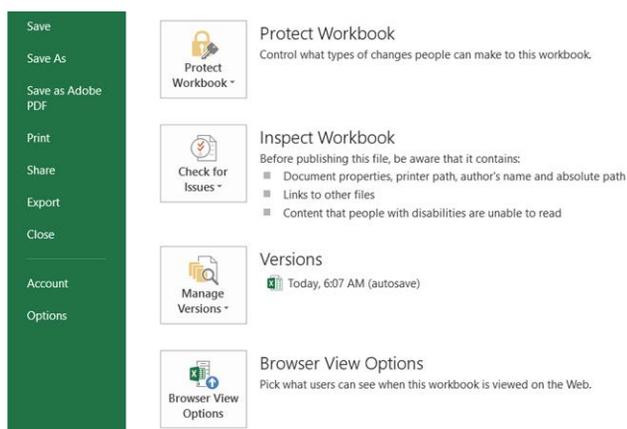
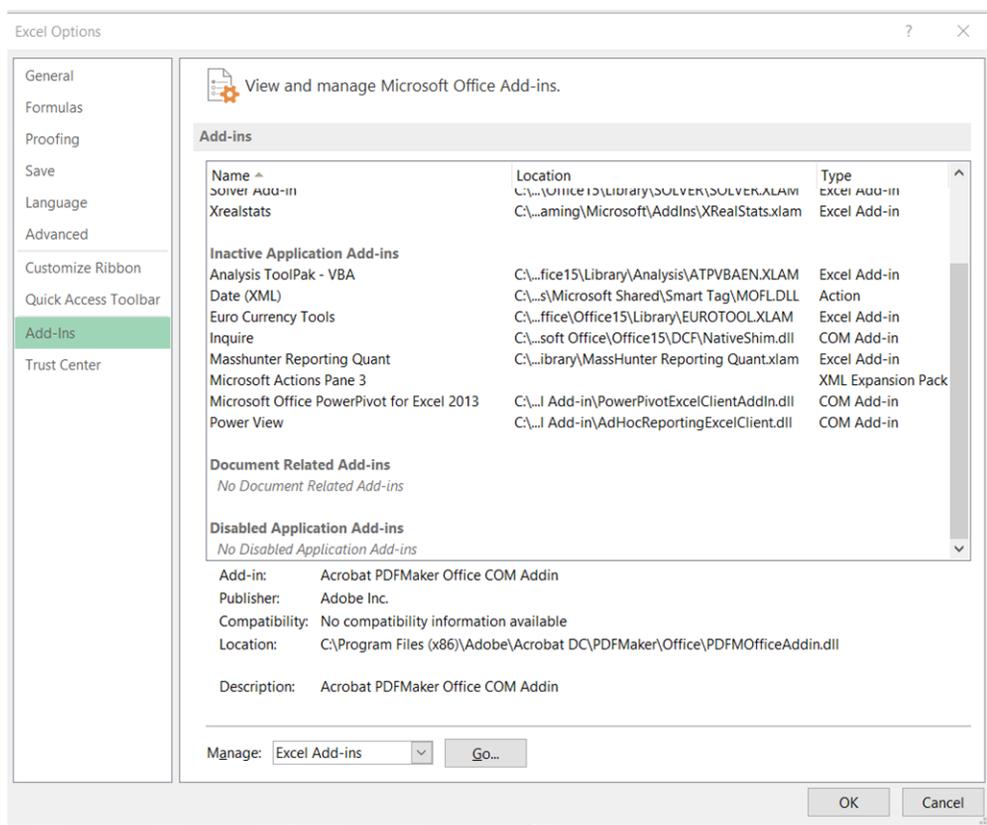


Supplementary File (S3): How to install the XRealStats Add-in:

1. Open Excel, then go to “Options”.



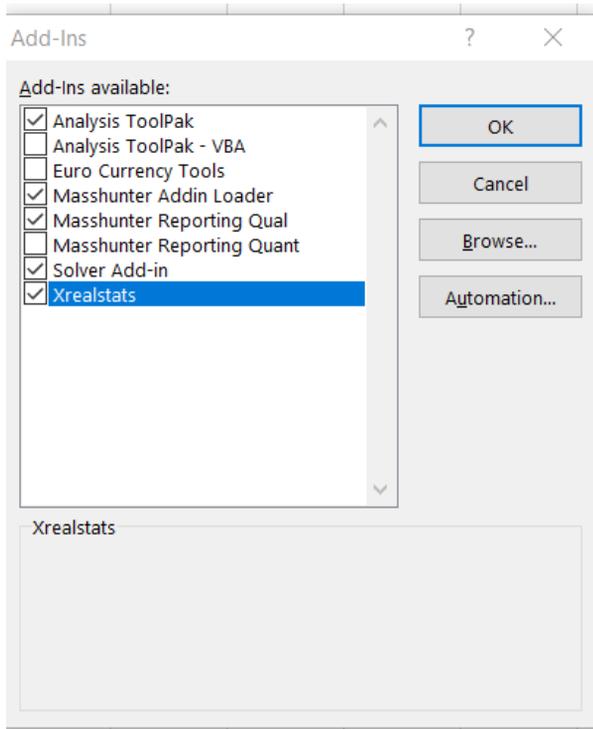
2. Click on “Add-ins”. In the “Manage” box: Select Excel Add-ins and click “Go”.



3. After downloading Xrealstats, click on “Browse” to find it in your computer. Once it is selected, it will appear in the list of Add-ins; it will need to be enabled

The default folder of the Add-ins is

C:\Users\name of computer\AppData\Roaming\Microsoft\Add-ins



4. Open the Table S2.xls file and click on “Enable Editing”.

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW MASSHUNTER REPORTING ADD-INS ACROBAT Sign in

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. Enable Editing

BY2 =-LOG(IF(BT2<0.05,'C:\Users\jagui\AppData\Roaming\Microsoft\Addins\XRealStats.xlam'\MTEST(BH2:BM2,BN2:BS2),IF(BV2<0.05,TTTEST(BH2:BM2,BN2:BS2,2,3),TTTEST(BH2:BM2,BN2:BS2,2,2))),2)

	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	C
	impute	Ctrl-1	Ctrl-2	Ctrl-3	Ctrl-4	Ctrl-5	Ctrl-6	Tr-1	Tr-2	Tr-3	Tr-4	Tr-5	Tr-6	SW test	F-test	Volcano	Fold change	p-value	p-value Bonferroni corrected							
1	3.58	4.39	5.65	4.42	3.99	3.78	0.69	2.87	3.08	3.05	0.19	3.46	0.05	0.19	-2.08	8.98	-0.73									
2	1.95	3.45	3.29	3.50	3.76	3.67	1.90	1.29	1.94	3.89	2.42	2.12	0.00	0.30	-1.30	5.74	-1.10									
3	3.51	3.69	3.61	5.76	3.89	6.06	1.16	3.12	6.00	5.66	-2.27	0.88	0.02	0.05	-2.00	3.74	-2.31									
4	5.11	5.32	4.87	5.18	5.74	5.48	6.30	5.95	5.95	5.54	6.96	5.85	0.29	0.16	0.64	4.51	-2.07									
5	5.39	4.42	4.26	4.54	5.41	4.90	6.28	5.95	4.77	4.94	6.07	6.43	0.21	0.21	0.90	4.83	-2.20									
6	5.09	5.34	5.26	5.19	5.69	5.72	5.79	5.34	3.20	5.96	2.24	5.52	0.04	0.00	-0.77	1.00	-3.13									
7	2.35	1.86	1.21	-0.09	2.54	0.35	6.89	2.21	2.73	3.30	6.35	4.84	0.36	0.21	2.98	6.85	-1.37									
8	2.80	2.77	3.05	3.16	3.31	3.02	2.27	2.75	3.40	3.89	3.27	3.45	0.38	0.34	0.15	0.89	-3.17									
9	1.08	2.29	2.69	2.04	1.41	2.35	5.85	1.00	2.96	1.79	5.46	1.90	0.96	0.02	1.07	1.97	-2.97									
10	3.49	3.23	3.83	4.21	4.09	3.61	3.09	3.34	2.03	1.69	2.99	4.93	0.39	0.03	-0.77	2.59	-2.65									
11	4.94	4.70	4.16	4.97	4.58	4.84	2.30	4.75	4.75	4.37	2.02	6.14	0.27	0.00	-0.64	1.43	-3.00									
12	7.64	7.96	7.78	9.24	8.06	7.46	7.96	7.49	7.99	7.85	8.66	7.98	0.03	0.42	0.03	1.00	-3.13									
13	2.87	2.95	2.94	3.19	0.65	2.80	-0.12	3.58	3.57	3.34	-0.62	3.99	0.01	0.11	-0.28	2.57	-2.66									
14	4.51	1.63	1.64	2.00	4.11	3.82	3.72	4.76	4.98	4.71	3.94	4.76	0.04	0.04	3.46	5.74	-1.70									
15	7.74	7.78	7.94	7.74	9.22	7.91	8.36	7.53	8.11	8.08	9.12	8.27	0.13	0.04	0.36	2.65	-2.63									
16	6.09	6.09	7.92	7.86	8.31	7.80	8.48	7.97	7.83	7.86	8.51	7.60	0.25	0.16	0.03	0.19	-3.38									

Volcano plot

30.24

25.92

21.60

17.28

13.96

10.74

7.52

4.30

1.08

-1.14

-4.36

-7.58

-10.80

-14.02

-17.24

-20.46

-23.68

-26.90

-30.12

-33.34

-36.56

-39.78

-43.00

-46.22

-49.44

-52.66

-55.88

-59.10

-62.32

-65.54

-68.76

-71.98

-75.20

-78.42

-81.64

-84.86

-88.08

-91.30

-94.52

-97.74

-100.96

-104.18

-107.40

-110.62

-113.84

-117.06

-120.28

-123.50

-126.72

-130.94

-134.16

-137.38

-140.60

-143.82

-147.04

-150.26

-153.48

-156.70

-159.92

-163.14

-166.36

-169.58

-172.80

-176.02

-179.24

-182.46

-185.68

-188.90

-192.12

-195.34

-198.56

-201.78

-205.00

-208.22

-211.44

-214.66

-217.88

-221.10

-224.32

-227.54

-230.76

-233.98

-237.20

-240.42

-243.64

-246.86

-250.08

-253.30

-256.52

-259.74

-262.96

-266.18

-269.40

-272.62

-275.84

-279.06

-282.28

-285.50

-288.72

-291.94

-295.16

-298.38

-301.60

-304.82

-308.04

-311.26

-314.48

-317.70

-320.92

-324.14

-327.36

-330.58

-333.80

-337.02

-340.24

-343.46

-346.68

-349.90

-353.12

-356.34

-359.56

-362.78

-366.00

-369.22

-372.44

-375.66

-378.88

-382.10

-385.32

-388.54

-391.76

-394.98

-398.20

-401.42

-404.64

-407.86

-411.08

-414.30

-417.52

-420.74

-423.96

-427.18

-430.40

-433.62

-436.84

-440.06

-443.28

-446.50

-449.72

-452.94

-456.16

-459.38

-462.60

-465.82

-469.04

-472.26

-475.48

-478.70

-481.92

-485.14

-488.36

-491.58

-494.80

-498.02

-501.24

-504.46

-507.68

-510.90

-514.12

-517.34

-520.56

-523.78

-527.00

-530.22

-533.44

-536.66

-539.88

-543.10

-546.32

-549.54

-552.76

-555.98

-559.20

-562.42

-565.64

-568.86

-572.08

-575.30

-578.52

-581.74

-584.96

-588.18

-591.40

-594.62

-597.84

-601.06

-604.28

-607.50

-610.72

-613.94

-617.16

-620.38

-623.60

-626.82

-630.04

-633.26

-636.48

-639.70

-642.92

-646.14

-649.36

-652.58

-655.80

-659.02

-662.24

-665.46

-668.68

-671.90

-675.12

-678.34

-681.56

-684.78

-688.00

-691.22

-694.44

-697.66

-700.88

-704.10

-707.32

-710.54

-713.76

-716.98

-720.20

-723.42

-726.64

-729.86

-733.08

-736.30

-739.52

-742.74

-745.96

-749.18

-752.40

-755.62

-758.84

-762.06

-765.28

-768.50

-771.72

-774.94

-778.16

-781.38

-784.60

-787.82

-791.04

-794.26

-797.48

-800.70

-803.92

-807.14

-810.36

-813.58

-816.80

-820.02

-823.24

-826.46

-829.68

-832.90

-836.12

-839.34

-842.56

-845.78

-849.00

-852.22

-855.44

-858.66

-861.88

-865.10

-868.32

-871.54

-874.76

-877.98

-881.20

-884.42

-887.64

-890.86

-894.08

-897.30

-900.52

-903.74

-906.96

-910.18

-913.40

-916.62

-919.84

-923.06

-926.28

-929.50

-932.72

-935.94

-939.16

-942.38

-945.60

-948.82

-952.04

-955.26

-958.48

-961.70

-964.92

-968.14

-971.36

-974.58

-977.80

-981.02

-984.24

-987.46

-990.68

-993.90

-997.12

-1000.34

5. Notice after enabling editing that the SW test, p-value and Bonferroni columns have no values. Click on "Enable Content".

The screenshot shows an Excel spreadsheet with a data table and a Volcano plot. The data table has columns: BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE. The rows represent different samples, with the first row labeled 'impute'. The columns contain numerical values for various tests, including SW test, F-test, Volcano, Fold change, p-value, and p-value Bonferroni corrected. A yellow warning bar at the top reads "SECURITY WARNING Automatic update of links has been disabled" with an "Enable Content" button. On the right, a Volcano plot is displayed with the y-axis labeled "-log2 F-test p-value" and the x-axis labeled "log2 fold change tr/ctrl". The plot shows a distribution of points with a horizontal line at 0.00 and a vertical line at 4.32.

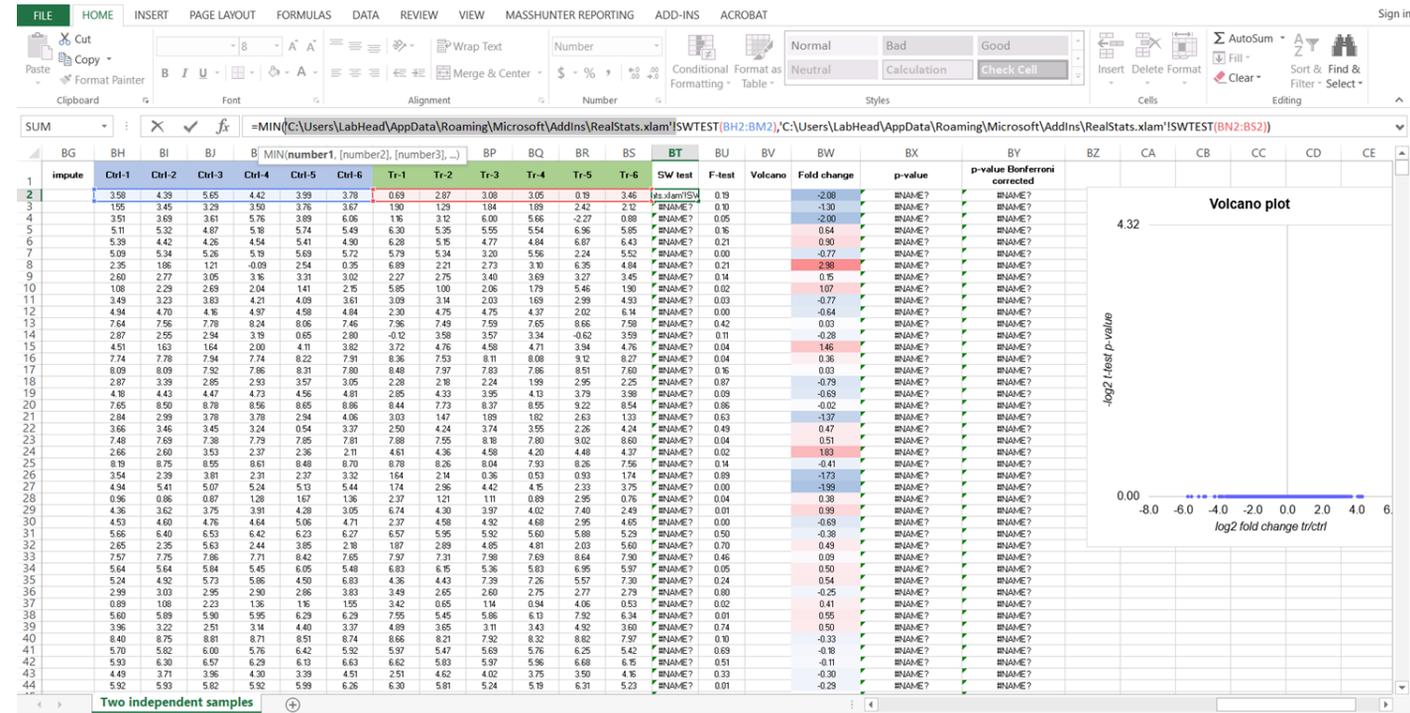
6. Click on the X to close this message.

This screenshot is identical to the one above, but with a "Microsoft Excel" error dialog box open in the foreground. The dialog box contains the following text: "We can't update some of the links in your workbook right now. You can continue without updating their values, or edit the links you think are wrong." Below the text are "Continue" and "Edit Links..." buttons. A link "Was this information helpful?" is also visible. The background spreadsheet and Volcano plot are partially obscured by the dialog box.

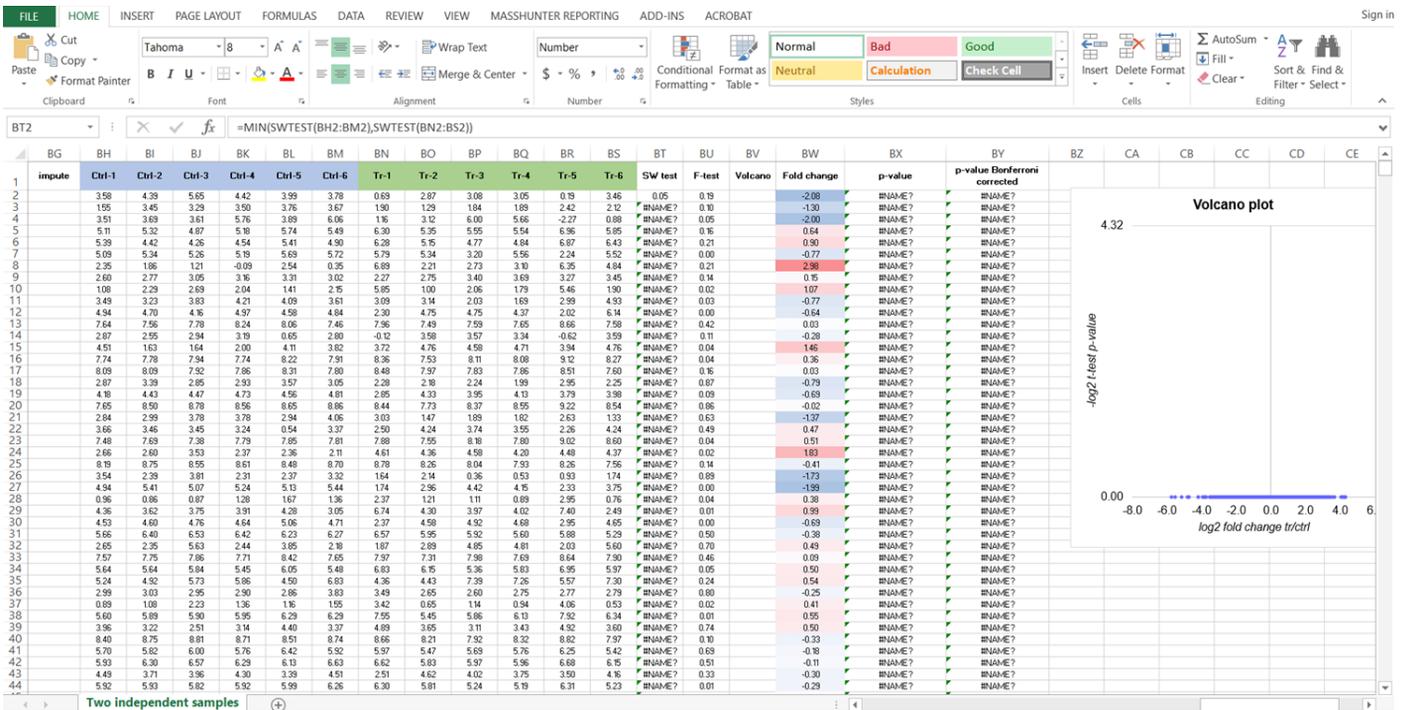
7. Click on cell "BT2" under the SW test column. You will see the links incorporated in the formula.

8. Remove both links

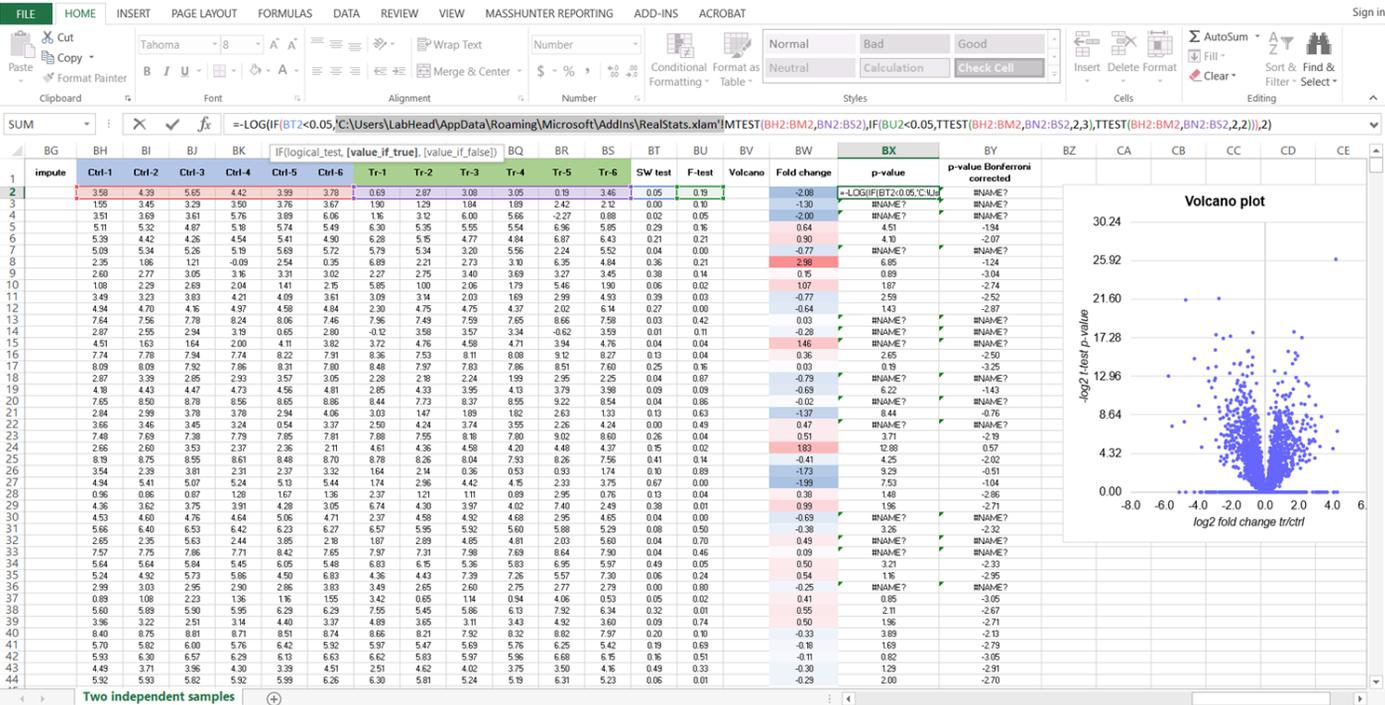
'C:\Users\Labhead\AppData\Roaming\Microsoft\AddIns\RealStats.xlam'!
from the formula as highlighted



9. A valid value should appear. Fill down the formula to the end of the column.



9. Repeat the same operation in the column of the p-value "BX". This is for the Mann-Whitney test



This is what spreadsheet should like if the Realstats Add-in works correctly.

