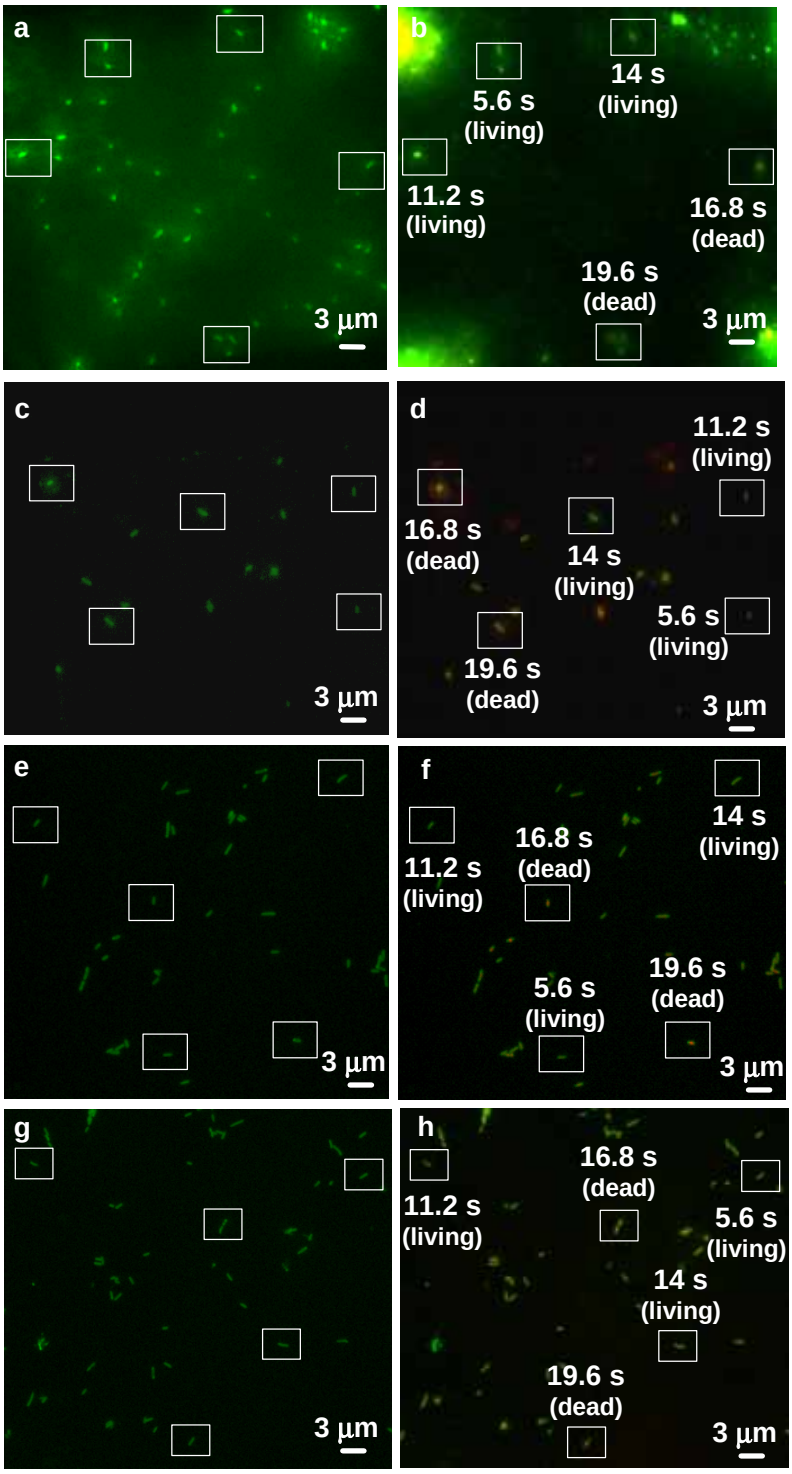
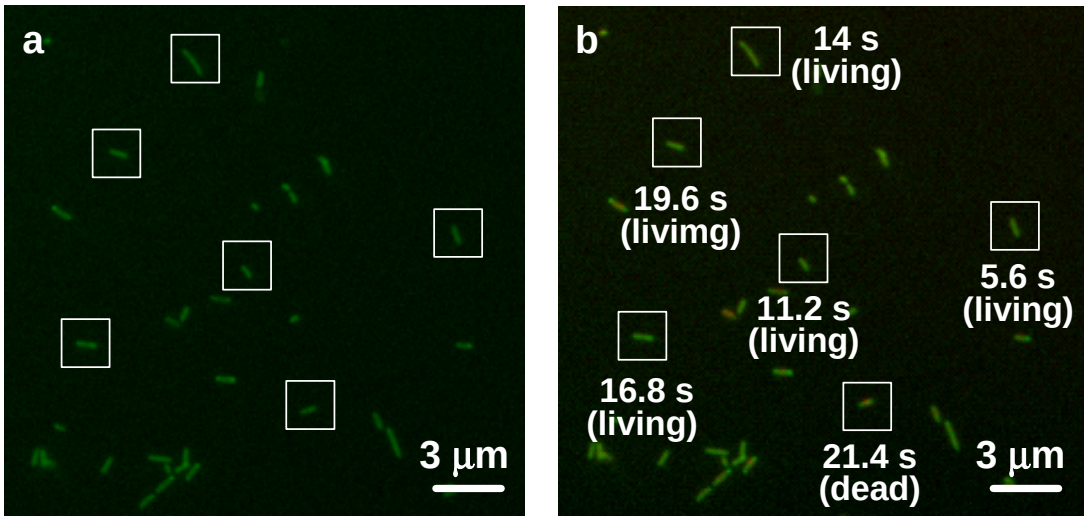
Supplementary information for ***novel microchip for in situ TEM imaging of living organisms and bio-reactions in aqueous condition*** by K. L. Liu, C. C. Wu, Y. J. Huang, H. L. Peng, H. Y.Chang, P. Chang, L. Hsu and T. R. Yew*.

Supplementary Figures



Supplemental Fig. 1



Supplemental Fig. 2

Supplementary Figure Captions

Supplemental Figure 1. Fluorescence images of four *K. pneumoniae* samples (a), (c), (e), (g) for pre-TEM, and (b), (d), (f), (h) for their post-continuous TEM (200 KeV) electron beam exposure for different durations, respectively, proving that *K. pneumoniae* cells indeed survived up to 14 s under continuous TEM exposure. Especially in (a), parts of the living cells sealed in the K-kit were motile in aqueous environment, consequently sometime different images of living cells pre- and post-TEM imaging were observed in some area at the same K-kit. The bacteria in the middle region of (b) may have moved out the viewing window so that the middle region gets dark. The reason that four corners become very bright is due to the aggregation of some bacteria.

Supplemental Figure 2. Fluorescence images of the *K. pneumoniae* (a) pre- and (b) post- accumulated TEM (200 KeV) electron beam exposure for different durations. The interval between each electron beam exposure (2.8 s) was 10 min.