S8: Compounds with gene signatures anticorrelated to metastatic disease or the MYC signaling signature

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| **Rank** | **Name of compound** | **Known function** | **N\*** | **p-value†** |
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|  |  |  |  |  |
| Anti-correlated to the MYC signaling signature |   |   |
|  |  |  |  |  |
| 1 | trichostatin A | HDAC inhibitor | 182 | <0.00001 |
| 1 | LY-294002 | PI3-Kinase inhibitor | 61 | <0.00001 |
| 1 | sirolimus | mTOR inhibitor | 44 | <0.00001 |
| 1 | tanespimycin | heat shock protein 90 inhibitor | 62 | <0.00001 |
| 5 | trifluoperazine | antipsychotic drug | 16 | 0.0006 |
| 6 | metyrapone | steroid 11β-hydroxylase inhibitor | 4 | 0.0007 |
| 7 | latamoxef | oxacephem antibiotic  | 3 | 0.0001 |
| 8 | 3-acetylcoumarin |  | 5 | 0.001 |
| 9 | wortmannin | PI3-Kinase inhibitor | 18 | 0.001 |
| 10 | vorinostat | HDAC inhibitor | 12 | 0.003 |
|  |  |  |  |  |
| Anti-correlated to a gene signature defined by genes differentially regulated in patients with metastatic disease compared with patients without metastatic disease |
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|  |  |  |  |  |
| 1 | puromycin | Protein synthesis inhibitor | 4 | <0.00001 |
| 1 | cicloheximide | Protein synthesis inhibitor | 4 | <0.00001 |
| 1 | trichostatin A | HDAC inhibitor | 182 | <0.00001 |
| 1 | sirolimus | mTOR inhibitor | 44 | <0.00001 |
| 1 | LY-294002 | PI3-Kinase inhibitor | 61 | <0.00001 |
| 6 | wortmannin | PI3-Kinase inhibitor | 18 | 0.00002 |
| 7 | thioridazine | Antipsychotic drug | 20 | 0.00006 |
| 8 | cephaeline | alkaloid chemical | 5 | 0.0003 |
| 9 | vorinostat | HDAC inhibitor | 12 | 0.0003 |
| 10 | trifluoperazine | Antipsychotic drug | 16 | 0.0004 |
|  |  |  |  |  |
|   |   |   |   |   |
| \* N = number of instances in which the compounds were tested in the Connectivity map |  |
| †The p-value for each small molecule represents the distribution of these scores  |  |  |
| compared with the distribution of scores among all small molecules, using a  |  |  |
| permutation test as described by Lamb et al (2) |   |   |