**Electronic supplementary material.**

# LINKING PATERNALLY-INHERITED mtDNA VARIANTS AND SPERM PERFORMANCE

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## SUPPORTING FIGURES AND TABLES

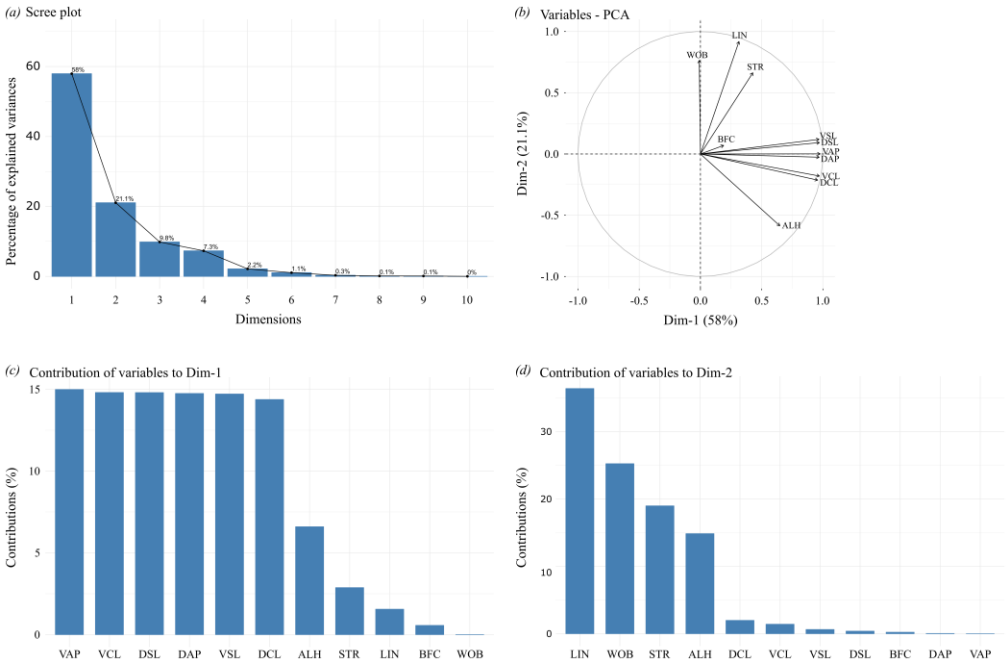


**Figure s1.** PCA summary. *(a)* Percentage of explained variance of each principal component. *(b)* Variable correlation plots. *(c)* Contribution of variables to the first principal component (PC1). *(d)* Contribution of variables to the second principal component (PC2). Sperm motility parameters: DAP, average path distance (µm); DSL, straight-line distance (µm); DCL, curvilinear distance (µm); VAP, average path velocity (µm·s$^{-1}$); VSL, straight-line velocity (µm·s$^{-1}$); VCL, curvilinear velocity (µm·s$^{-1}$); STR, straightness (VSL/VAP); LIN, linearity (VSL/VCL); ALH, amplitude of lateral head displacement (µm); BFC, beat-cross frequency (Hz); WOB, wobble coefficient (VAP/VCL). Additional information in table s1.

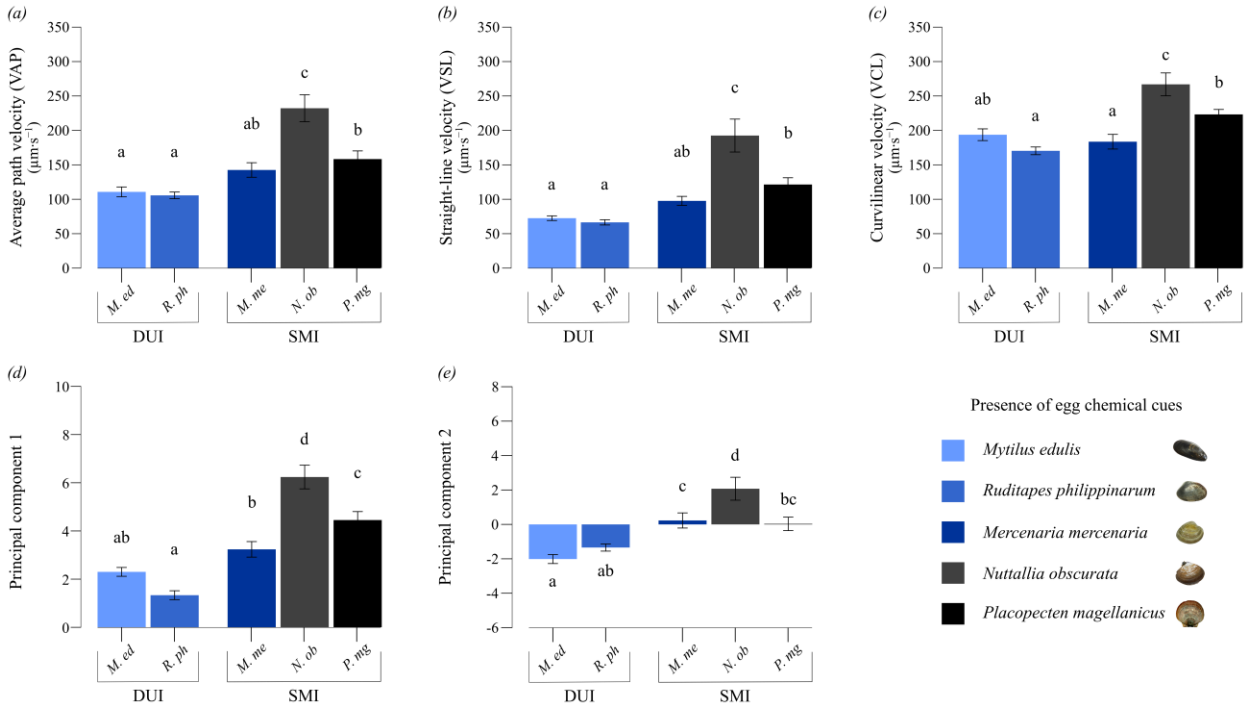


**Figure s2.** Basal sperm motility parameters in five bivalve species, DUI and SMI, with presence of chemoattractants. *(a)* Average path velocity (µm·s$^{-1}$). *(b)* Straight-line velocity (µm·s$^{-1}$). *(c)* Curvilinear velocity (µm·s$^{-1}$). *(d)* First principal component of the PCA combining sperm velocity parameters. *(e)* Second principal component of the PCA. Data are presented as means ± s.e.m. Differences ($p \leq 0.05$) in a *post hoc* Tukey's test are indicated by different letters. DUI species: *M. edulis* (*M. ed*, $n = 11$), *R. philippinarum* (*R. ph*, $n = 9$). SMI species: *M. mercenaria* (*M. me*, $n = 9$), *N. obscurata* (*N. ob*, $n = 5$), *P. magellanicus* (*P. mg*, $n = 11$). Detailed summary is reported in electronic supplementary material, tables s2 and s3.

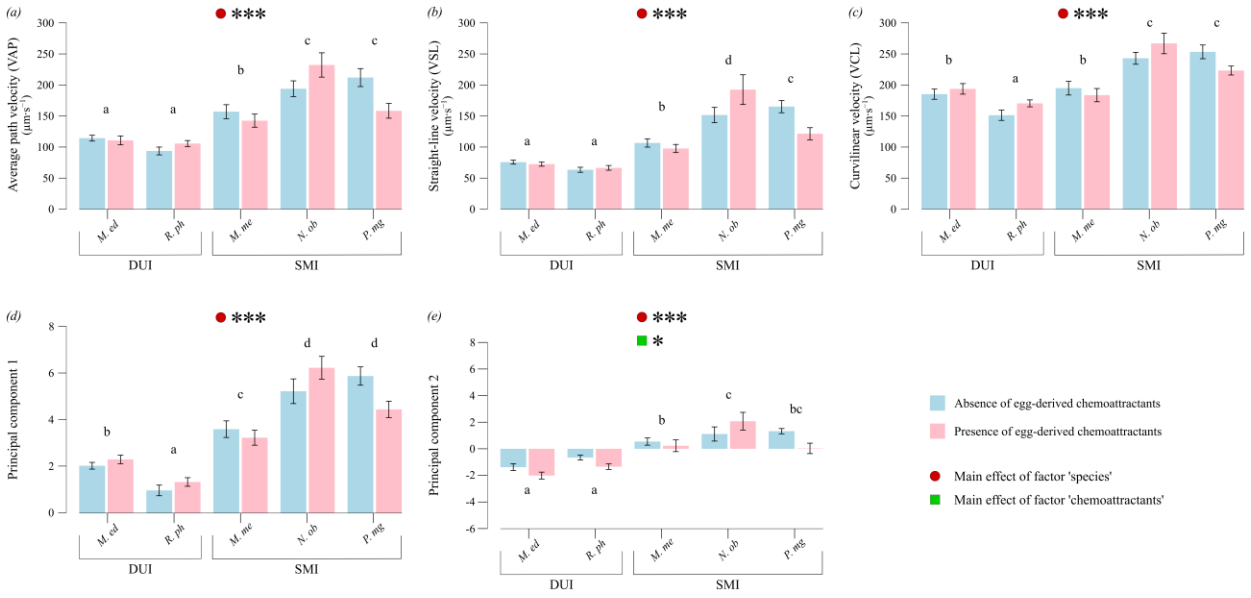


**Figure s3.** Sperm motility parameters comparison among five bivalve species, DUI and SMI, with and without chemoattractants. *(a)* Average path velocity (µm·s$^{-1}$). *(b)* Straight-line velocity (µm·s$^{-1}$). *(c)* Curvilinear velocity (µm·s$^{-1}$). *(d)* First principal component of the PCA combining sperm velocity parameters. *(e)* Second principal component of the PCA. Values are presented as means ± s.e.m. A linear mixed model was implemented for each parameter separately. The main effect of the two fixed factors 'species' and 'chemoattractants' are indicated with a circle and square respectively. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$. Differences among species are indicated by letters in subscript. DUI, doubly uniparental inheritance; SMI, strict maternal inheritance. Species: *M. edulis* (*M. ed*, $n = 11$); *R. philippinarum* (*R. ph*, $n = 9$); *M. mercenaria* (*M. me*, $n = 9$); *N. obscurata* (*N. ob*, $n = 5$); *P. magellanicus* (*P. mg*, $n = 11$). Detailed summary is reported in electronic supplementary material, tables s2 and s4.

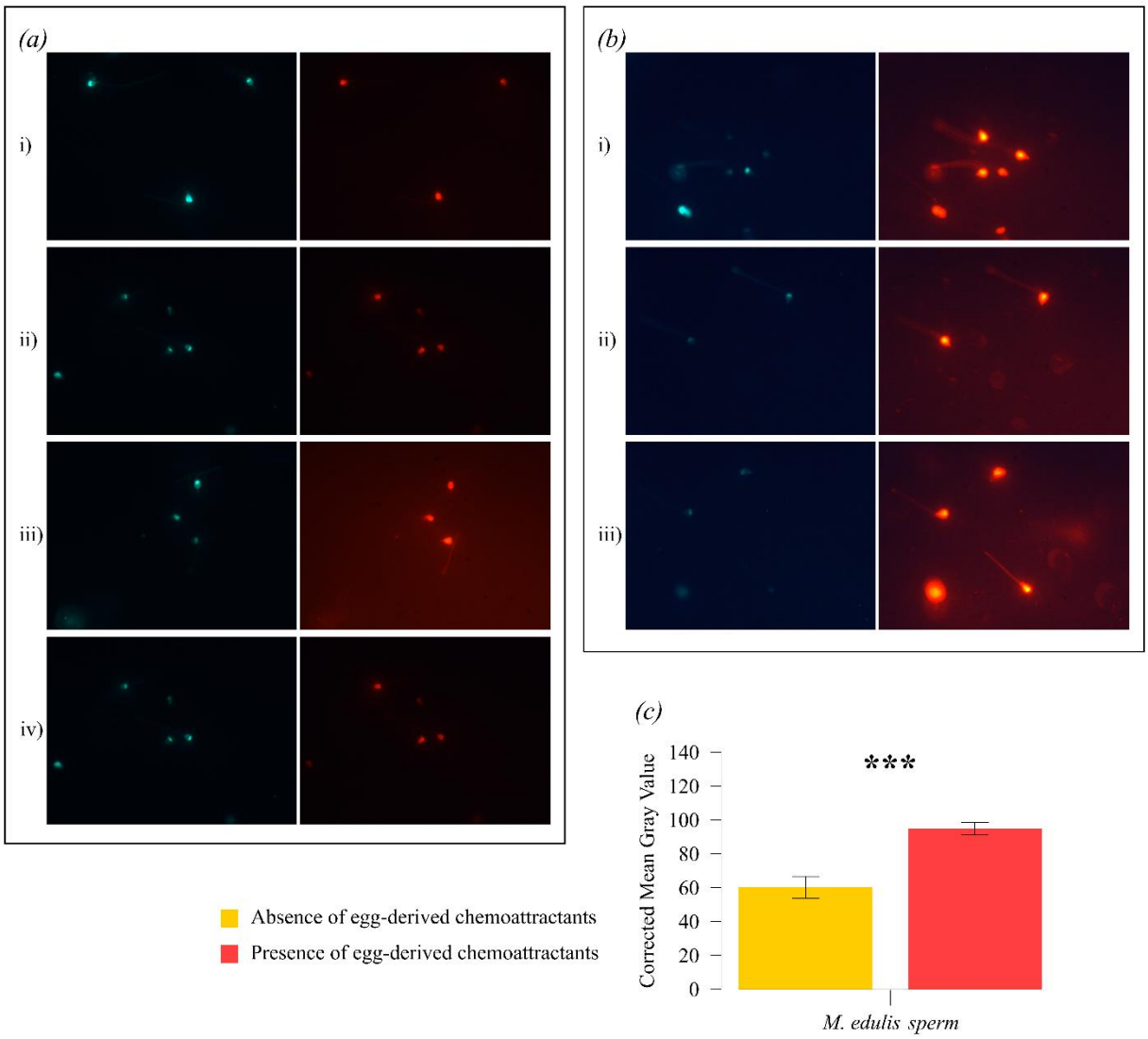


**Figure s4.** Membrane potential of *Mytilus edulis* (DUI) sperm mitochondria following the addition of egg-derived chemoattractants. The fluorescent dyes MitoSpy™ Green FM (400 nM, excitation/emission 490/516 nm) and MitoSpy™ Red CMXRos (500 nM; excitation/emission 577/598 nm) (BioLegend Inc, San Diego, California) were used to localize sperm mitochondria (green stain) and quantify their membrane potential (red stain), respectively. *(a)* Absence of egg-derived chemoattractants. *(b)* Presence of egg-derived chemoattractants. *(c)* Quantification and comparison of sperm mitochondria membrane potential without ($n$ = 15 spermatozoa) and with egg-derived chemoattractants ($n$ = 15 spermatozoa). Fluorescence intensity has been quantified as mean grey value per pixel and corrected for the relative background fluorescence. Values are presented as means ± s.e.m. The effect of oocytes detection has been tested through a paired $t$ test. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$.

**Table s1.** PCA summary. Contribution and correlation of the variables with principal components. The contributions of variables in accounting for the variability in a given principal component are expressed in percentage. Significant correlation coefficients ($p \leq 0.05$) are shown in bold.

| **Table s1** | **PC1** | | **PC2** | |
|---|---|---|---|---|
| Variable | Contribution | Correlation | Contribution | Correlation |
| **DAP** | 14.74 | **0.97** | 0.03 | -0.03 |
| **DSL** | 14.80 | **0.97** | 0.37 | **0.09** |
| **DCL** | 14.37 | **0.96** | 1.97 | **-0.21** |
| **VAP** | 14.99 | **0.98** | 0.00 | 0.00 |
| **VSL** | 14.71 | **0.97** | 0.62 | **0.12** |
| **VCL** | 14.80 | **0.97** | 1.40 | **-0.18** |
| **STR** | 2.87 | **0.43** | 18.97 | **0.66** |
| **LIN** | 1.55 | **0.31** | 36.37 | **0.92** |
| **ALH** | 6.60 | **0.65** | 14.84 | **-0.59** |
| **BFC** | 0.56 | **0.19** | 0.21 | 0.07 |
| **WOB** | 0.00 | -0.01 | 25.22 | **0.76** |

**Table s2.** Data summary table. Sperm motility parameters measured. Inheritance: DUI, doubly uniparental inheritance; SMI, strict maternal inheritance. Species: MyEd, *M. edulis* (*n* = 11); RuPh, *R. philippinarum* (*n* = 9); MeMe, *M. mercenaria* (*n* = 9); NuOb, *N. obscurata* (*n* = 5); PlMg, *P. magellanicus* (*n* = 11). Sperm motility parameters: DAP, average path distance (μm); DSL, straight-line distance (μm); DCL, curvilinear distance (μm); VAP, average path velocity (μm·s$^{-1}$); VSL, straight-line velocity (μm·s$^{-1}$); VCL, curvilinear velocity (μm·s$^{-1}$); STR, straightness (VSL/VAP); LIN, linearity (VSL/VCL); ALH, amplitude of lateral head displacement (μm); BFC, beat-cross frequency (Hz); WOB, wobble coefficient (VAP/VCL); PC1, principal component 1; PC2, principal component 2.

**Table s2**

| DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 | Inheritance | Species | Treatment | Chem | ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.90 | 32.39 | 93.14 | 107.70 | 68.10 | 183.81 | 63.99 | 38.74 | 10.58 | 23.11 | 59.83 | 1.65 | -1.77 | DUI | MyEd | Ctrl | N | MyEd_1 |
| 9.70 | 6.73 | 14.42 | 21.49 | 14.99 | 32.81 | 73.17 | 51.80 | 2.56 | 29.28 | 69.60 | -2.42 | 1.15 | DUI | MyEd | Rot | N | MyEd_1 |
| 9.38 | 6.93 | 13.37 | 19.98 | 15.04 | 28.95 | 72.33 | 55.30 | 1.96 | 33.31 | 71.78 | -2.45 | 1.51 | DUI | MyEd | Ama | N | MyEd_1 |
| 7.15 | 3.92 | 14.26 | 15.54 | 9.66 | 31.20 | 55.47 | 32.68 | 2.17 | 45.75 | 52.27 | -2.87 | -1.08 | DUI | MyEd | Omy | N | MyEd_1 |
| 58.69 | 37.96 | 100.53 | 129.96 | 87.97 | 214.06 | 68.65 | 44.32 | 9.41 | 30.10 | 63.30 | 2.46 | -1.01 | DUI | MyEd | Oxa | N | MyEd_1 |
| 104.38 | 40.19 | 140.71 | 165.54 | 76.38 | 225.83 | 45.19 | 32.86 | 8.64 | 28.01 | 74.01 | 3.19 | -1.83 | DUI | MyEd | Ctrl | ch | MyEd_1 |
| 10.77 | 8.31 | 14.75 | 14.65 | 11.30 | 20.05 | 79.85 | 64.59 | 1.51 | 25.37 | 78.67 | -2.46 | 2.57 | DUI | MyEd | Rot | ch | MyEd_1 |
| 9.47 | 7.79 | 11.82 | 13.69 | 11.30 | 17.05 | 87.03 | 68.06 | 0.79 | 29.55 | 78.53 | -2.44 | 3.08 | DUI | MyEd | Ama | ch | MyEd_1 |
| 8.67 | 7.32 | 10.49 | 13.33 | 11.37 | 15.96 | 87.64 | 72.22 | 2.01 | 28.02 | 82.14 | -2.33 | 3.32 | DUI | MyEd | Omy | ch | MyEd_1 |
| 54.19 | 30.52 | 95.23 | 106.95 | 64.99 | 187.67 | 66.61 | 40.11 | 11.54 | 23.75 | 59.46 | 1.78 | -1.79 | DUI | MyEd | Oxa | ch | MyEd_1 |
| 65.31 | 46.66 | 92.66 | 108.46 | 79.79 | 152.52 | 77.07 | 53.05 | 8.68 | 30.48 | 69.16 | 2.18 | 0.21 | DUI | MyEd | Ctrl | N | MyEd_2 |
| 8.11 | 4.39 | 15.09 | 22.54 | 13.76 | 42.30 | 55.90 | 38.17 | 3.57 | 40.30 | 59.17 | -2.57 | -0.68 | DUI | MyEd | Rot | N | MyEd_2 |
| 8.25 | 6.19 | 13.35 | 27.14 | 21.25 | 43.69 | 72.35 | 51.22 | 3.16 | 34.04 | 65.37 | -2.22 | 0.82 | DUI | MyEd | Ama | N | MyEd_2 |
| 8.95 | 5.66 | 18.22 | 24.88 | 16.88 | 52.88 | 61.77 | 36.46 | 4.86 | 46.40 | 52.16 | -2.17 | -1.10 | DUI | MyEd | Omy | N | MyEd_2 |
| 52.59 | 32.82 | 77.62 | 109.51 | 71.61 | 155.20 | 70.46 | 47.02 | 10.35 | 26.12 | 67.04 | 1.55 | -0.64 | DUI | MyEd | Oxa | N | MyEd_2 |
| 67.14 | 45.80 | 116.62 | 116.47 | 80.54 | 200.60 | 71.20 | 39.96 | 12.00 | 26.51 | 57.23 | 2.81 | -1.85 | DUI | MyEd | Ctrl | ch | MyEd_2 |
| 9.10 | 6.55 | 12.32 | 12.38 | 8.91 | 16.76 | 76.84 | 60.43 | 1.51 | 27.07 | 76.71 | -2.65 | 2.19 | DUI | MyEd | Rot | ch | MyEd_2 |
| 6.39 | 5.75 | 8.10 | 8.97 | 8.08 | 11.38 | 89.50 | 69.87 | 0.72 | 27.32 | 77.70 | -2.62 | 3.21 | DUI | MyEd | Ama | ch | MyEd_2 |
| 6.60 | 6.02 | 9.10 | 8.98 | 8.19 | 12.37 | 91.22 | 66.39 | 0.61 | 31.31 | 72.72 | -2.58 | 2.87 | DUI | MyEd | Omy | ch | MyEd_2 |
| 41.76 | 31.67 | 68.75 | 105.76 | 82.55 | 167.53 | 80.01 | 53.34 | 8.82 | 29.64 | 65.61 | 1.52 | 0.14 | DUI | MyEd | Oxa | ch | MyEd_2 |
| 50.41 | 37.41 | 94.46 | 113.40 | 83.41 | 195.51 | 73.92 | 40.84 | 9.32 | 26.42 | 55.22 | 2.01 | -1.39 | DUI | MyEd | Ctrl | N | MyEd_3 |
| 14.55 | 6.85 | 21.96 | 20.82 | 9.53 | 32.31 | 63.24 | 49.35 | 2.68 | 33.05 | 72.90 | -2.44 | 0.86 | DUI | MyEd | Rot | N | MyEd_3 |
| 9.27 | 7.50 | 11.27 | 12.61 | 10.20 | 15.33 | 83.76 | 68.27 | 0.84 | 23.69 | 81.90 | -2.57 | 3.13 | DUI | MyEd | Ama | N | MyEd_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | N | MyEd_3 |
| 44.29 | 31.90 | 81.30 | 85.67 | 63.58 | 153.32 | 74.41 | 42.96 | 8.75 | 30.71 | 57.30 | 1.13 | -1.00 | DUI | MyEd | Oxa | N | MyEd_3 |
| 49.63 | 31.93 | 91.12 | 96.06 | 66.14 | 169.67 | 74.04 | 37.78 | 11.05 | 21.54 | 53.58 | 1.54 | -1.87 | DUI | MyEd | Ctrl | ch | MyEd_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Rot | ch | MyEd_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | ch | MyEd_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | ch | MyEd_3 |
| 49.18 | 32.12 | 92.18 | 89.81 | 59.87 | 162.63 | 70.49 | 38.73 | 9.90 | 22.42 | 55.43 | 1.28 | -1.69 | DUI | MyEd | Oxa | ch | MyEd_3 |
| 68.25 | 39.71 | 100.57 | 125.83 | 79.64 | 182.85 | 64.65 | 43.54 | 8.55 | 29.31 | 68.01 | 2.20 | -0.78 | DUI | MyEd | Ctrl | N | MyEd_4 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Rot | N | MyEd_4 |
| 7.21 | 6.57 | 8.83 | 12.08 | 11.14 | 14.43 | 90.96 | 73.76 | 1.11 | 30.06 | 80.85 | -2.41 | 3.57 | DUI | MyEd | Ama | N | MyEd_4 |
| 4.87 | 4.18 | 6.77 | 6.62 | 5.69 | 9.20 | 85.85 | 61.79 | 0.49 | 28.49 | 71.98 | -2.86 | 2.45 | DUI | MyEd | Omy | N | MyEd_4 |
| 52.41 | 36.49 | 111.77 | 82.47 | 56.41 | 173.07 | 68.42 | 32.86 | 11.45 | 18.38 | 48.18 | 1.58 | -2.72 | DUI | MyEd | Oxa | N | MyEd_4 |
| 59.00 | 39.34 | 115.72 | 94.26 | 63.18 | 182.44 | 68.19 | 34.77 | 10.43 | 29.28 | 51.29 | 1.98 | -2.29 | DUI | MyEd | Ctrl | ch | MyEd_4 |
| 10.25 | 8.05 | 13.59 | 19.58 | 14.42 | 28.75 | 81.59 | 64.70 | 1.85 | 22.44 | 78.32 | -2.35 | 2.54 | DUI | MyEd | Rot | ch | MyEd_4 |
| 12.90 | 6.41 | 16.15 | 27.65 | 18.69 | 33.34 | 74.81 | 60.04 | 2.85 | 43.11 | 80.13 | -2.03 | 2.18 | DUI | MyEd | Ama | ch | MyEd_4 |
| 6.13 | 4.95 | 8.44 | 15.60 | 10.60 | 24.80 | 79.00 | 62.68 | 2.13 | 23.42 | 74.94 | -2.60 | 2.17 | DUI | MyEd | Omy | ch | MyEd_4 |
| 47.13 | 32.01 | 93.51 | 85.84 | 58.22 | 164.12 | 68.89 | 36.18 | 9.47 | 29.59 | 52.27 | 1.22 | -1.93 | DUI | MyEd | Oxa | ch | MyEd_4 |
| 50.74 | 29.47 | 91.10 | 117.82 | 72.55 | 206.85 | 63.87 | 37.37 | 11.04 | 25.88 | 58.24 | 1.84 | -2.00 | DUI | MyEd | Ctrl | N | MyEd_5 |
| 21.86 | 9.21 | 41.87 | 44.09 | 22.98 | 78.03 | 49.83 | 34.07 | 5.52 | 26.58 | 61.87 | -1.70 | -1.39 | DUI | MyEd | Rot | N | MyEd_5 |
| 19.03 | 5.39 | 26.48 | 26.04 | 7.38 | 36.33 | 37.47 | 29.61 | 3.07 | 26.59 | 76.33 | -2.86 | -0.82 | DUI | MyEd | Ama | N | MyEd_5 |
| 15.06 | 14.88 | 15.99 | 20.48 | 20.24 | 21.75 | 98.82 | 93.07 | 0.78 | 25.05 | 94.18 | -1.71 | 5.43 | DUI | MyEd | Omy | N | MyEd_5 |
| 52.16 | 34.31 | 89.69 | 116.32 | 78.52 | 194.98 | 68.12 | 40.26 | 10.33 | 28.35 | 59.31 | 1.94 | -1.51 | DUI | MyEd | Oxa | N | MyEd_5 |
| 49.05 | 26.85 | 104.62 | 97.32 | 55.98 | 200.47 | 57.56 | 29.86 | 11.75 | 28.58 | 49.65 | 1.52 | -3.15 | DUI | MyEd | Ctrl | ch | MyEd_5 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.45 | 7.54 | 27.27 | 28.64 | 14.28 | 42.95 | 52.13 | 37.86 | 4.29 | 24.85 | 68.49 | -2.37 | -0.55 | DUI | MyEd | Rot | ch | MyEd_5 |
| 16.13 | 6.47 | 17.74 | 21.94 | 8.80 | 24.13 | 64.02 | 53.20 | 0.90 | 27.88 | 86.80 | -2.68 | 2.03 | DUI | MyEd | Ama | ch | MyEd_5 |
| 12.26 | 7.59 | 17.90 | 29.85 | 23.22 | 38.96 | 84.21 | 68.64 | 5.65 | 30.57 | 78.59 | -1.59 | 2.34 | DUI | MyEd | Omy | ch | MyEd_5 |
| 45.44 | 28.99 | 85.97 | 95.69 | 62.42 | 166.92 | 66.64 | 39.25 | 12.70 | 20.72 | 57.78 | 1.40 | -2.03 | DUI | MyEd | Oxa | ch | MyEd_5 |
| 63.63 | 38.92 | 126.57 | 107.87 | 67.45 | 208.17 | 62.60 | 33.96 | 14.17 | 21.78 | 53.40 | 2.59 | -3.01 | DUI | MyEd | Ctrl | N | MyEd_6 |
| 22.83 | 11.47 | 47.05 | 41.23 | 23.35 | 82.39 | 49.52 | 28.60 | 5.98 | 20.17 | 57.09 | -1.67 | -2.03 | DUI | MyEd | Rot | N | MyEd_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | N | MyEd_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | N | MyEd_6 |
| 73.75 | 46.98 | 102.09 | 174.15 | 113.41 | 245.40 | 66.52 | 47.26 | 11.42 | 21.56 | 70.45 | 3.62 | -0.88 | DUI | MyEd | Oxa | N | MyEd_6 |
| 59.67 | 45.92 | 105.28 | 90.31 | 65.98 | 158.85 | 73.83 | 41.42 | 10.83 | 17.32 | 56.72 | 1.92 | -1.54 | DUI | MyEd | Ctrl | ch | MyEd_6 |
| 12.87 | 7.69 | 32.87 | 30.56 | 23.07 | 58.65 | 68.34 | 51.19 | 6.08 | 29.21 | 61.73 | -1.66 | -0.01 | DUI | MyEd | Rot | ch | MyEd_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | ch | MyEd_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | ch | MyEd_6 |
| 35.47 | 28.68 | 64.93 | 65.91 | 58.25 | 112.47 | 91.13 | 57.45 | 10.48 | 10.98 | 62.16 | 0.70 | 0.22 | DUI | MyEd | Oxa | ch | MyEd_6 |
| 57.79 | 43.28 | 98.26 | 91.93 | 67.63 | 153.89 | 74.99 | 44.38 | 9.87 | 26.79 | 59.14 | 1.83 | -1.02 | DUI | MyEd | Ctrl | N | MyEd_7 |
| 28.84 | 12.73 | 58.46 | 41.91 | 19.04 | 87.20 | 40.72 | 20.21 | 8.75 | 23.62 | 51.28 | -1.37 | -3.41 | DUI | MyEd | Rot | N | MyEd_7 |
| 12.52 | 3.59 | 25.64 | 20.76 | 5.06 | 43.73 | 39.98 | 27.39 | 7.78 | 31.41 | 56.16 | -2.51 | -2.52 | DUI | MyEd | Ama | N | MyEd_7 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | N | MyEd_7 |
| 73.82 | 41.82 | 105.78 | 121.23 | 70.94 | 181.44 | 65.56 | 41.96 | 9.77 | 30.86 | 65.26 | 2.36 | -1.15 | DUI | MyEd | Oxa | N | MyEd_7 |
| 60.41 | 45.67 | 108.31 | 91.14 | 68.28 | 163.91 | 76.03 | 42.79 | 10.22 | 28.49 | 56.15 | 2.10 | -1.30 | DUI | MyEd | Ctrl | ch | MyEd_7 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Rot | ch | MyEd_7 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | ch | MyEd_7 |
| 18.28 | 5.99 | 27.53 | 24.86 | 8.14 | 37.44 | 30.89 | 20.67 | 6.13 | 67.48 | 66.06 | -2.32 | -2.14 | DUI | MyEd | Omy | ch | MyEd_7 |
| 51.26 | 38.47 | 86.03 | 82.36 | 62.57 | 138.36 | 77.76 | 45.10 | 8.69 | 32.97 | 58.23 | 1.35 | -0.70 | DUI | MyEd | Oxa | ch | MyEd_7 |
| 53.18 | 32.45 | 94.51 | 141.84 | 93.53 | 234.81 | 66.30 | 39.34 | 11.50 | 27.57 | 58.69 | 2.57 | -1.87 | DUI | MyEd | Ctrl | N | MyEd_8 |
| 28.61 | 16.32 | 53.95 | 38.95 | 22.21 | 73.48 | 49.38 | 28.35 | 6.72 | 35.44 | 53.28 | -1.30 | -2.26 | DUI | MyEd | Rot | N | MyEd_8 |
| 18.85 | 8.40 | 30.12 | 25.88 | 11.59 | 41.41 | 43.11 | 28.59 | 3.98 | 28.57 | 65.50 | -2.55 | -1.37 | DUI | MyEd | Ama | N | MyEd_8 |
| 9.35 | 3.41 | 23.27 | 14.49 | 4.68 | 37.38 | 48.30 | 38.33 | 7.08 | 37.40 | 55.78 | -2.46 | -1.61 | DUI | MyEd | Omy | N | MyEd_8 |
| 58.68 | 37.35 | 90.84 | 129.07 | 86.40 | 198.23 | 69.07 | 44.50 | 11.82 | 23.62 | 64.23 | 2.41 | -1.24 | DUI | MyEd | Oxa | N | MyEd_8 |
| 62.54 | 46.53 | 116.06 | 114.16 | 84.84 | 203.90 | 73.13 | 40.92 | 11.22 | 31.20 | 55.01 | 2.81 | -1.72 | DUI | MyEd | Ctrl | ch | MyEd_8 |
| 5.96 | 5.14 | 7.76 | 8.10 | 6.99 | 10.55 | 86.26 | 66.26 | 0.53 | 21.37 | 76.81 | -2.81 | 2.88 | DUI | MyEd | Rot | ch | MyEd_8 |
| 13.82 | 11.10 | 17.87 | 19.18 | 15.44 | 24.73 | 79.29 | 61.34 | 1.07 | 27.37 | 76.71 | -2.30 | 2.36 | DUI | MyEd | Ama | ch | MyEd_8 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | ch | MyEd_8 |
| 57.83 | 41.23 | 97.56 | 107.80 | 78.52 | 177.48 | 75.14 | 44.19 | 10.65 | 26.66 | 59.21 | 2.19 | -1.15 | DUI | MyEd | Oxa | ch | MyEd_8 |
| 73.72 | 38.79 | 112.13 | 119.87 | 65.66 | 178.06 | 58.54 | 38.17 | 11.65 | 25.60 | 66.11 | 2.29 | -1.82 | DUI | MyEd | Ctrl | N | MyEd_9 |
| 14.40 | 5.27 | 30.12 | 31.81 | 10.15 | 63.46 | 35.97 | 19.53 | 5.01 | 22.54 | 51.11 | -2.65 | -3.00 | DUI | MyEd | Rot | N | MyEd_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | N | MyEd_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | N | MyEd_9 |
| 76.83 | 42.85 | 118.27 | 116.22 | 66.37 | 177.86 | 61.81 | 39.79 | 10.63 | 32.55 | 64.69 | 2.47 | -1.55 | DUI | MyEd | Oxa | N | MyEd_9 |
| 69.61 | 37.97 | 124.46 | 139.86 | 84.09 | 254.48 | 57.70 | 31.89 | 13.55 | 25.55 | 55.00 | 3.16 | -3.12 | DUI | MyEd | Ctrl | ch | MyEd_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Rot | ch | MyEd_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | ch | MyEd_9 |
| 19.53 | 7.47 | 28.74 | 26.55 | 10.15 | 39.09 | 38.23 | 25.97 | 7.08 | 40.39 | 67.94 | -2.28 | -1.86 | DUI | MyEd | Omy | ch | MyEd_9 |
| 42.64 | 30.16 | 85.49 | 95.84 | 69.31 | 179.16 | 72.80 | 39.98 | 10.36 | 30.58 | 54.14 | 1.48 | -1.62 | DUI | MyEd | Oxa | ch | MyEd_9 |
| 58.95 | 38.14 | 88.01 | 129.92 | 89.74 | 192.56 | 68.48 | 45.84 | 9.62 | 25.45 | 65.99 | 2.23 | -0.77 | DUI | MyEd | Ctrl | N | MyEd_10 |
| 15.42 | 7.86 | 30.17 | 34.01 | 20.33 | 90.62 | 53.82 | 28.35 | 6.13 | 27.15 | 59.90 | -1.89 | -1.71 | DUI | MyEd | Rot | N | MyEd_10 |
| 7.88 | 7.83 | 8.30 | 26.20 | 26.04 | 27.60 | 99.42 | 94.36 | 6.08 | 36.57 | 94.91 | -1.27 | 4.92 | DUI | MyEd | Ama | N | MyEd_10 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | N | MyEd_10 |
| 45.55 | 33.97 | 71.18 | 100.39 | 77.26 | 152.75 | 76.79 | 49.89 | 8.58 | 31.20 | 65.00 | 1.39 | -0.10 | DUI | MyEd | Oxa | N | MyEd_10 |
| 59.31 | 45.32 | 94.30 | 115.12 | 89.36 | 179.79 | 76.79 | 48.63 | 8.62 | 31.60 | 63.08 | 2.34 | -0.35 | DUI | MyEd | Ctrl | ch | MyEd_10 |
| 7.83 | 7.42 | 8.46 | 36.02 | 34.14 | 38.93 | 94.79 | 87.70 | 6.24 | 9.21 | 92.52 | -1.46 | 4.15 | DUI | MyEd | Rot | ch | MyEd_10 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Ama | ch | MyEd_10 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | MyEd | Omy | ch | MyEd_10 |
| 49.55 | 39.52 | 85.56 | 102.53 | 82.29 | 172.63 | 79.42 | 47.33 | 8.84 | 30.58 | 58.81 | 1.87 | -0.57 | DUI | MyEd | Oxa | ch | MyEd_10 |
| 42.73 | 28.41 | 74.02 | 90.00 | 62.00 | 144.55 | 68.91 | 44.80 | 9.84 | 19.05 | 63.83 | 0.88 | -0.93 | DUI | MyEd | Ctrl | N | MyEd_11 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.51 | 8.77 | 23.76 | 22.69 | 13.48 | 34.15 | 61.97 | 46.31 | 2.66 | 27.00 | 69.52 | -2.42 | 0.47 | DUI | MyEd | Rot | N | MyEd_11 |
| 14.03 | 9.02 | 33.14 | 22.21 | 14.36 | 51.28 | 63.81 | 40.07 | 6.28 | 36.93 | 53.40 | -1.86 | -1.09 | DUI | MyEd | Ama | N | MyEd_11 |
| 5.95 | 5.09 | 8.54 | 8.32 | 7.04 | 11.95 | 87.47 | 61.44 | 0.66 | 27.02 | 70.20 | -2.75 | 2.36 | DUI | MyEd | Omy | N | MyEd_11 |
| 40.00 | 25.49 | 72.41 | 92.67 | 59.83 | 156.84 | 65.98 | 40.94 | 11.91 | 19.10 | 61.43 | 0.96 | -1.63 | DUI | MyEd | Oxa | N | MyEd_11 |
| 53.02 | 34.25 | 105.70 | 94.66 | 60.22 | 187.47 | 65.03 | 32.84 | 14.25 | 16.30 | 50.54 | 1.88 | -3.09 | DUI | MyEd | Ctrl | ch | MyEd_11 |
| 12.00 | 5.87 | 18.73 | 30.12 | 26.69 | 56.38 | 67.40 | 41.32 | 3.39 | 30.87 | 65.48 | -2.15 | 0.12 | DUI | MyEd | Rot | ch | MyEd_11 |
| 6.82 | 7.65 | 12.49 | 26.89 | 33.56 | 53.15 | 117.45 | 67.46 | 6.46 | 31.40 | 59.15 | -1.09 | 2.22 | DUI | MyEd | Ama | ch | MyEd_11 |
| 15.44 | 6.44 | 30.42 | 28.43 | 11.78 | 56.39 | 41.54 | 30.43 | 5.25 | 67.03 | 62.05 | -2.02 | -1.48 | DUI | MyEd | Omy | ch | MyEd_11 |
| 62.32 | 43.69 | 116.61 | 99.05 | 70.24 | 181.31 | 71.87 | 40.57 | 11.09 | 19.84 | 55.85 | 2.26 | -1.78 | DUI | MyEd | Oxa | ch | MyEd_11 |
| 48.56 | 29.31 | 68.36 | 92.39 | 62.15 | 127.67 | 71.82 | 52.87 | 6.59 | 25.19 | 72.67 | 0.73 | 0.53 | DUI | RuPh | Ctrl | N | RuPh_1 |
| 27.60 | 15.63 | 49.23 | 50.10 | 29.18 | 86.83 | 57.21 | 36.63 | 7.11 | 23.09 | 61.38 | -1.08 | -1.32 | DUI | RuPh | Rot | N | RuPh_1 |
| 12.42 | 6.34 | 20.50 | 38.07 | 31.15 | 57.76 | 61.38 | 39.19 | 4.14 | 21.70 | 62.35 | -2.14 | -0.49 | DUI | RuPh | Ama | N | RuPh_1 |
| 16.87 | 9.12 | 28.81 | 32.62 | 18.80 | 59.60 | 58.11 | 34.94 | 6.07 | 39.30 | 61.94 | -1.82 | -1.02 | DUI | RuPh | Omy | N | RuPh_1 |
| 45.46 | 23.21 | 57.65 | 101.42 | 58.86 | 127.81 | 62.71 | 50.75 | 5.82 | 21.13 | 80.15 | 0.27 | 0.63 | DUI | RuPh | Oxa | N | RuPh_1 |
| 57.34 | 39.05 | 86.07 | 114.22 | 76.55 | 164.59 | 68.22 | 46.20 | 9.19 | 24.90 | 68.55 | 1.78 | -0.54 | DUI | RuPh | Ctrl | ch | RuPh_1 |
| 17.02 | 6.75 | 28.58 | 39.86 | 25.43 | 61.26 | 58.43 | 41.87 | 4.52 | 21.08 | 67.50 | -2.00 | -0.29 | DUI | RuPh | Rot | ch | RuPh_1 |
| 20.84 | 6.32 | 25.74 | 33.23 | 12.14 | 40.71 | 44.41 | 37.32 | 5.87 | 33.17 | 83.49 | -2.24 | -0.19 | DUI | RuPh | Ama | ch | RuPh_1 |
| 16.44 | 9.65 | 22.91 | 59.13 | 44.32 | 83.61 | 75.57 | 57.08 | 5.80 | 17.59 | 75.88 | -1.15 | 1.24 | DUI | RuPh | Omy | ch | RuPh_1 |
| 26.67 | 18.73 | 59.18 | 76.34 | 56.95 | 135.99 | 75.74 | 45.96 | 7.33 | 24.85 | 58.97 | 0.11 | -0.50 | DUI | RuPh | Oxa | ch | RuPh_1 |
| 66.85 | 41.23 | 102.25 | 123.21 | 81.75 | 188.13 | 66.97 | 43.75 | 8.24 | 28.90 | 65.73 | 2.25 | -0.78 | DUI | RuPh | Ctrl | N | RuPh_2 |
| 33.49 | 14.77 | 67.19 | 64.09 | 32.16 | 119.85 | 51.54 | 30.68 | 8.64 | 21.77 | 57.88 | -0.54 | -2.29 | DUI | RuPh | Rot | N | RuPh_2 |
| 11.87 | 7.81 | 12.97 | 32.30 | 21.26 | 35.28 | 65.81 | 60.24 | 2.76 | 35.36 | 91.54 | -2.18 | 2.49 | DUI | RuPh | Ama | N | RuPh_2 |
| 19.34 | 7.59 | 24.75 | 37.76 | 18.07 | 46.76 | 45.68 | 38.88 | 2.78 | 17.93 | 81.21 | -2.52 | 0.13 | DUI | RuPh | Omy | N | RuPh_2 |
| 53.97 | 33.78 | 72.93 | 125.13 | 91.50 | 166.46 | 72.07 | 54.46 | 7.46 | 28.99 | 75.06 | 1.75 | 0.62 | DUI | RuPh | Oxa | N | RuPh_2 |
| 63.28 | 37.42 | 97.45 | 125.56 | 82.25 | 188.57 | 64.45 | 41.99 | 9.67 | 22.09 | 64.95 | 2.13 | -1.21 | DUI | RuPh | Ctrl | ch | RuPh_2 |
| 24.36 | 10.08 | 44.68 | 33.71 | 14.08 | 61.57 | 46.84 | 29.42 | 5.32 | 21.32 | 61.20 | -2.02 | -1.75 | DUI | RuPh | Rot | ch | RuPh_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | ch | RuPh_2 |
| 14.21 | 6.99 | 20.48 | 28.05 | 18.80 | 38.60 | 67.33 | 53.13 | 3.31 | 22.03 | 76.13 | -2.25 | 1.20 | DUI | RuPh | Omy | ch | RuPh_2 |
| 39.38 | 25.90 | 70.95 | 92.12 | 65.01 | 167.25 | 71.13 | 37.74 | 9.71 | 20.22 | 54.20 | 0.89 | -1.70 | DUI | RuPh | Oxa | ch | RuPh_2 |
| 55.46 | 30.89 | 78.15 | 106.11 | 67.22 | 149.50 | 65.02 | 45.30 | 5.98 | 30.05 | 70.90 | 1.03 | -0.09 | DUI | RuPh | Ctrl | N | RuPh_3 |
| 28.45 | 11.99 | 49.90 | 49.35 | 23.56 | 86.04 | 45.56 | 26.85 | 8.19 | 16.10 | 60.39 | -1.39 | -2.40 | DUI | RuPh | Rot | N | RuPh_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | N | RuPh_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Omy | N | RuPh_3 |
| 37.03 | 24.87 | 56.16 | 97.94 | 68.31 | 142.63 | 73.10 | 51.30 | 6.63 | 21.32 | 69.28 | 0.53 | 0.31 | DUI | RuPh | Oxa | N | RuPh_3 |
| 56.78 | 32.33 | 106.49 | 84.69 | 49.47 | 165.93 | 59.22 | 31.77 | 7.58 | 36.74 | 53.87 | 1.15 | -2.13 | DUI | RuPh | Ctrl | ch | RuPh_3 |
| 29.86 | 13.24 | 54.77 | 62.21 | 31.90 | 102.75 | 50.65 | 34.56 | 7.49 | 17.00 | 64.45 | -0.97 | -1.60 | DUI | RuPh | Rot | ch | RuPh_3 |
| 13.41 | 9.55 | 32.60 | 18.24 | 12.99 | 44.33 | 71.22 | 29.30 | 10.91 | 41.32 | 41.14 | -1.49 | -2.59 | DUI | RuPh | Ama | ch | RuPh_3 |
| 20.40 | 8.47 | 28.81 | 30.90 | 12.79 | 45.95 | 41.46 | 31.09 | 3.68 | 28.14 | 74.29 | -2.50 | -0.81 | DUI | RuPh | Omy | ch | RuPh_3 |
| 41.50 | 21.59 | 81.33 | 70.35 | 40.58 | 135.49 | 57.29 | 31.03 | 7.39 | 33.66 | 53.02 | 0.10 | -2.16 | DUI | RuPh | Oxa | ch | RuPh_3 |
| 43.65 | 28.20 | 82.96 | 81.70 | 53.73 | 150.20 | 69.82 | 39.82 | 7.41 | 27.56 | 57.11 | 0.71 | -1.17 | DUI | RuPh | Ctrl | N | RuPh_4 |
| 24.01 | 11.12 | 44.92 | 48.48 | 24.68 | 82.70 | 50.86 | 33.49 | 5.76 | 26.98 | 61.29 | -1.51 | -1.46 | DUI | RuPh | Rot | N | RuPh_4 |
| 20.21 | 6.26 | 24.67 | 40.72 | 13.21 | 49.25 | 30.72 | 25.27 | 5.51 | 12.25 | 81.85 | -2.67 | -1.36 | DUI | RuPh | Ama | N | RuPh_4 |
| 15.51 | 7.42 | 21.49 | 31.31 | 18.73 | 41.02 | 53.68 | 45.72 | 4.90 | 33.84 | 77.08 | -2.16 | 0.32 | DUI | RuPh | Omy | N | RuPh_4 |
| 36.79 | 29.44 | 89.75 | 59.13 | 48.48 | 137.25 | 79.81 | 37.19 | 5.27 | 42.19 | 44.95 | 0.49 | -1.25 | DUI | RuPh | Oxa | N | RuPh_4 |
| 47.83 | 33.08 | 90.70 | 107.09 | 74.29 | 196.88 | 69.72 | 37.55 | 8.86 | 35.57 | 55.18 | 1.72 | -1.58 | DUI | RuPh | Ctrl | ch | RuPh_4 |
| 18.51 | 9.00 | 44.59 | 43.76 | 25.60 | 90.26 | 59.24 | 32.59 | 5.34 | 28.64 | 51.58 | -1.52 | -1.70 | DUI | RuPh | Rot | ch | RuPh_4 |
| 14.28 | 8.17 | 17.44 | 23.47 | 13.32 | 28.66 | 62.40 | 51.63 | 2.46 | 22.28 | 81.93 | -2.55 | 1.41 | DUI | RuPh | Ama | ch | RuPh_4 |
| 16.09 | 7.08 | 23.74 | 26.70 | 13.28 | 38.99 | 51.23 | 39.24 | 4.04 | 33.38 | 73.12 | -2.40 | -0.17 | DUI | RuPh | Omy | ch | RuPh_4 |
| 43.24 | 27.75 | 78.03 | 78.05 | 51.33 | 141.36 | 67.61 | 39.55 | 6.06 | 33.11 | 58.28 | 0.46 | -0.95 | DUI | RuPh | Oxa | ch | RuPh_4 |
| 53.50 | 34.05 | 91.33 | 117.77 | 79.61 | 189.54 | 68.39 | 43.17 | 8.51 | 28.59 | 61.85 | 1.83 | -0.98 | DUI | RuPh | Ctrl | N | RuPh_5 |
| 36.09 | 18.53 | 60.89 | 61.36 | 32.69 | 101.64 | 54.54 | 32.24 | 5.86 | 26.00 | 59.37 | -0.77 | -1.59 | DUI | RuPh | Rot | N | RuPh_5 |
| 21.56 | 7.40 | 32.59 | 49.12 | 21.10 | 69.34 | 41.68 | 30.86 | 6.02 | 19.72 | 70.87 | -2.01 | -1.40 | DUI | RuPh | Ama | N | RuPh_5 |
| 13.76 | 8.25 | 23.82 | 37.91 | 25.40 | 65.66 | 63.33 | 41.75 | 3.98 | 17.20 | 65.34 | -2.08 | -0.19 | DUI | RuPh | Omy | N | RuPh_5 |
| 59.98 | 29.61 | 79.42 | 115.30 | 64.58 | 157.42 | 60.78 | 44.37 | 6.80 | 23.12 | 74.52 | 1.11 | -0.25 | DUI | RuPh | Oxa | N | RuPh_5 |
| 62.36 | 32.05 | 97.53 | 121.42 | 71.31 | 180.83 | 59.86 | 41.91 | 8.74 | 24.58 | 68.01 | 1.74 | -1.08 | DUI | RuPh | Ctrl | ch | RuPh_5 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29.65 | 10.07 | 61.00 | 60.25 | 24.03 | 116.70 | 43.88 | 22.69 | 6.75 | 31.87 | 51.08 | -1.08 | -2.95 | DUI | RuPh | Rot | ch | RuPh_5 |
| 17.23 | 7.42 | 26.88 | 31.26 | 15.89 | 47.22 | 48.23 | 35.14 | 4.16 | 25.86 | 70.19 | -2.39 | -0.69 | DUI | RuPh | Ama | ch | RuPh_5 |
| 17.98 | 9.25 | 31.44 | 45.66 | 28.79 | 80.43 | 56.13 | 32.57 | 6.74 | 19.53 | 58.73 | -1.67 | -1.59 | DUI | RuPh | Omy | ch | RuPh_5 |
| 48.53 | 31.05 | 72.16 | 99.04 | 66.76 | 147.77 | 70.94 | 49.09 | 7.04 | 25.22 | 69.25 | 0.98 | 0.05 | DUI | RuPh | Oxa | ch | RuPh_5 |
| 42.13 | 29.07 | 76.52 | 94.85 | 69.32 | 165.10 | 72.72 | 42.51 | 8.69 | 25.30 | 57.96 | 1.11 | -1.06 | DUI | RuPh | Ctrl | N | RuPh_6 |
| 23.77 | 11.82 | 45.41 | 53.29 | 29.14 | 95.28 | 52.86 | 31.24 | 6.73 | 20.88 | 58.27 | -1.32 | -1.84 | DUI | RuPh | Rot | N | RuPh_6 |
| 21.10 | 10.78 | 33.00 | 45.70 | 31.52 | 69.99 | 64.84 | 42.79 | 6.25 | 20.06 | 69.79 | -1.46 | -0.17 | DUI | RuPh | Ama | N | RuPh_6 |
| 10.28 | 9.51 | 14.51 | 28.56 | 26.92 | 38.70 | 88.85 | 66.74 | 3.78 | 34.13 | 74.50 | -1.69 | 2.48 | DUI | RuPh | Omy | N | RuPh_6 |
| 40.88 | 29.82 | 71.25 | 95.18 | 73.67 | 155.51 | 77.91 | 47.24 | 7.99 | 26.90 | 60.93 | 1.10 | -0.37 | DUI | RuPh | Oxa | N | RuPh_6 |
| 54.35 | 31.98 | 83.38 | 105.95 | 69.43 | 157.96 | 67.38 | 44.82 | 6.97 | 29.94 | 67.00 | 1.27 | -0.40 | DUI | RuPh | Ctrl | ch | RuPh_6 |
| 25.82 | 13.09 | 49.92 | 51.72 | 27.74 | 94.82 | 51.99 | 29.72 | 7.20 | 21.80 | 56.06 | -1.23 | -2.13 | DUI | RuPh | Rot | ch | RuPh_6 |
| 22.25 | 8.61 | 30.38 | 36.41 | 15.97 | 48.79 | 45.99 | 36.08 | 5.33 | 18.73 | 76.29 | -2.22 | -0.61 | DUI | RuPh | Ama | ch | RuPh_6 |
| 9.36 | 6.81 | 13.15 | 27.96 | 22.94 | 37.78 | 74.98 | 59.24 | 4.59 | 35.90 | 77.72 | -1.95 | 1.76 | DUI | RuPh | Omy | ch | RuPh_6 |
| 37.78 | 21.36 | 60.86 | 90.04 | 55.24 | 140.95 | 64.06 | 40.10 | 7.99 | 24.74 | 61.73 | 0.28 | -1.11 | DUI | RuPh | Oxa | ch | RuPh_6 |
| 32.17 | 20.08 | 57.59 | 73.90 | 51.76 | 126.75 | 80.09 | 42.58 | 8.37 | 20.38 | 57.35 | 0.14 | -0.77 | DUI | RuPh | Ctrl | N | RuPh_7 |
| 21.41 | 11.10 | 37.71 | 51.55 | 28.87 | 84.78 | 54.81 | 35.48 | 5.67 | 21.74 | 64.14 | -1.53 | -1.08 | DUI | RuPh | Rot | N | RuPh_7 |
| 4.81 | 2.42 | 9.64 | 11.43 | 6.64 | 21.08 | 54.82 | 33.24 | 1.93 | 50.48 | 55.88 | -3.05 | -0.79 | DUI | RuPh | Ama | N | RuPh_7 |
| 9.50 | 4.99 | 14.72 | 20.76 | 11.64 | 31.80 | 57.00 | 38.54 | 2.56 | 47.23 | 65.18 | -2.63 | -0.12 | DUI | RuPh | Omy | N | RuPh_7 |
| 43.40 | 27.64 | 68.71 | 114.29 | 78.12 | 172.24 | 70.52 | 47.35 | 8.51 | 22.87 | 67.09 | 1.25 | -0.39 | DUI | RuPh | Oxa | N | RuPh_7 |
| 50.72 | 24.34 | 88.96 | 107.93 | 59.58 | 174.67 | 52.58 | 32.38 | 9.49 | 25.18 | 60.17 | 1.04 | -2.25 | DUI | RuPh | Ctrl | ch | RuPh_7 |
| 28.27 | 15.68 | 51.61 | 59.60 | 35.49 | 103.42 | 53.93 | 32.61 | 6.68 | 19.15 | 59.44 | -0.99 | -1.70 | DUI | RuPh | Rot | ch | RuPh_7 |
| 16.90 | 6.72 | 25.01 | 43.41 | 27.95 | 57.12 | 54.40 | 46.08 | 7.77 | 35.82 | 74.90 | -1.58 | -0.15 | DUI | RuPh | Ama | ch | RuPh_7 |
| 11.13 | 5.55 | 14.01 | 40.04 | 21.94 | 46.24 | 69.22 | 56.26 | 4.19 | 33.81 | 81.04 | -1.98 | 1.63 | DUI | RuPh | Omy | ch | RuPh_7 |
| 45.93 | 26.00 | 73.56 | 108.44 | 69.58 | 161.05 | 67.69 | 43.92 | 7.63 | 24.45 | 65.94 | 1.00 | -0.59 | DUI | RuPh | Oxa | ch | RuPh_7 |
| 45.59 | 29.73 | 76.79 | 79.24 | 54.01 | 130.59 | 69.55 | 42.47 | 5.46 | 33.34 | 61.06 | 0.48 | -0.49 | DUI | RuPh | Ctrl | N | RuPh_8 |
| 32.05 | 16.70 | 57.90 | 69.06 | 36.52 | 113.66 | 49.95 | 31.55 | 8.42 | 16.39 | 64.06 | -0.66 | -1.92 | DUI | RuPh | Rot | N | RuPh_8 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | N | RuPh_8 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Omy | N | RuPh_8 |
| 28.55 | 25.81 | 56.66 | 82.39 | 72.40 | 154.10 | 86.98 | 47.64 | 5.25 | 33.94 | 54.78 | 0.57 | 0.06 | DUI | RuPh | Oxa | N | RuPh_8 |
| 39.49 | 22.93 | 70.73 | 96.80 | 62.27 | 157.36 | 61.66 | 39.02 | 9.09 | 17.35 | 62.10 | 0.61 | -1.45 | DUI | RuPh | Ctrl | ch | RuPh_8 |
| 20.72 | 11.46 | 32.07 | 64.95 | 44.75 | 96.56 | 62.61 | 46.36 | 7.19 | 12.10 | 71.56 | -1.05 | -0.17 | DUI | RuPh | Rot | ch | RuPh_8 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | ch | RuPh_8 |
| 9.01 | 8.63 | 19.84 | 32.71 | 30.99 | 86.72 | 95.97 | 53.80 | 7.76 | 39.03 | 55.65 | -0.97 | 0.51 | DUI | RuPh | Omy | ch | RuPh_8 |
| 42.92 | 26.15 | 78.25 | 88.73 | 56.31 | 154.28 | 68.18 | 38.73 | 8.11 | 23.46 | 57.06 | 0.70 | -1.38 | DUI | RuPh | Oxa | ch | RuPh_8 |
| 42.57 | 27.95 | 80.18 | 71.63 | 48.90 | 131.09 | 70.20 | 39.61 | 6.77 | 29.08 | 56.15 | 0.41 | -1.09 | DUI | RuPh | Ctrl | N | RuPh_9 |
| 28.96 | 14.86 | 61.93 | 56.61 | 31.05 | 114.94 | 53.91 | 28.80 | 7.50 | 26.44 | 51.80 | -0.78 | -2.42 | DUI | RuPh | Rot | N | RuPh_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | N | RuPh_9 |
| 13.71 | 2.19 | 16.96 | 37.30 | 5.96 | 46.14 | 15.98 | 12.92 | 4.71 | 13.60 | 80.84 | -3.36 | -2.33 | DUI | RuPh | Omy | N | RuPh_9 |
| 37.12 | 23.63 | 63.38 | 76.41 | 51.38 | 135.03 | 71.63 | 42.92 | 5.89 | 30.75 | 59.46 | 0.17 | -0.54 | DUI | RuPh | Oxa | N | RuPh_9 |
| 45.98 | 26.08 | 79.44 | 84.94 | 50.90 | 143.60 | 62.58 | 36.90 | 7.59 | 26.99 | 59.38 | 0.52 | -1.43 | DUI | RuPh | Ctrl | ch | RuPh_9 |
| 32.15 | 15.45 | 60.67 | 62.37 | 32.99 | 111.01 | 52.13 | 30.30 | 7.23 | 26.20 | 56.39 | -0.74 | -2.11 | DUI | RuPh | Rot | ch | RuPh_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Ama | ch | RuPh_9 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | DUI | RuPh | Omy | ch | RuPh_9 |
| 50.30 | 31.61 | 80.60 | 90.05 | 55.82 | 142.06 | 65.07 | 40.52 | 8.73 | 23.14 | 63.27 | 0.88 | -1.13 | DUI | RuPh | Oxa | ch | RuPh_9 |
| 119.39 | 57.49 | 142.31 | 191.00 | 104.18 | 227.17 | 57.96 | 46.58 | 11.02 | 21.57 | 81.68 | 4.56 | -0.66 | SMI | MeMe | Ctrl | N | MeMe_1 |
| 15.38 | 8.17 | 18.43 | 20.91 | 11.11 | 25.06 | 56.35 | 47.05 | 1.54 | 21.82 | 81.86 | -2.79 | 1.12 | SMI | MeMe | Rot | N | MeMe_1 |
| 14.38 | 8.03 | 20.87 | 19.56 | 10.93 | 28.38 | 76.44 | 56.22 | 2.41 | 20.38 | 72.94 | -2.37 | 1.57 | SMI | MeMe | Ama | N | MeMe_1 |
| 22.84 | 10.79 | 35.81 | 36.57 | 18.48 | 55.62 | 52.36 | 37.28 | 5.08 | 17.47 | 69.39 | -2.00 | -0.71 | SMI | MeMe | Omy | N | MeMe_1 |
| 65.57 | 43.03 | 87.71 | 108.98 | 75.39 | 146.02 | 73.94 | 52.79 | 8.39 | 19.81 | 72.61 | 1.83 | 0.26 | SMI | MeMe | Oxa | N | MeMe_1 |
| 60.40 | 41.54 | 93.47 | 112.95 | 71.50 | 168.70 | 68.52 | 45.56 | 15.87 | 16.86 | 65.99 | 2.42 | -1.68 | SMI | MeMe | Ctrl | ch | MeMe_1 |
| 19.20 | 18.15 | 21.70 | 26.12 | 24.68 | 29.52 | 94.77 | 83.40 | 1.19 | 30.37 | 88.03 | -1.48 | 4.49 | SMI | MeMe | Rot | ch | MeMe_1 |
| 16.07 | 14.10 | 17.98 | 21.86 | 19.17 | 24.45 | 86.94 | 77.71 | 0.82 | 27.95 | 89.20 | -1.94 | 4.07 | SMI | MeMe | Ama | ch | MeMe_1 |
| 16.16 | 8.47 | 20.31 | 23.05 | 12.44 | 29.03 | 63.28 | 51.59 | 2.56 | 19.27 | 80.74 | -2.51 | 1.33 | SMI | MeMe | Omy | ch | MeMe_1 |
| 50.08 | 35.23 | 83.94 | 68.11 | 47.91 | 114.15 | 73.78 | 48.72 | 10.25 | 15.54 | 64.49 | 0.85 | -0.63 | SMI | MeMe | Oxa | ch | MeMe_1 |
| 99.81 | 55.78 | 122.49 | 190.75 | 122.00 | 230.44 | 65.51 | 52.04 | 8.49 | 27.52 | 79.62 | 4.24 | 0.20 | SMI | MeMe | Ctrl | N | MeMe_2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.45 | 12.57 | 36.02 | 35.86 | 18.68 | 52.40 | 57.03 | 41.88 | 5.06 | 17.37 | 72.02 | -1.87 | -0.20 | SMI | MeMe | Rot | N | MeMe_2 |
| 28.31 | 10.77 | 40.85 | 43.70 | 18.57 | 61.77 | 42.22 | 30.16 | 6.36 | 14.20 | 71.14 | -1.91 | -1.50 | SMI | MeMe | Ama | N | MeMe_2 |
| 22.00 | 8.67 | 29.23 | 33.34 | 14.47 | 43.66 | 45.38 | 35.85 | 3.73 | 19.61 | 77.66 | -2.44 | -0.34 | SMI | MeMe | Omy | N | MeMe_2 |
| 80.76 | 46.05 | 106.89 | 142.66 | 90.39 | 182.05 | 68.13 | 49.98 | 9.20 | 24.83 | 73.76 | 2.85 | -0.17 | SMI | MeMe | Oxa | N | MeMe_2 |
| 99.23 | 65.37 | 120.29 | 175.75 | 124.16 | 210.83 | 72.48 | 58.30 | 7.12 | 30.61 | 80.67 | 4.24 | 1.04 | SMI | MeMe | Ctrl | ch | MeMe_2 |
| 22.42 | 11.20 | 31.09 | 32.42 | 16.63 | 44.55 | 58.98 | 48.03 | 4.18 | 17.15 | 78.40 | -2.05 | 0.62 | SMI | MeMe | Rot | ch | MeMe_2 |
| 18.87 | 9.56 | 23.67 | 28.14 | 14.77 | 34.94 | 54.79 | 43.79 | 2.82 | 20.61 | 79.93 | -2.48 | 0.61 | SMI | MeMe | Ama | ch | MeMe_2 |
| 18.25 | 8.75 | 23.34 | 28.96 | 15.36 | 36.50 | 55.39 | 44.94 | 2.79 | 21.31 | 80.01 | -2.46 | 0.70 | SMI | MeMe | Omy | ch | MeMe_2 |
| 75.48 | 52.40 | 98.72 | 129.54 | 94.81 | 166.27 | 74.51 | 54.88 | 6.67 | 29.23 | 73.56 | 2.62 | 0.70 | SMI | MeMe | Oxa | ch | MeMe_2 |
| 107.74 | 73.59 | 129.57 | 162.82 | 114.33 | 194.71 | 72.28 | 58.72 | 6.91 | 28.13 | 82.16 | 4.28 | 1.14 | SMI | MeMe | Ctrl | N | MeMe_3 |
| 5.06 | 4.08 | 7.59 | 6.88 | 5.54 | 10.32 | 80.58 | 53.75 | 0.72 | 12.52 | 66.70 | -3.12 | 1.50 | SMI | MeMe | Rot | N | MeMe_3 |
| 28.66 | 11.09 | 44.90 | 45.11 | 18.97 | 69.28 | 40.55 | 26.76 | 6.96 | 18.14 | 65.95 | -1.77 | -2.06 | SMI | MeMe | Ama | N | MeMe_3 |
| 21.28 | 9.86 | 35.23 | 28.94 | 13.41 | 47.91 | 49.92 | 33.09 | 4.69 | 20.25 | 66.08 | -2.26 | -1.09 | SMI | MeMe | Omy | N | MeMe_3 |
| 68.24 | 42.81 | 80.20 | 131.84 | 95.80 | 158.30 | 88.23 | 59.76 | 7.76 | 18.08 | 78.79 | 2.36 | 1.48 | SMI | MeMe | Oxa | N | MeMe_3 |
| 110.70 | 61.61 | 138.81 | 163.71 | 94.20 | 204.59 | 61.56 | 46.26 | 12.09 | 17.78 | 77.58 | 4.19 | -0.90 | SMI | MeMe | Ctrl | ch | MeMe_3 |
| 16.17 | 8.64 | 27.19 | 23.39 | 12.55 | 39.85 | 54.59 | 32.36 | 8.60 | 43.72 | 62.16 | -1.88 | -1.52 | SMI | MeMe | Rot | ch | MeMe_3 |
| 18.90 | 9.36 | 32.12 | 38.01 | 21.15 | 60.85 | 53.41 | 38.84 | 7.23 | 22.20 | 65.74 | -1.78 | -1.05 | SMI | MeMe | Ama | ch | MeMe_3 |
| 19.41 | 8.93 | 27.25 | 31.64 | 14.05 | 45.84 | 49.21 | 38.34 | 3.78 | 25.68 | 73.92 | -2.35 | -0.26 | SMI | MeMe | Omy | ch | MeMe_3 |
| 50.97 | 31.89 | 72.48 | 91.66 | 61.04 | 129.35 | 71.25 | 51.03 | 7.39 | 23.54 | 70.69 | 0.87 | 0.19 | SMI | MeMe | Oxa | ch | MeMe_3 |
| 93.46 | 65.23 | 113.99 | 168.14 | 124.17 | 204.33 | 74.69 | 60.42 | 6.92 | 31.52 | 80.81 | 4.06 | 1.29 | SMI | MeMe | Ctrl | N | MeMe_4 |
| 23.26 | 11.03 | 33.11 | 37.12 | 19.38 | 51.37 | 53.07 | 42.14 | 4.73 | 16.18 | 74.84 | -2.02 | -0.12 | SMI | MeMe | Rot | N | MeMe_4 |
| 24.34 | 9.55 | 34.17 | 36.34 | 15.20 | 51.18 | 44.62 | 33.78 | 4.94 | 15.33 | 75.14 | -2.24 | -0.81 | SMI | MeMe | Ama | N | MeMe_4 |
| 22.50 | 10.81 | 35.69 | 40.28 | 20.48 | 61.18 | 48.93 | 35.19 | 5.06 | 18.84 | 72.99 | -1.99 | -0.72 | SMI | MeMe | Omy | N | MeMe_4 |
| 74.77 | 54.57 | 98.25 | 130.51 | 99.09 | 170.65 | 76.35 | 56.68 | 6.96 | 30.89 | 73.40 | 2.80 | 0.81 | SMI | MeMe | Oxa | N | MeMe_4 |
| 91.44 | 69.88 | 112.48 | 162.87 | 129.77 | 200.13 | 80.18 | 64.41 | 6.60 | 32.39 | 80.26 | 4.17 | 1.70 | SMI | MeMe | Ctrl | ch | MeMe_4 |
| 14.77 | 6.74 | 18.98 | 25.06 | 13.36 | 31.31 | 54.86 | 45.06 | 3.09 | 22.49 | 80.46 | -2.62 | 0.69 | SMI | MeMe | Rot | ch | MeMe_4 |
| 17.48 | 8.30 | 22.12 | 27.27 | 12.86 | 34.54 | 49.47 | 39.62 | 2.75 | 18.91 | 79.42 | -2.68 | 0.22 | SMI | MeMe | Ama | ch | MeMe_4 |
| 20.49 | 9.47 | 28.53 | 31.60 | 15.42 | 44.76 | 49.05 | 37.85 | 3.80 | 19.01 | 76.96 | -2.38 | -0.18 | SMI | MeMe | Omy | ch | MeMe_4 |
| 65.93 | 49.81 | 92.67 | 102.31 | 79.33 | 144.85 | 79.46 | 54.81 | 6.79 | 28.96 | 68.98 | 2.02 | 0.62 | SMI | MeMe | Oxa | ch | MeMe_4 |
| 76.43 | 43.39 | 103.38 | 154.38 | 101.56 | 204.40 | 67.64 | 49.17 | 9.01 | 28.39 | 73.07 | 3.02 | -0.22 | SMI | MeMe | Ctrl | N | MeMe_5 |
| 24.79 | 10.79 | 38.66 | 43.52 | 20.86 | 65.12 | 47.07 | 32.15 | 5.88 | 15.45 | 67.15 | -1.89 | -1.38 | SMI | MeMe | Rot | N | MeMe_5 |
| 18.01 | 9.79 | 21.57 | 34.04 | 21.47 | 40.03 | 59.95 | 51.69 | 2.98 | 19.93 | 84.83 | -2.23 | 1.39 | SMI | MeMe | Ama | N | MeMe_5 |
| 20.08 | 8.69 | 27.79 | 30.82 | 13.38 | 42.59 | 46.96 | 36.37 | 4.35 | 21.99 | 75.79 | -2.40 | -0.43 | SMI | MeMe | Omy | N | MeMe_5 |
| 76.20 | 46.25 | 100.56 | 143.27 | 94.78 | 184.66 | 70.41 | 52.39 | 9.04 | 25.74 | 74.75 | 2.84 | 0.12 | SMI | MeMe | Oxa | N | MeMe_5 |
| 73.72 | 48.11 | 100.44 | 132.98 | 93.50 | 177.76 | 73.19 | 52.04 | 7.25 | 31.42 | 71.60 | 2.65 | 0.32 | SMI | MeMe | Ctrl | ch | MeMe_5 |
| 24.76 | 9.66 | 37.74 | 42.95 | 18.88 | 63.49 | 43.07 | 30.15 | 5.73 | 16.30 | 69.10 | -2.02 | -1.47 | SMI | MeMe | Rot | ch | MeMe_5 |
| 7.17 | 6.11 | 8.99 | 9.75 | 8.31 | 12.22 | 85.21 | 67.98 | 0.58 | 16.70 | 79.78 | -2.77 | 3.05 | SMI | MeMe | Ama | ch | MeMe_5 |
| 21.91 | 10.95 | 27.53 | 37.11 | 20.14 | 45.48 | 57.46 | 48.82 | 3.93 | 16.47 | 82.77 | -2.07 | 0.89 | SMI | MeMe | Omy | ch | MeMe_5 |
| 43.97 | 31.16 | 68.98 | 79.04 | 58.23 | 122.09 | 73.86 | 48.24 | 6.49 | 29.97 | 63.82 | 0.57 | -0.04 | SMI | MeMe | Oxa | ch | MeMe_5 |
| 57.05 | 41.64 | 84.47 | 88.39 | 64.88 | 130.01 | 76.06 | 50.81 | 6.77 | 25.40 | 66.56 | 1.26 | 0.19 | SMI | MeMe | Ctrl | N | MeMe_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | MeMe | Rot | N | MeMe_6 |
| 18.31 | 8.46 | 24.02 | 33.64 | 17.48 | 44.79 | 53.19 | 43.03 | 3.79 | 21.58 | 78.98 | -2.31 | 0.34 | SMI | MeMe | Ama | N | MeMe_6 |
| 15.10 | 7.69 | 20.37 | 27.62 | 16.78 | 36.12 | 62.92 | 49.13 | 3.11 | 18.57 | 77.28 | -2.41 | 0.94 | SMI | MeMe | Omy | N | MeMe_6 |
| 53.91 | 39.62 | 76.91 | 97.55 | 73.84 | 135.05 | 77.35 | 53.97 | 7.41 | 23.61 | 69.65 | 1.37 | 0.48 | SMI | MeMe | Oxa | N | MeMe_6 |
| 99.77 | 40.27 | 130.08 | 185.32 | 95.13 | 232.37 | 56.25 | 44.68 | 16.09 | 14.20 | 78.30 | 4.15 | -1.72 | SMI | MeMe | Ctrl | ch | MeMe_6 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | MeMe | Rot | ch | MeMe_6 |
| 17.03 | 8.38 | 21.40 | 29.06 | 15.60 | 35.32 | 55.18 | 46.42 | 3.45 | 21.04 | 82.88 | -2.44 | 0.83 | SMI | MeMe | Ama | ch | MeMe_6 |
| 20.58 | 9.90 | 29.18 | 34.79 | 18.12 | 49.21 | 54.12 | 42.11 | 4.92 | 14.46 | 74.38 | -2.14 | -0.13 | SMI | MeMe | Omy | ch | MeMe_6 |
| 39.25 | 30.03 | 65.32 | 66.50 | 50.86 | 109.47 | 77.34 | 48.04 | 7.65 | 23.31 | 61.52 | 0.31 | -0.24 | SMI | MeMe | Oxa | ch | MeMe_6 |
| 110.05 | 62.56 | 133.71 | 171.98 | 103.60 | 207.39 | 66.46 | 51.27 | 8.67 | 23.50 | 78.60 | 4.16 | 0.07 | SMI | MeMe | Ctrl | N | MeMe_7 |
| 15.58 | 10.87 | 18.23 | 22.75 | 16.27 | 26.58 | 74.58 | 61.86 | 1.65 | 27.77 | 83.16 | -2.24 | 2.49 | SMI | MeMe | Rot | N | MeMe_7 |
| 22.40 | 11.34 | 29.43 | 39.82 | 21.17 | 50.97 | 57.35 | 47.95 | 4.29 | 16.87 | 80.94 | -1.96 | 0.69 | SMI | MeMe | Ama | N | MeMe_7 |
| 24.60 | 13.68 | 35.93 | 33.45 | 18.61 | 48.86 | 52.02 | 37.08 | 3.81 | 19.05 | 74.12 | -2.09 | -0.29 | SMI | MeMe | Omy | N | MeMe_7 |
| 87.62 | 47.16 | 110.57 | 140.64 | 80.90 | 174.41 | 71.55 | 52.69 | 10.46 | 20.47 | 75.37 | 2.99 | -0.06 | SMI | MeMe | Oxa | N | MeMe_7 |
| 76.28 | 56.73 | 97.08 | 123.97 | 93.13 | 160.43 | 78.66 | 59.30 | 7.32 | 24.58 | 75.17 | 2.71 | 1.03 | SMI | MeMe | Ctrl | ch | MeMe_7 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10.63 | 9.17 | 13.53 | 23.94 | 20.94 | 30.37 | 86.61 | 68.29 | 7.37 | 42.34 | 78.70 | -1.44 | 2.28 | SMI | MeMe | Rot | ch | MeMe_7 |
| 16.21 | 9.40 | 22.11 | 30.89 | 17.82 | 41.16 | 59.88 | 48.52 | 4.47 | 29.24 | 78.11 | -2.11 | 0.73 | SMI | MeMe | Ama | ch | MeMe_7 |
| 15.88 | 6.81 | 18.38 | 21.59 | 9.26 | 24.99 | 56.43 | 46.13 | 1.03 | 20.78 | 85.11 | -2.88 | 1.31 | SMI | MeMe | Omy | ch | MeMe_7 |
| 58.27 | 46.13 | 79.82 | 92.05 | 73.43 | 124.96 | 83.05 | 59.60 | 5.97 | 26.26 | 71.54 | 1.49 | 1.25 | SMI | MeMe | Oxa | ch | MeMe_7 |
| 76.16 | 59.07 | 100.05 | 116.24 | 91.38 | 151.82 | 79.51 | 59.51 | 7.20 | 27.78 | 74.52 | 2.69 | 1.08 | SMI | MeMe | Ctrl | N | MeMe_8 |
| 18.45 | 13.75 | 23.68 | 36.55 | 28.72 | 53.59 | 76.30 | 65.22 | 3.08 | 28.95 | 82.61 | -1.55 | 2.46 | SMI | MeMe | Rot | N | MeMe_8 |
| 21.90 | 9.14 | 29.92 | 37.71 | 18.06 | 50.40 | 49.11 | 38.93 | 4.46 | 18.56 | 76.55 | -2.19 | -0.25 | SMI | MeMe | Ama | N | MeMe_8 |
| 14.60 | 11.56 | 19.22 | 22.28 | 16.91 | 29.51 | 84.03 | 70.81 | 1.97 | 26.32 | 81.23 | -1.99 | 3.05 | SMI | MeMe | Omy | N | MeMe_8 |
| 48.37 | 37.69 | 68.56 | 86.65 | 70.17 | 118.87 | 81.55 | 58.91 | 6.67 | 22.64 | 71.53 | 1.01 | 1.08 | SMI | MeMe | Oxa | N | MeMe_8 |
| 60.83 | 50.72 | 85.87 | 89.39 | 73.34 | 126.26 | 81.45 | 58.33 | 6.60 | 26.22 | 70.53 | 1.67 | 0.99 | SMI | MeMe | Ctrl | ch | MeMe_8 |
| 8.87 | 8.24 | 11.31 | 12.07 | 11.20 | 15.38 | 92.84 | 72.86 | 1.41 | 24.55 | 78.48 | -2.34 | 3.38 | SMI | MeMe | Rot | ch | MeMe_8 |
| 23.33 | 6.50 | 37.11 | 35.72 | 11.04 | 57.81 | 33.25 | 18.93 | 8.85 | 28.02 | 61.90 | -2.08 | -3.04 | SMI | MeMe | Ama | ch | MeMe_8 |
| 23.07 | 8.21 | 28.16 | 31.38 | 11.17 | 38.30 | 39.36 | 33.81 | 2.86 | 23.40 | 82.96 | -2.65 | -0.20 | SMI | MeMe | Omy | ch | MeMe_8 |
| 57.41 | 43.34 | 81.36 | 98.30 | 76.21 | 137.36 | 78.43 | 54.23 | 7.74 | 21.79 | 68.85 | 1.59 | 0.42 | SMI | MeMe | Oxa | ch | MeMe_8 |
| 89.26 | 66.17 | 107.81 | 166.51 | 130.50 | 200.32 | 79.59 | 65.41 | 6.73 | 30.73 | 81.93 | 4.06 | 1.80 | SMI | MeMe | Ctrl | N | MeMe_9 |
| 20.36 | 8.48 | 28.38 | 34.02 | 15.74 | 46.23 | 46.95 | 37.56 | 3.87 | 20.37 | 76.48 | -2.38 | -0.28 | SMI | MeMe | Rot | N | MeMe_9 |
| 21.65 | 9.09 | 33.87 | 39.13 | 19.65 | 60.40 | 49.16 | 36.69 | 5.26 | 21.55 | 69.20 | -2.00 | -0.85 | SMI | MeMe | Ama | N | MeMe_9 |
| 19.00 | 9.79 | 26.09 | 38.87 | 24.23 | 50.03 | 60.17 | 50.12 | 4.41 | 21.74 | 80.48 | -1.93 | 0.89 | SMI | MeMe | Omy | N | MeMe_9 |
| 19.16 | 17.43 | 26.10 | 96.86 | 89.69 | 126.83 | 92.44 | 69.48 | 4.69 | 20.63 | 74.88 | 0.20 | 2.48 | SMI | MeMe | Oxa | N | MeMe_9 |
| 75.70 | 57.08 | 95.07 | 133.21 | 101.87 | 168.54 | 76.86 | 61.12 | 7.00 | 27.40 | 78.06 | 2.87 | 1.28 | SMI | MeMe | Ctrl | ch | MeMe_9 |
| 18.02 | 7.57 | 26.04 | 35.07 | 15.58 | 50.83 | 47.53 | 36.64 | 4.04 | 22.52 | 75.53 | -2.39 | -0.37 | SMI | MeMe | Rot | ch | MeMe_9 |
| 21.32 | 9.31 | 28.47 | 33.08 | 16.71 | 42.84 | 58.66 | 47.12 | 3.46 | 22.77 | 76.74 | -2.15 | 0.62 | SMI | MeMe | Ama | ch | MeMe_9 |
| 15.80 | 8.01 | 20.21 | 46.70 | 30.04 | 56.22 | 60.88 | 51.88 | 3.81 | 19.49 | 82.89 | -1.97 | 1.20 | SMI | MeMe | Omy | ch | MeMe_9 |
| 73.44 | 58.94 | 97.21 | 120.78 | 98.24 | 159.68 | 80.93 | 59.27 | 6.47 | 30.57 | 72.69 | 2.74 | 1.14 | SMI | MeMe | Oxa | ch | MeMe_9 |
| 130.02 | 86.00 | 156.31 | 226.13 | 158.58 | 276.30 | 70.02 | 55.68 | 8.47 | 33.70 | 78.83 | 6.45 | 0.45 | SMI | NuOb | Ctrl | N | NuOb_1 |
| 15.61 | 8.42 | 19.70 | 21.23 | 11.45 | 26.79 | 58.25 | 48.24 | 2.97 | 17.63 | 80.77 | -2.63 | 0.96 | SMI | NuOb | Rot | N | NuOb_1 |
| 15.30 | 11.91 | 17.52 | 20.81 | 16.19 | 23.83 | 77.82 | 67.95 | 1.55 | 24.22 | 87.32 | -2.21 | 3.10 | SMI | NuOb | Ama | N | NuOb_1 |
| 13.13 | 6.86 | 18.66 | 36.59 | 13.16 | 58.50 | 59.33 | 44.67 | 4.82 | 24.39 | 71.03 | -2.19 | 0.06 | SMI | NuOb | Omy | N | NuOb_1 |
| 36.57 | 23.79 | 63.86 | 110.67 | 91.71 | 151.06 | 47.11 | 32.16 | 5.51 | 29.74 | 60.16 | 0.40 | -1.68 | SMI | NuOb | Oxa | N | NuOb_1 |
| 78.09 | 75.58 | 81.62 | 292.04 | 282.64 | 305.26 | 96.78 | 92.59 | 5.93 | 33.66 | 95.67 | 7.05 | 4.69 | SMI | NuOb | Ctrl | ch | NuOb_1 |
| 14.89 | 7.82 | 23.95 | 38.99 | 27.91 | 53.59 | 65.38 | 55.13 | 6.10 | 31.75 | 74.97 | -1.62 | 0.84 | SMI | NuOb | Rot | ch | NuOb_1 |
| 13.80 | 8.19 | 23.28 | 28.48 | 16.89 | 48.03 | 59.32 | 35.17 | 5.70 | 41.27 | 59.29 | -2.04 | -1.01 | SMI | NuOb | Ama | ch | NuOb_1 |
| 23.89 | 9.70 | 41.93 | 37.89 | 18.37 | 62.92 | 59.46 | 49.78 | 10.69 | 45.33 | 71.28 | -0.92 | -0.42 | SMI | NuOb | Omy | ch | NuOb_1 |
| 13.99 | 12.07 | 18.54 | 19.03 | 16.42 | 25.21 | 86.27 | 65.13 | 2.68 | 14.25 | 75.50 | -2.13 | 2.40 | SMI | NuOb | Oxa | ch | NuOb_1 |
| 97.19 | 69.23 | 126.61 | 172.88 | 124.16 | 225.29 | 68.99 | 52.19 | 8.12 | 28.49 | 72.56 | 4.37 | 0.04 | SMI | NuOb | Ctrl | N | NuOb_2 |
| 20.54 | 5.91 | 32.11 | 33.22 | 9.56 | 51.92 | 28.77 | 18.40 | 5.59 | 51.75 | 63.98 | -2.35 | -2.49 | SMI | NuOb | Rot | N | NuOb_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | NuOb | Ama | N | NuOb_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | NuOb | Omy | N | NuOb_2 |
| 74.16 | 60.08 | 88.41 | 164.64 | 138.72 | 194.23 | 81.58 | 66.97 | 7.15 | 27.72 | 80.47 | 3.65 | 1.87 | SMI | NuOb | Oxa | N | NuOb_2 |
| 119.68 | 85.18 | 139.58 | 214.53 | 164.76 | 245.88 | 78.26 | 64.57 | 7.95 | 31.36 | 82.82 | 6.06 | 1.51 | SMI | NuOb | Ctrl | ch | NuOb_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | NuOb | Rot | ch | NuOb_2 |
| 12.80 | 8.07 | 17.78 | 41.70 | 29.32 | 75.98 | 77.40 | 55.31 | 5.39 | 46.10 | 73.10 | -1.32 | 1.29 | SMI | NuOb | Ama | ch | NuOb_2 |
| 11.26 | 6.66 | 14.79 | 16.97 | 10.49 | 22.23 | 69.75 | 55.70 | 1.36 | 37.74 | 78.16 | -2.56 | 1.89 | SMI | NuOb | Omy | ch | NuOb_2 |
| 69.63 | 54.62 | 97.48 | 108.60 | 79.25 | 161.16 | 66.90 | 53.31 | 10.44 | 26.93 | 69.83 | 2.47 | -0.33 | SMI | NuOb | Oxa | ch | NuOb_2 |
| 74.79 | 54.98 | 108.22 | 157.68 | 123.62 | 222.59 | 74.49 | 54.72 | 7.08 | 39.38 | 69.52 | 3.64 | 0.42 | SMI | NuOb | Ctrl | N | NuOb_3 |
| 19.06 | 11.73 | 29.10 | 32.95 | 21.36 | 49.50 | 63.40 | 44.75 | 4.39 | 30.66 | 68.08 | -1.86 | 0.13 | SMI | NuOb | Rot | N | NuOb_3 |
| 16.51 | 6.79 | 25.77 | 31.01 | 12.43 | 46.73 | 46.21 | 30.85 | 4.37 | 19.14 | 65.92 | -2.57 | -1.25 | SMI | NuOb | Ama | N | NuOb_3 |
| 17.70 | 9.99 | 32.96 | 29.42 | 16.48 | 52.22 | 55.00 | 32.67 | 4.72 | 27.11 | 58.82 | -2.14 | -1.28 | SMI | NuOb | Omy | N | NuOb_3 |
| 71.07 | 53.24 | 85.10 | 176.67 | 145.90 | 204.60 | 78.15 | 64.07 | 7.22 | 27.18 | 79.16 | 3.60 | 1.54 | SMI | NuOb | Oxa | N | NuOb_3 |
| 86.96 | 69.31 | 108.82 | 172.91 | 145.36 | 213.96 | 83.72 | 65.77 | 6.37 | 36.35 | 77.58 | 4.43 | 1.81 | SMI | NuOb | Ctrl | ch | NuOb_3 |
| 13.02 | 7.01 | 19.87 | 28.80 | 16.18 | 42.64 | 63.91 | 46.77 | 4.96 | 22.88 | 69.82 | -2.22 | 0.24 | SMI | NuOb | Rot | ch | NuOb_3 |
| 14.72 | 7.05 | 32.24 | 20.01 | 9.59 | 43.85 | 47.92 | 21.87 | 14.13 | 40.36 | 45.65 | -1.62 | -3.88 | SMI | NuOb | Ama | ch | NuOb_3 |
| 12.70 | 6.79 | 16.90 | 25.42 | 16.72 | 32.32 | 64.06 | 50.27 | 3.38 | 16.71 | 77.49 | -2.50 | 1.01 | SMI | NuOb | Omy | ch | NuOb_3 |
| 97.34 | 73.76 | 108.71 | 188.89 | 149.67 | 208.93 | 75.39 | 66.84 | 6.88 | 25.59 | 87.71 | 4.60 | 2.02 | SMI | NuOb | Oxa | ch | NuOb_3 |
| 107.35 | 89.64 | 123.55 | 215.01 | 187.67 | 244.10 | 87.44 | 75.52 | 5.98 | 34.80 | 86.17 | 6.10 | 2.90 | SMI | NuOb | Ctrl | N | NuOb_4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | NuOb | Rot | N | NuOb_4 |
| 17.39 | 7.62 | 32.73 | 33.57 | 14.72 | 63.19 | 43.83 | 23.29 | 7.20 | 9.65 | 53.13 | -2.29 | -2.84 | SMI | NuOb | Ama | N | NuOb_4 |
| 10.20 | 5.86 | 13.47 | 21.45 | 16.13 | 29.60 | 74.19 | 53.41 | 2.93 | 17.18 | 74.44 | -2.51 | 1.39 | SMI | NuOb | Omy | N | NuOb_4 |
| 93.20 | 78.76 | 116.09 | 139.30 | 118.54 | 172.75 | 86.19 | 67.31 | 5.30 | 34.70 | 77.33 | 3.98 | 2.10 | SMI | NuOb | Oxa | N | NuOb_4 |
| 123.36 | 87.13 | 143.47 | 232.29 | 175.02 | 273.41 | 75.34 | 62.35 | 8.23 | 25.80 | 82.33 | 6.46 | 1.18 | SMI | NuOb | Ctrl | ch | NuOb_4 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | NuOb | Rot | ch | NuOb_4 |
| 7.46 | 6.56 | 10.96 | 10.14 | 8.93 | 14.90 | 88.06 | 60.46 | 0.72 | 36.60 | 68.50 | -2.54 | 2.28 | SMI | NuOb | Ama | ch | NuOb_4 |
| 3.88 | 3.37 | 6.30 | 5.28 | 4.58 | 8.56 | 86.77 | 53.47 | 0.44 | 30.61 | 61.63 | -2.96 | 1.57 | SMI | NuOb | Omy | ch | NuOb_4 |
| 16.77 | 7.55 | 28.58 | 37.11 | 18.15 | 62.07 | 55.72 | 37.14 | 3.97 | 26.33 | 67.10 | -2.14 | -0.52 | SMI | NuOb | Oxa | ch | NuOb_4 |
| 103.92 | 82.68 | 130.47 | 196.19 | 162.56 | 244.84 | 82.44 | 66.25 | 6.66 | 33.07 | 79.33 | 5.55 | 1.76 | SMI | NuOb | Ctrl | N | NuOb_5 |
| 41.35 | 27.95 | 66.59 | 57.76 | 38.71 | 92.45 | 52.75 | 35.95 | 7.60 | 14.09 | 73.10 | -0.46 | -1.02 | SMI | NuOb | Rot | N | NuOb_5 |
| 9.85 | 8.29 | 17.27 | 34.58 | 29.97 | 61.82 | 86.97 | 58.39 | 5.44 | 21.30 | 66.62 | -1.57 | 1.27 | SMI | NuOb | Ama | N | NuOb_5 |
| 12.90 | 8.21 | 19.89 | 32.38 | 20.74 | 49.01 | 72.90 | 52.25 | 2.71 | 26.89 | 70.08 | -2.10 | 1.12 | SMI | NuOb | Omy | N | NuOb_5 |
| 94.22 | 61.10 | 112.51 | 193.22 | 143.44 | 222.97 | 68.68 | 59.34 | 7.75 | 26.73 | 81.46 | 4.37 | 0.94 | SMI | NuOb | Oxa | N | NuOb_5 |
| 121.79 | 89.19 | 145.47 | 247.50 | 193.21 | 294.14 | 79.36 | 64.51 | 9.76 | 31.71 | 80.86 | 7.14 | 1.16 | SMI | NuOb | Ctrl | ch | NuOb_5 |
| 15.55 | 6.42 | 20.33 | 41.75 | 22.06 | 51.61 | 53.33 | 44.26 | 4.37 | 15.30 | 79.56 | -2.28 | 0.32 | SMI | NuOb | Rot | ch | NuOb_5 |
| 7.86 | 7.55 | 9.62 | 10.69 | 10.27 | 13.09 | 96.12 | 78.49 | 0.52 | 27.83 | 81.66 | -2.36 | 4.06 | SMI | NuOb | Ama | ch | NuOb_5 |
| 4.22 | 2.48 | 9.45 | 8.77 | 6.02 | 18.79 | 58.62 | 31.00 | 1.49 | 40.80 | 49.94 | -3.21 | -1.09 | SMI | NuOb | Omy | ch | NuOb_5 |
| 118.47 | 84.95 | 140.39 | 186.94 | 137.38 | 219.86 | 77.68 | 64.51 | 5.39 | 36.42 | 82.36 | 5.29 | 1.83 | SMI | NuOb | Oxa | ch | NuOb_5 |
| 70.18 | 57.55 | 116.18 | 106.40 | 87.95 | 173.42 | 79.58 | 47.85 | 7.13 | 30.60 | 58.36 | 2.68 | -0.39 | SMI | PlMg | Ctrl | N | PlMg_1 |
| 16.66 | 7.87 | 27.73 | 24.24 | 11.91 | 39.70 | 48.01 | 31.46 | 3.19 | 24.55 | 65.00 | -2.65 | -1.02 | SMI | PlMg | Rot | N | PlMg_1 |
| 2.58 | 1.61 | 6.19 | 3.51 | 2.19 | 8.42 | 62.45 | 26.08 | 0.47 | 40.36 | 41.76 | -3.50 | -1.48 | SMI | PlMg | Ama | N | PlMg_1 |
| 19.43 | 6.17 | 26.70 | 26.42 | 8.39 | 36.31 | 38.76 | 27.56 | 3.07 | 18.73 | 73.41 | -2.91 | -1.07 | SMI | PlMg | Omy | N | PlMg_1 |
| 47.28 | 23.05 | 80.49 | 81.35 | 41.72 | 131.62 | 54.79 | 38.07 | 12.26 | 15.05 | 65.82 | 0.54 | -1.99 | SMI | PlMg | Oxa | N | PlMg_1 |
| 75.11 | 64.62 | 119.07 | 116.76 | 101.58 | 180.85 | 85.15 | 54.64 | 7.05 | 33.78 | 62.86 | 3.28 | 0.39 | SMI | PlMg | Ctrl | ch | PlMg_1 |
| 15.32 | 9.78 | 26.78 | 21.41 | 13.71 | 37.10 | 71.89 | 47.73 | 2.97 | 18.88 | 64.88 | -2.29 | 0.50 | SMI | PlMg | Rot | ch | PlMg_1 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_1 |
| 13.78 | 10.65 | 15.77 | 22.43 | 17.39 | 25.33 | 73.15 | 61.98 | 1.54 | 22.39 | 83.34 | -2.37 | 2.46 | SMI | PlMg | Omy | ch | PlMg_1 |
| 64.89 | 47.78 | 108.02 | 101.34 | 76.52 | 160.69 | 69.69 | 40.92 | 7.46 | 24.75 | 57.12 | 1.94 | -1.17 | SMI | PlMg | Oxa | ch | PlMg_1 |
| 128.30 | 97.52 | 156.11 | 198.39 | 153.09 | 244.60 | 77.55 | 61.33 | 6.83 | 33.79 | 78.54 | 6.21 | 1.23 | SMI | PlMg | Ctrl | N | PlMg_2 |
| 15.67 | 8.96 | 20.29 | 22.15 | 12.74 | 28.65 | 62.09 | 49.08 | 3.53 | 21.44 | 78.73 | -2.44 | 0.96 | SMI | PlMg | Rot | N | PlMg_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | N | PlMg_2 |
| 22.05 | 10.21 | 33.79 | 29.99 | 13.88 | 45.95 | 42.35 | 26.99 | 4.33 | 11.22 | 65.79 | -2.53 | -1.62 | SMI | PlMg | Omy | N | PlMg_2 |
| 81.59 | 47.36 | 118.04 | 125.87 | 77.33 | 193.57 | 63.82 | 38.04 | 10.35 | 17.30 | 62.91 | 2.69 | -1.71 | SMI | PlMg | Oxa | N | PlMg_2 |
| 93.99 | 78.21 | 133.46 | 147.05 | 124.27 | 210.58 | 83.57 | 60.67 | 6.68 | 34.04 | 72.32 | 4.48 | 1.13 | SMI | PlMg | Ctrl | ch | PlMg_2 |
| 21.47 | 13.98 | 26.94 | 29.20 | 19.01 | 36.64 | 70.32 | 56.13 | 2.44 | 21.55 | 79.89 | -2.00 | 1.74 | SMI | PlMg | Rot | ch | PlMg_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_2 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Omy | ch | PlMg_2 |
| 39.58 | 18.97 | 72.22 | 53.83 | 25.80 | 98.22 | 39.45 | 25.19 | 7.76 | 16.70 | 73.52 | -0.92 | -2.01 | SMI | PlMg | Oxa | ch | PlMg_2 |
| 92.75 | 81.50 | 132.67 | 146.53 | 130.22 | 208.21 | 88.87 | 60.98 | 6.40 | 33.68 | 68.12 | 4.59 | 1.16 | SMI | PlMg | Ctrl | N | PlMg_3 |
| 13.98 | 1.42 | 17.99 | 19.01 | 1.93 | 24.47 | 14.40 | 10.42 | 1.57 | 45.13 | 76.38 | -3.65 | -2.09 | SMI | PlMg | Rot | N | PlMg_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | N | PlMg_3 |
| 28.75 | 8.49 | 47.34 | 39.09 | 11.55 | 64.38 | 38.12 | 24.80 | 7.18 | 18.60 | 68.03 | -1.95 | -2.17 | SMI | PlMg | Omy | N | PlMg_3 |
| 82.56 | 60.40 | 139.10 | 132.04 | 97.84 | 220.66 | 74.15 | 44.36 | 11.72 | 23.65 | 58.86 | 3.87 | -1.50 | SMI | PlMg | Oxa | N | PlMg_3 |
| 106.85 | 76.56 | 150.96 | 153.65 | 111.44 | 216.29 | 71.42 | 48.28 | 7.78 | 32.06 | 65.90 | 4.56 | -0.43 | SMI | PlMg | Ctrl | ch | PlMg_3 |
| 16.47 | 8.43 | 20.56 | 22.39 | 11.46 | 27.96 | 52.84 | 44.44 | 3.63 | 15.68 | 81.11 | -2.66 | 0.52 | SMI | PlMg | Rot | ch | PlMg_3 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_3 |
| 13.45 | 1.15 | 14.88 | 18.29 | 1.57 | 20.24 | 8.57 | 7.75 | 0.61 | 35.62 | 90.39 | -4.00 | -1.58 | SMI | PlMg | Omy | ch | PlMg_3 |
| 33.19 | 14.44 | 47.45 | 48.63 | 22.18 | 68.31 | 47.50 | 35.23 | 6.37 | 18.32 | 74.27 | -1.47 | -0.92 | SMI | PlMg | Oxa | ch | PlMg_3 |
| 106.67 | 73.85 | 118.48 | 221.26 | 169.91 | 242.13 | 76.71 | 68.65 | 8.88 | 21.57 | 88.93 | 5.58 | 1.86 | SMI | PlMg | Ctrl | N | PlMg_4 |
| 17.54 | 10.14 | 22.38 | 31.34 | 20.94 | 39.29 | 67.44 | 55.06 | 3.30 | 20.88 | 80.32 | -2.09 | 1.51 | SMI | PlMg | Rot | N | PlMg_4 |
| 12.93 | 9.73 | 15.03 | 26.96 | 21.63 | 30.61 | 77.58 | 66.87 | 2.67 | 25.02 | 85.94 | -2.08 | 2.83 | SMI | PlMg | Ama | N | PlMg_4 |
| 17.41 | 8.34 | 21.74 | 26.31 | 12.52 | 32.36 | 54.86 | 43.76 | 2.85 | 24.31 | 79.42 | -2.54 | 0.61 | SMI | PlMg | Omy | N | PlMg_4 |
| 55.48 | 45.94 | 72.38 | 123.35 | 105.50 | 157.56 | 68.99 | 50.85 | 5.74 | 33.99 | 71.67 | 1.86 | 0.51 | SMI | PlMg | Oxa | N | PlMg_4 |
| 128.21 | 87.63 | 164.30 | 185.57 | 130.34 | 235.27 | 71.20 | 52.83 | 6.21 | 39.73 | 74.45 | 5.62 | 0.45 | SMI | PlMg | Ctrl | ch | PlMg_4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.45 | 7.52 | 21.63 | 22.46 | 10.28 | 29.55 | 48.87 | 37.69 | 3.03 | 24.09 | 76.77 | -2.75 | -0.03 | SMI | PlMg | Rot | ch | PlMg_4 |
| 11.41 | 7.13 | 18.02 | 27.05 | 19.59 | 40.45 | 66.88 | 49.96 | 6.01 | 35.65 | 69.03 | -1.96 | 0.39 | SMI | PlMg | Ama | ch | PlMg_4 |
| 15.41 | 7.16 | 20.15 | 23.62 | 11.78 | 30.45 | 52.02 | 39.99 | 3.12 | 20.22 | 76.52 | -2.73 | 0.14 | SMI | PlMg | Omy | ch | PlMg_4 |
| 53.12 | 45.04 | 62.21 | 83.65 | 71.75 | 96.92 | 77.32 | 63.74 | 4.06 | 29.22 | 80.32 | 0.84 | 2.10 | SMI | PlMg | Oxa | ch | PlMg_4 |
| 143.53 | 94.96 | 161.06 | 257.39 | 183.30 | 280.60 | 72.24 | 64.82 | 8.24 | 21.12 | 89.95 | 7.25 | 1.52 | SMI | PlMg | Ctrl | N | PlMg_5 |
| 27.68 | 20.81 | 45.23 | 48.07 | 35.08 | 74.76 | 67.15 | 43.08 | 4.74 | 26.25 | 64.78 | -1.05 | -0.13 | SMI | PlMg | Rot | N | PlMg_5 |
| 8.27 | 6.92 | 10.23 | 11.25 | 9.41 | 13.91 | 82.34 | 66.58 | 0.72 | 25.38 | 80.95 | -2.65 | 2.98 | SMI | PlMg | Ama | N | PlMg_5 |
| 21.94 | 8.04 | 35.11 | 31.75 | 12.68 | 49.95 | 40.42 | 27.95 | 4.87 | 20.73 | 69.64 | -2.41 | -1.47 | SMI | PlMg | Omy | N | PlMg_5 |
| 117.00 | 75.09 | 157.45 | 177.97 | 118.64 | 236.17 | 68.27 | 51.11 | 6.46 | 35.23 | 75.45 | 4.97 | 0.25 | SMI | PlMg | Oxa | N | PlMg_5 |
| 67.60 | 44.53 | 129.50 | 102.40 | 67.06 | 195.70 | 68.74 | 36.41 | 9.34 | 32.14 | 52.45 | 2.43 | -2.02 | SMI | PlMg | Ctrl | ch | PlMg_5 |
| 14.35 | 5.87 | 18.37 | 19.95 | 8.37 | 25.47 | 47.32 | 37.40 | 2.57 | 25.02 | 78.34 | -2.95 | 0.07 | SMI | PlMg | Rot | ch | PlMg_5 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_5 |
| 14.37 | 6.55 | 19.10 | 19.91 | 9.16 | 26.37 | 53.02 | 39.72 | 2.62 | 24.60 | 74.20 | -2.82 | 0.13 | SMI | PlMg | Omy | ch | PlMg_5 |
| 53.11 | 47.40 | 79.58 | 89.27 | 81.30 | 129.56 | 81.71 | 57.03 | 3.80 | 35.63 | 68.09 | 1.38 | 1.27 | SMI | PlMg | Oxa | ch | PlMg_5 |
| 116.62 | 99.67 | 146.40 | 200.57 | 174.86 | 250.16 | 87.70 | 68.56 | 6.15 | 40.76 | 78.27 | 6.44 | 2.08 | SMI | PlMg | Ctrl | N | PlMg_6 |
| 40.84 | 27.92 | 74.40 | 64.07 | 43.64 | 113.20 | 65.87 | 38.11 | 9.77 | 15.43 | 57.61 | 0.20 | -1.66 | SMI | PlMg | Rot | N | PlMg_6 |
| 17.24 | 13.14 | 20.46 | 25.45 | 19.32 | 30.11 | 76.25 | 66.34 | 2.87 | 12.82 | 86.46 | -2.07 | 2.67 | SMI | PlMg | Ama | N | PlMg_6 |
| 21.55 | 10.28 | 29.28 | 31.40 | 15.44 | 42.33 | 48.39 | 38.03 | 4.09 | 17.66 | 77.39 | -2.36 | -0.21 | SMI | PlMg | Omy | N | PlMg_6 |
| 87.82 | 76.48 | 123.75 | 132.47 | 115.59 | 185.12 | 80.93 | 56.62 | 6.20 | 34.26 | 66.83 | 3.85 | 0.70 | SMI | PlMg | Oxa | N | PlMg_6 |
| 91.30 | 71.20 | 136.08 | 147.71 | 116.60 | 220.49 | 79.04 | 50.89 | 8.63 | 30.66 | 63.92 | 4.33 | -0.25 | SMI | PlMg | Ctrl | ch | PlMg_6 |
| 29.98 | 16.58 | 54.01 | 45.49 | 25.25 | 79.43 | 51.76 | 31.99 | 8.34 | 15.51 | 63.39 | -1.17 | -1.82 | SMI | PlMg | Rot | ch | PlMg_6 |
| 12.53 | 10.89 | 16.66 | 17.04 | 14.81 | 22.66 | 85.90 | 64.22 | 2.68 | 14.06 | 74.49 | -2.25 | 2.29 | SMI | PlMg | Ama | ch | PlMg_6 |
| 20.55 | 9.84 | 31.15 | 28.74 | 13.76 | 44.12 | 49.23 | 37.05 | 4.10 | 20.99 | 74.30 | -2.35 | -0.39 | SMI | PlMg | Omy | ch | PlMg_6 |
| 47.95 | 34.81 | 86.51 | 72.97 | 51.49 | 126.97 | 69.23 | 39.51 | 10.01 | 17.66 | 57.53 | 0.83 | -1.55 | SMI | PlMg | Oxa | ch | PlMg_6 |
| 111.67 | 77.78 | 133.37 | 209.54 | 158.62 | 247.00 | 76.41 | 61.33 | 7.31 | 31.81 | 80.44 | 5.59 | 1.26 | SMI | PlMg | Ctrl | N | PlMg_7 |
| 32.59 | 20.49 | 64.95 | 55.89 | 36.23 | 102.86 | 59.04 | 37.05 | 7.43 | 21.44 | 62.76 | -0.55 | -1.28 | SMI | PlMg | Rot | N | PlMg_7 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | N | PlMg_7 |
| 22.21 | 10.16 | 33.91 | 39.10 | 21.18 | 55.46 | 55.42 | 44.49 | 4.79 | 16.95 | 74.80 | -1.92 | 0.05 | SMI | PlMg | Omy | N | PlMg_7 |
| 98.55 | 68.47 | 123.99 | 153.46 | 110.68 | 194.60 | 73.80 | 54.47 | 5.96 | 32.44 | 74.89 | 3.85 | 0.77 | SMI | PlMg | Oxa | N | PlMg_7 |
| 65.63 | 45.77 | 136.54 | 103.71 | 74.13 | 209.88 | 72.07 | 35.06 | 11.48 | 21.39 | 48.61 | 2.75 | -2.57 | SMI | PlMg | Ctrl | ch | PlMg_7 |
| 32.02 | 14.90 | 58.68 | 48.93 | 23.15 | 87.97 | 49.50 | 32.32 | 8.38 | 19.30 | 62.69 | -1.06 | -1.94 | SMI | PlMg | Rot | ch | PlMg_7 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_7 |
| 18.49 | 6.81 | 22.86 | 26.73 | 9.57 | 33.14 | 49.26 | 41.20 | 3.65 | 17.37 | 81.54 | -2.65 | 0.26 | SMI | PlMg | Omy | ch | PlMg_7 |
| 59.54 | 38.10 | 104.87 | 98.10 | 67.85 | 172.52 | 71.72 | 38.78 | 10.31 | 22.61 | 55.53 | 1.88 | -1.73 | SMI | PlMg | Oxa | ch | PlMg_7 |
| 125.68 | 93.82 | 144.31 | 247.57 | 198.04 | 282.69 | 80.54 | 68.45 | 7.56 | 33.89 | 85.23 | 7.12 | 1.96 | SMI | PlMg | Ctrl | N | PlMg_8 |
| 33.66 | 23.13 | 58.28 | 55.73 | 39.00 | 93.92 | 61.34 | 38.38 | 6.92 | 25.66 | 62.49 | -0.54 | -1.02 | SMI | PlMg | Rot | N | PlMg_8 |
| 13.96 | 9.86 | 18.61 | 18.98 | 13.41 | 25.30 | 69.06 | 52.67 | 1.79 | 24.63 | 77.70 | -2.50 | 1.56 | SMI | PlMg | Ama | N | PlMg_8 |
| 23.95 | 9.99 | 37.88 | 39.86 | 19.30 | 60.02 | 50.38 | 36.94 | 5.92 | 17.72 | 71.37 | -1.88 | -0.81 | SMI | PlMg | Omy | N | PlMg_8 |
| 102.32 | 79.44 | 138.18 | 152.14 | 119.04 | 209.70 | 76.36 | 53.35 | 8.22 | 34.45 | 69.12 | 4.62 | 0.17 | SMI | PlMg | Oxa | N | PlMg_8 |
| 110.07 | 85.43 | 141.43 | 199.15 | 161.73 | 251.66 | 80.79 | 61.20 | 7.37 | 36.43 | 75.25 | 5.86 | 1.13 | SMI | PlMg | Ctrl | ch | PlMg_8 |
| 21.43 | 10.81 | 34.72 | 32.96 | 17.61 | 52.41 | 49.01 | 33.59 | 5.30 | 20.35 | 69.33 | -2.11 | -1.00 | SMI | PlMg | Rot | ch | PlMg_8 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_8 |
| 16.15 | 6.89 | 21.01 | 22.14 | 9.45 | 28.84 | 48.41 | 38.01 | 2.75 | 21.75 | 78.31 | -2.83 | 0.08 | SMI | PlMg | Omy | ch | PlMg_8 |
| 62.33 | 48.86 | 101.14 | 108.60 | 85.98 | 172.13 | 73.93 | 45.94 | 8.12 | 30.78 | 61.16 | 2.28 | -0.61 | SMI | PlMg | Oxa | ch | PlMg_8 |
| 110.58 | 75.80 | 127.76 | 259.72 | 202.36 | 296.00 | 78.25 | 66.63 | 9.30 | 27.29 | 85.01 | 6.69 | 1.53 | SMI | PlMg | Ctrl | N | PlMg_9 |
| 30.01 | 18.41 | 51.13 | 49.97 | 30.57 | 82.99 | 57.09 | 38.56 | 6.60 | 17.79 | 68.28 | -1.07 | -0.83 | SMI | PlMg | Rot | N | PlMg_9 |
| 17.18 | 9.33 | 22.66 | 25.67 | 13.98 | 34.21 | 58.70 | 45.95 | 3.36 | 21.11 | 77.90 | -2.42 | 0.67 | SMI | PlMg | Ama | N | PlMg_9 |
| 19.25 | 8.90 | 27.82 | 32.28 | 16.83 | 45.55 | 51.83 | 40.40 | 4.03 | 17.83 | 75.31 | -2.33 | -0.09 | SMI | PlMg | Omy | N | PlMg_9 |
| 87.74 | 70.23 | 106.83 | 171.99 | 144.26 | 204.92 | 80.88 | 63.51 | 5.98 | 34.28 | 76.90 | 4.26 | 1.64 | SMI | PlMg | Oxa | N | PlMg_9 |
| 100.19 | 70.28 | 120.77 | 221.68 | 172.76 | 261.78 | 77.58 | 63.75 | 8.09 | 29.98 | 81.66 | 5.57 | 1.39 | SMI | PlMg | Ctrl | ch | PlMg_9 |
| 22.27 | 12.44 | 38.41 | 38.65 | 23.52 | 63.74 | 57.63 | 39.45 | 5.95 | 17.71 | 66.66 | -1.69 | -0.71 | SMI | PlMg | Rot | ch | PlMg_9 |
| 9.28 | 7.53 | 11.10 | 12.62 | 10.24 | 15.10 | 80.98 | 67.74 | 0.69 | 26.30 | 83.06 | -2.60 | 3.11 | SMI | PlMg | Ama | ch | PlMg_9 |
| 15.59 | 7.25 | 20.28 | 21.94 | 10.47 | 28.46 | 52.44 | 42.14 | 2.61 | 20.61 | 78.83 | -2.77 | 0.44 | SMI | PlMg | Omy | ch | PlMg_9 |
| 83.67 | 63.29 | 108.46 | 155.79 | 124.76 | 196.99 | 76.13 | 53.90 | 6.37 | 35.30 | 69.24 | 3.67 | 0.55 | SMI | PlMg | Oxa | ch | PlMg_9 |
| 105.69 | 71.69 | 124.78 | 237.27 | 180.67 | 277.37 | 76.32 | 63.39 | 8.98 | 27.76 | 82.90 | 6.00 | 1.24 | SMI | PlMg | Ctrl | N | PlMg_10 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40.16 | 28.12 | 68.62 | 70.62 | 50.25 | 114.53 | 62.94 | 37.62 | 8.67 | 17.81 | 59.00 | 0.13 | -1.51 | SMI | PlMg | Rot | N | PlMg_10 |
| 9.32 | 8.09 | 11.85 | 12.68 | 11.01 | 16.11 | 86.25 | 65.85 | 0.89 | 25.62 | 76.21 | -2.51 | 2.80 | SMI | PlMg | Ama | N | PlMg_10 |
| 23.90 | 10.68 | 33.43 | 49.42 | 26.84 | 67.81 | 52.95 | 41.03 | 5.04 | 20.02 | 75.81 | -1.72 | -0.16 | SMI | PlMg | Omy | N | PlMg_10 |
| 71.51 | 57.83 | 100.62 | 123.70 | 102.99 | 169.72 | 78.63 | 53.54 | 5.70 | 33.22 | 65.49 | 2.72 | 0.52 | SMI | PlMg | Oxa | N | PlMg_10 |
| 95.64 | 73.67 | 125.96 | 176.86 | 142.70 | 229.45 | 81.56 | 59.32 | 7.02 | 35.41 | 72.84 | 4.83 | 1.01 | SMI | PlMg | Ctrl | ch | PlMg_10 |
| 28.10 | 17.36 | 48.06 | 45.43 | 28.74 | 76.09 | 59.15 | 38.10 | 7.11 | 16.99 | 63.92 | -1.17 | -1.07 | SMI | PlMg | Rot | ch | PlMg_10 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_10 |
| 17.74 | 7.43 | 25.63 | 33.45 | 16.30 | 50.19 | 47.81 | 36.12 | 3.86 | 21.71 | 74.77 | -2.43 | -0.40 | SMI | PlMg | Omy | ch | PlMg_10 |
| 58.51 | 46.91 | 101.83 | 90.42 | 72.93 | 154.14 | 76.61 | 44.20 | 8.93 | 24.07 | 56.44 | 1.88 | -1.01 | SMI | PlMg | Oxa | ch | PlMg_10 |
| 124.74 | 80.57 | 144.74 | 242.53 | 174.01 | 280.26 | 73.11 | 61.33 | 8.56 | 26.93 | 84.22 | 6.48 | 1.09 | SMI | PlMg | Ctrl | N | PlMg_11 |
| 53.31 | 34.58 | 70.51 | 105.07 | 76.93 | 135.02 | 64.05 | 45.33 | 4.91 | 34.41 | 69.93 | 0.93 | 0.08 | SMI | PlMg | Rot | N | PlMg_11 |
| 8.54 | 5.81 | 10.25 | 14.51 | 10.60 | 17.08 | 74.95 | 62.85 | 1.05 | 18.65 | 83.63 | -2.78 | 2.63 | SMI | PlMg | Ama | N | PlMg_11 |
| 20.71 | 10.15 | 32.13 | 28.84 | 14.34 | 44.89 | 54.60 | 39.69 | 4.24 | 21.27 | 72.59 | -2.21 | -0.20 | SMI | PlMg | Omy | N | PlMg_11 |
| 101.86 | 70.47 | 126.72 | 154.39 | 108.23 | 192.43 | 73.00 | 55.92 | 5.81 | 35.97 | 76.09 | 3.96 | 0.91 | SMI | PlMg | Oxa | N | PlMg_11 |
| 112.66 | 75.24 | 148.67 | 184.08 | 130.03 | 239.86 | 73.49 | 52.16 | 7.91 | 32.88 | 71.72 | 5.17 | 0.10 | SMI | PlMg | Ctrl | ch | PlMg_11 |
| 48.84 | 36.62 | 71.00 | 83.47 | 66.04 | 116.59 | 63.19 | 43.11 | 4.30 | 33.01 | 67.15 | 0.47 | -0.10 | SMI | PlMg | Rot | ch | PlMg_11 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.00 | 0.00 | SMI | PlMg | Ama | ch | PlMg_11 |
| 18.44 | 7.79 | 26.96 | 25.48 | 10.98 | 37.09 | 48.57 | 35.33 | 3.13 | 23.19 | 73.84 | -2.62 | -0.35 | SMI | PlMg | Omy | ch | PlMg_11 |
| 83.46 | 65.37 | 114.99 | 134.98 | 108.34 | 183.11 | 81.02 | 57.02 | 6.10 | 35.20 | 70.04 | 3.46 | 0.90 | SMI | PlMg | Oxa | ch | PlMg_11 |

**Table s3.** Sperm motility parameters comparison between five bivalve species, both DUI and SMI, with and without chemoattractants. Values are presented as means ± s.e.m. The effect of the factor 'species' (*F* and *p*) was assessed separately for each parameter and presence/absence of egg chemical cues by means of a one way ANOVA, followed by a Tukey's multi comparison test (result indicates by letters in subscript). Significant differences ($p \leq 0.05$) are shown in bold. Inheritance: For abbreviations refer to table s2.

| Tables s3 | Inheritance | Species | DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| without chemoattractants | DUI | MyEd | 57.96 ± 2.75$^{a}$ | 36.88 ± 1.71$^{a}$ | 96.86 ± 4.05$^{ab}$ | 114.06 ± 4.66$^{a}$ | 75.41 ± 3.16$^{a}$ | 184.87 ± 8.19$^{ab}$ | 67.57 ± 1.74$^{a}$ | 41.82 ± 1.57$^{a}$ | 10.44 ± 0.49$^{a}$ | 25.59 ± 0.99$^{a}$ | 61.6 ± 1.59$^{a}$ | 2.02 ± 0.14$^{a}$ | −1.38 ± 0.26$^{a}$ |
| | DUI | RuPh | 47.83 ± 3.29$^{a}$ | 30.06 ± 1.87$^{a}$ | 79.35 ± 4.24$^{a}$ | 93.42 ± 6.28$^{a}$ | 63.16 ± 4.04$^{a}$ | 150.95 ± 8.34$^{a}$ | 70.51 ± 1.43$^{a}$ | 43.56 ± 1.31$^{a}$ | 7.34 ± 0.4$^{b}$ | 27.6 ± 1.22$^{ab}$ | 62.31 ± 2.05$^{a}$ | 0.97 ± 0.23$^{a}$ | −0.66 ± 0.19$^{a}$ |
| | SMI | MeMe | 92.15 ± 6.57$^{b}$ | 58.32 ± 3.47$^{b}$ | 115.31 ± 6.13$^{bc}$ | 156.69 ± 11.27$^{b}$ | 106.29 ± 6.65$^{b}$ | 194.51 ± 11.01$^{b}$ | 71.08 ± 2.41$^{a}$ | 54.88 ± 2.1$^{b}$ | 7.97 ± 0.49$^{b}$ | 27.17 ± 1.07$^{a}$ | 77.66 ± 1.76$^{b}$ | 3.59 ± 0.36$^{b}$ | 0.54 ± 0.27$^{b}$ |
| | SMI | NuOb | 102.65 ± 8.88$^{b}$ | 76.51 ± 6.39$^{c}$ | 129.03 ± 7.79$^{c}$ | 193.58 ± 12.73$^{bc}$ | 151.32 ± 12.26$^{c}$ | 242.62 ± 9.6$^{c}$ | 76.68 ± 3.59$^{ab}$ | 60.87 ± 4.38$^{bc}$ | 7.26 ± 0.46$^{b}$ | 33.89 ± 1.74$^{b}$ | 77.28 ± 2.9$^{b}$ | 5.22 ± 0.53$^{c}$ | 1.11 ± 0.53$^{b}$ |
| | SMI | PlMg | 112.4 ± 5.89$^{b}$ | 82.25 ± 3.92$^{c}$ | 136.9 ± 4.46$^{c}$ | 211.56 ± 14.47$^{c}$ | 164.82 ± 9.82$^{c}$ | 252.95 ± 11.04$^{c}$ | 78.84 ± 1.59$^{b}$ | 63.03 ± 1.79$^{c}$ | 7.76 ± 0.33$^{b}$ | 29.93 ± 1.74$^{ab}$ | 80 ± 2.82$^{b}$ | 5.87 ± 0.39$^{c}$ | 1.32 ± 0.2$^{b}$ |
| | | *F* | (4,40) 29.69 | (4,40) 50.13 | (4,40) 22.11 | (4,40) 23.27 | (4,40) 39.13 | (4,40) 17.58 | (4,40) 5.93 | (4,40) 24.79 | (4,40) 9.96$^{b}$ | (4,40) 4.07 | (4,40) 16.98$^{b}$ | (4,40) 41.92 | (4,40) 20.93 |
| | | *P* | **1.69E-11** | **4.62E-15** | **1.08E-09** | **5.42E-10** | **2.51E-13** | **2.11E-08** | **7.50E-04** | **2.26E-10** | **1.44E-05** | **7.20E-03** | **3.23E-08** | **8.45E-14** | **2.25E-09** |
| with chemoattractants | DUI | MyEd | 63.07 ± 4.57$^{a}$ | 39.98 ± 2.02$^{a}$ | 111.17 ± 4.18$^{b}$ | 110.45 ± 7.16$^{a}$ | 72.27 ± 3.39$^{a}$ | 193.4 ± 8.51$^{ab}$ | 67.15 ± 2.99$^{ab}$ | 37.61 ± 1.72$^{a}$ | 11.14 ± 0.53$^{a}$ | 25.85 ± 1.58$^{a}$ | 56.57 ± 2.07$^{a}$ | 2.3 ± 0.18$^{ab}$ | −2.01 ± 0.26$^{a}$ |
| | DUI | RuPh | 53.13 ± 2.61$^{a}$ | 31.03 ± 1.86$^{a}$ | 88.97 ± 3.57$^{a}$ | 105.4 ± 4.82$^{a}$ | 66.23 ± 3.8$^{a}$ | 170.04 ± 5.6$^{a}$ | 62.85 ± 1.78$^{a}$ | 39.17 ± 1.69$^{a}$ | 8.58 ± 0.32$^{ab}$ | 27.04 ± 2.07$^{ab}$ | 62.13 ± 1.81$^{ab}$ | 1.33 ± 0.18$^{a}$ | −1.34 ± 0.21$^{ab}$ |
| | SMI | MeMe | 83.12 ± 5.97$^{ab}$ | 54.59 ± 3.42$^{b}$ | 108.18 ± 6.07$^{ab}$ | 142.24 ± 10.55$^{ab}$ | 97.4 ± 6.54$^{ab}$ | 183.29 ± 10.63$^{a}$ | 72.13 ± 2.87$^{bc}$ | 54.44 ± 2.48$^{b}$ | 9.55 ± 1.34$^{ab}$ | 24.61 ± 2.26$^{a}$ | 75.35 ± 1.66$^{cd}$ | 3.23 ± 0.32$^{b}$ | 0.23 ± 0.44$^{c}$ |
| | SMI | NuOb | 105.98 ± 9.69$^{b}$ | 81.28 ± 3.79$^{c}$ | 123.79 ± 12.47$^{bc}$ | 231.85 ± 19.55$^{c}$ | 192.2 ± 23.9$^{c}$ | 266.53 ± 16.58$^{c}$ | 82.69 ± 3.77$^{c}$ | 69.96 ± 5.68$^{c}$ | 7.65 ± 0.69$^{b}$ | 31.78 ± 1.74$^{ab}$ | 83.85 ± 3.09$^{d}$ | 6.23 ± 0.49$^{d}$ | 2.07 ± 0.66$^{d}$ |
| | SMI | PlMg | 95.2 ± 5.9$^{b}$ | 70.29 ± 4.23$^{c}$ | 136.98 ± 4.13$^{c}$ | 158.06 ± 11.88$^{b}$ | 121.15 ± 9.81$^{b}$ | 222.89 ± 7.2$^{b}$ | 76.78 ± 1.7$^{c}$ | 52.29 ± 2.87$^{b}$ | 7.96 ± 0.44$^{b}$ | 32.59 ± 1.39$^{b}$ | 67.45 ± 3.01$^{bc}$ | 4.44 ± 0.35$^{c}$ | 0.03 ± 0.39$^{bc}$ |
| | | *F* | (4,40) 13.93 | (4,40) 35.65 | (4,40) 11.75 | (4,40) 17.18 | (4,40) 24.14 | (4,40) 13.11 | (4,40) 7.53 | (4,40) 19.27 | (4,40) 3.77 | (4,40) 3.79 | (4,40) 16.49 | (4,40) 32.18 | (4,40) 14.44 |
| | | *P* | **3.32E-07** | **1.07E-12** | **2.09E-06** | **2.80E-08** | **3.26E-10** | **6.48E-07** | **1.20E-04** | **6.64E-09** | **1.00E-02** | **1.00E-02** | **4.62E-08** | **5.10E-12** | **2.20E-07** |

**Table s4.** Sperm motility parameters comparison between five bivalve species, both DUI and SMI, with and without chemoattractants. Values are presented as means ± s.e.m. The main effect of the two fixed factors 'species' and 'chemoattractants', was assessed for each parameter separately through a liner mixed effect model which took into account the by-subject variability. Differences among species are indicated by letters in subscript and were determined through a *post hoc* pairwise comparison, with *p*-values adjusted using Holm's correction for multiple testing. Significant differences ($p \leq 0.05$) are shown in bold. Inheritance: DUI, doubly uniparental inheritance; SMI, strict maternal inheritance. Species: MyEd, *M. edulis* (*n* = 11); RuPh, *R. philippinarum* (*n* = 9); MeMe, *M. mercenaria* (*n* = 9); NuOb, *N. obscurata* (*n* = 5); PlMg, *P. magellanicus* (*n* = 11). 'Control-N', basal sperm motility without chemoattractants; 'Control -ch', basal sperm motility with chemoattractants. ':species', main effect of factor 'species'; ':chem', main effect of factor 'chemoattractants'. For abbreviations refer to table s2.

**Table s4**

| Species | Inheritance | Treatment | DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MyEd | DUI | Control-N | 57.96 ± 2.75$^{a}$ | 36.88 ± 1.71$^{a}$ | 96.86 ± 4.05$^{b}$ | 114.06 ± 4.66$^{a}$ | 75.41 ± 3.16$^{a}$ | 184.87 ± 8.19$^{b}$ | 67.57 ± 1.74$^{a}$ | 41.82 ± 1.57$^{a}$ | 10.44 ± 0.49$^{b}$ | 25.59 ± 0.99$^{a}$ | 61.6 ± 1.59$^{a}$ | 2.02 ± 0.14$^{b}$ | −1.38 ± 0.26$^{a}$ |
| | | Control-ch | 63.07 ± 4.57$^{a}$ | 39.98 ± 2.02$^{a}$ | 111.17 ± 4.18$^{b}$ | 110.45 ± 7.16$^{a}$ | 72.27 ± 3.39$^{a}$ | 193.4 ± 8.51$^{b}$ | 67.15 ± 2.99$^{a}$ | 37.61 ± 1.72$^{a}$ | 11.14 ± 0.53$^{b}$ | 25.85 ± 1.58$^{a}$ | 56.57 ± 2.07$^{a}$ | 2.3 ± 0.18$^{b}$ | −2.01 ± 0.26$^{a}$ |
| RuPh | DUI | Control-N | 47.83 ± 3.29$^{a}$ | 30.06 ± 1.87$^{a}$ | 79.35 ± 4.24$^{a}$ | 93.42 ± 6.28$^{a}$ | 63.16 ± 4.04$^{a}$ | 150.95 ± 8.34$^{a}$ | 70.51 ± 1.43$^{a}$ | 43.56 ± 1.31$^{a}$ | 7.34 ± 0.4$^{a}$ | 27.6 ± 1.22$^{ab}$ | 62.31 ± 2.05$^{a}$ | 0.97 ± 0.23$^{a}$ | −0.66 ± 0.19$^{a}$ |
| | | Control-ch | 53.13 ± 2.61$^{a}$ | 31.03 ± 1.86$^{a}$ | 88.97 ± 3.57$^{a}$ | 105.4 ± 4.82$^{a}$ | 66.23 ± 3.8$^{a}$ | 170.04 ± 5.6$^{a}$ | 62.85 ± 1.78$^{a}$ | 39.17 ± 1.69$^{a}$ | 8.58 ± 0.32$^{a}$ | 27.04 ± 2.07$^{ab}$ | 62.13 ± 1.81$^{a}$ | 1.33 ± 0.18$^{a}$ | −1.34 ± 0.21$^{a}$ |
| MeMe | SMI | Control-N | 92.15 ± 6.57$^{b}$ | 58.32 ± 3.47$^{b}$ | 115.31 ± 6.13$^{bc}$ | 156.69 ± 11.27$^{b}$ | 106.29 ± 6.65$^{b}$ | 194.51 ± 11.01$^{b}$ | 71.08 ± 2.41$^{a}$ | 54.88 ± 2.1$^{b}$ | 7.97 ± 0.49$^{a}$ | 27.17 ± 1.07$^{a}$ | 77.66 ± 1.76$^{b}$ | 3.59 ± 0.36$^{c}$ | 0.54 ± 0.27$^{b}$ |
| | | Control-ch | 83.12 ± 5.97$^{b}$ | 54.59 ± 3.42$^{b}$ | 108.18 ± 6.07$^{bc}$ | 142.24 ± 10.55$^{b}$ | 97.4 ± 6.54$^{b}$ | 183.29 ± 10.63$^{b}$ | 72.13 ± 2.87$^{a}$ | 54.44 ± 2.48$^{b}$ | 9.55 ± 1.34$^{a}$ | 24.61 ± 2.26$^{a}$ | 75.35 ± 1.66$^{b}$ | 3.23 ± 0.32$^{c}$ | 0.23 ± 0.44$^{b}$ |
| NuOb | SMI | Control-N | 102.65 ± 8.88$^{c}$ | 76.51 ± 6.39$^{c}$ | 129.03 ± 7.79$^{cd}$ | 193.58 ± 12.73$^{c}$ | 151.32 ± 12.26$^{d}$ | 242.62 ± 9.6$^{c}$ | 76.68 ± 3.59$^{b}$ | 60.87 ± 4.38$^{c}$ | 7.26 ± 0.46$^{a}$ | 33.89 ± 1.74$^{c}$ | 77.28 ± 2.9$^{b}$ | 5.22 ± 0.53$^{d}$ | 1.11 ± 0.53$^{c}$ |
| | | Control-ch | 105.98 ± 9.69$^{c}$ | 81.28 ± 3.79$^{c}$ | 123.79 ± 12.47$^{cd}$ | 231.85 ± 19.55$^{c}$ | 192.2 ± 23.9$^{d}$ | 266.53 ± 16.58$^{c}$ | 82.69 ± 3.77$^{b}$ | 69.96 ± 5.68$^{c}$ | 7.65 ± 0.69$^{a}$ | 31.78 ± 1.74$^{c}$ | 83.85 ± 3.09$^{b}$ | 6.23 ± 0.49$^{d}$ | 2.07 ± 0.66$^{c}$ |
| PlMg | SMI | Control-N | 112.4 ± 5.89$^{c}$ | 82.25 ± 3.92$^{c}$ | 136.9 ± 4.46$^{d}$ | 211.56 ± 14.47$^{c}$ | 164.82 ± 9.82$^{c}$ | 252.95 ± 11.04$^{c}$ | 78.84 ± 1.59$^{b}$ | 63.03 ± 1.79$^{b}$ | 7.76 ± 0.33$^{a}$ | 29.93 ± 1.74$^{bc}$ | 80 ± 2.82$^{b}$ | 5.87 ± 0.39$^{d}$ | 1.32 ± 0.2$^{bc}$ |
| | | Control-ch | 95.2 ± 5.9$^{c}$ | 70.29 ± 4.23$^{c}$ | 136.98 ± 4.13$^{d}$ | 158.06 ± 11.88$^{c}$ | 121.15 ± 9.81$^{c}$ | 222.89 ± 7.2$^{c}$ | 76.78 ± 1.7$^{b}$ | 52.29 ± 2.87$^{b}$ | 7.96 ± 0.44$^{a}$ | 32.59 ± 1.39$^{bc}$ | 67.45 ± 3.01$^{b}$ | 4.44 ± 0.35$^{d}$ | 0.03 ± 0.39$^{bc}$ |
| | | *:species* | **$F_{4,84}$=39.26, $P$ <2.16e-16*** ** | **$F_{4,40}$=63.23, $P$ <2.16e-16*** ** | **$F_{4,84}$=30.72, $P$=9.37e-16*** ** | **$F_{4,40}$=26.37, $P$=9.42e-11*** ** | **$F_{4,40}$=38.64, $P$ =3e-13*** ** | **$F_{4,40}$=21.75, $P$ =1.35e-09*** ** | **$F_{4,40}$=10.9, $P$ =4.52e-06*** ** | **$F_{4,84}$=34.4, $P$<2e-16*** ** | **$F_{4,40}$=9.58, $P$=1.56e-05*** ** | **$F_{4,40}$=6, $P$ =6.5e-04*** ** | **$F_{4,84}$=26, $P$=4.88e-14*** ** | **$F_{4,40}$=53.22, $P$ =1.71e-15*** ** | **$F_{4,40}$=28.8, $P$ =2.65e-11*** ** |
| | | *:chem* | $F_{1,84}$=0.9, $P$=0.34 | $F_{1,44}$=1.36, $P$=0.24 | $F_{1,84}$=1, $P$=0.3 | $F_{1,44}$=2.34, $P$=0.13 | $F_{1,44}$=2.36, $P$ =0.13 | $F_{1,44}$=0.033, $P$=0.85 | $F_{1,44}$=0.76, $P$=0.38 | **$F_{1,84}$=5.23, $P$ =0.024*** | **$F_{1,44}$=5.14, $P$=0.028*** | $F_{1,44}$=0.02, $P$=0.88 | **$F_{1,84}$=6.62, $P$=0.012*** | $F_{1,44}$=0.77, $P$ =0.38 | **$F_{1,44}$=7.13, $P$ =0.0106*** |

**Table s5.** Effect of metabolic inhibitors on sperm motility parameters in five bivalve species, both DUI and SMI, without chemoattractants. Values are presented as means ± s.e.m. The effect of the factor 'treatment' (*F* and *p*) was assessed for each species and each parameter separately through a liner mixed effect model, which took into account the by-subject variability. Difference among treatments (indicated by letters in subscript) were determined through a *post hoc* pairwise comparison, with *p*-values adjusted using Holm's correction for multiple testing. Significant differences ($p \leq 0.05$) are shown in bold. For abbreviations refer to table s2.

**Table s5**

| Species | Inheritance | Treatment | DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MyEd | DUI | Control | 57.96 ± 2.75$^{a}$ | 36.88 ± 1.71$^{a}$ | 96.86 ± 4.05$^{a}$ | 114.06 ± 4.66$^{a}$ | 75.41 ± 3.16$^{a}$ | 184.87 ± 8.19$^{a}$ | 67.57 ± 1.74$^{a}$ | 41.82 ± 1.57 | 10.44 ± 0.49$^{a}$ | 25.59 ± 0.99 | 61.6 ± 1.59 | 2.02 ± 0.14$^{a}$ | −1.38 ± 0.26$^{a}$ |
| | | Rotenone | 16.35 ± 2.64$^{b}$ | 8.15 ± 1.32$^{b}$ | 30.62 ± 5.46$^{b}$ | 29.05 ± 3.96$^{b}$ | 15.44 ± 2.15$^{b}$ | 56.07 ± 8.85$^{b}$ | 48.5 ± 5.77$^{a}$ | 31.34 ± 4.56 | 4.51 ± 0.74$^{b}$ | 25.92 ± 3.14 | 55.07 ± 5.95 | −1.86 ± 0.24$^{b}$ | **−1.09 ± 0.47$^{ab}$** |
| | | Antimycin A | 9.67 ± 1.9$^{bc}$ | 5.58 ± 0.94$^{b}$ | 15.5 ± 3.51$^{c}$ | 17.54 ± 3.04$^{bc}$ | 11.1 ± 2.43$^{b}$ | 27.52 ± 5.39$^{c}$ | 54.84 ± 10.22$^{a}$ | 42.6 ± 8.93 | 3.11 ± 0.8$^{bc}$ | 25.56 ± 4 | 58.75 ± 9.46 | −1.88 ± 0.31$^{b}$ | 0.74 ± 0.7$^{c}$ |
| | | Oligomycin | 4.67 ± 1.55$^{c}$ | 3.38 ± 1.34$^{b}$ | 7.91 ± 2.63$^{c}$ | 8.21 ± 2.8$^{c}$ | 5.84 ± 2.17$^{b}$ | 14.94 ± 5.57$^{c}$ | 39.79 ± 12.28$^{a}$ | 29.43 ± 9.81 | 1.46 ± 0.72$^{c}$ | 19.1 ± 5.88 | 36.05 ± 10.97 | −1.35 ± 0.4$^{b}$ | 0.59 ± 0.62$^{bc}$ |
| | | Oxamate | 57.16 ± 3.82$^{a}$ | 36.54 ± 1.78$^{a}$ | 92.86 ± 4.85$^{a}$ | 114.33 ± 7.76$^{a}$ | 75.66 ± 4.86$^{a}$ | 182.1 ± 8.85$^{a}$ | 68.71 ± 1.25$^{a}$ | 42.89 ± 1.39 | 10.4 ± 0.36$^{a}$ | 26.6 ± 1.55 | 62.38 ± 1.78 | 1.99 ± 0.23$^{a}$ | −1.22 ± 0.2$^{a}$ |
| | | *F* | (4,40) 99.35 | (4,50) 138.29 | (4,40) 108.23 | (4,40) 132.67 | (4,40) 144.32 | (4,40) 138.46 | (4,40) 2.85 | (4,40) 1.14 | (4,40) 47.36 | (4,40) 0.87 | (4,40) 2.41 | (4,40) 67.46 | (4,40) 4.87 |
| | | *P* | **< 2.2E-16** | **< 2.2E-16** | | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **0.035** | 0.349 | **1.17E-14** | 0.48 | 0.06 | **< 2.2E-16** | **2.60E-03** |
| RuPh | DUI | Control | 47.83 ± 3.29$^{a}$ | 30.06 ± 1.87$^{a}$ | 79.35 ± 4.24$^{a}$ | 93.42 ± 6.28$^{a}$ | 63.16 ± 4.04$^{a}$ | 150.95 ± 8.34$^{a}$ | 70.51 ± 1.43$^{a}$ | 43.56 ± 1.31$^{ab}$ | 7.34 ± 0.4$^{a}$ | 27.6 ± 1.22 | 62.31 ± 2.05 | 0.97 ± 0.23$^{a}$ | −0.66 ± 0.19$^{b}$ |
| | | Rotenone | 28.43 ± 1.62$^{b}$ | 14.06 ± 0.89$^{b}$ | 52.79 ± 3.22$^{c}$ | 55.99 ± 2.44$^{b}$ | 29.76 ± 1.33$^{b}$ | 98.41 ± 4.87$^{b}$ | 52.36 ± 1.13$^{ab}$ | 31.88 ± 1.02$^{abc}$ | 7.1 ± 0.39$^{a}$ | 22.15 ± 1.34 | 59.84 ± 1.25 | −1.07 ± 0.13$^{b}$ | −1.81 ± 0.16$^{a}$ |
| | | Antimycin A | 10.22 ± 3.11$^{c}$ | 4.56 ± 1.35$^{c}$ | 14.82 ± 4.51$^{d}$ | 24.15 ± 7.01$^{c}$ | 13.88 ± 4.33$^{b}$ | 33.63 ± 9.84$^{c}$ | 35.47 ± 9.62$^{b}$ | 25.73 ± 7.2$^{c}$ | 2.96 ± 0.88$^{b}$ | 17.73 ± 5.75 | 48.03 ± 12.48 | −1.5 ± 0.4$^{b}$ | −0.19 ± 0.38$^{b}$ |
| | | Oligomycin | 11 ± 2.31$^{c}$ | 5.45 ± 1.27$^{c}$ | 16.12 ± 3.43$^{d}$ | 25.14 ± 5.08$^{c}$ | 13.95 ± 3.38$^{b}$ | 36.63 ± 7.72$^{c}$ | 42.51 ± 10.2$^{b}$ | 31.05 ± 7.45$^{bc}$ | 3.2 ± 0.7$^{b}$ | 22.58 ± 5.65 | 56.23 ± 10.88 | −1.81 ± 0.38$^{b}$ | −0.08 ± 0.42$^{b}$ |
| | | Oxamate | 42.58 ± 3.2$^{a}$ | 27.53 ± 1.16$^{a}$ | 68.43 ± 3.79$^{b}$ | 96.35 ± 6.99$^{a}$ | 67.48 ± 4.5$^{a}$ | 149.83 ± 5$^{a}$ | 72.83 ± 2.71$^{a}$ | 47.02 ± 1.7$^{a}$ | 6.62 ± 0.39$^{a}$ | 27.91 ± 2.32 | 65.14 ± 3.72 | 0.8 ± 0.17$^{a}$ | −0.13 ± 0.2$^{b}$ |
| | | *F* | (4,32) 61.60 | (4,32) 125.12 | (4,32) 88.08 | (4,32) 51.64 | (4,32) 74.39 | (4, 32) 81.42 | (4,32) 8.49 | (4,32) 4.78 | (4,32) 15.53 | (4,32) 1.34 | (4,32) 0.88 | (4,32) 23.14 | (4,32) 6.44 |
| | | *P* | **1.40E-14** | **< 2.2E-16** | **< 2.2E-16** | **1.63E-13** | **9.62E-16** | **2.62E-16** | **8.64E-05** | **3.80E-03** | **3.66E-07** | 0.27 | 0.48 | **4.63E-09** | **6.40E-04** |
| MeMe | SMI | Control | 92.15 ± 6.57$^{a}$ | 58.32 ± 3.47$^{a}$ | 115.31 ± 6.13$^{a}$ | 156.69 ± 11.27$^{a}$ | 106.29 ± 6.65$^{a}$ | 194.51 ± 11.01$^{a}$ | 71.08 ± 2.41$^{ab}$ | 54.88 ± 2.1$^{ab}$ | 7.97 ± 0.49$^{a}$ | 27.17 ± 1.07$^{a}$ | 77.66 ± 1.76 | 3.59 ± 0.36$^{a}$ | 0.54 ± 0.27 |
| | | Rotenone | 16.37 ± 2.89$^{c}$ | 8.86 ± 1.45$^{c}$ | 22.68 ± 4.34$^{c}$ | 26.4 ± 4.97$^{c}$ | 15.14 ± 2.86$^{c}$ | 36.74 ± 7.38$^{c}$ | 54.66 ± 8.04$^{bc}$ | 42.4 ± 6.43$^{ab}$ | 2.95 ± 0.69$^{b}$ | 17.83 ± 2.89$^{b}$ | 67.2 ± 8.65 | −1.98 ± 0.3$^{c}$ | 0.62 ± 0.45 |
| | | Antimycin A | 22 ± 1.57$^{c}$ | 9.7 ± 0.39$^{c}$ | 31.07 ± 2.77$^{c}$ | 36.56 ± 2.49$^{c}$ | 17.94 ± 1.08$^{c}$ | 50.8 ± 4.1$^{c}$ | 52.51 ± 3.7$^{c}$ | 40.58 ± 3.32$^{b}$ | 4.61 ± 0.49$^{b}$ | 18.5 ± 0.88$^{b}$ | 75.07 ± 1.99 | −2.11 ± 0.07$^{c}$ | −0.16 ± 0.42 |
| | | Oligomycin | 20.22 ± 1.15$^{c}$ | 10.17 ± 0.6$^{c}$ | 29.48 ± 2.22$^{c}$ | 32.46 ± 1.91$^{c}$ | 17.42 ± 1.18$^{c}$ | 46.16 ± 3.2$^{c}$ | 55.85 ± 4.02$^{bc}$ | 42.77 ± 4.05$^{ab}$ | 4.02 ± 0.33$^{b}$ | 20.43 ± 0.88$^{b}$ | 75 ± 1.66 | −2.17 ± 0.07$^{c}$ | 0.14 ± 0.43 |
| | | Oxamate | 63.84 ± 6.95$^{b}$ | 41.62 ± 3.43$^{b}$ | 83.97 ± 8.64$^{b}$ | 119.88 ± 7.46$^{b}$ | 85.56 ± 3.56$^{b}$ | 155.2 ± 8.18$^{b}$ | 77.77 ± 2.74$^{a}$ | 56.29 ± 1.97$^{a}$ | 7.84 ± 0.56$^{a}$ | 22.97 ± 1.29$^{ab}$ | 73.86 ± 0.86 | 2.03 ± 0.33$^{b}$ | 0.72 ± 0.28 |
| | | *F* | (4,32) 67.76 | (4,32) 105.66 | (4,32) 71.78 | (4,32) 108.33 | (4,32) 179.89 | (4,32) 132.12 | (4,40) 5.93 | (4,32) 3.87 | (4,32) 19.63 | (4,40) 5.69 | (4,32) 0.94 | (4,40) 112.92 | (4,32) 1 |
| | | *P* | **3.65E-15** | **< 2.2E-16** | **1.60E-15** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **7.50E-04** | **0.011** | **3.00E-08** | **9.99E-04** | 0.45 | **< 2.2E-16** | 0.42 |
| NuOb | SMI | Control | 102.65 ± 8.88$^{a}$ | 76.51 ± 6.39$^{a}$ | 129.03 ± 7.79$^{a}$ | 193.58 ± 12.73$^{a}$ | 151.32 ± 12.26$^{a}$ | 242.62 ± 9.6$^{a}$ | 76.68 ± 3.59 | 60.87 ± 4.38 | 7.26 ± 0.46$^{a}$ | 33.89 ± 1.74 | 77.28 ± 2.9 | 5.22 ± 0.53$^{a}$ | 1.11 ± 0.53 |
| | | Rotenone | 19.31 ± 6.61$^{c}$ | 10.8 ± 4.7$^{c}$ | 29.5 ± 10.84$^{c}$ | 29.03 ± 9.39$^{c}$ | 16.22 ± 6.57$^{b}$ | 44.13 ± 15.28$^{c}$ | 40.63 ± 11.76 | 29.47 ± 9 | 4.11 ± 1.28$^{ab}$ | 22.83 ± 8.72 | 57.19 ± 14.57 | −1.46 ± 0.52$^{c}$ | −0.48 ± 0.59 |
| | | Antimycin A | 11.81 ± 3.23$^{c}$ | 6.92 ± 1.94$^{c}$ | 18.66 ± 5.48$^{c}$ | 23.99 ± 6.48$^{c}$ | 14.66 ± 4.78$^{b}$ | 39.11 ± 12.08$^{c}$ | 50.97 ± 15.31 | 36.1 ± 12.26 | 3.71 ± 1.3$^{ab}$ | 14.86 ± 4.45 | 54.6 ± 14.71 | −1.73 ± 0.46$^{c}$ | 0.06 ± 1.02 |
| | | Oligomycin | 10.79 ± 2.95$^{c}$ | 6.18 ± 1.69$^{c}$ | 17 ± 5.33$^{c}$ | 23.97 ± 6.48$^{c}$ | 13.3 ± 3.54$^{b}$ | 37.87 ± 10.63$^{c}$ | 52.28 ± 13.59 | 36.6 ± 9.87 | 3.04 ± 0.88$^{b}$ | 19.11 ± 5.11 | 54.87 ± 13.97 | −1.79 ± 0.45$^{c}$ | 0.26 ± 0.47 |
| | | Oxamate | 73.84 ± 10.46$^{b}$ | 55.39 ± 8.96$^{b}$ | 93.19 ± 9.61$^{b}$ | 156.9 ± 14.52$^{b}$ | 127.66 ± 10.2$^{a}$ | 189.12 ± 12.51$^{b}$ | 72.34 ± 6.93 | 57.97 ± 6.61 | 6.59 ± 0.49$^{ab}$ | 29.21 ± 1.46 | 75.72 ± 3.95 | 3.2 ± 0.71$^{b}$ | 0.95 ± 0.69 |
| | | *F* | (4,20) 35.23 | (4,20) 35.63 | (4,20) 39.24 | (4,16) 63.59 | (4,16) 78.21 | (4,16) 75.57 | (4,16) 2.18 | (4,16) 2.8 | (4,20) 3.81 | (4,20) 2.29 | (4,16) 1.13 | (4,16) 38.34 | (4,20) 0.91 |
| | | *P* | **8.56E-09** | **7.76E-09** | **3.35E-09** | **1.28E-09** | **2.70E-10** | **3.50E-10** | 0.11 | 0.06 | **0.018** | 0.09 | 0.37 | **5.22E-08** | 0.47 |
| PlMg | SMI | Control | 112.4 ± 5.89$^{a}$ | 82.25 ± 3.92$^{a}$ | 136.9 ± 4.46$^{a}$ | 211.56 ± 14.47$^{a}$ | 164.82 ± 9.82$^{a}$ | 252.95 ± 11.04$^{a}$ | 78.84 ± 1.59$^{a}$ | 63.03 ± 1.79$^{a}$ | 7.76 ± 0.33$^{a}$ | 29.93 ± 1.74$^{a}$ | 80 ± 2.82$^{a}$ | 5.87 ± 0.39$^{a}$ | 1.32 ± 0.2$^{a}$ |
| | | Rotenone | 29.28 ± 3.79$^{c}$ | 18.35 ± 3.07$^{c}$ | 47.41 ± 6.59$^{c}$ | 49.65 ± 7.67$^{c}$ | 32.66 ± 6.3$^{c}$ | 77.22 ± 11.67$^{c}$ | 57.22 ± 4.59$^{bc}$ | 38.56 ± 3.43$^{bc}$ | 5.51 ± 0.77$^{b}$ | 24.62 ± 2.58$^{ab}$ | 67.75 ± 2.35$^{ab}$ | −1.16 ± 0.42$^{c}$ | −0.64 ± 0.34$^{b}$ |
| | | Antimycin A | 8.18 ± 2.03$^{d}$ | 5.86 ± 1.42$^{d}$ | 10.48 ± 2.49$^{e}$ | 12.64 ± 3.23$^{d}$ | 9.23 ± 2.35$^{d}$ | 15.98 ± 3.89$^{e}$ | 53.42 ± 10.62$^{bc}$ | 41.2 ± 8.78$^{bc}$ | 1.26 ± 0.37$^{c}$ | 17.6 ± 3.95$^{b}$ | 55.5 ± 11.35$^{b}$ | −1.86 ± 0.38$^{cd}$ | 1.33 ± 0.47$^{a}$ |
| | | Oligomycin | 21.92 ± 0.9$^{c}$ | 9.22 ± 0.41$^{d}$ | 32.65 ± 2$^{d}$ | 34.04 ± 2.13$^{cd}$ | 15.72 ± 1.55$^{d}$ | 49.55 ± 3.4$^{d}$ | 48.01 ± 2.05$^{c}$ | 35.6 ± 2.21$^{c}$ | 4.58 ± 0.37$^{b}$ | 18.64 ± 0.98$^{b}$ | 73.05 ± 1.24$^{ab}$ | −2.25 ± 0.11$^{d}$ | −0.65 ± 0.26$^{b}$ |
| | | Oxamate | 84.88 ± 6.25$^{b}$ | 61.34 ± 5.11$^{b}$ | 117.05 ± 7.66$^{b}$ | 138.98 ± 8.14$^{b}$ | 103.8 ± 7.91$^{b}$ | 190.55 ± 8.85$^{b}$ | 72.15 ± 2.37$^{ab}$ | 50.89 ± 2.37$^{ab}$ | 7.67 ± 0.77$^{a}$ | 29.99 ± 2.29$^{a}$ | 69.46 ± 1.81$^{ab}$ | 3.38 ± 0.39$^{b}$ | 0.02 ± 0.36$^{b}$ |
| | | *F* | (4,40) 158.38 | (4,40) 167.67 | (4,40) 149.53 | (4,40) 151.78 | (4,40) 189.51 | (4,40) 194.35 | (4,40) 6.62 | (4,40) 8.42 | (4,50) 22.7 | (4,50) 5.59 | (4,40) 3.02 | (4,40) 136.51 | (4,40) 13.63 |
| | | *P* | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **3.40E-04** | **4.96E-05** | **9.83E-11** | **8.30E-04** | **0.028** | **< 2.2E-16** | **4.23E-07** |

**Table s6.** Effect of metabolic inhibitors on sperm motility parameters in five bivalve species, both DUI and SMI, with chemoattractants. Values are presented as means ± s.e.m. The effect of the factor 'treatment' (*F* and *p*) was assessed for each species and each parameter separately through a liner mixed effect model, which took into account the by-subject variability. Difference among treatments (indicated by letters in subscript) were determined through a *post hoc* pairwise comparison, with *p*-values adjusted using Holm's correction for multiple testing. Significant differences ($p \leq 0.05$) are shown in bold. For abbreviations refer to table s2.

**Table s6**

| Species | Inheritance | Treatment | DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MyEd | DUI | Control | 63.07 ± 4.57$^{a}$ | 39.98 ± 2.02$^{a}$ | 111.17 ± 4.18$^{a}$ | 110.45 ± 7.16$^{a}$ | 72.27 ± 3.39$^{a}$ | 193.4 ± 8.51$^{a}$ | 67.15 ± 2.99 | 37.61 ± 1.72 | 11.14 ± 0.53$^{a}$ | 25.85 ± 1.58 | 56.57 ± 2.07 | 2.3 ± 0.18$^{a}$ | −2.01 ± 0.26$^{a}$ |
| | | Rotenone | 7.84 ± 1.76$^{c}$ | 5.14 ± 1.03$^{c}$ | 12.34 ± 3.28$^{c}$ | 16.37 ± 4.08$^{c}$ | 12.71 ± 3.44$^{b}$ | 24.82 ± 6.62$^{c}$ | 55.2 ± 11.19 | 43.1 ± 9.26 | 2.31 ± 0.71$^{b}$ | 17.31 ± 3.75 | 54.43 ± 10.82 | −1.63 ± 0.34$^{b}$ | 1.26 ± 0.49$^{b}$ |
| | | Antimycin A | 5.96 ± 1.92$^{c}$ | 4.11 ± 1.25$^{c}$ | 7.65 ± 2.36$^{c}$ | 10.76 ± 3.48$^{c}$ | 8.72 ± 3.23$^{b}$ | 14.89 ± 5.32$^{c}$ | 46.55 ± 13.99 | 34.54 ± 10.06 | 1.16 ± 0.59$^{b}$ | 16.97 ± 5.07 | 41.73 ± 12.21 | −1.2 ± 0.37$^{b}$ | 1.37 ± 0.41$^{b}$ |
| | | Oligomycin | 7.9 ± 2.28$^{c}$ | 4.16 ± 1.02$^{c}$ | 12.06 ± 3.69$^{c}$ | 13.42 ± 3.75$^{c}$ | 7.59 ± 2.18$^{b}$ | 20.46 ± 6.07$^{c}$ | 41.16 ± 11.62 | 31.55 ± 9.22 | 2.62 ± 0.86$^{b}$ | 26.2 ± 7.61 | 45.86 ± 11.09 | −1.43 ± 0.35$^{b}$ | 0.47 ± 0.58$^{b}$ |
| | | Oxamate | 48.8 ± 2.3$^{b}$ | 34.28 ± 1.62$^{b}$ | 88.35 ± 4.19$^{b}$ | 94.32 ± 3.82$^{b}$ | 68.11 ± 2.8$^{a}$ | 164.57 ± 6.52$^{b}$ | 74.61 ± 2.18 | 43.84 ± 1.99 | 10.23 ± 0.38$^{a}$ | 25.25 ± 1.95 | 58.09 ± 1.12 | 1.55 ± 0.14$^{a}$ | −1.17 ± 0.25$^{a}$ |
| | | *F* | (4,40) 104.52 | (4,40) 163.75 | (4,40) 214.96 | (4,40) 121.68 | (4,40) 127.77 | (4,40) 217.79 | (4,40) 2.46 | (4,40) 0.63 | (4,40) 66.42 | (4,40) 1.19 | (4,40) 0.81 | (4,40) 45.95 | (4,40) 17.14 |
| | | *P* | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | 0.06 | 0.64 | **< 2.2E-16** | 0.32 | 0.52 | **1.92E-14** | **2.88E-08** |
| RuPh | DUI | Control | 53.13 ± 2.61$^{a}$ | 31.03 ± 1.86$^{a}$ | 88.97 ± 3.57$^{a}$ | 105.4 ± 4.82$^{a}$ | 66.23 ± 3.8$^{a}$ | 170.04 ± 5.6$^{a}$ | 62.85 ± 1.78$^{a}$ | 39.17 ± 1.69 | 8.58 ± 0.32$^{a}$ | 27.04 ± 2.07 | 62.13 ± 1.81 | 1.33 ± 0.18$^{a}$ | −1.34 ± 0.21$^{a}$ |
| | | Rotenone | 25.15 ± 1.8$^{c}$ | 11.65 ± 1$^{c}$ | 47.54 ± 3.81$^{c}$ | 53.16 ± 3.81$^{c}$ | 29.11 ± 2.86$^{b}$ | 93.15 ± 6.57$^{c}$ | 53.3 ± 2$^{ab}$ | 33.35 ± 2.35 | 6.41 ± 0.36$^{ab}$ | 22.13 ± 2.01 | 59.92 ± 2.33 | −1.29 ± 0.15$^{b}$ | −1.6 ± 0.29$^{a}$ |
| | | Antimycin A | 11.66 ± 3.06$^{d}$ | 5.2 ± 1.34$^{d}$ | 17.56 ± 4.6$^{d}$ | 20.67 ± 5.69$^{d}$ | 10.92 ± 3.14$^{c}$ | 29.65 ± 7.82$^{e}$ | 36.29 ± 9.49$^{b}$ | 26.17 ± 6.88 | 4.06 ± 1.28$^{b}$ | 19.69 ± 5.42 | 47.55 ± 12.57 | −1.39 ± 0.36$^{b}$ | −0.31 ± 0.35$^{bc}$ |
| | | Oligomycin | 12.74 ± 2.05$^{d}$ | 6.94 ± 0.97$^{d}$ | 19.38 ± 3.14$^{d}$ | 32.35 ± 5.36$^{d}$ | 21.54 ± 4.22$^{bc}$ | 50.92 ± 9.37$^{d}$ | 59.1 ± 9.07$^{ab}$ | 42.49 ± 6.42 | 4.46 ± 0.75$^{b}$ | 25.49 ± 4.07 | 63.62 ± 8.46 | −1.65 ± 0.27$^{b}$ | 0.42 ± 0.38$^{c}$ |
| | | Oxamate | 41.81 ± 2.32$^{b}$ | 25.57 ± 1.45$^{b}$ | 72.77 ± 2.7$^{b}$ | 88.13 ± 3.93$^{b}$ | 57.51 ± 2.94$^{a}$ | 147.36 ± 3.74$^{b}$ | 67.52 ± 1.73$^{a}$ | 40.74 ± 1.73 | 7.78 ± 0.35$^{a}$ | 25.87 ± 1.5 | 60.19 ± 1.78 | 0.6 ± 0.12$^{a}$ | −1.05 ± 0.22$^{ab}$ |
| | | *F* | (4,32) 62.06 | (4,40) 72.06 | (4,32) 97.94 | (4,32) 68.38 | (4,32) 53.16 | (4,32) 79.50 | (4,32) 4.12 | (4,32) 2.52 | (4,40) 7.78 | (4,32) 0.98 | (4,32) 0.97 | (4,32) 33.5 | (4,32) 9.12 |
| | | *P* | **1.27E-14** | **< 2.2E-16** | **< 2.2E-16** | **3.21E-15** | **1.09E-13** | **3.70E-16** | **8.00E-03** | 0.06 | **9.77E-05** | 0.42 | 0.43 | **5.04E-11** | **4.90E-05** |
| MeMe | SMI | Control | 83.12 ± 5.97$^{a}$ | 54.59 ± 3.42$^{a}$ | 108.18 ± 6.07$^{a}$ | 142.24 ± 10.55$^{a}$ | 97.4 ± 6.54$^{a}$ | 183.29 ± 10.63$^{a}$ | 72.13 ± 2.87$^{ab}$ | 54.44 ± 2.48 | 9.55 ± 1.34$^{a}$ | 24.61 ± 2.26 | 75.35 ± 1.66 | 3.23 ± 0.32$^{a}$ | 0.23 ± 0.44 |
| | | Rotenone | 14.98 ± 2.53$^{c}$ | 8.82 ± 1.57$^{c}$ | 20.84 ± 3.8$^{c}$ | 24.56 ± 4.21$^{c}$ | 14.87 ± 2.34$^{c}$ | 33.92 ± 6.28$^{c}$ | 59.25 ± 9.92$^{ab}$ | 46.31 ± 8.55 | 3.96 ± 0.96$^{b}$ | 24.38 ± 4.49 | 67.87 ± 8.82 | −1.8 ± 0.26$^{c}$ | 0.9 ± 0.7 |
| | | Antimycin A | 17.38 ± 1.5$^{c}$ | 9 ± 0.77$^{c}$ | 23.77 ± 2.72$^{c}$ | 28.2 ± 2.8$^{c}$ | 15.27 ± 1.35$^{c}$ | 38.24 ± 5.03$^{c}$ | 59.64 ± 5.63$^{ab}$ | 47.66 ± 5.65 | 3.83 ± 0.91$^{b}$ | 23.05 ± 1.47 | 77.08 ± 2.79 | −2.27 ± 0.11$^{c}$ | 0.67 ± 0.69 |
| | | Oligomycin | 19.06 ± 0.9$^{c}$ | 8.83 ± 0.4$^{c}$ | 24.77 ± 1.41$^{c}$ | 31.87 ± 2.5$^{c}$ | 16.22 ± 2.06$^{c}$ | 41.15 ± 3.3$^{c}$ | 53.91 ± 2.4$^{b}$ | 43.94 ± 2.13 | 3.28 ± 0.37$^{b}$ | 19.99 ± 1.12 | 79.97 ± 1.34 | −2.38 ± 0.1$^{c}$ | 0.52 ± 0.23 |
| | | Oxamate | 57.2 ± 4.19$^{b}$ | 42.1 ± 3.5$^{b}$ | 82.28 ± 4.03$^{b}$ | 94.25 ± 7.19$^{b}$ | 71.12 ± 6.02$^{b}$ | 134.24 ± 6.53$^{b}$ | 76.96 ± 1.29$^{a}$ | 53.2 ± 1.49 | 7.27 ± 0.42$^{a}$ | 25.46 ± 1.64 | 68.46 ± 1.42 | 1.45 ± 0.29$^{b}$ | 0.38 ± 0.21 |
| | | *F* | (4,32) 76.03 | (4,32) 102.26 | (4,40) 106.93 | (4,32) 75.51 | (4,32) 97.26 | (4,32) 105.28 | (4,32) 3.48 | (4,32) 0.93 | (4,40) 9.58 | (4,32) 0.8 | (4,32) 1.6 | (4,40) 116.01 | (4,32) 0.27 |
| | | *P* | **7.04E-16** | **< 2.2E-16** | **< 2.2E-16** | **7.77e-16** | **< 2.2E-16** | **< 2.2E-16** | **1.70E-02** | 0.45 | **1.56E-05** | 0.53 | 0.19 | **< 2.2E-16** | 0.89 |
| NuOb | SMI | Control | 105.98 ± 9.69$^{a}$ | 81.28 ± 3.79$^{a}$ | 123.79 ± 12.47$^{a}$ | 231.85 ± 19.55$^{a}$ | 192.2 ± 23.9$^{a}$ | 266.53 ± 16.58$^{a}$ | 82.69 ± 3.77$^{a}$ | 69.96 ± 5.68$^{a}$ | 7.65 ± 0.69 | 31.78 ± 1.74$^{a}$ | 83.85 ± 3.09 | 6.23 ± 0.49$^{a}$ | 2.07 ± 0.66 |
| | | Rotenone | 8.69 ± 3.57$^{c}$ | 4.25 ± 1.75$^{c}$ | 12.83 ± 5.29$^{c}$ | 21.91 ± 9.2$^{c}$ | 13.23 ± 5.71$^{c}$ | 29.57 ± 12.21$^{c}$ | 36.52 ± 15.06$^{b}$ | 29.23 ± 12.07$^{b}$ | 3.09 ± 1.29 | 13.99 ± 6.28$^{b}$ | 44.87 ± 18.38 | −1.22 ± 0.51$^{bc}$ | 0.28 ± 0.15 |
| | | Antimycin A | 11.33 ± 1.53$^{c}$ | 7.48 ± 0.31$^{c}$ | 18.78 ± 4.17$^{c}$ | 22.2 ± 5.93$^{c}$ | 15 ± 3.85$^{c}$ | 39.17 ± 11.67$^{c}$ | 73.76 ± 8.93$^{a}$ | 50.26 ± 9.9$^{ab}$ | 5.29 ± 2.47 | 38.43 ± 3.05$^{a}$ | 65.64 ± 6.17 | −1.98 ± 0.23$^{c}$ | 0.55 ± 1.38 |
| | | Oligomycin | 11.19 ± 3.64$^{c}$ | 5.8 ± 1.3$^{c}$ | 17.87 ± 6.3$^{c}$ | 18.87 ± 5.89$^{c}$ | 11.24 ± 2.77$^{c}$ | 28.96 ± 9.3$^{c}$ | 67.73 ± 5.15$^{ab}$ | 48.04 ± 4.4$^{ab}$ | 3.47 ± 1.87 | 34.24 ± 4.99$^{a}$ | 67.7 ± 5.34 | −2.43 ± 0.4$^{c}$ | 0.59 ± 0.58 |
| | | Oxamate | 63.24 ± 21.02$^{b}$ | 46.59 ± 15.8$^{b}$ | 78.74 ± 23.65$^{b}$ | 108.11 ± 35.86$^{b}$ | 80.17 ± 28.3$^{b}$ | 135.45 ± 39.19$^{b}$ | 72.39 ± 5.18$^{ab}$ | 57.39 ± 5.6$^{ab}$ | 5.87 ± 1.34 | 25.9 ± 3.52$^{ab}$ | 76.5 ± 3.83 | 1.62 ± 1.6$^{b}$ | 1.08 ± 0.62 |
| | | *F* | (4,20) 16.66 | (4,20) 21.65 | (4,20) 15.09 | (4,20) 23.52 | (4,20) 21.41 | (4,20) 24.44 | (4,20) 4.17 | (4,20) 3.38 | (4,16) 1.31 | (4,20) 5.04 | (4,20) 2.51 | (4,20) 19.69 | (4,20) 0.81 |
| | | *P* | **3.71E-06** | **4.91E-07** | **7.75E-06** | **2.53E-07** | **5.38E-07** | **1.85E-07** | **0.012** | **0.028** | 0.3 | **0.0056** | 0.073 | **1.03E-06** | 0.53 |
| PlMg | SMI | Control | 95.2 ± 5.9$^{a}$ | 70.29 ± 4.23$^{a}$ | 136.98 ± 4.13$^{a}$ | 158.06 ± 11.88$^{a}$ | 121.15 ± 9.81$^{a}$ | 222.89 ± 7.2$^{a}$ | 76.78 ± 1.7$^{a}$ | 52.29 ± 2.87$^{a}$ | 7.96 ± 0.44$^{a}$ | 32.59 ± 1.39$^{a}$ | 67.45 ± 3.01$^{a}$ | 4.44 ± 0.35$^{a}$ | 0.03 ± 0.39 |
| | | Rotenone | 24.25 ± 3.06$^{c}$ | 14.03 ± 2.52$^{c}$ | 38.11 ± 5.3$^{c}$ | 37.3 ± 5.63$^{c}$ | 22.47 ± 4.79$^{c}$ | 57.54 ± 8.97$^{c}$ | 56.5 ± 2.64$^{bc}$ | 40.18 ± 2.19$^{a}$ | 4.91 ± 0.68$^{b}$ | 20.74 ± 1.55$^{b}$ | 70.38 ± 2.16$^{a}$ | −1.76 ± 0.3$^{d}$ | −0.35 ± 0.33 |
| | | Antimycin A | 3.02 ± 1.58$^{d}$ | 2.32 ± 1.23$^{d}$ | 4.16 ± 2.21$^{e}$ | 5.16 ± 2.84$^{d}$ | 4.06 ± 2.19$^{c}$ | 7.11 ± 4.07$^{e}$ | 21.25 ± 11.05$^{d}$ | 16.54 ± 8.63$^{b}$ | 0.85 ± 0.57$^{d}$ | 6.91 ± 3.86$^{c}$ | 20.6 ± 10.68$^{b}$ | −0.62 ± 0.32$^{c}$ | 0.53 ± 0.33 |
| | | Oligomycin | 14.91 ± 1.63$^{c}$ | 6.5 ± 0.97$^{cd}$ | 19.8 ± 2.45$^{d}$ | 22.07 ± 2.55$^{cd}$ | 10.04 ± 1.61$^{c}$ | 29.48 ± 3.93$^{d}$ | 43.86 ± 6.3$^{c}$ | 34.48 ± 5.08$^{ab}$ | 2.54 ± 0.4$^{c}$ | 20.77 ± 2.5$^{b}$ | 71.46 ± 7.3$^{a}$ | −2.51 ± 0.29$^{d}$ | 0.07 ± 0.29 |
| | | Oxamate | 58.12 ± 4.75$^{b}$ | 42.82 ± 4.76$^{b}$ | 89.75 ± 6.6$^{b}$ | 94.33 ± 9.55$^{b}$ | 71.72 ± 9.27$^{b}$ | 141.78 ± 12.36$^{b}$ | 69.48 ± 4.1$^{ab}$ | 45.59 ± 3.43$^{a}$ | 7.21 ± 0.65$^{a}$ | 26.39 ± 2.19$^{ab}$ | 65.75 ± 2.59$^{a}$ | 1.43 ± 0.48$^{b}$ | −0.38 ± 0.41 |
| | | *F* | (4,40) 114.19 | (4,40) 93.32 | (4,40) 172.19 | (4,40) 91.35 | (4,40) 72.05 | (4,40) 172.23 | (4,40) 14.13 | (4,40) 7.99 | (4,40) 39.23 | (4,40) 16.78 | (4,40) 13.14 | (4,40) 64.5 | (4,40) 1.16 |
| | | *P* | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **< 2.2E-16** | **2.83E-07** | **7.81E-05** | **2.42E-13** | **3.74E-08** | **6.34E-07** | **< 2.2E-16** | 0.33 |

**Table s7.** Interaction effect between glycolysis inhibition and chemoattractant addition on sperm motility parameters in five bivalve species, both DUI and SMI. Values are presented as means ± s.e.m. The main effect of the two fixed factors 'treatment' and 'chemoattractants', as well as their interaction, was assessed for each species and each parameter separately through a liner mixed effect model which considered the by-subject variability and the individual variability in the response to egg detection. Simple main effects (indicated by letters in subscript) were determined through a *post hoc* pairwise comparison, with *p*-values adjusted using Holm's correction for multiple testing. Significant differences ($p \leq 0.05$) are shown in bold. 'Control-N', basal sperm motility without chemoattractants; 'Control-ch', basal sperm motility with chemoattractants; 'Oxamate-N', sperm motility in presence of oxamate without chemoattractants; 'Oxamate-ch', sperm motility in presence of oxamate with chemoattractants. ':treat', main effect of factor 'treatment'; ':chem', main effect of factor 'chemoattractants'; ':treat:chem', interaction effect between factor 'treatment' and factor 'chemoattractants'. For abbreviations refer to table s2.

**Table s7**

| Species | Inheritance | Treatment | DAP | DSL | DCL | VAP | VSL | VCL | STR | LIN | ALH | BFC | WOB | PC1 | PC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MyEd | DUI | Control-N | 57.96 ± 2.75$^{ab}$ | 36.88 ± 1.71 | 96.86 ± 4.05$^{ab}$ | 114.06 ± 4.66 | 75.41 ± 3.16 | 184.87 ± 8.19$^{ab}$ | 67.57 ± 1.74$^{a}$ | 41.82 ± 1.57$^{ab}$ | 10.44 ± 0.49 | 25.59 ± 0.99 | 61.6 ± 1.59 | 2.02 ± 0.14$^{ab}$ | −1.38 ± 0.26 |
| | | Control-ch | 63.07 ± 4.57$^{a}$ | 39.98 ± 2.02 | 111.17 ± 4.18$^{a}$ | 110.45 ± 7.16 | 72.27 ± 3.39 | 193.4 ± 8.51$^{a}$ | 67.15 ± 2.99$^{a}$ | 37.61 ± 1.72$^{b}$ | 11.14 ± 0.53 | 25.85 ± 1.58 | 56.57 ± 2.07 | 2.3 ± 0.18$^{a}$ | −2.01 ± 0.26 |
| | | Oxamate-N | 57.16 ± 3.82$^{ab}$ | 36.54 ± 1.78 | 92.86 ± 4.85$^{b}$ | 114.33 ± 7.76 | 75.66 ± 4.86 | 182.1 ± 8.85$^{ab}$ | 68.71 ± 1.25$^{ab}$ | 42.89 ± 1.39$^{a}$ | 10.4 ± 0.36 | 26.6 ± 1.55 | 62.38 ± 1.78 | 1.99 ± 0.23$^{ab}$ | −1.22 ± 0.2 |
| | | Oxamate-ch | 48.8 ± 2.3$^{b}$ | 34.28 ± 1.62 | 88.35 ± 4.19$^{b}$ | 94.32 ± 3.82 | 68.11 ± 2.8 | 164.57 ± 6.52$^{b}$ | 74.61 ± 2.18$^{b}$ | 43.84 ± 1.99$^{a}$ | 10.23 ± 0.38 | 25.25 ± 1.95 | 58.09 ± 1.12 | 1.55 ± 0.14$^{b}$ | −1.17 ± 0.25 |
| | | *:treat* | **$F_{1,20}$ =6.7, $P$ =0.017*** | $F_{1,20}$ =4.11, $P$=0.056 | **$F_{1,20}$ =15.66, $P$ =7.7e-04***** | $F_{1,20}$=2.11, $P$=0.16 | $F_{1,20}$=0.38, $P$=0.54 | **$F_{1,20}$=8.96, $P$=0.007**** | **$F_{1,20}$=9.11, $P$=0.0067**** | **$F_{1,30}$=9, $P$=0.005**** | $F_{1,30}$=1.6, $P$=0.21 | $F_{1,30}$=0.04, $P$=0.84 | $F_{1,30}$=0.57, $P$=0.45 | **$F_{1,20}$=8.2, $P$=0.0095**** | **$F_{1,30}$=6.8, $P$=0.01*** |
| | | *:chem* | $F_{1,10}$ =0.16, $P$=0.7 | $F_{1,10}$=0.05, $P$=0.82 | $F_{1,10}$=0.87, $P$=0.37 | $F_{1,10}$=3.44, $P$=0.09 | $F_{1,10}$=2.55, $P$=0.14 | $F_{1,10}$=0.17, $P$=0.68 | $F_{1,10}$=1.6, $P$=0.23 | $F_{1,15}$ =1.4, $P$=0.25 | $F_{1,29}$ =0.51, $P$=0.47 | $F_{1,13}$ =0.17, $P$=0.67 | **$F_{1,23}$=8.9, $P$=0.006**** | $F_{1,10}$=0.14, $P$=0.71 | $F_{1,17}$=2, $P$=0.17 |
| | | *:treat:chem* | **$F_{1,20}$=5.33, $P$=0.031*** | $F_{1,20}$ =3.25, $P$=0.086 | **$F_{1,20}$=7.72, $P$=0.011*** | $F_{1,20}$=2.26, $P$=0.14 | $F_{19.9}$=0.49, $P$=0.48 | **$F_{1,20}$=6.09, $P$=0.022*** | **$F_{1,20}$ =4.9, $P$ =0.037*** | **$F_{1,30}$ =4.5, $P$=0.04*** | $F_{1,30}$=1.4, $P$=0.24 | $F_{1,30}$ =0.6, $P$=0.44 | $F_{1,30}$ =0.06, $P$=0.8 | **$F_{1,20}$=6.8, $P$=0.016*** | $F_{1,20}$=3.23, $P$=0.08 |
| RuPh | DUI | Control-N | 47.83 ± 3.29 | 30.06 ± 1.87 | 79.35 ± 4.24 | 93.42 ± 6.28$^{ab}$ | 63.16 ± 4.04 | 150.95 ± 8.34$^{b}$ | 70.51 ± 1.43 | 43.56 ± 1.31 | 7.34 ± 0.4 | 27.6 ± 1.22 | 62.31 ± 2.05 | 0.97 ± 0.23$^{ab}$ | −0.66 ± 0.19 |
| | | Control-ch | 53.13 ± 2.61 | 31.03 ± 1.86 | 88.97 ± 3.57 | 105.4 ± 4.82$^{a}$ | 66.23 ± 3.8 | 170.04 ± 5.6$^{a}$ | 62.85 ± 1.78 | 39.17 ± 1.69 | 8.58 ± 0.32 | 27.04 ± 2.07 | 62.13 ± 1.81 | 1.33 ± 0.18$^{a}$ | −1.34 ± 0.21 |
| | | Oxamate-N | 42.58 ± 3.2 | 27.53 ± 1.16 | 68.43 ± 3.79 | 96.35 ± 6.99$^{ab}$ | 67.48 ± 4.5 | 149.83 ± 5$^{b}$ | 72.83 ± 2.71 | 47.02 ± 1.7 | 6.62 ± 0.39 | 27.91 ± 2.32 | 65.14 ± 3.72 | 0.8 ± 0.17$^{ab}$ | −0.13 ± 0.2 |
| | | Oxamate-ch | 41.81 ± 2.32 | 25.57 ± 1.45 | 72.77 ± 2.7 | 88.13 ± 3.93$^{b}$ | 57.51 ± 2.94 | 147.36 ± 3.74$^{b}$ | 67.52 ± 1.73 | 40.74 ± 1.73 | 7.78 ± 0.35 | 25.87 ± 1.5 | 60.19 ± 1.78 | 0.6 ± 0.12$^{b}$ | −1.05 ± 0.22 |
| | | *:treat* | **$F_{1,24}$ =13.25, $P$ =0.0013**** | **$F_{1,24}$=7.95, $P$=0.009**** | **$F_{1,24}$ =19.72, $P$ =1.7e-04***** | $F_{1,16}$=3.68, $P$=0.07 | $F_{1,16}$=0.62, $P$=0.4 | **$F_{1,24}$=7, $P$=0.014*** | $F_{1,24}$ =3.4, $P$=0.07 | **$F_{1,16}$ =5, $P$=0.04*** | **$F_{1,16}$=7.7, $P$=0.013*** | $F_{1,16}$ =0.12, $P$=0.73 | $F_{1,16}$=0.07, $P$=0.79 | **$F_{1,24}$=11.66, $P$=0.0022**** | **$F_{1,16}$ =8, $P$ =0.012*** |
| | | *:chem* | $F_{1,12}$ =0.72, $P$=0.4 | $F_{1,18}$=0.11, $P$=0.74 | $F_{1,11}$ =4, $P$=0.067 | $F_{1,8}$=0.13, $P$=0.72 | $F_{1,8}$=0.98, $P$=0.35 | $F_{1.13.8}$=2.8, $P$=0.11 | **$F_{1,8}$ =8.5, $P$ =0.018*** | **$F_{1,8}$ =8, $P$=0.02*** | **$F_{1,8}$ =8.5, $P$ =0.02*** | $F_{1,8}$ =0.34, $P$=0.57 | $F_{1,8}$=0.83, $P$=0.38 | $F_{1,12}$=0.26, $P$=0.61 | **$F_{1,8}$=9.75, $P$=0.014*** |
| | | *:treat:chem* | $F_{1,24}$ =1.77, $P$=0.2 | $F_{1,24}$ =1, $P$=0.3 | $F_{1,24}$ =0.75, $P$=0.39 | **$F_{1,16}$=7.31, $P$ =0.015*** | **$F_{1,16}$=5.47, $P$=0.03*** | **$F_{1,24}$=5.76, $P$=0.024*** | $F_{1,24}$=0.38, $P$=0.53 | $F_{1,16}$=0.7, $P$=0.4 | $F_{1,16}$ =0.02, $P$=0.87 | $F_{1,16}$=0.36, $P$=0.55 | $F_{1,16}$=1.99, $P$=0.17 | **$F_{1,24}$=4.68, $P$=0.04*** | $F_{1,16}$=0.67, $P$=0.42 |
| MeMe | SMI | Control-N | 92.15 ± 6.57 | 58.32 ± 3.47 | 115.31 ± 6.13 | 156.69 ± 11.27 | 106.29 ± 6.65 | 194.51 ± 11.01 | 71.08 ± 2.41 | 54.88 ± 2.1 | 7.97 ± 0.49 | 27.17 ± 1.07$^{a}$ | 77.66 ± 1.76 | 3.59 ± 0.36 | 0.54 ± 0.27 |
| | | Control-ch | 83.12 ± 5.97 | 54.59 ± 3.42 | 108.18 ± 6.07 | 142.24 ± 10.55 | 97.4 ± 6.54 | 183.29 ± 10.63 | 72.13 ± 2.87 | 54.44 ± 2.48 | 9.55 ± 1.34 | 24.61 ± 2.26$^{ab}$ | 75.35 ± 1.66 | 3.23 ± 0.32 | 0.23 ± 0.44 |
| | | Oxamate-N | 63.84 ± 6.95 | 41.62 ± 3.43 | 83.97 ± 8.64 | 119.88 ± 7.46 | 85.56 ± 3.56 | 155.2 ± 8.18 | 77.77 ± 2.74 | 56.29 ± 1.97 | 7.84 ± 0.56 | 22.97 ± 1.29$^{b}$ | 73.86 ± 0.86 | 2.03 ± 0.33 | 0.72 ± 0.28 |
| | | Oxamate-ch | 57.2 ± 4.19 | 42.1 ± 3.5 | 82.28 ± 4.03 | 94.25 ± 7.19 | 71.12 ± 6.02 | 134.24 ± 6.53 | 76.96 ± 1.29 | 53.2 ± 1.49 | 7.27 ± 0.42 | 25.46 ± 1.64$^{ab}$ | 68.46 ± 1.42 | 1.45 ± 0.29 | 0.38 ± 0.21 |
| | | *:treat* | **$F_{1,24}$ =27, $P$ =2.45e-05***** | **$F_{1,24}$ =25.13, $P$ =4e-05***** | **$F_{1,24}$ =27.24, $P$ =2.4e-05***** | **$F_{1,16}$=31, $P$ =4.25e-05***** | $F_{1,20}$=0.38, $P$=0.54 | **$F_{1,16}$=32.74, $P$=3.14e-05***** | **$F_{1,16}$ =13, $P$ =0.0022**** | $F_{1,16}$ =0.008, $P$=0.92 | $F_{1,16}$ =4.2, $P$=0.056 | $F_{1,24}$ =3.3, $P$=0.08 | **$F_{1,16}$ =25, $P$ =1.1e-04***** | **$F_{1,24}$=33.27, $P$=6e-06***** | $F_{1,16}$=0.97, $P$=0.33 |
| | | *:chem* | $F_{1,9}$=1.53, $P$=0.24 | $F_{1,13}$=0.26, $P$=0.61 | $F_{1,14}$ =0.37, $P$=0.55 | $F_{1,8}$=4.72, $P$=0.061 | $F_{1,10}$=2.55, $P$=0.14 | $F_{1,8}$=3, $P$=0.12 | $F_{1,8}$ =0.001, $P$=0.96 | $F_{1,8}$ =0.8, $P$=0.39 | $F_{1,8}$ =0.32, $P$=0.58 | $F_{1,9}$ =0.0007, $P$=0.97 | $F_{1,8}$ =8.2, $P$=0.02 | $F_{1,15}$=2.41, $P$=0.14 | $F_{1,8}$ =1, $P$=0.34 |
| | | *:treat:chem* | $F_{1,24}$=0.05, $P$=0.82 | $F_{1,24}$=0.52, $P$=0.47 | $F_{1,24}$ =0.24, $P$=0.62 | $F_{1,16}$=0.53, $P$=0.47 | $F_{1,20}$=0.49, $P$=0.48 | $F_{1,16}$=0.39, $P$=0.53 | $F_{1,16}$=0.34, $P$=0.56 | $F_{1,16}$ =2, $P$=0.17 | $F_{1,16}$=3.4, $P$=0.08 | **$F_{1,24}$ =7.5, $P$ =0.011*** | $F_{1,16}$ =2.1, $P$=0.16 | $F_{1,24}$=0.13, $P$=0.71 | $F_{1,16}$=0.0078, $P$=0.93 |
| NuOb | SMI | Control-N | 102.65 ± 8.88 | 76.51 ± 6.39 | 129.03 ± 7.79 | 193.58 ± 12.73 | 151.32 ± 12.26$^{ab}$ | 242.62 ± 9.6 | 76.68 ± 3.59 | 60.87 ± 4.38 | 7.26 ± 0.46 | 33.89 ± 1.74 | 77.28 ± 2.9 | 5.22 ± 0.53 | 1.11 ± 0.53 |
| | | Control-ch | 105.98 ± 9.69 | 81.28 ± 3.79 | 123.79 ± 12.47 | 231.85 ± 19.55 | 192.2 ± 23.9$^{a}$ | 266.53 ± 16.58 | 82.69 ± 3.77 | 69.96 ± 5.68 | 7.65 ± 0.69 | 31.78 ± 1.74 | 83.85 ± 3.09 | 6.23 ± 0.49 | 2.07 ± 0.66 |
| | | Oxamate-N | 73.84 ± 10.46 | 55.39 ± 8.96 | 93.19 ± 9.61 | 156.9 ± 14.52 | 127.66 ± 10.2$^{ab}$ | 189.12 ± 12.51 | 72.34 ± 6.93 | 57.97 ± 6.61 | 6.59 ± 0.49 | 29.21 ± 1.46 | 75.72 ± 3.95 | 3.2 ± 0.71 | 0.95 ± 0.69 |
| | | Oxamate-ch | 63.24 ± 21.02 | 46.59 ± 15.8 | 78.74 ± 23.65 | 108.11 ± 35.86 | 80.17 ± 28.3$^{b}$ | 135.45 ± 39.19 | 72.39 ± 5.18 | 57.39 ± 5.6 | 5.87 ± 1.34 | 25.9 ± 3.52 | 76.5 ± 3.83 | 1.62 ± 1.6 | 1.08 ± 0.62 |
| | | *:treat* | **$F_{1,12}$ =9.36, $P$ =0.009**** | **$F_{1,12}$ =9.19, $P$ =0.01*** | **$F_{1,12}$ =13.15, $P$ =0.003**** | **$F_{1,16}$ =12.6, $P$ =2e-03**** | **$F_{1,16}$=11.32, $P$ =3.9e-03**** | **$F_{1,12}$=17.43, $P$ =1.2e-03**** | **$F_{1,12}$ =6.2, $P$ =0.028*** | $F_{1,12}$ =4, $P$=0.06 | $F_{1,12}$ =3.3, $P$=0.09 | **$F_{1,12}$ =6.11, $P$ =0.029*** | $F_{1,12}$ =1.8, $P$=0.2 | **$F_{1,12}$=13.27, $P$ =3.3e-03**** | $F_{1,12}$ =1.98, $P$=0.18 |
| | | *:chem* | $F_{1.5.4}$ =0.06, $P$=0.81 | $F_{1.5}$ =0.036, $P$=0.85 | $F_{1.4.4}$ =0.32, $P$=0.59 | $F_{1,16}$=0.054, $P$=0.81 | $F_{1,16}$=0.02, $P$=0.87 | $F_{1,12}$=0.42, $P$=0.52 | $F_{1.4}$ =0.12, $P$=0.74 | $F_{1.4}$ =0.2, $P$=0.66 | $F_{1.5}$ =0.03, $P$=0.85 | $F_{1.4}$ =1.12, $P$=0.34 | $F_{1.4}$ =0.86, $P$=0.4 | $F_{1,8.6}$=0.08, $P$=0.77 | $F_{1,4}$=0.27, $P$=0.62 |
| | | *:treat:chem* | $F_{1,12}$ =0.35, $P$=0.56 | $F_{1,12}$ =0.54, $P$=0.47 | $F_{1,12}$ =0.17, $P$=0.68 | $F_{1,16}$=3.71, $P$=0.071 | **$F_{1,16}$ =4.8, $P$ =0.043*** | $F_{1,9}$ =3.1, $P$=0.10 | $F_{1,12}$ =1, $P$=0.33 | $F_{1,12}$ =1.5, $P$=0.22 | $F_{1,12}$ =0.66, $P$=0.42 | $F_{1,12}$ =0.07, $P$=0.78 | $F_{1,12}$ =0.76, $P$=0.39 | $F_{1,12}$=2, $P$=0.18 | $F_{1,12}$ =1, $P$=0.32 |
| PlMg | SMI | Control-N | 112.4 ± 5.89 | 82.25 ± 3.92 | 136.9 ± 4.46$^{a}$ | 211.56 ± 14.47 | 164.82 ± 9.82 | 252.95 ± 11.04 | 78.84 ± 1.59 | 63.03 ± 1.79 | 7.76 ± 0.33 | 29.93 ± 1.74 | 80 ± 2.82$^{a}$ | 5.87 ± 0.39 | 1.32 ± 0.2 |
| | | Control-ch | 95.2 ± 5.9 | 70.29 ± 4.23 | 136.98 ± 4.13$^{a}$ | 158.06 ± 11.88 | 121.15 ± 9.81 | 222.89 ± 7.2 | 76.78 ± 1.7 | 52.29 ± 2.87 | 7.96 ± 0.44 | 32.59 ± 1.39 | 67.45 ± 3.01$^{b}$ | 4.44 ± 0.35 | 0.03 ± 0.39 |
| | | Oxamate-N | 84.88 ± 6.25 | 61.34 ± 5.11 | 117.05 ± 7.66$^{b}$ | 138.98 ± 8.14 | 103.8 ± 7.91 | 190.55 ± 8.85 | 72.15 ± 2.37 | 50.89 ± 2.37 | 7.67 ± 0.77 | 29.99 ± 2.29 | 69.46 ± 1.81$^{b}$ | 3.38 ± 0.39 | 0.02 ± 0.36 |
| | | Oxamate-ch | 58.12 ± 4.75 | 42.82 ± 4.76 | 89.75 ± 6.6$^{c}$ | 94.33 ± 9.55 | 71.72 ± 9.27 | 141.78 ± 12.36 | 69.48 ± 4.1 | 45.59 ± 3.43 | 7.21 ± 0.65 | 26.39 ± 2.19 | 65.75 ± 2.59$^{b}$ | 1.43 ± 0.48 | −0.38 ± 0.41 |
| | | *:treat* | **$F_{1,20}$ =61, $P$ =1.6e-07***** | **$F_{1,20}$ =40, $P$ =3.55e-06***** | **$F_{1,10}$ =47, $P$ =1.3e-07***** | **$F_{1,20}$=88.22, $P$=8.97e-09***** | **$F_{1,20}$=90, $P$=7.14e-09***** | **$F_{1,20}$=86, $P$=1.1e-08***** | **$F_{1,20}$ =7.4, $P$=0.01*** | **$F_{1,30}$ =15, $P$ =4.2e-04***** | $F_{1,30}$ =0.61, $P$=0.44 | $F_{1,30}$ =2.6, $P$=0.12 | **$F_{1,20}$ =10, $P$ =0.004**** | **$F_{1,20}$=83.88, $P$ =1.35e-08***** | **$F_{1,20}$=7.28, $P$ =0.013*** |
| | | *:chem* | **$F_{1,10}$ =9.45, $P$ =0.01*** | **$F_{1,10}$ =8.11, $P$ =0.01*** | $F_{1,10}$ =3.72, $P$=0.08 | **$F_{1,10}$=23, $P$=7.1e-04***** | **$F_{1,10}$=22.1, $P$ =8.3e-04***** | **$F_{1,10}$=19, $P$ =1.4e-03**** | $F_{1,13}$ =0.73, $P$=0.4 | **$F1,27$ =11, $P$=0.002**** | $F_{1,10}$ =0.04, $P$=0.84 | $F_{1,12}$ =0.05, $P$=0.81 | **$F_{1,10}$ =7.8, $P$ =0.018*** | **$F_{1,10}$=15.66, $P$=2.6e-03**** | **$F_{1,10}$=6.61, $P$ =0.027*** |
| | | *:treat:chem* | $F_{1,20}$=1.34, $P$=0.26 | $F_{1,20}$=0.73, $P$=0.4 | **$F_{1,30}$ =7.8, $P$=0.0088**** | $F_{1,20}$=0.37, $P$=0.54 | $F_{1,30}$=0.99, $P$=0.32 | $F_{1,20}$=1.46, $P$=0.24 | $F_{1,30}$ =0.01, $P$=0.9 | $F_{1,30}$ =1.3, $P$=0.26 | $F_{1,30}$ =0.38, $P$=0.53 | $F_{1,30}$ =2.6, $P$=0.11 | **$F_{1,20}$ =5.4, $P$ =0.03*** | $F_{1,20}$=0.73, $P$=0.4 | $F_{1,20}$=1.96, $P$=0.17 |