**Table S2**: **Scoring scheme for phenotypic response of mealworms to injection of sOAIP-1**

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| --- | --- | --- |
| **Response** | **Score** | **Characteristics of phenotypic response1** |
| Excitatory | 2 | Movements more erratic than control insects |
| Excitatory paralysis | 1 | Movements so erratic that the insect is effectively paralyzed and not able to move independently |
| Dead or moribund | 0 | Insect is dead or unable to right itself when turnedon its back |
| Depressive Paralysis | –1 | Movements so depressed that the insect is effectively paralyzed and not able to move independently |
| Depressive | –2 | Movements depressed compared with control insects |

1Insects were assessed at 5, 30, and 60 min post-injection. The observed states were given a numeric score based on differences from control insects injected only with water in order to determine whether the peptide was excitatory or depressive.