Supporting Information

Influence of laser-designed microstructures density on responses of epithelial cells

Anca Bonciu^{1,2}, Alixandra Wagner³, Valentina Marascu^{1,4}, Antoniu Moldovan¹, Cerasela Zoica Dinu^{3*} and Valentina Dinca^{1*}

1National Institute for Lasers, Plasma and Radiation Physics, Atomistilor 409, Magurele, 077125, Romania
2University of Bucharest, Faculty of Physics, RO 077125, Magurele, Romania
3Department of Chemical and Biomedical Engineering, West Virginia University, Morgantown, WV, 20506, USA
4Universit éParis Saclay, CEA, INRAE, DMTS, SCBM, F-91191 Gif-sur-Yvette, France

 $*Corresponding \ authors: \ \underline{valentina.dinca@inflpr.ro} \ , \ \underline{cerasela-zoica.dinu@mail.wvu.edu}$

<u>Figure S1.</u>

Optical microscopy images of the surface of polycarbonate structures a) LDSU, b) MDSU, c) HDSU at $10 \times$ magnification, and d) LDSU, e) MDSU, f) HDSU at 40x magnification respectively.



Figure S2:

Force versus distance curves recorded using contact mode AFM on PDMS replicates; analyses were performed in three zones with different heights being analyzed on a) PDMS controls, b) LDSU, c) MDSU, and d) HDSU structures respectively.



Figure S3.

Representative AFM image depicting analysis of distance between high, intermediate (red) and shallow structures (red).



Figure S4: Representative images at 24 h for a) control cells, b) cells on PDMS, c) cells on LDSU, d) cells on MDSU, and e) cells on HDSU respectively, taken at 10x via use of optical microscopy.

