

Figure S2: From the main dataset, four subsets were extracted, each containing 200 records: genes of the lowest  $B$  (number of protein molecules produced), genes of the highest  $B$ , genes of the lowest  $g$  (ribosome density), and genes of the highest  $g$ . We compared the translational parameters between genes of high and low  $B$ , as well as between genes of high and low  $g$ . Genes having elevated values of  $B$  or  $g$  tend to have shorter times of translation initiation. In cases of genes with elevated  $B$ , the difference is caused mainly by the elevated value of parameter  $Pz$  (the relative rate of binding of free ribosomes to the 5' end of a transcript), while the parameter  $Ps$  (the relative rate of successful accomplishments of initiation once the ribosome-mRNA complex is formed) seems not to affect the time of translation initiation significantly. On the other hand, genes with elevated  $g$  have shorter times of initiation, because of the elevated value of the  $Ps$  parameter, while the  $Pz$  parameter seems not to affect the time of translation initiation significantly. The boxplots show the distributions of the values of  $Ps$  and  $Pz$  in all four sets of genes: (A) comparison of  $Pz$  values between genes of high and low protein production rate  $B$ ; (B) comparison of  $Ps$  values between genes of high and low protein production rate  $B$ ; (C) comparison of  $Pz$  values between genes of high and low ribosome density  $g$ ; and (D) comparison of  $Ps$  values between genes of high and low ribosome density  $g$ .

