

Supporting Information S-3

Results of 5-fold Cross validation for each of the five folds

Explanation of Results

Each page has a separate fold of the CV results. Fold 2 has the best Train and Test R^2 value.

Coef is the coefficient, where const is the intercept value.

0.025 and 0.975 are providing ± 2 Standard deviations limit of the coefficient values.

FOLD 1:

OLS Regression Results

```

=====
Dep. Variable:          PI50      R-squared:                0.743
Model:                  OLS       Adj. R-squared:           0.679
Method:                 Least Squares   F-statistic:             11.56
Date:                   Tue, 24 Sep 2024   Prob (F-statistic):      0.000746
Time:                   13:23:56    Log-Likelihood:          -11.602
No. Observations:      16          AIC:                     31.20
Df Residuals:          12          BIC:                     34.30
Df Model:               3
Covariance Type:       nonrobust
=====

```

	coef	std err	t	P> t	[0.025	0.975]
const	-4.9405	4.833	-1.022	0.327	-15.471	5.590
OPM	0.6079	0.128	4.735	0.000	0.328	0.888
BIC0	7.3377	2.208	3.323	0.006	2.527	12.149
J	-3.3066	2.144	-1.542	0.149	-7.978	1.365

```

=====
Omnibus:                1.530    Durbin-Watson:           2.119
Prob(Omnibus):          0.465    Jarque-Bera (JB):        0.565
Skew:                   0.456    Prob(JB):                0.754
Kurtosis:               3.130    Cond. No.                682.
=====

```

R² for Fold 1 Test Data: 0.7776503169384719

FOLD 2: (Best Fold)
 OLS Regression Results

```

=====
Dep. Variable:          PI50      R-squared:          0.742
Model:                  OLS       Adj. R-squared:       0.677
Method:                 Least Squares   F-statistic:         11.50
Date:                   Tue, 24 Sep 2024   Prob (F-statistic):   0.000764
Time:                   13:23:56    Log-Likelihood:      -12.525
No. Observations:      16          AIC:                 33.05
Df Residuals:          12          BIC:                 36.14
Df Model:               3
Covariance Type:       nonrobust
=====
  
```

	coef	std err	t	P> t	[0.025	0.975]
const	-7.4600	5.506	-1.355	0.200	-19.456	4.536
OPM	0.5530	0.111	4.977	0.000	0.311	0.795
BIC0	5.7628	2.594	2.222	0.046	0.111	11.414
J	-1.6390	2.276	-0.720	0.485	-6.599	3.321

```

=====
Omnibus:                1.166    Durbin-Watson:          2.319
Prob(Omnibus):          0.558    Jarque-Bera (JB):        0.634
Skew:                   0.479    Prob(JB):                0.728
Kurtosis:               2.820    Cond. No.:               740.
=====
  
```

R² for Fold 2 Test Data: 0.8386515868913238

FOLD 3:

OLS Regression Results

```

=====
Dep. Variable:          PI50      R-squared:          0.813
Model:                  OLS       Adj. R-squared:       0.767
Method:                 Least Squares   F-statistic:         17.44
Date:                   Tue, 24 Sep 2024   Prob (F-statistic):   0.000113
Time:                   13:23:56    Log-Likelihood:      -8.9978
No. Observations:      16          AIC:                 26.00
Df Residuals:          12          BIC:                 29.09
Df Model:               3
Covariance Type:       nonrobust
=====

```

```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const         -6.0821        3.935       -1.546      0.148      -14.655       2.491
OPM            0.5314        0.087        6.093      0.000        0.341       0.721
BIC0           6.7599        1.644        4.111      0.001        3.178      10.342
J             -2.3464        1.422       -1.650      0.125       -5.445       0.752
=====

```

```

=====
Omnibus:              7.482    Durbin-Watson:          1.535
Prob(Omnibus):        0.024    Jarque-Bera (JB):        4.244
Skew:                 1.050    Prob(JB):                0.120
Kurtosis:             4.399    Cond. No.                 632.
=====

```

R² for Fold 3 Test Data: 0.5123392775517821

FOLD 4:

OLS Regression Results

```

=====
Dep. Variable:          PI50      R-squared:          0.798
Model:                  OLS       Adj. R-squared:       0.748
Method:                 Least Squares   F-statistic:        15.81
Date:                   Tue, 24 Sep 2024   Prob (F-statistic):  0.000181
Time:                   13:23:56    Log-Likelihood:     -8.2427
No. Observations:      16          AIC:                24.49
Df Residuals:          12          BIC:                27.58
Df Model:               3
Covariance Type:       nonrobust
=====

```

```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const        -5.5841      4.283       -1.304      0.217     -14.916      3.747
OPM           0.5045      0.080        6.330      0.000        0.331      0.678
BIC0          6.1963      1.557        3.980      0.002         2.804      9.589
J            -2.1269      1.411       -1.507      0.158     -5.201      0.948
=====

```

```

=====
Omnibus:          0.366   Durbin-Watson:          2.380
Prob(Omnibus):    0.833   Jarque-Bera (JB):          0.365
Skew:             0.291   Prob(JB):              0.833
Kurtosis:         2.543   Cond. No.               717.
=====

```

R² for Fold 4 Test Data: 0.5563971790580429

FOLD 5:

OLS Regression Results

```

=====
Dep. Variable:          PI50      R-squared:          0.750
Model:                  OLS       Adj. R-squared:       0.688
Method:                 Least Squares   F-statistic:         12.03
Date:                  Tue, 24 Sep 2024   Prob (F-statistic):   0.000627
Time:                  13:23:56    Log-Likelihood:      -12.002
No. Observations:      16         AIC:                 32.00
Df Residuals:          12         BIC:                 35.09
Df Model:               3
Covariance Type:       nonrobust
=====

```

```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const         -2.7838         5.401        -0.515      0.616      -14.552       8.985
OPM            0.5504         0.096         5.742      0.000         0.342       0.759
BIC0           5.5802         2.421         2.305      0.040         0.305      10.855
J             -2.7369         1.966        -1.392      0.189        -7.020       1.546
=====

```

```

=====
Omnibus:                 3.080    Durbin-Watson:           1.789
Prob(Omnibus):           0.214    Jarque-Bera (JB):         1.332
Skew:                    0.671    Prob(JB):                 0.514
Kurtosis:                3.446    Cond. No.                  722.
=====

```

R² for Fold 5 Test Data: 0.6294473219045892