**Appendix 2 – Supplementary File 1**

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| **Symbol** | **Parameter** | **Value** | **Source** |
|  | Number of mRNAs  (per cell) | 2800 | Estimated from (Bremer and Dennis, 2008) |
|  | Number of proteins  (106/cell) | 5.29 | Estimated from (Bremer and Dennis, 2008) |
|  | Number of mRNAs  for a newborn cell | 2020 | Calculated as |
|  | Number of proteins  for a newborn cell (106) | 3.82 | Calculated as |
|  | Number of RNAPs  in the cell (103) | 5.7 | Estimated from (Bremer and Dennis, 2008) |
|  | Number of proteins  in the cell (106) | 5.29 | Estimated from (Bremer and Dennis, 2008) |
|  | Fraction of RNAPs relative to the total number of proteins | 0.00108 |  |
|  | Fraction of RNAPs involved in mRNA synthesis | 0.18 | Estimated from (Bremer et al., 2003). |
|  | Mean transcription time to generate one mRNA molecule (min) | 0.33 | Estimated from (Bremer and Dennis, 2008) |
|  | Bulk transcription rate (10-3/min) | 1.99 |  |
|  | Number of ribosomes  in a cell (103) | 26 | Estimated from (Bremer and Dennis, 2008) |
|  | Number of proteins  in a cell (106) | 5.29 | Estimated from (Bremer and Dennis, 2008) |
|  | Ratio between ribosome number and protein number (10-3) | 4.91 |  |
|  | Mean translation time for one protein molecule (min) | 0.25 | Estimated from (Bremer and Dennis, 2008) |
|  | Bulk translation rate  (10-3/min) | 20.0 |  |