

Effective methods for immobilization of non-adherent Pv11 cells while maintaining their desiccation tolerance

Hiroto Fuse, Takahiro Kikawada* & Richard Cornette*

H. Fuse

Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, 5-1-5 Kashiwa, Chiba 277-8562, Japan.

e-mail: 4182125849@edu.k.u-tokyo.ac.jp

T. Kikawada

Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, 5-1-5 Kashiwa, Chiba 277-8562, Japan.

Division of Biomaterial Sciences, Institute of Agrobiological Sciences, National Agriculture and Food Research Organization (NARO), 1-2 Owashi, Tsukuba, Ibaraki 3050851 Japan.

e-mail: tkikawada@edu.k.u-tokyo.ac.jp, kikawada@affrc.go.jp

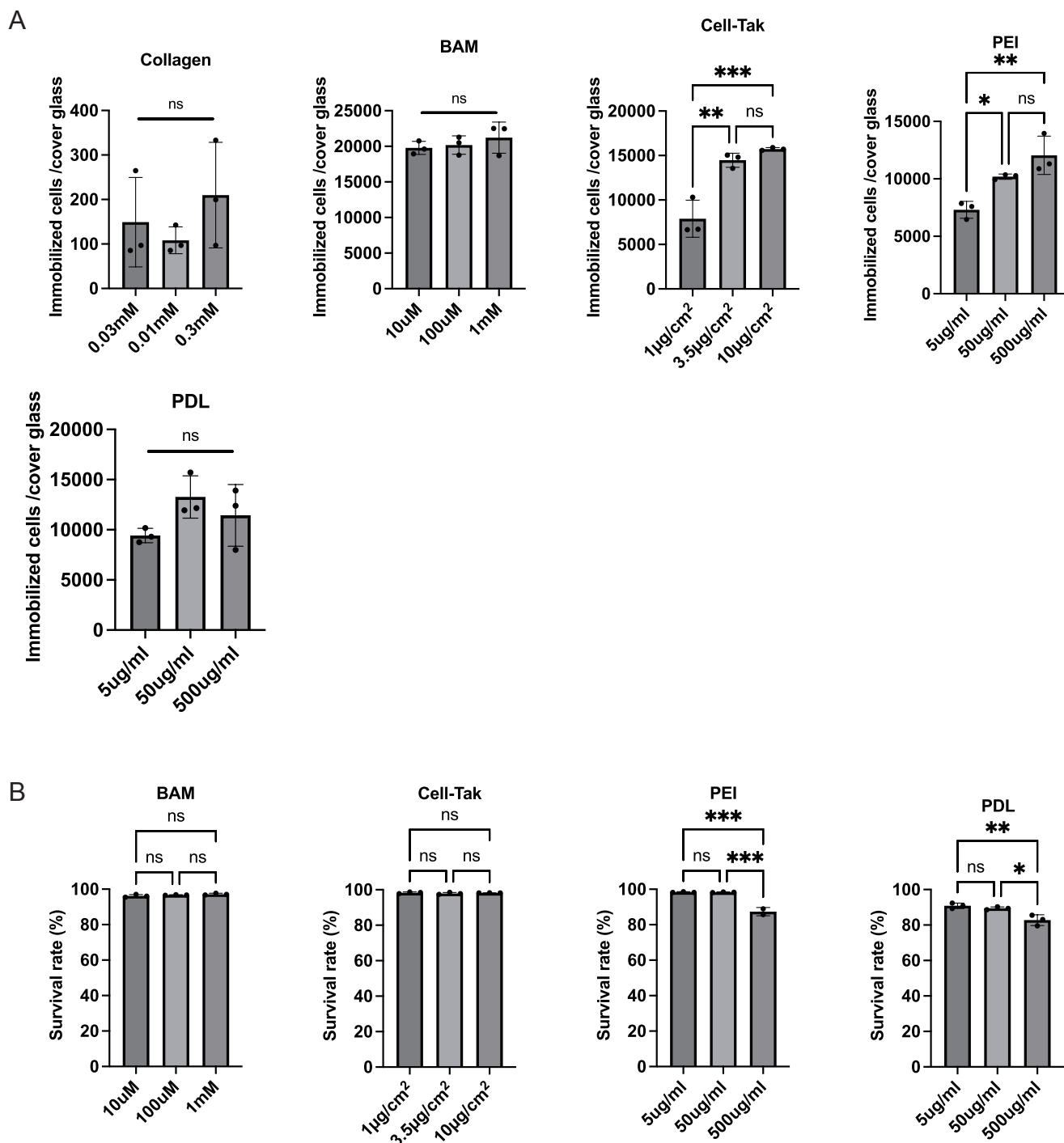
R. Cornette

Division of Biomaterial Sciences, Institute of Agrobiological Sciences, National Agriculture and Food Research Organization (NARO), 1-2 Owashi, Tsukuba, Ibaraki 3050851 Japan.

e-mail: cornette@affrc.go.jp

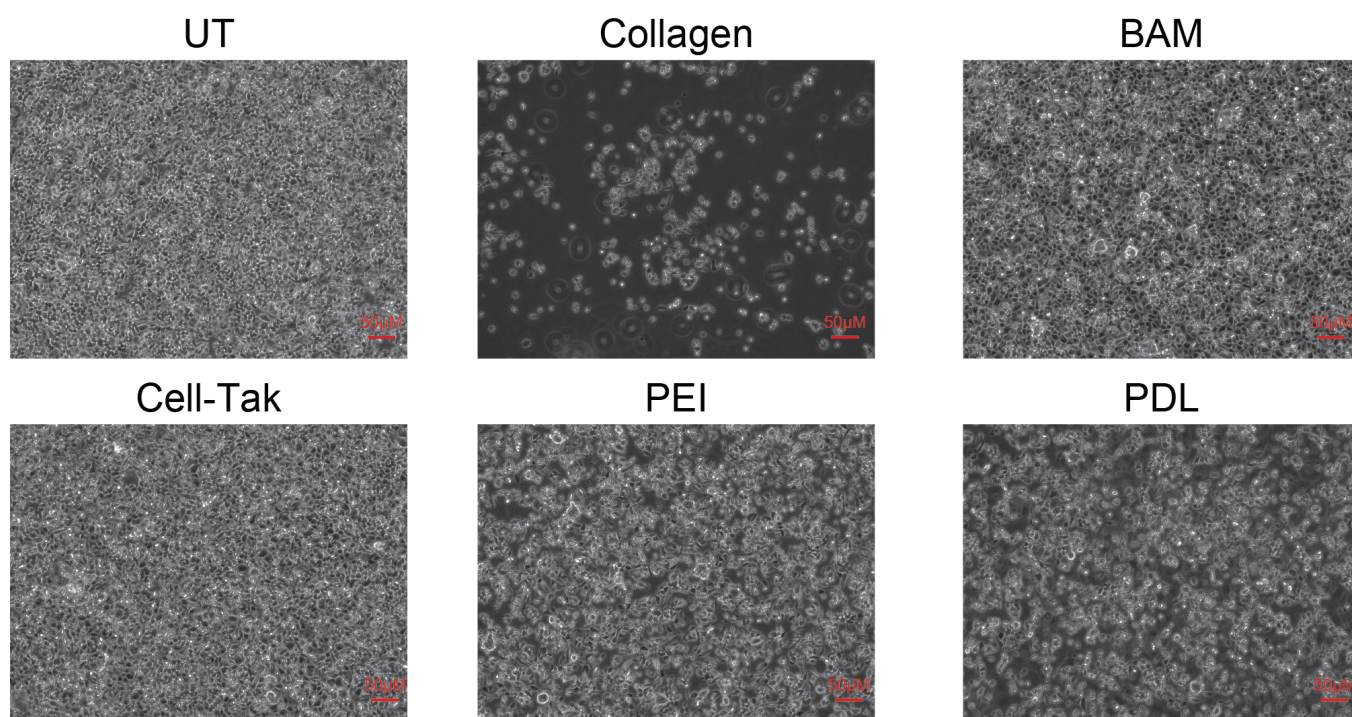
*Corresponding authors

Supplementary Figures: 3

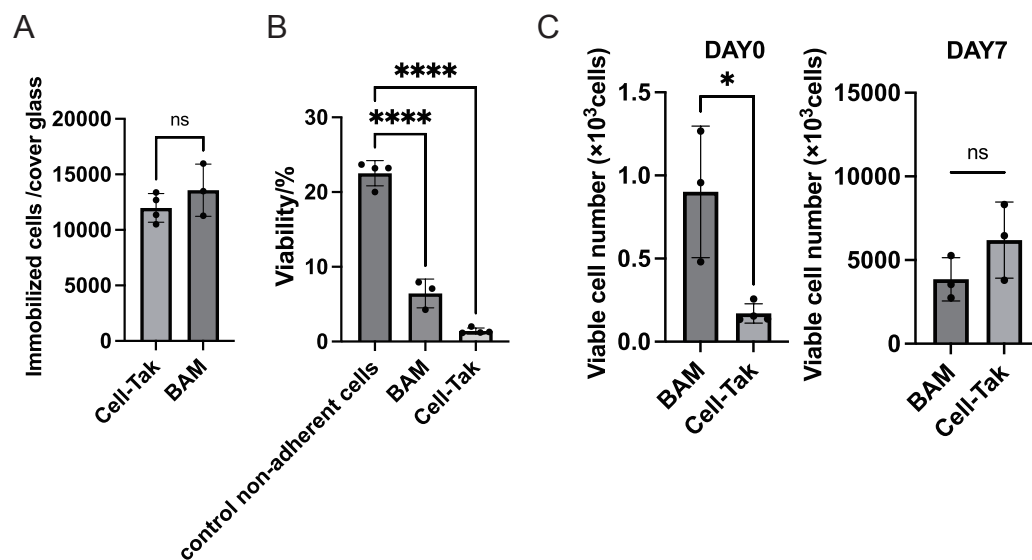


Supplementary Fig. 1. Optimization of effective concentration of coating reagents for the immobilization of Pv11 cells.

(A) The adhesion efficiency of Pv11 cells was assessed by counting the number of immobilized cells. (B) The cytotoxicity of each coating method to Pv11 cells was evaluated by calculating cell viability 24 h after cell adhesion.



Supplementary Fig. 2. Microscopic images of immobilized Pv11 cells for each coating method. Red bars indicate 50 μm .



Supplementary Fig. 3. “Trehalose treatment after immobilization” using BAM- and Cell-Tak-coated cover glasses.

After rehydration of the desiccated cells that had been immobilized on the coated glasses, retention of immobilized cells (A) and viability (B) of the cells were assessed. Proliferative capability (C) of immobilized cells after desiccation and subsequent rehydration is shown as the number of viable cells on Day 0 and Day 7 after rehydration. Data are shown as means $\pm$ SD. Dots indicate individual replicates. P values are: < 0.0001 as ****; 0.0001 to 0.001 as ***; 0.001 to 0.01 as **; 0.01 to 0.05 as *; ≥ 0.05 as “ns” (not significant).