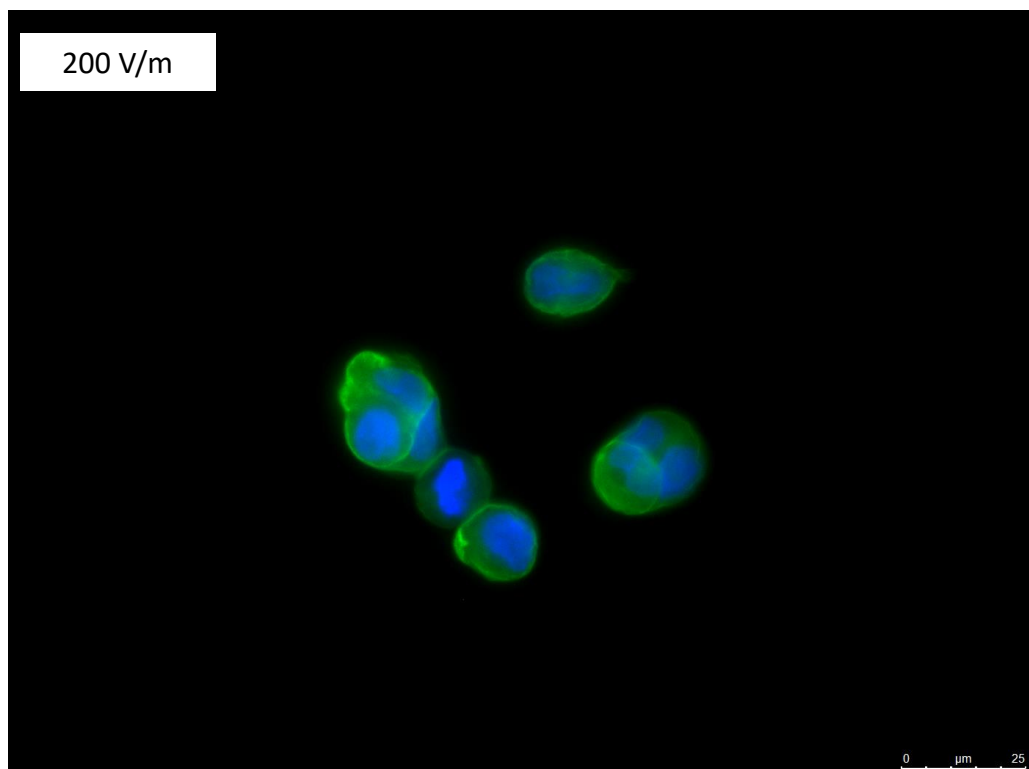
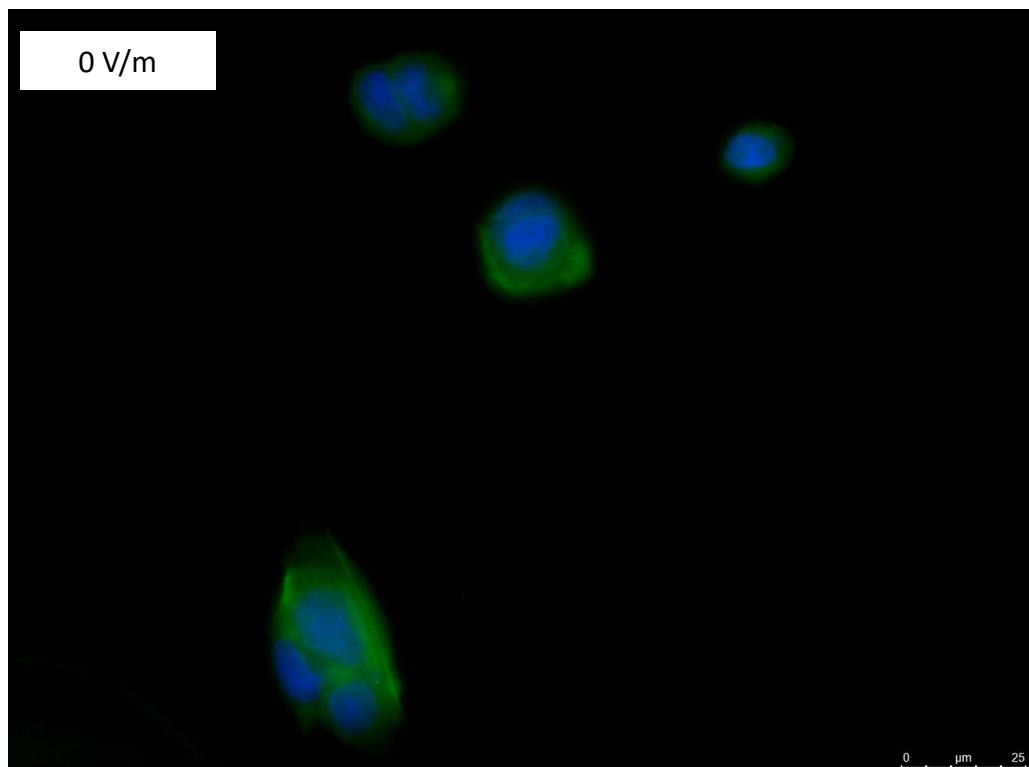


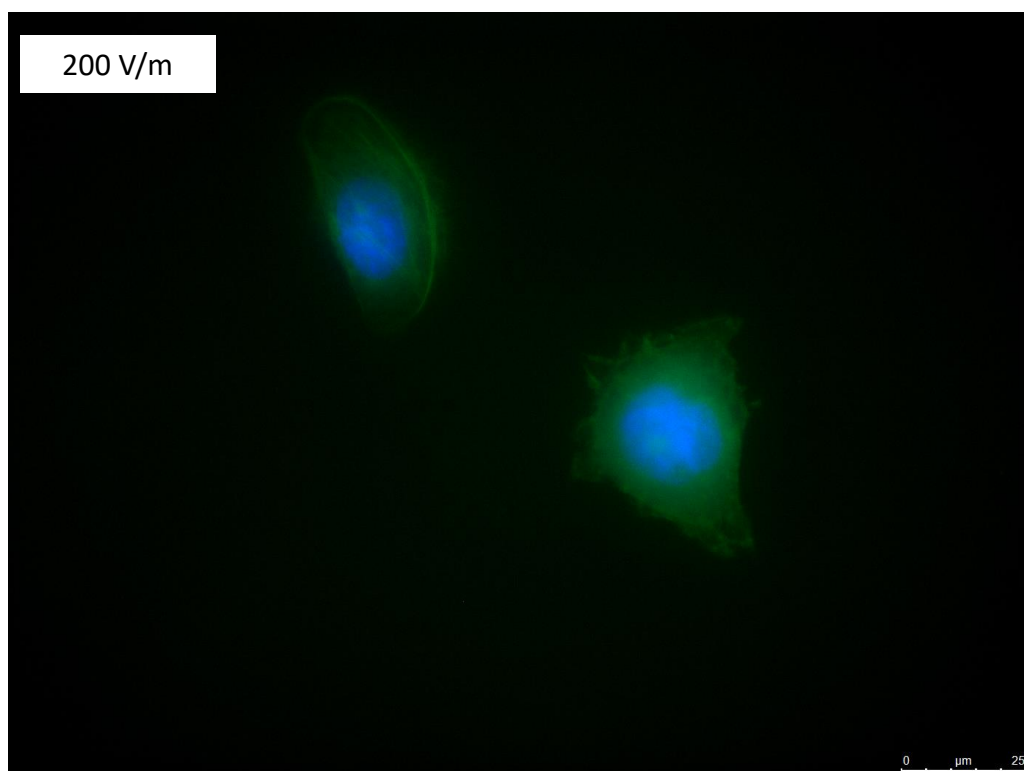
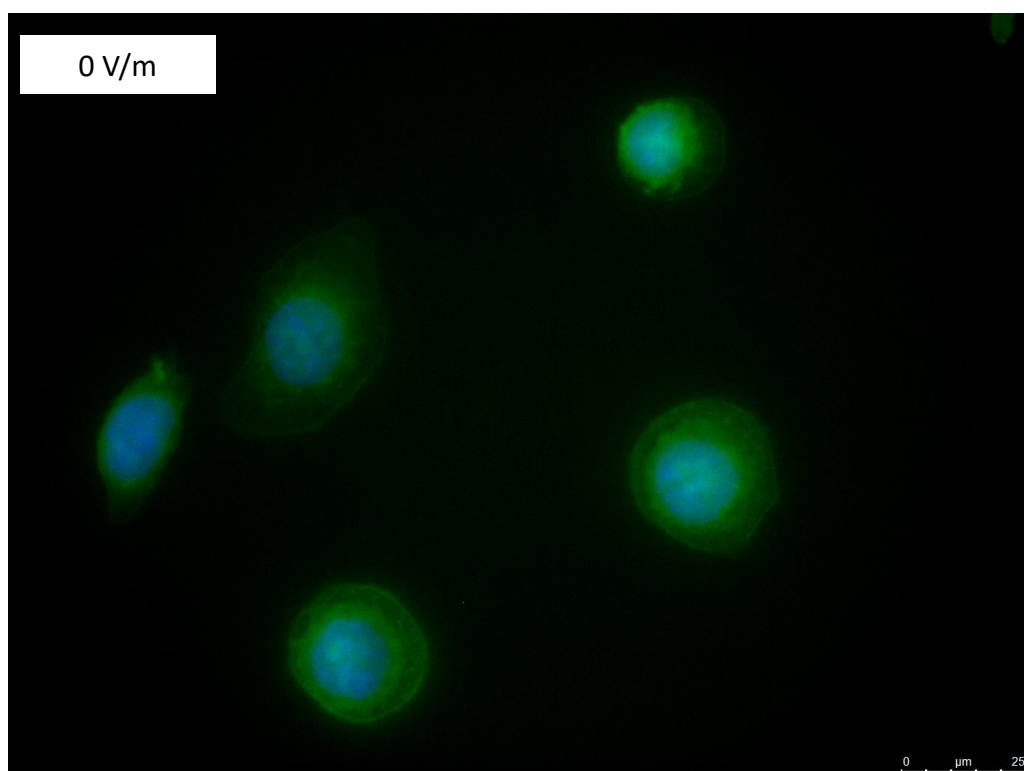
**Supplementary Figure S1:** Galvanotaxis of CRC cells in the DC electrical field. Migration of (A) HROC18, (B) HROC173, (C) HROC383, (D) HROC277, and (E) HROC277Met2 CRC cells after 6 hours of DC electrical field stimulation (200 V/m) is shown in red. Control cultures w/o DC are marked in black. In X-dimension, a migration towards positiv values indicates an anodal movement of the cells, negative values represent a cathodal migration.

## HROC18



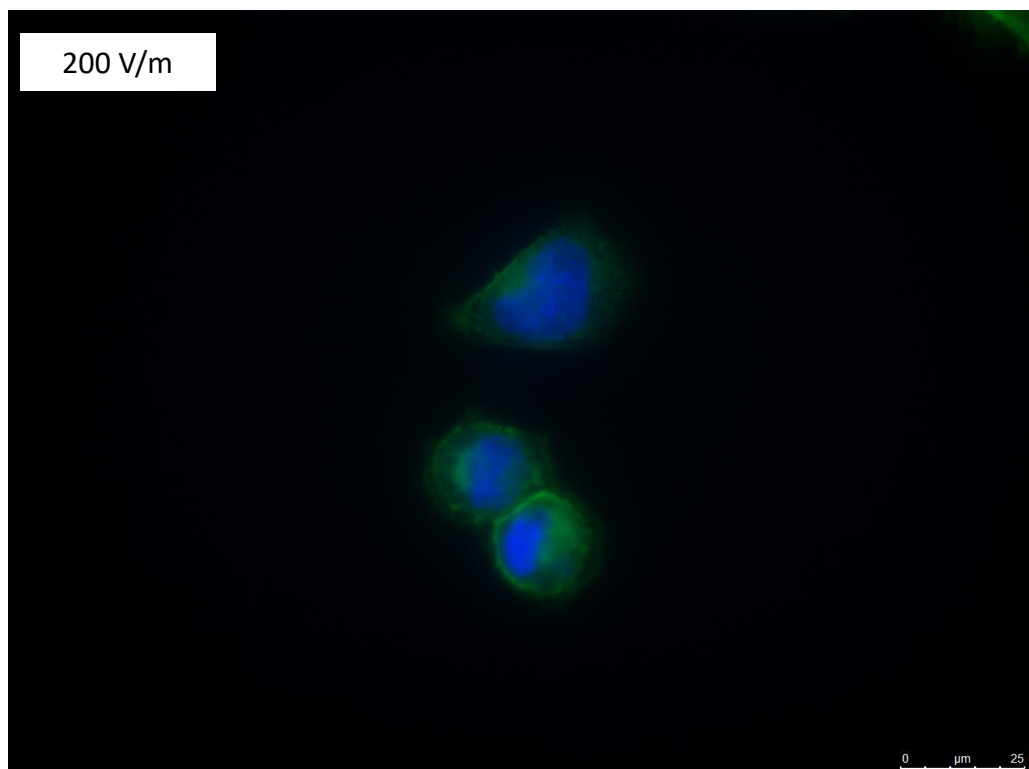
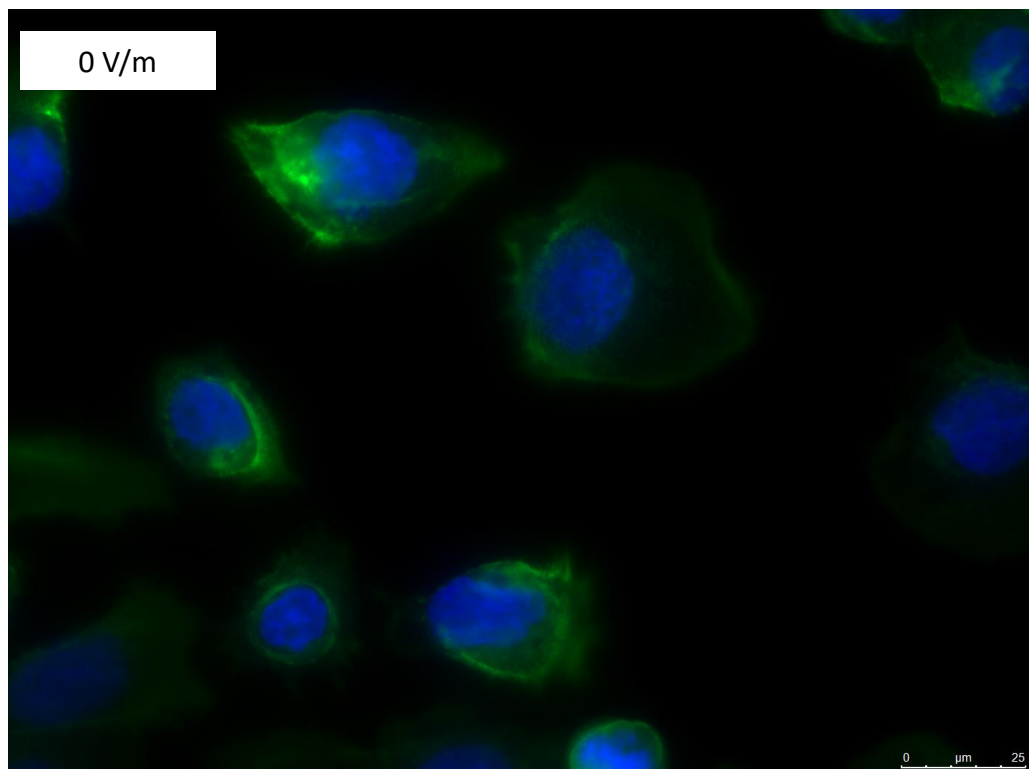
**Supplementary Figure S2:** Fluorescence microscopic images of HROC18 cells (original magnification  $\times 630$ ). Actin was visualized with Acti-stain 488 phalloidin (shown in green). Nuclei were counterstained with DAPI (shown in blue).

## HROC173



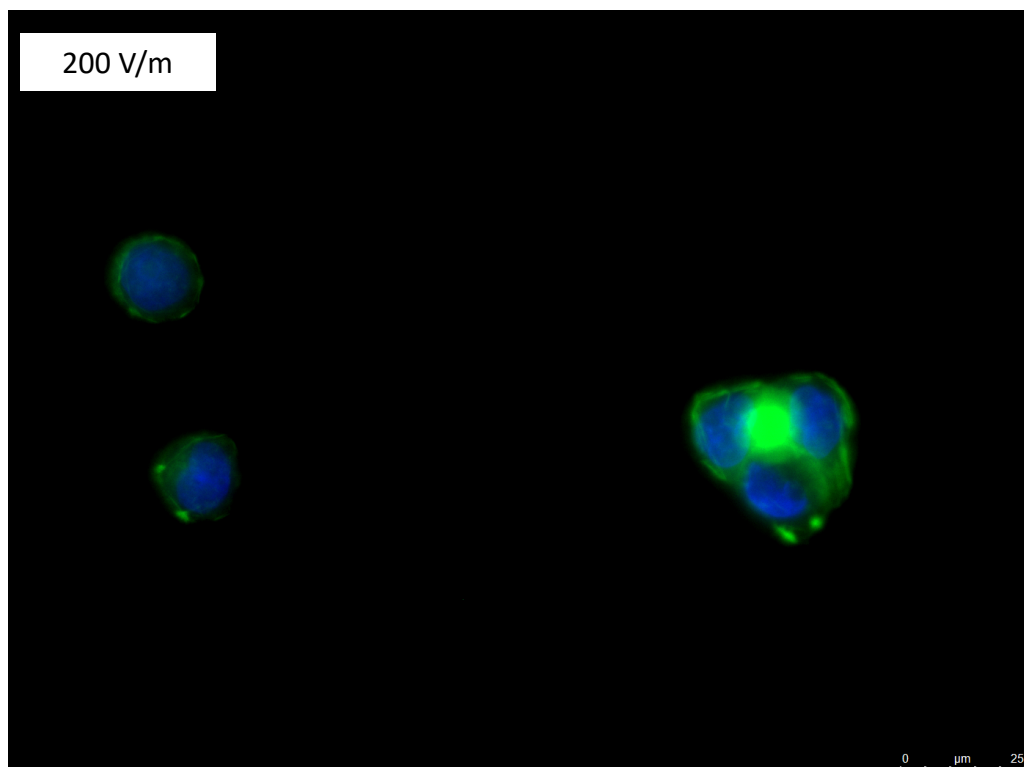
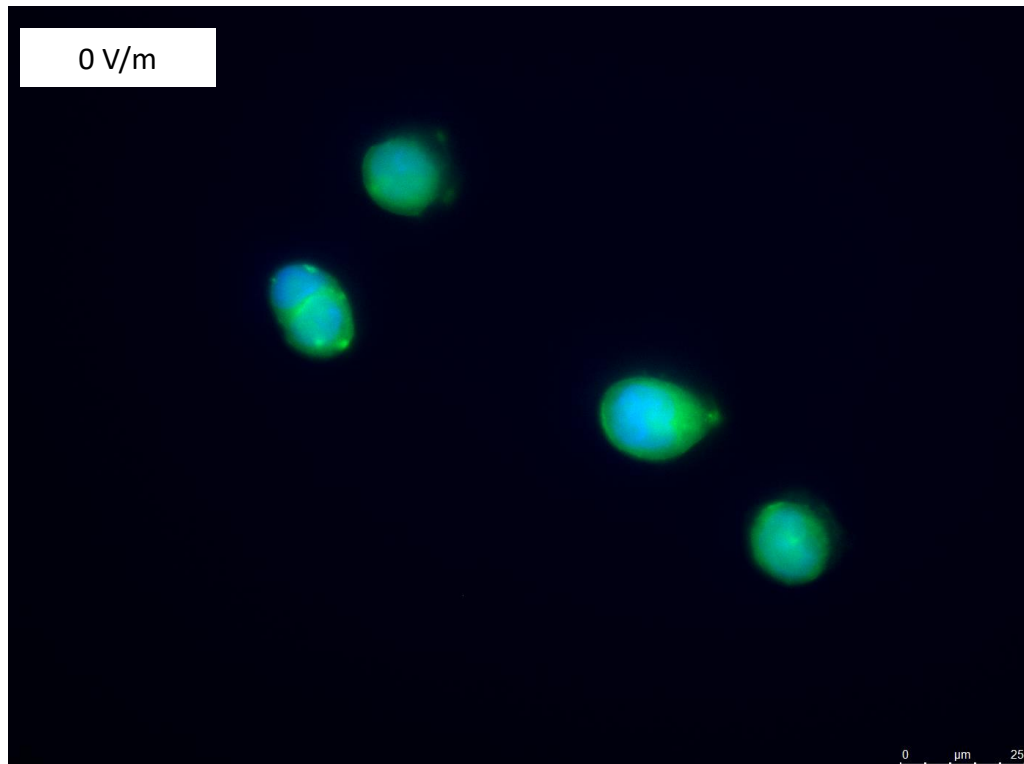
**Supplementary Figure S3:** Fluorescence microscopic images of HROC173 cells (original magnification  $\times 630$ ). Actin was visualized with Acti-stain 488 phalloidin (shown in green). Nuclei were counterstained with DAPI (shown in blue).

## HROC383



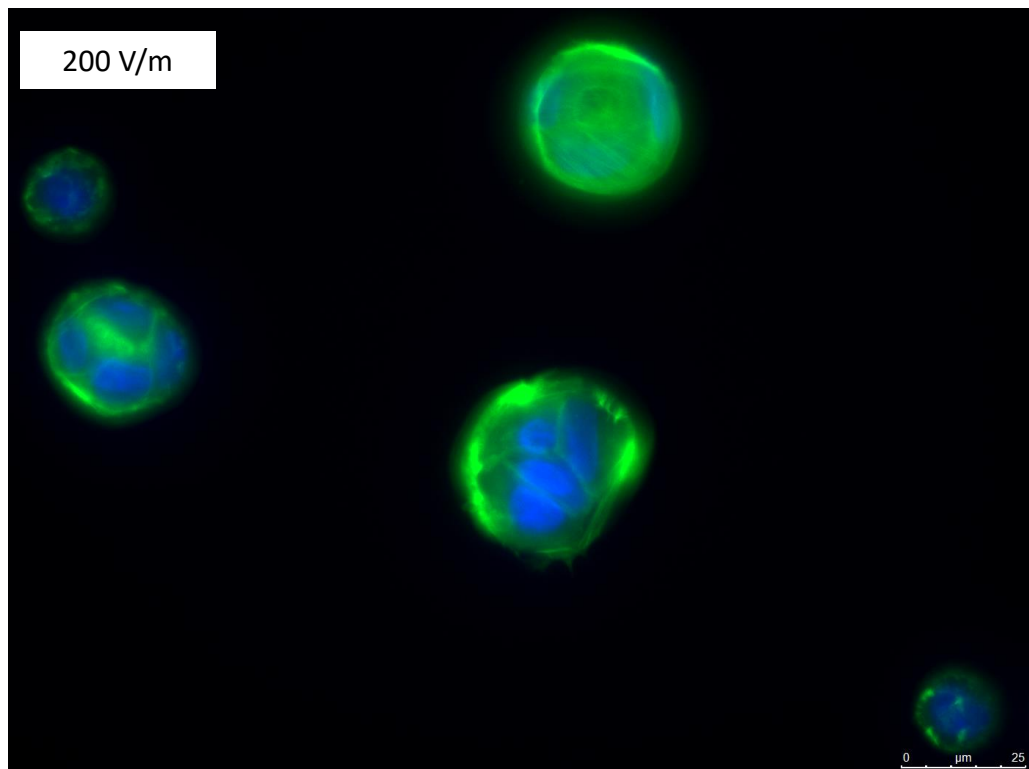
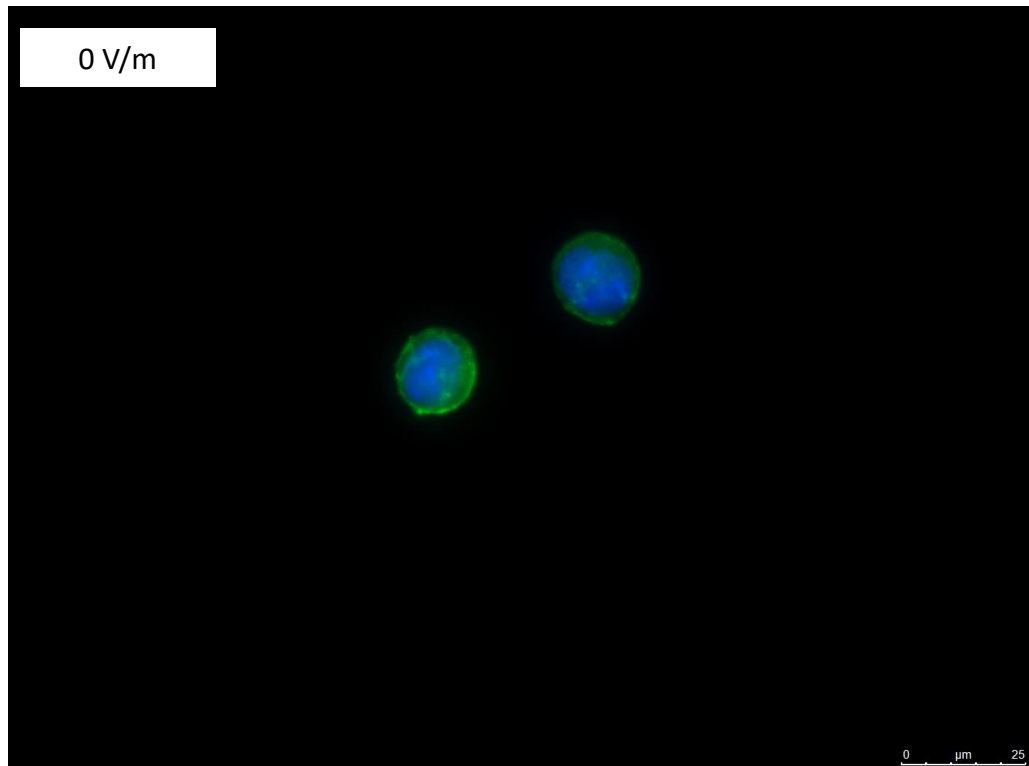
**Supplementary Figure S4:** Fluorescence microscopic images of HROC383 cells (original magnification  $\times 630$ ). Actin was visualized with Acti-stain 488 phalloidin (shown in green). Nuclei were counterstained with DAPI (shown in blue).

## HROC277



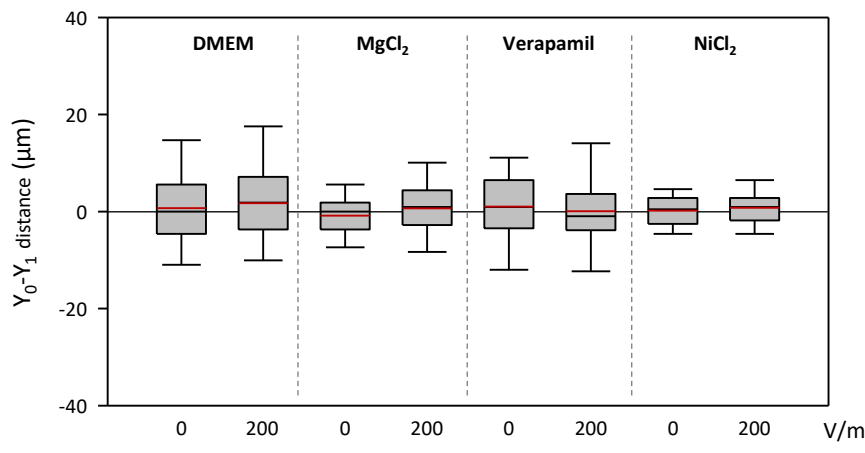
**Supplementary Figure S5:** Fluorescence microscopic images of HROC277 cells (original magnification  $\times 630$ ). Actin was visualized with Acti-stain 488 phalloidin (shown in green). Nuclei were counterstained with DAPI (shown in blue).

## HROC277Met2

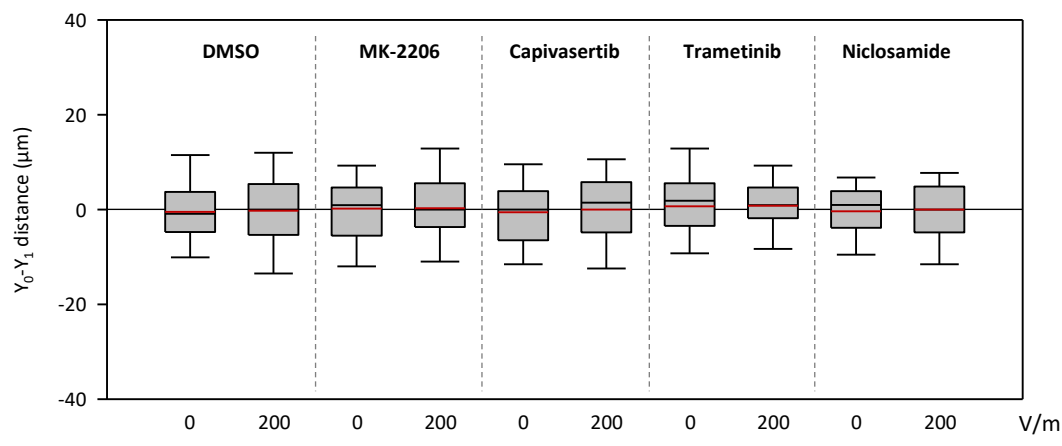


**Supplementary Figure S6:** Fluorescence microscopic images of HROC277Met2 cells (original magnification  $\times 630$ ). Actin was visualized with Acti-stain 488 phalloidin (shown in green). Nuclei were counterstained with DAPI (shown in blue).

A



B



**Supplementary Figure S7:** Y-dimensional migration of HROC383 colorectal cancer cells in the direct-current electrical field (DCEF). Cells were stimulated for 6 hours and distance perpendicular to the DCEF ( $Y_0$ - $Y_1$ ) was determined as described in the Materials and Methods section. Cells were either exposed to **(A)** verapamil,  $MgCl_2$  and  $NiCl_2$  that interfere with calcium influx or **(B)** inhibitors that address intracellular signaling pathways. For each experimental group, migration of 120-200 cells was analyzed. No significant differences between control cultures w/o DC and DC-stimulated cultures were determined (Mann–Whitney U test).