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Supplementary Information for

Nanonewton forces between *Staphylococcus aureus* surface protein IsdB and vitronectin

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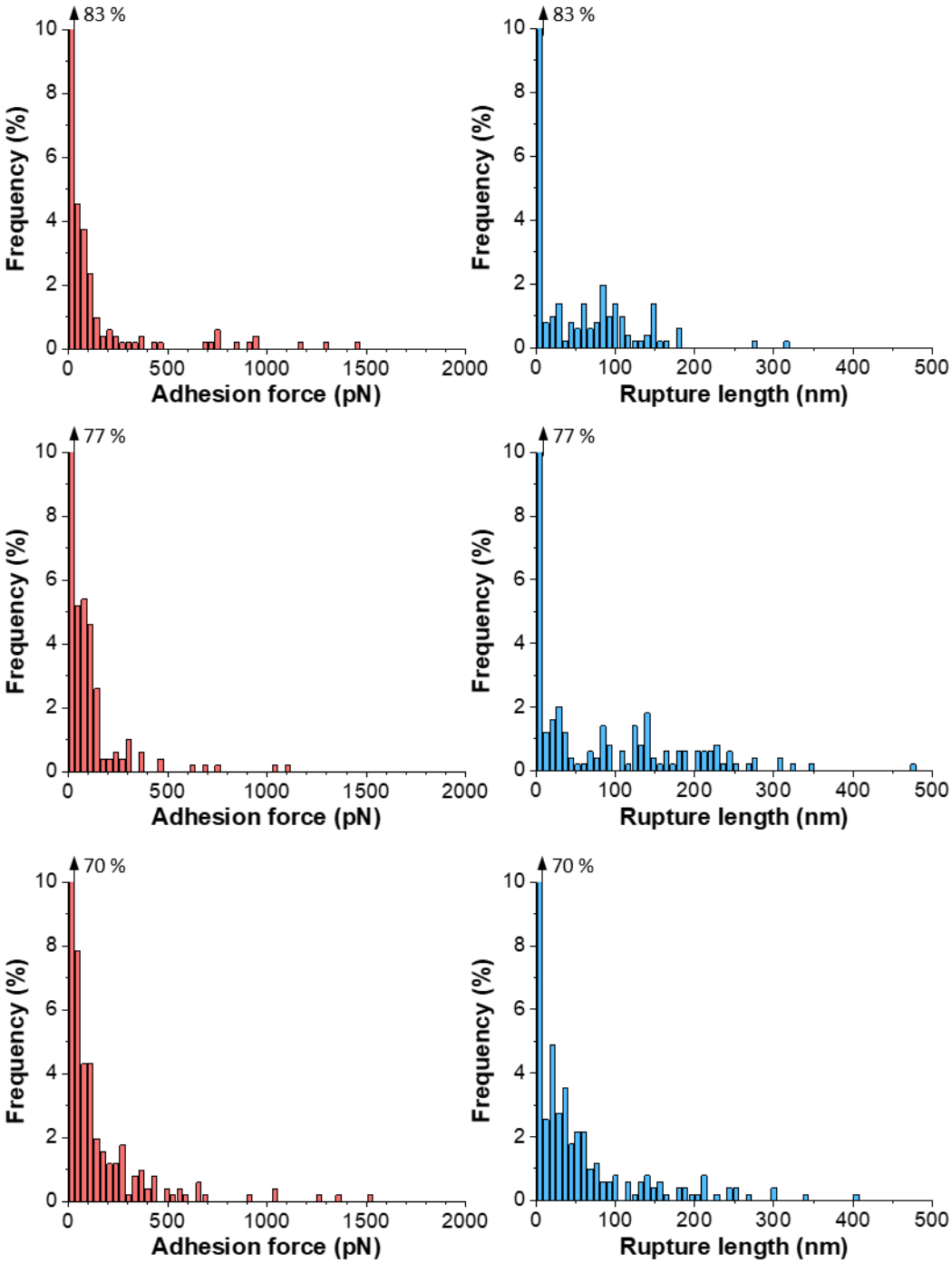
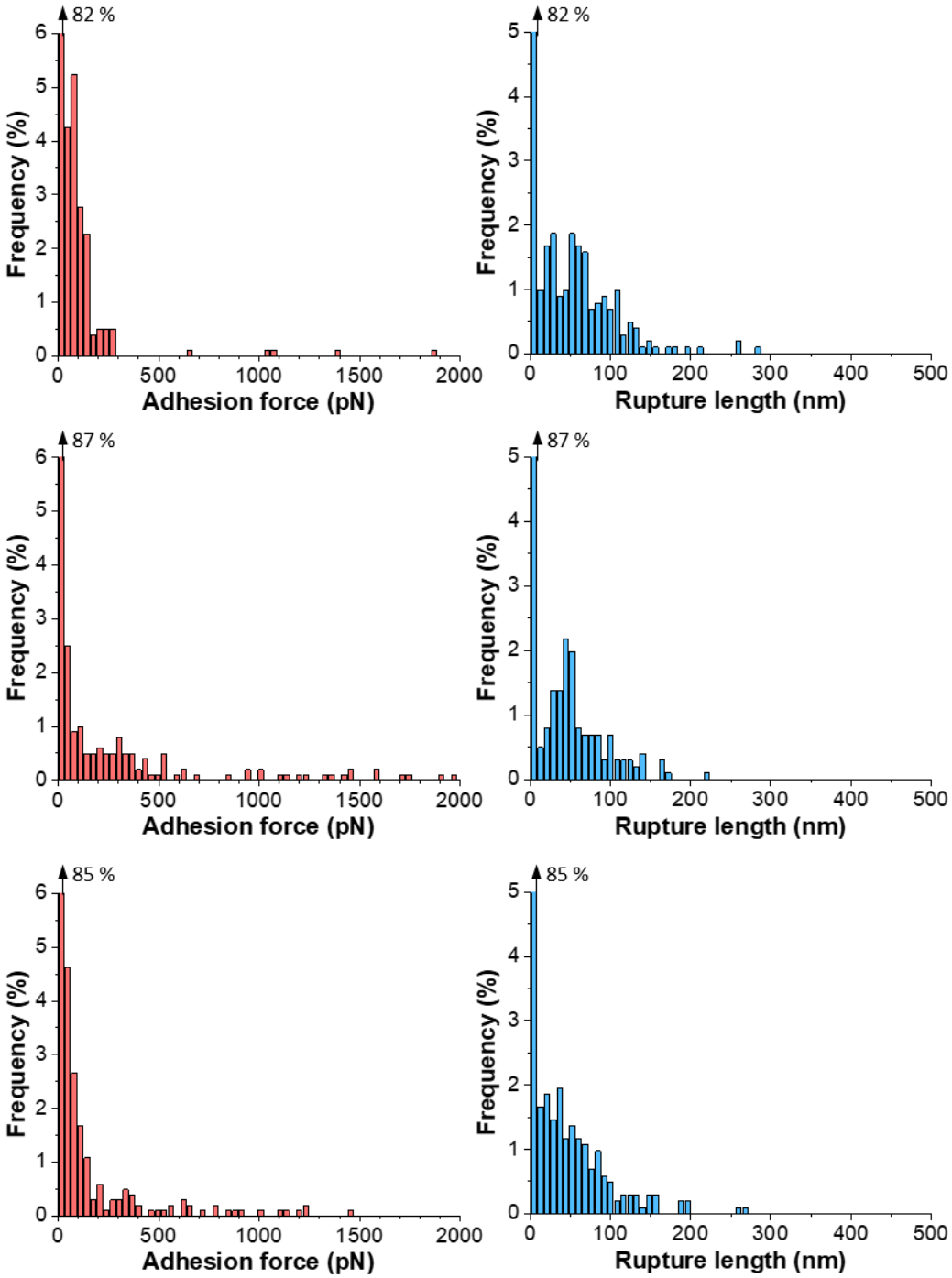
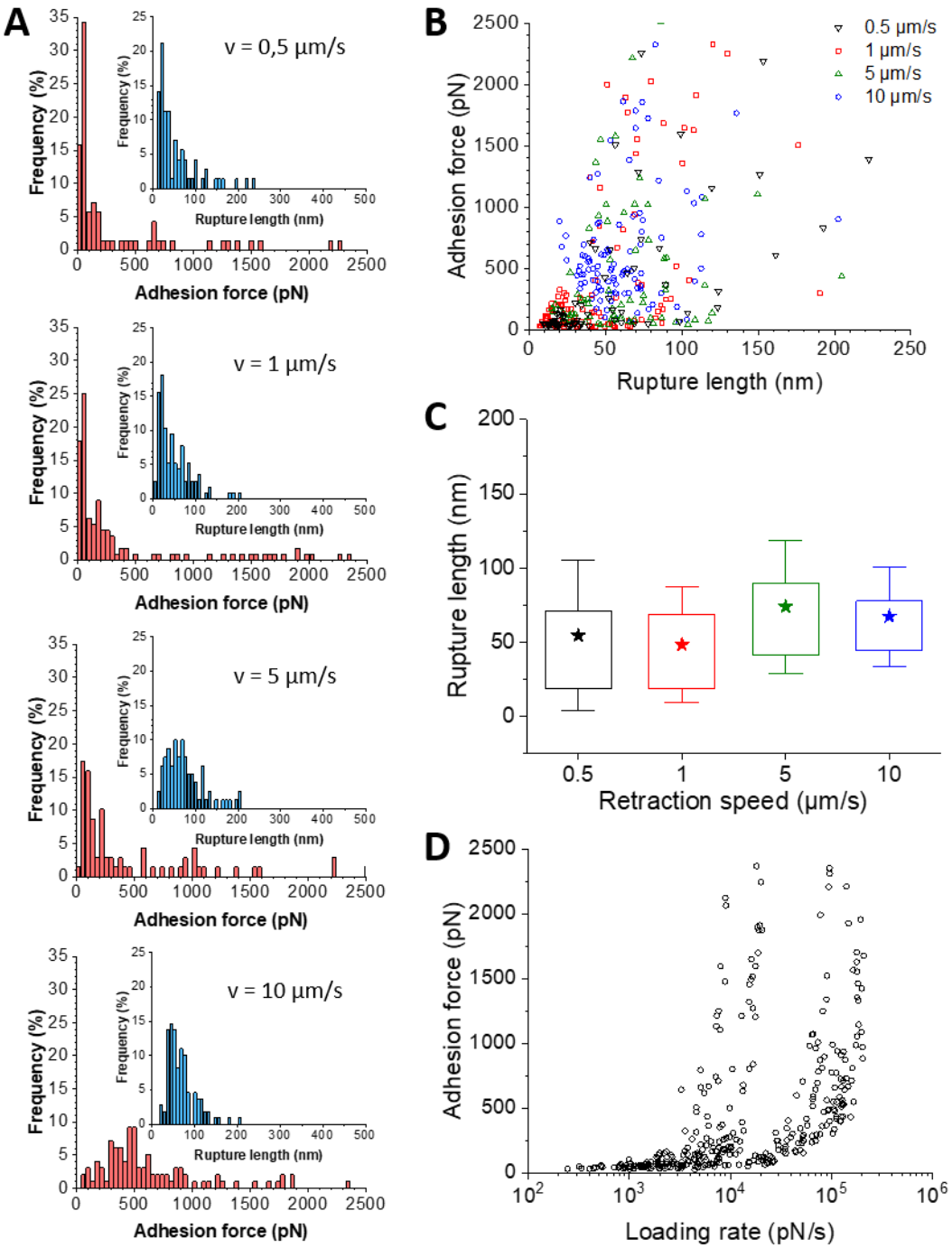
This PDF file includes supplementary figures 1 to 4.



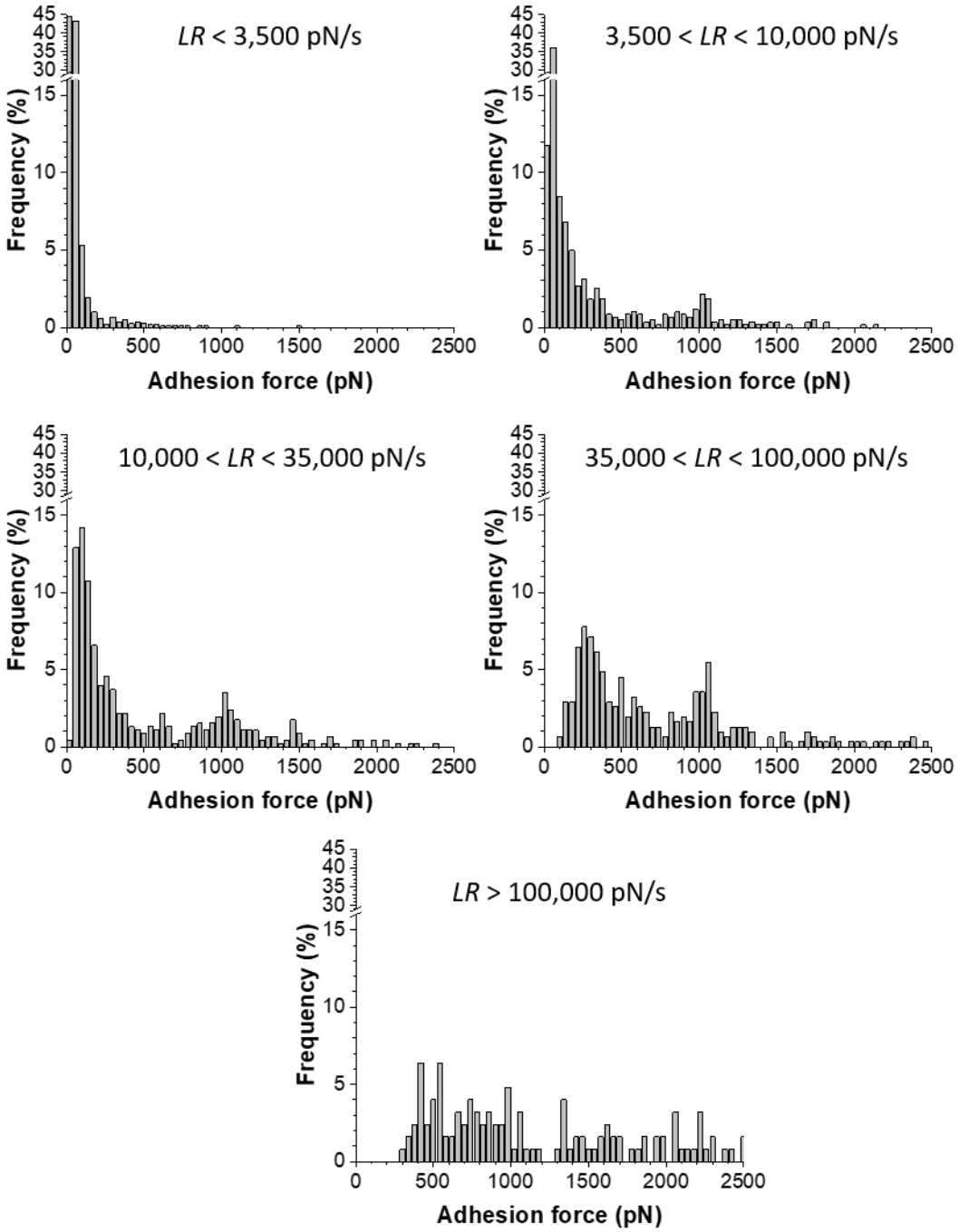
Supplementary figure 1. Maximum adhesion force (left) and rupture length (right) histograms obtained by recording force-distance curves in PBS, at a retraction speed of 1 µm/s (~2.10^4 pN/s), between three independent WT *S. aureus* cells and Vn substrates.



Supplementary figure 2. Maximum adhesion force (left) and rupture length (right) histograms obtained by recording force-distance curves in PBS, at a retraction speed of 1 µm/s (~2.10^4 pN/s), between three independent WT *S. aureus* cells and AFM tips functionalized with Vn.



Supplementary figure 3. (A) Adhesion force and rupture length histograms, obtained at different retraction speeds, by recording force curves on one representative WT cell using AFM tips labelled with Vn. (B) Adhesion force vs rupture length scatter plot as a function of retraction speed, showing no dependency between the two parameters. (C) Box plots showing the distribution of rupture lengths of IsdB – Vn bonds as a function of retraction speed. Stars are the mean values, boxes the 25-75 % quartiles and whiskers the SD. No significant differences are reported. (D) Dynamic force spectroscopy plot, from the raw data shown in (A) showing the adhesion forces for the IsdB - Vn interaction measured at increasing loading rates on one representative cell.



Supplementary figure 4. Adhesion force histograms obtained by sorting the DFS data shown in Figure 5 in discrete *LRs* ranges showing that the probability of forming strong bonds increases with the *LR*.