

## H. pylori N6

| Compound                          | Luminescence in first screen | IC <sub>50</sub> luc                   | IC <sub>50</sub> vit                      | MIC                 | MBC                 |
|-----------------------------------|------------------------------|--|---|---------------------|---------------------|
| Tyrphostin AG 879                 | 18 %                         | 0.34 µg/ml, 1.1 µM                     | 0.03 µg/ml, 0.09 µM                       | 1 µg/ml, 3.2 µM     | 4 µg/ml, 12.6 µM    |
| L-750,667-trihydrochloride        | 5 %                          | 0.87 µg/ml, 1.6 µM / 0.9 µg/ml, 1.7 µM | 0.58 µg/ml, 1.1 µM                        | 1 µg/ml, 1.9 µM     | > 8 µg/ml, 15.2 µM  |
| Calmidazoliumchloride             | 20 %                         | 2.13 µg/ml, 3.1 µM / 2.7 µg/ml, 3.9 µM | 0.13 µg/ml, 0.19 µM / 0.16 µg/ml, 0.23 µM | 2 µg/ml, 2.9 µM     | 4 µg/ml, 5.8 µM     |
| Z-L-Phe-chloromethylketone (ZPCK) | 12 %                         | 3.8 µg/ml, 11.5 µM / 4 µg/ml, 12.1 µM  | 5.4 µg/ml, 16.3 µM                        | 0.5 µg/ml, 1.5 µM   | 4 µg/ml, 12.1 µM    |
| Ebselen                           | 15 %                         | 2.6 µg/ml, 9.5 µM                      | 2.9 µg/ml, 10.6 µM                        | 4 µg/ml, 14.6 µM    | 4 µg/ml, 14.6 µM    |
| SP600125                          | 9 %                          | 3.7 µg/ml, 16.8 µM                     | precipitated; n.d.                        | 8 µg/ml, 36.3 µM    | > 64 µg/ml          |
| Calcimycine                       | 9 %                          | 0.04 µg/ml, 0.076 µM                   | 0.01 µg/ml, 0.02 µM                       | 0.25 µg/ml, 0.5 µM  | 0.5 µg/ml, 1 µM     |
| NSC 95397                         | 1 %                          | 0.46 µg/ml, 1.48 µM                    | 0.18 µg/ml, 0.58 µM                       | 0.5 µg/ml, 1.6 µM   | 1 µg/ml, 3.2 µM     |
| β-Lapachone                       | 7 %                          | 0.27 µg/ml, 1.11 µM                    | 0.1 µg/ml, 0.4 µM                         | 0.25 µg/ml, 1 µM    | ≥ 1 µg/ml, 4.1 µM   |
| Flupirtinmaleate                  | 3 %                          | not applicable                         | 39.8 µg/ml, 94.7 µM                       | 256 µg/ml, 609 µM   | > 256 µg/ml         |
| YC-1                              | 1 %                          | 0.22 µg/ml, 0.72 µM                    | 6.13 µg/ml, 20.1 µM                       | 4 µg/ml, 13.1 µM    | 16 µg/ml, 52.6 µM   |
| Bay 11-7085                       | 1 %                          | 0.7 µg/ml, 2.8 µM / 0.9 µg/ml, 3.6 µM  | 0.48 µg/ml, 1.9 µM                        | 0.25 µg/ml, 1 µM    | 0.5 µg/ml, 2 µM     |
| L-745,870-hydrochloride           | 22 %                         | 0.2 µg/ml, 0.55 µM                     | 1.76 µg/ml, 4.8 µM                        | 2 µg/ml, 5.5 µM     | > 32 µg/ml, 88.1 µM |
| Chelerythrine-chloride            | 19 %                         | 2.28 µg/ml, 5.9 µM                     | 6.97 µg/ml, 18.2 µM                       | 8 µg/ml, 20.8 µM    | 16 µg/ml, 41.7 µM   |
| Tyrphostin A9 / Malonoben         | 19 %                         | 0.04 µg/ml, 0.14 µM                    | 0.01 µg/ml, 0.04 µM                       | 0.125 µg/ml, 0.4 µM | 4 µg/ml, 14.2 µM    |

## H. pylori P12

| Compound                          | MIC                 | MBC                    |
|-----------------------------------|---------------------|------------------------|
| Tyrphostin AG 879                 | 2 µg/ml, 6.3 µM     | 8 µg/ml, 25.3 µM       |
| L-750,667                         | 1 µg/ml, 1.9 µM     | > 256 µg/ml, 485.2 µM  |
| Calmidazolium                     | 4 µg/ml, 5.8 µM     | 16 µg/ml, 23.3 µM      |
| Z-L-Phe-chloromethylketone (ZPCK) | 0.125 µg/ml, 0.4 µM | 8 µg/ml, 24.1 µM       |
| Ebselen                           | 4 µg/ml, 14.6 µM    | 8 µg/ml, 29.2 µM       |
| SP600125                          | 8 µg/ml, 36.3 µM    | > 256 µg/ml, 1162.4 µM |
| Calcimycine                       | 1 µg/ml, 1.9 µM     | 4 µg/ml, 7.6 µM        |
| NSC 95397                         | 0.5 µg/ml, 1.6 µM   | 1 µg/ml, 3.2 µM        |
| β-Lapachone                       | 0.125 µg/ml, 0.5 µM | 0.25 µg/ml, 1 µM       |
| Flupirtinmaleate                  | 64 µg/ml, 152.2 µM  | 256 µg/ml, 609 µM      |
| YC-1                              | 16 µg/ml, 52.6 µM   | 32 µg/ml, 105.1 µM     |
| Bay 11-7085                       | 0.125 µg/ml, 0.5 µM | 1 µg/ml, 4 µM          |
| L-745,870                         | 4 µg/ml, 11 µM      | > 256 µg/ml, 704.7 µM  |
| Chelerythrine-chloride            | 2 µg/ml, 5.2 µM     | 4 µg/ml, 10.4 µM       |
| Tyrphostin A9 / Malonoben         | 0.125 µg/ml, 0.4 µM | > 0.5 µg/ml, 1.8 µM    |

**Supplemental Table S1:** specific compound characterization of selected compounds from LOPAC (repurposing) library with primary hit characteristics on the *H. pylori flaA* luciferase reporter strain. Selected compounds were tested in detail on two different *H. pylori* strains (N6, P12), demonstrating strain-independent reproducible compound effects. Since most of the compounds had strong effects on the vitality of *H. pylori*, P12 strain was exclusively tested for MIC and MBC values, revealing similar compound effects on both strains. P12 was slightly more sensitive than N6 in those assays. Bacteriostatic compounds in contrast to bactericidal compounds are distinguishable by high MBC values. The only compound with very little bacteriostatic or bactericidal effect, but strong motility inhibitory effect in this assay panel was flupirtinmaleate. All other compounds had strong antibacterial (“killing”) effects in vitro.