Table S1. Dauer formation in transgenic lines expressing lin-42

|  |         | GFP (+) <sup>†</sup> |      | GFP (-)*            |      | Broods | Animals |
|--|---------|----------------------|------|---------------------|------|--------|---------|
| Genotype*                              | Array # | Dauer formation (%)  | s.d. | Dauer formation (%) | s.d. | scored | scored§ |
| lin-42(ve11); daf-12(rh285); Ex[pHG82] | veEx426 | 3                    | 1    | 67                  | 1    | 3      | 301     |
|  | veEx582 | 6                    |      | 71                  |      | 1      | 48      |
|  | veEx427 | 8                    |      | 69                  |      | 1      | 50      |
| daf-7(e1372); Ex[Pdpy-7::lin-42C]      | veEx478 | 6                    | 6    | 97                  | 4    | 14     | 817     |
|  | veEx479 | 15                   | 11   | 99                  | 1    | 12     | 1221    |
|  | veEx477 | 26                   | 18   | 99                  | 1    | 12     | 1112    |
| daf-2(e1368); Ex[Pdpy-7::lin-42C]      | veEx528 | 25                   | 19   | 89                  | 16   | 22     | 1552    |
|  | veEx529 | 21                   | 16   | 96                  | 8    | 20     | 1019    |
|  | veEx530 | 14                   | 17   | 96                  | 9    | 18     | 498     |
| daf-2(e1370); Ex[Pdpy-7::lin-42C]      | veEx482 | 72                   | 19   | 99                  | 1    | 16     | 291     |
|  | veEx480 | 52                   | 24   | 100                 | 0    | 20     | 448     |
|  | veEx481 | 58                   | 32   | 99                  | 2    | 17     | 427     |
|  | veEx531 | 13                   | 15   | 98                  | 2    | 13     | 676     |
|  | veEx532 | 48                   | 14   | 96                  | 5    | 6      | 551     |
| daf-9(m540); Ex[Pdpy-7::lin-42C]       | veEx583 | 48                   | 25   | 97                  | 3    | 7      | 828     |
|  | veEx473 | 11                   | 9    | 93                  | 8    | 9      | 679     |
|  | veEx474 | 8                    | 12   | 88                  | 25   | 9      | 338     |
|  | veEx475 | 2                    | 4    | 83                  | 32   | 10     | 251     |
| daf-12(rh273); Ex[Pdpy-7::lin-42C]     | veEx520 | 1                    | 1    | 93                  | 8    | 9      | 687     |
|  | veEx521 | 0                    | 0    | 91                  | 3    | 11     | 649     |
|  | veEx522 | 1                    | 3    | 98                  | 3    | 6      | 292     |
|  | veEx523 | 0                    | 0    | 91                  | 11   | 8      | 285     |
|  | veEx524 | 0                    | 0    | 100                 | 0    | 4      | 141     |

Strains were grown at 20°C except for the daf-7 and daf-2 lines, which were analyzed at 25°C. s.d. could not be calculated for two control strains where a single brood was assayed. The dauer formation data averaged from different strains of the same genotype are presented in Figs 1, 3 and 4. \*Constructs were co-injected with str-1::gfp (100  $ng/\mu$ l) which is expressed in the two AWB neurons (Troemel et al., 1997), which had no effect on dauer formation when

assayed alone (see Fig. 1 legend).

<sup>&</sup>lt;sup>†</sup>Animals carried the extrachromosomal array as determined by *str-1::gfp* expression.

<sup>\*</sup>Animals lacked the extrachromosomal array as determined by absence of str-1::qfp expression.

<sup>§</sup>Total number of animals scored for each transgenic line.