**Supplementary Table 1** Regulatory interactions of the dauer Boolean network.

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| **Upstream node** | **Downstream node** | **Interaction** | **PubMed ID** |
| *aap-1* | *age-1* | Activating | 12393910 |
| *age-1* | *pdk-1* | Activating | 10364160 |
| *akt\** | *daf-16* | Inhibitory | 11747825, 11381260, 11747821, 9716402 |
| *cmk-1* | *daf-28* | Activating | 26335407 |
| *cmk-1* | *daf-7* | Activating | 26335407 |
| *daf-1* | *daf-8-14\** | Activating | 10887089 |
| *daf-11\** | *tax-4* | Activating | 8893027 |
| *daf-12* | *daf-16* | Activating | 15383841, 12966085 |
| *daf-12* | *daf-16* | Activating | 15383841 |
| *daf-12* | *daf-9* | Activating | 15084461 |
| *daf-12* | dauer | Activating | 15383841 |
| *daf-16*  | *ins-18* | Activating | 22683638 |
| *daf-16* | *ins-7* | Inhibitory | 12845331 |
| *daf-16* | *ins-7* | Inhibitory | 19489741 |
| *daf-16* | dauer | Activating | 15383841 |
| *daf-2* | *aap-1* | Activating | 12393910 |
| *daf-2* | *dhs-16* | Activating | 22505847 |
| *daf-2* | *hsf-1* | Inhibitory | 23116063 |
| *daf-28* | *daf-2* | Activating | 12654727, 27125673 |
| *daf-3* | *daf-5* | Activating | 14681186 |
| *daf-5* | *ins-1* | Activating | 21533078 |
| *daf-7* | *daf-1-4* | Activating | 10887089, 8413626, 8570636 |
| *daf-7* | *ins-7* | Activating | 19489741 |
| *daf-8-14\** | *daf-3* | Inhibitory | 20081192, 14992718 |
| *dhs-16* | *daf-9* | Inhibitory | 22505847 |
| *hsf-1* | *daf-7* | Inhibitory | 23116063 |
| *ins-1* | *daf-2* | Inhibitory | 21343369, 11274053 |
| *ins-18* | *daf-2* | Inhibitory | 22683638 |
| *ins-7* | *daf-2* | Activating | 12845331 |
| *ncr\** | *daf-9* | Activating | 15509773 |
| *pdk-1* | *akt\** | Activating | 10364160 |
| *pher\** | *srbc\** | Activating | 19797623 |
| *srbc\** | *daf-11\** | Inhibitory | 19797623 |
| *tax-4* | *daf-7* | Activating | 16903785 |

**\***The nodes names used in literature have been modified for convenience. Here, *daf-11* = cGMP, pher = Pheromone, *ncr* = *ncr-1/2,* *daf-8-14* = *daf-8* and *daf-14*, *akt* = *akt-1/2*, *srbc* = *srbc-64* and *srbc-66*.