |
| LJP006 MCF7 24H-A443654-0.12     | 6/108 | $2.58 \times 10^{-4}$ | $2.51 \times 10^{-3}$ |
| LJP006 BT20 24H-A443654-0.12     | 6/110 | $2.85 \times 10^{-4}$ | $2.73 \times 10^{-3}$ |
| LJP006 MCF10A 3H-A443654-3.33    | 6/110 | $2.85 \times 10^{-4}$ | $2.73 \times 10^{-3}$ |
| LJP006 HT29 24H-A443654-10       | 5/71  | $2.85 \times 10^{-4}$ | $2.73 \times 10^{-3}$ |
| LJP006 MDAMB231 24H-A443654-3.33 | 5/71  | $2.85 \times 10^{-4}$ | $2.73 \times 10^{-3}$ |
| LJP006 HS578T 3H-A443654-1.11    | 6/113 | $3.29 \times 10^{-4}$ | $3.08 \times 10^{-3}$ |
| LJP006 MCF7 24H-A443654-10       | 4/43  | $4.10 \times 10^{-4}$ | $3.68 \times 10^{-3}$ |
| LJP006 HT29 24H-A443654-3.33     | 5/78  | $4.42 \times 10^{-4}$ | $3.93 \times 10^{-3}$ |
| LJP006 A375 24H-A443654-10       | 4/44  | $4.48 \times 10^{-4}$ | $3.98 \times 10^{-3}$ |
| LJP006 BT20 3H-A443654-10        | 4/45  | $4.88 \times 10^{-4}$ | $4.29 \times 10^{-3}$ |
| LJP006 MDAMB231 3H-A443654-3.33  | 6/123 | $5.18 \times 10^{-4}$ | $4.51 \times 10^{-3}$ |
| LJP006 SKBR3 3H-A443654-0.37     | 3/20  | $5.47 \times 10^{-4}$ | $4.71 \times 10^{-3}$ |
| LJP006 LNCAP 3H-A443654-10       | 5/82  | $5.56 \times 10^{-4}$ | $4.77 \times 10^{-3}$ |
| LJP006 MDAMB231 24H-A443654-0.04 | 4/48  | $6.26 \times 10^{-4}$ | $5.26 \times 10^{-3}$ |
| LJP006 MCF7 24H-A443654-1.11     | 4/49  | $6.77 \times 10^{-4}$ | $5.61 \times 10^{-3}$ |
| LJP006 LNCAP 3H-A443654-3.33     | 5/89  | $8.09 \times 10^{-4}$ | $6.54 \times 10^{-3}$ |
| LJP006 MCF7 24H-A443654-0.37     | 5/91  | $8.94 \times 10^{-4}$ | $7.14 \times 10^{-3}$ |
| LJP006 MCF7 3H-A443654-1.11      | 5/91  | $8.94 \times 10^{-4}$ | $7.13 \times 10^{-3}$ |
| LJP006 BT20 3H-A443654-0.37      | 3/25  | $1.07 \times 10^{-3}$ | $8.27 \times 10^{-3}$ |
| LJP006 BT20 3H-A443654-0.04      | 3/26  | $1.20 \times 10^{-3}$ | $9.09 \times 10^{-3}$ |
| LJP006 MCF10A 3H-A443654-0.37    | 4/62  | $1.64 \times 10^{-3}$ | $1.18 \times 10^{-2}$ |
| LJP006 MCF7 3H-A443654-3.33      | 4/66  | $2.07 \times 10^{-3}$ | $1.43 \times 10^{-2}$ |
| LJP006 MDAMB231 24H-A443654-0.12 | 4/70  | $2.57 \times 10^{-3}$ | $1.71 \times 10^{-2}$ |
| LJP006 HEPG2 24H-A443654-0.37    | 5/116 | $2.62 \times 10^{-3}$ | $1.74 \times 10^{-2}$ |
| LJP006 LNCAP 3H-A443654-0.37     | 3/34  | $2.64 \times 10^{-3}$ | $1.75 \times 10^{-2}$ |
| LJP006 HEPG2 24H-A443654-1.11    | 5/125 | $3.62 \times 10^{-3}$ | $2.27 \times 10^{-2}$ |
| LJP006 HS578T 3H-A443654-0.12    | 3/39  | $3.92 \times 10^{-3}$ | $2.41 \times 10^{-2}$ |
| LJP006 MCF7 24H-A443654-3.33     | 3/43  | $5.16 \times 10^{-3}$ | $2.99 \times 10^{-2}$ |
| LJP006 HME1 3H-A443654-0.04      | 3/48  | $7.03 \times 10^{-3}$ | $3.82 \times 10^{-2}$ |
| LJP006 LNCAP 24H-A443654-0.04    | 3/48  | $7.03 \times 10^{-3}$ | $3.82 \times 10^{-2}$ |
| LJP006 HT29 24H-A443654-0.37     | 3/50  | $7.87 \times 10^{-3}$ | $4.18 \times 10^{-2}$ |
| LJP006 LNCAP 3H-A443654-0.04     | 2/18  | $9.27 \times 10^{-3}$ | $4.75 \times 10^{-2}$ |