Supporting information.

Organization of *Pseudomonas fluorescens* on chemically different nano/microstructured surfaces

Carolina Díaz.[1], *Roberto C. Salvarezza*[1], *Mónica A. Fernández Lorenzo de Mele*[1,2], *Patricia L. Schilardi*.*

[1] Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA), Facultad de Ciencias Exactas, Universidad Nacional de La Plata – CONICET, Casilla de Correo 16, Sucursal 4, (1900) La Plata – ARGENTINA

[2] Facultad de Ingeniería, Universidad Nacional de La Plata, La Plata, Argentina

Bacteria organization on surfaces is analyzed using AFM imaging in air conditions (average relative humidity larger than 70 %) and after drying the samples at the same relative humidity. To disregard any possibility of the influence of dewetting forces in the location of bacteria the following experiments have been made. *P. fluorescens* were maintained in Cetrimide agar at 28 °C in identical conditions of similar assays

performed to obtain AFM images. After 24 hours growth, the substrates were placed vertically into the culture for 2 h so that bacteria could attach on them.

Then, the culture solution was sucked gently and replaced by double-sterile distilled water by keeping the sample always immersed in the solution. This step was repeated until no bacteria was detected in the removed solution. This fact was confirmed by the pour plate technique for bacterial enumeration. After that, the substrate was kept immersed in double-sterile water until dying with acridine orange. The sample was imaged by epifluorescence microscopy with the 100X objective and inmersion oil. It should be noted that the substrates have not been dewetted in any moment. The images obtained from the epifluorescence microscopy under these conditions were similar to those obtained by AFM imaging (compare Figures 3a and 3b, 7a and 7b); consequently, it can be inferred that neither the trapping of bacteria at the channels in MS substrates, nor the formations of rafts on NS substrates are artifacts caused by dewetting forces.