| Sequence     | MIC ug/mL | FIC ug/mL | FIC Index |
|--------------|-----------|-----------|-----------|
|              | $H_{99}$  | $\Delta CDC_{50}$ | $H_{99}$  | $\Delta CDC_{50}$ | $H_{99}$  | $\Delta CDC_{50}$ |
|              | Caspofungin | Peptide | Caspofungin | Peptide | Caspofungin | Peptide |
| Caspofungin  | 16        | 4        | -          | -       | -          | -       |
| QY15         | >128      | >128     | 8          | 0.5     | 1          | 0.5     | 0.5-1     | 0.5-1     |
| QY15-Ma      | >128      | 128      | 8          | 0.5     | 1          | 0.5     | 0.5-1     | 0.25      |
| AS15         | >128      | 128      | 8          | 0.5     | 1          | 0.5     | 0.5-1     | 0.25      |
| AS15-Ma      | >128      | 8        | 8          | 0.5     | 0.25       | 0.25    | 0.5-1     | 0.094     |
| AS15-Aa      | >128      | >128     | -          | -       | -          | -       | -         | -         |
| AS15-Ha      | >128      | >128     | -          | -       | -          | -       | -         | -         |
| AS15-Da      | >128      | >128     | -          | -       | -          | -       | -         | -         |
| AW9-Ma       | 64        | 2        | 4          | 16      | 0.125      | 0.125   | 0.5       | 0.094     |
| KS9-Ma       | >128      | >128     | -          | -       | -          | -       | -         | -         |
| GS9-Ma       | >128      | >128     | -          | -       | -          | -       | -         | -         |
| AS15-Pa      | >128      | 128      | 8          | 0.5     | 2          | 2       | 0.5-1     | 0.53      |
| AW9-Pa       | >128      | 8        | 8          | 0.5     | 2          | 1       | 0.5-1     | 0.75      |

S1. Table comprising all values of MIC, FIC, and FIC Index determined throughout the paper against wild-type and mutant strains.

S2. Figure showing calibration of the hemolysis experiment
S3. Alignment of *Homo sapiens* CDC50 protein with *Cryptococcus neoformans* CDC50. The boxed region shows the location of the original peptide sequences.

| Peptide  | Amount mg (Crude) | Yield % (Crude) | Amount mg (Purified) | Yield % (Purified) | Purity (%) |
|----------|-------------------|----------------|----------------------|--------------------|------------|
| AS15     | 176.23            | 111.5          | 123.98               | 78.43              | 99.2       |
| AS15-MA  | 199.5             | 111.4          | 120.61               | 67.34              | 97.5       |
| QY15     | 191.52            | 102.6          | 68.86                | 36.9               | 96.4       |
| QY15-MA  | 186.19            | 89.67          | 68.86                | 36.9               | 96.4       |
| AS15-AC  | 190.91            | 117.6          | 162.15               | 99.9               | 99.0       |
| AS15-HEX | 160.78            | 95.76          | 91.82                | 54.7               | 99.3       |
| AS15-DA  | 179.14            | 103.3          | 133.68               | 64.38              | 96.0       |
| AW9-MA   | 129.83            | 104.1          | 77.64                | 62.3               | 87.6       |
| K9-MA    | 107.14            | 97.54          | 72.85                | 66.3               | 81.1       |
| G59-MA   | 105.90            | 98.76          | 36.72                | 34.2               | 70.5       |
| AS15-Pa  | 178.10            | 97.9           | 105.43               | 59.7               | 76.0       |
| AW9-Pa   | 134.51            | 105            | 58.24                | 46.5               | 93.7       |

S4. Yield and purity of peptides before and after HPLC purification.
| Peptide | Expected Mass (Da) | Calculated m/z | Crude | Purified |
|---------|--------------------|----------------|-------|----------|
|         |                    | +1 | +2 | +3 | Observed m/z | Comment | Observed m/z | Comment |
| AS15    | 1580.76            | 1581.77 | 791.39 | 527.92 | 790.5 | +2 | 790.4 | +2 |
| AS15-Ma | 1791.13            | 1792.13 | 896.57 | 598.04 | 895.5 | +2 | 895.5 | +2 |
| QY15    | 1865.98            | 1866.99 | 934.0 | 622.99 | 932.9 | +2 | 932.9 | +2 |
| QY15-Ma | 2076.34            | 2077.35 | 1039.18 | 693.11 | 1038.3 | +2 | 1038.4 | +2 |
| AS15-Ac | 1622.80            | 1623.80 | 812.4 | 541.93 | 812.5 | +1, +2 | 812.3 | +2 |
| AS15-Ha | 1678.91            | 1679.91 | 840.455 | 560.63 | 1679, 839.45 | +1, +2 | 840.5 | +2 |
| AS15-Da | 1733.94            | 1734 | 867.97 | 578.98 | 867.55 | +2 | 869.6 | +2 |
| AW9-Ma  | 1246.56            | 1247.56 | 624.28 | 416.52 | 1246.95, 623.6 | +1, +2 | 1247.7; 624.0 | +1, +2 |
| KS9-Ma  | 1098.40            | 1099.40 | 550.2 | 367.13 | 1099, 550.6 | +1, +2 | 1098.7, 551.0 | +1, +2 |
| GS9-Ma  | 1072.27            | 1073.27 | 537.135 | 358.42 | N/A | N/A | 1095.6 | +1, Na adduct |
| AS15-PA | 1819.18            | 1820.18 | 910.59 | 607.39 | 909.2 | +2 | 910.0 | +2 |
| AW9-PA  | 1274.62            | 1275.62 | 638.31 | 425.87 | 1274.3, 637.7 | +1, +2 | 1275.6; 637.8 | +1, +2 |

S5. Mass Spectroscopy results for peptide predicted monoisotopic mass