

## **SUPPLEMENTARY INFORMATION**

### **Early events in actin cytoskeleton dynamics and E-cadherin-mediated cell-cell adhesion during epithelial-mesenchymal transition**

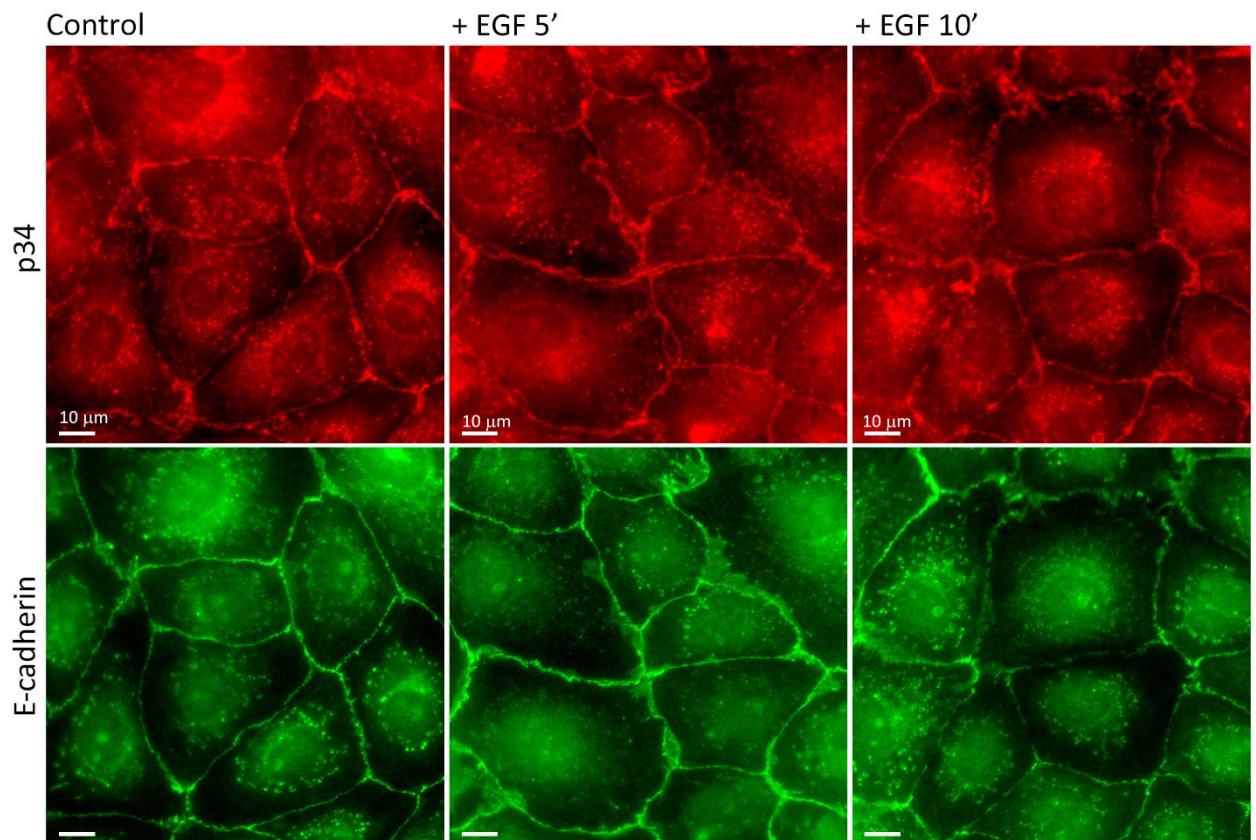
Irina Y Zhitnyak<sup>¶</sup>, Svetlana N Rubtsova<sup>¶</sup>, Nikita I Litovka, Natalya A Gloushankova\*

Institute of Carcinogenesis, N.N. Blokhin National Medical Research Center of Oncology,  
Moscow, Russia

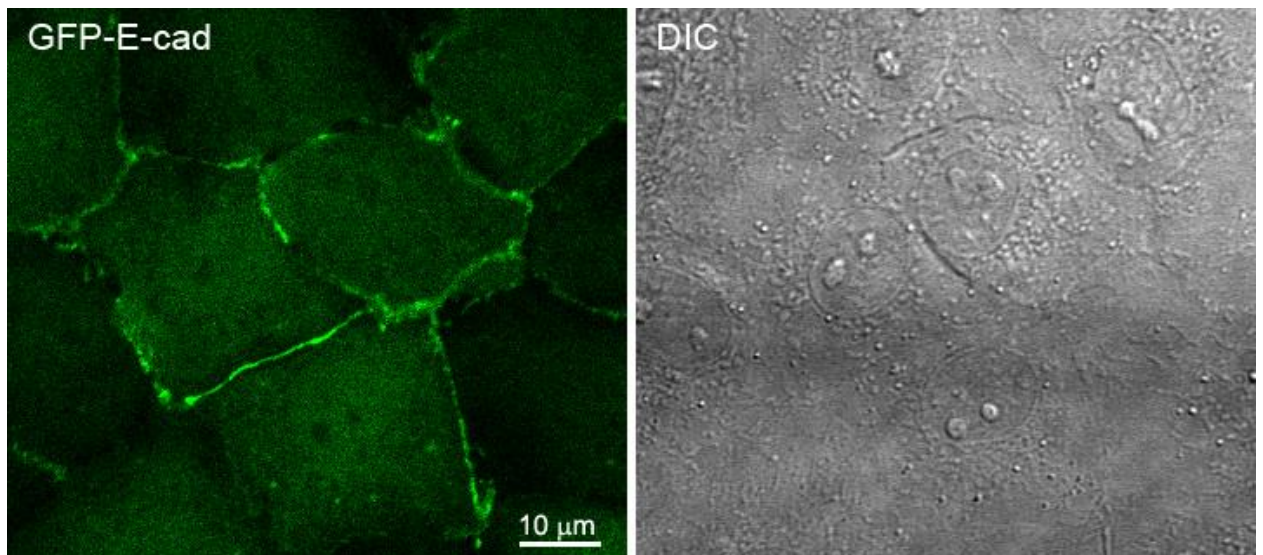
\* Corresponding author

E-mail: [n.gloushankova@ronc.ru](mailto:n.gloushankova@ronc.ru), [natglu@hotmail.com](mailto:natglu@hotmail.com)

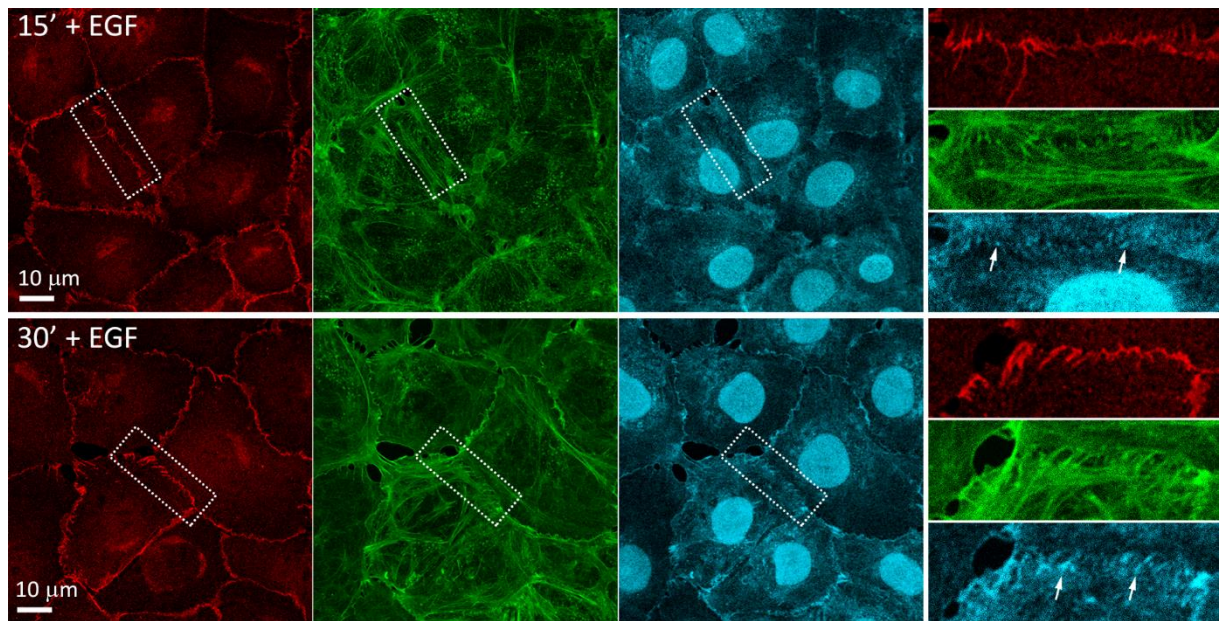
<sup>¶</sup> These authors contributed equally to this work.



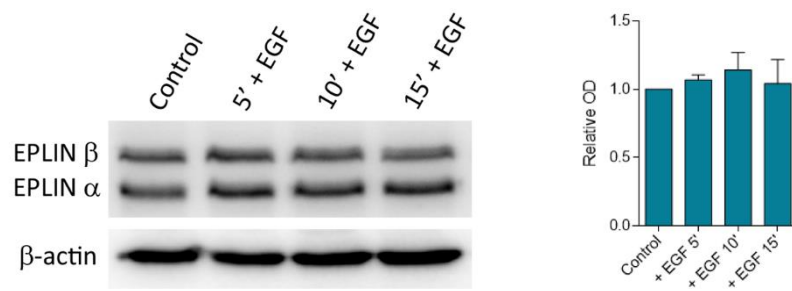
**Supplementary Figure S1.** Immunostaining of p34 and E-cadherin in control and EGF-treated IAR-20 cells.



**Supplementary Figure S2.** Control IAR-20 cells expressing GFP-E-cadherin form a continuous monolayer at the beginning of the experiment.



**Supplementary Figure S3.** Immunofluorescent staining for  $\beta$ -catenin/actin/EPLIN in IAR-20 cells treated with EGF for 15 and 30 min. Red –  $\beta$ -catenin, green – actin, blue – EPLIN. In cells treated with EGF (15 and 30 min) EPLIN is observed in straight actin fibers associated with punctate AJs (arrows). The enlarged cell-cell boundaries indicated with rectangles are shown on the right.



**Supplementary Figure S4. Western blot analysis of EPLIN.** Left – Western blot (10% PAAG) of EPLIN in the cells treated with EGF.  $\beta$ -actin was used as loading control. Right – western blot densitometry of EPLIN $\beta$  relative to  $\beta$ -actin. Data are presented as mean  $\pm$  SEM, N=3.

## **Legends to Supplementary Videos**

**Supplementary Video S1. Scattering of IAR-20 epithelial cells in response to EGF.**

**Supplementary Video S2. Disappearance of contact paralysis in the culture of IAR-20 epithelial cells in the presence of EGF.**

**Supplementary Video S3. Disruption of the circumferential actin bundle and appearance of pseudopodia at the cell-cell-boundaries after the addition of EGF. IAR-20 cells stably expressing F-tractin-tdTomato.**

**Supplementary Video S4. Myosin retrograde flow in IAR-20 cells treated with EGF. IAR-20 cells stably expressing GFP-RLC.**

**Supplementary Video S5. Displacement of ConA-coated beads attached to the dorsal cell surface in the zone of cell-cell contact before and after the addition of EGF.**

**Supplementary Video S6. Rearrangement of E-cadherin-based AJs in IAR-20 cells treated with EGF. IAR-20 cells stably expressing GFP-E-cadherin.**

**Supplementary Video S7. Rearrangement of E-cadherin-based AJs in IAR-20 cells treated with EGF. Enlarged region of Supplementary Video S6.**

**Supplementary Video S8. Accumulation of zyxin in AJs of IAR-20 cells treated with EGF. IAR-20 cells stably expressing GFP-E-cadherin were transfected with mKate2-zyxin.**