Publication Guidelines for Data Presentation
in Biological and Pharmaceutical Bulletin

(Effective from April 3, 2023)

1) In electrophoresis and immunoblotting images, the location of molecular weight markers (preferably two or more) or the molecular weight of the target band should be indicated.

2) Extreme cropping of electrophoresis or immunoblotting images is not recommended. Comparisons between samples should be made using the same images rather than using different images.

3) For all image data, avoid adjusting brightness and contrast to the extent that the information in the original data is altered.

4) In each figure or graph, indicate what "n" or "N" stands for. For example, indicate whether it represents the number of experiments, samples, or animals. It is not sufficient to state "all experiments were conducted at least in triplicate."

5) Specify which statistical validation method was used for which data analysis. For statistical methods that generate P-values or similar values of significance, use the exact values, i.e., $p = 0.0023$, rather than indicating "$P < 0.01$." Indicate which samples were compared in graphs.

6) Individual data points should be clearly indicated rather than using bar or line graphs showing only the mean ± SD (or SEM, etc.).

7) Appropriate disclosure of research data should be in accordance with the Findable, Accessible, Interoperable, and Reusable (FAIR) data principles (https://force11.org/info/the-fair-data-principles/).