|  |  |  |  |
| --- | --- | --- | --- |
| Comparison | Medium | Multiple R2 | p-value |
| RLS | YPD | 0.001457 | 0.3778 |
| RLS | YPDGE | 0.001226 | 0.4186 |
| RLS | YPG | 0.006863 | 0.05527 |
| RLS | YPE | 0.01106 | 0.01488 |
| RLS | YPL | 0.00782 | 0.04071 |

|  |  |  |  |
| --- | --- | --- | --- |
| Species 1 | Species 2 | Multiple R2 | p-value |
| S. Cerevisiae | S. Paradoxus | 0.002773 | 0.3758 |
| S. Cerevisiae | S. Mikatae | 0.007775 | 0.2109 |
| S. Cerevisiae | S. Bayanus | 0.004759 | 0.3175 |

RLS\_Del\_alpha ~ pDegree + YPE

|  |  |
| --- | --- |
|  | **Individual P-value** |
| pDegree | 0.308 |
| YPE | 0.104 |

|  |  |
| --- | --- |
| **Multiple R-squared** | **p-value** |
| 0.0112 | 0.1106 |

RLS\_Del\_alpha ~ gDegree + YPE

|  |  |
| --- | --- |
|  | **Individual P-value** |
| gDegree | 0.9471 |
| YPE | .0789 |

|  |  |
| --- | --- |
| **Multiple R-squared** | **p-value** |
| 0.007244 | 0.1753 |

RLS\_Del\_alpha ~ gDegree + pDegree + YPE

|  |  |
| --- | --- |
|  | Individual P-value |
| gDegree | 0.632 |
| pDegree | 0.248 |
| YPE | 0.407 |

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.009782 | 0.3371 |

gDegree ~ YPE

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.1363 | <2.2e-16 |

pDegree ~ YPE

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.0316 | 0.0003917 |

1/CV ~ RLS

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.001249 | 0.4141 |

Sqrt(1/CV) ~ RLS

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.001351 | 0.3958 |

RLS ~ sqrt(1/CV) + pDegree

|  |  |
| --- | --- |
|  | Individual P-value |
| Sqrt(1/CV) | 0.300 |
| pDegree | 0.237 |

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.007224 | 0.2423 |

RLS ~ scmd standard dev

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.03431 | 1.349e-05 |

RLS ~ sqrt(1/scmdstdev)

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.03178 | 2.844e-05 |

RLS ~ sqrt(scmd st dev)

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.03333 | 1.8e-05 |

RLS ~ scmdMean

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.01766 | 0.00188 |

Scmd st dev ~ scmdMean

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.5191 | <2.2e-16 |

Note: SCMD mean and stddev are highly correlated. We probably need a better way to use the morphology data set.

RLS ~ scmd CV

|  |  |
| --- | --- |
| Multiple R-squared | p-value |
| 0.001581 | 0.3542 |

|  |  |  |  |
| --- | --- | --- | --- |
| Lifespan | Robustness Proxy | Multiple R-squared | p-value |
| RLS | YPE | 0.01106 | 0.01488 |
| RLS | Ka | 0.002773 | 0.3758 |
| RLS | pDegree | 0.004564 | 0.1759 |
| RLS | gDegree | 0.0006784 | 0.5641 |
| RLS | scmdstddev | 0.03431 | 1.349e-05 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Multiple R-squared | p-value |
| gDegree | YPE | 0.1363 | 2.2e-16 |
| gDegree | Ka | 0.01118 | 0.09068 |
| gDegree | scmdstddev | 0.084 | 6.429e-11 |
| pDegree | YPE | 0.0316 | 0.0003917 |

|  |  |  |  |
| --- | --- | --- | --- |
| Factors in Multiple Regression | | R2 value | p-value |
| RLS | * **Morphological Plasticity (2.58e-05)** * **Fitness (0.383)** | **0.04244** | **1.045 x 10-5** |
| Fitness | * **Evolutionary Distance (0.066324)** * **Number of Protein Interactions (0.072944)** * **Morphological Plasticity (0.000433)** | **0.1149** | **8.773 x 10-6** |
| Fitness | * **Evolutionary Distance (0.738861)** * **Number of Genetic Interactions (0.000348)** * **Morphological Plasticity (0.000353)** | **0.1231** | **4.084 x 10-7** |

|  |  |  |  |
| --- | --- | --- | --- |
| Factors in Multiple Regression | | R2 value | p-value |
| Fitness | * **Number of Genetic Interactions** | **0.1363** | **<2.2 x 10-16** |
| Fitness | * **Number of Protein Interactions** | **0.0316** | **0.0003917** |
| Fitness | * **Evolutionary Distance (0.738861)** * **Number of Genetic Interactions (0.000348)** * **Morphological Plasticity (0.000353)** | **0.1231** | **4.084 x 10-7** |
| RLS | * **Fitness** | **0.01106** | **0.01488** |
| RLS | * **Morphological Plasticity (2.58e-05)** * **Fitness (0.383)** | **0.04244** | **1.045 x 10-5** |









