Title: Analysis of changes in sodium and chloride ion transport in the skin as a valuable tool to assess the pathomechanism of skin disruption.

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Figure 1S. The comparison of the transepithelial electric potential (PD, mV) and transepithelial resistance (R, $\Omega^* \text{cm}^2$) measured in stationary conditions of the isolated rabbit skin specimens, incubated in: Ringer solution (RH), amiloride (A, 0.1 mM) and bumetanide (B, 0.1 mM):

a) PD measured before mechanical-chemical stimulations,

b) R measured after mechanical-chemical stimulations.

The values of medians and lower and upper quartiles are given. The P value < 0.05 were considered as statistically significant.



Figure 2S. The comparison of the minimal (PDmin, mV) and maximal (PDmax, mV) transepithelial electric potential measured in 15s mechanical-chemical stimulation of the isolated rabbit skin specimens, incubated and stimulated by: Ringer solution (**RH**), and amiloride (**A**, 0.1 mM) solution and bumetanide (**B**, 0.1 mM) solution:

a) PDmin measured during stimulation by RH, A and B solutions,

b) PDmax measured during stimulation by RH, A and B solutions.

The values of medians and lower and upper quartiles are given. The P value < 0.05 were considered as statistically significant.



Figure 3S. The scheme of modified Ussing chamber.

Abbreviations: $V_1 - a$ measured electrode, $V_2 - a$ ground electrode, I_1 , I_2 - electrodes to pass the current of constant intensity of 10 μ A from I_1 side and 10 μ A from I_2 side.