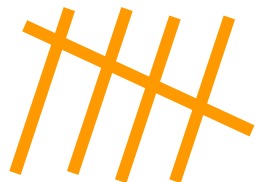


RAD 2018



SIX INTERNATIONAL CONFERENCE
ON RADIATION AND APPLICATIONS IN VARIOUS FIELDS OF RESEARCH
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EFFECT OF CONSTANT ELECTRIC FIELD ON THE CHANGE OF ERITHROCYTE'S MEMBRANE PERMEABILITY FOR GLUCOSE

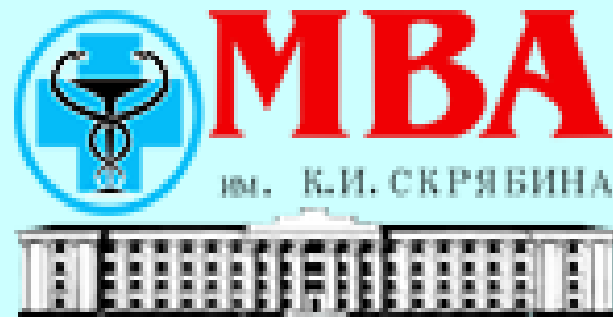
Anna V. Novikova, Anna A. Oleshkevich, Viktor E. Novikov

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Biotechnology (Moscow SAVMB)*

Moscow, Russia

Section: Biophysics, Medical Physics

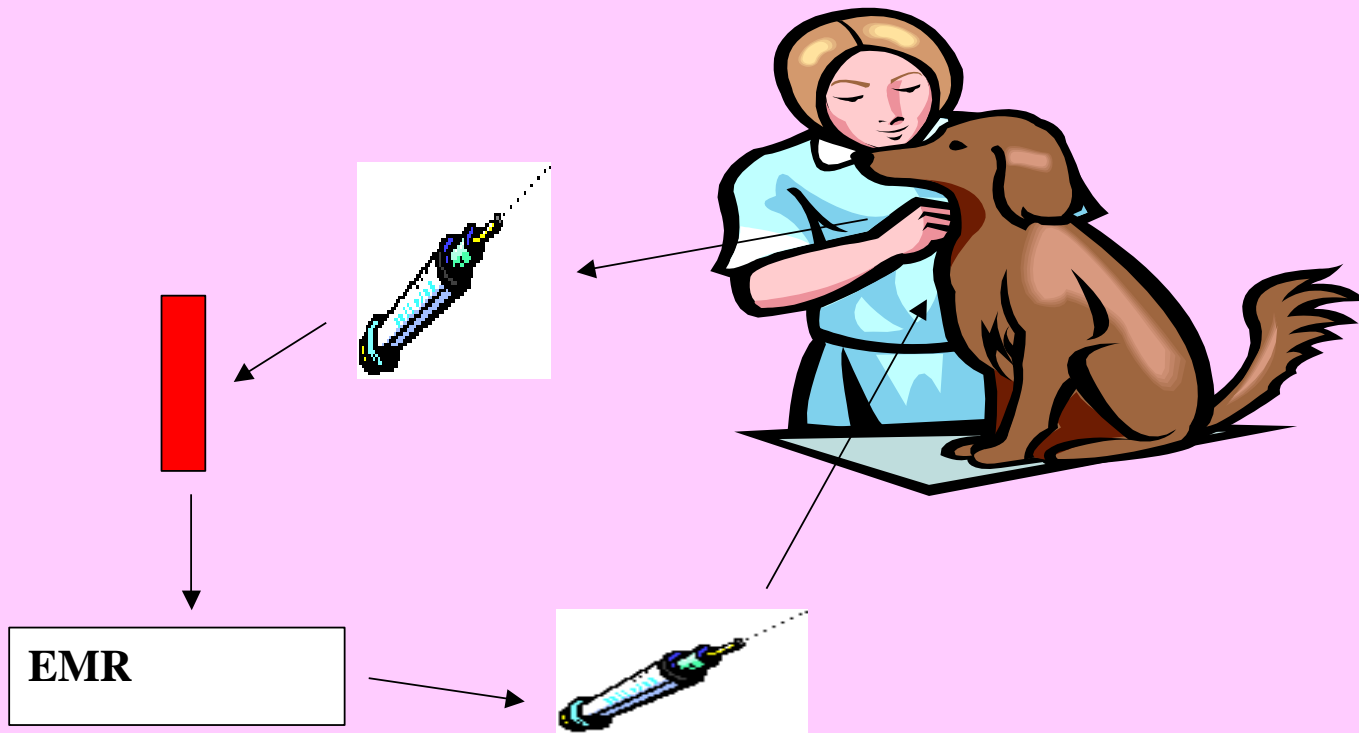
kaffizmgavmib@mail.ru



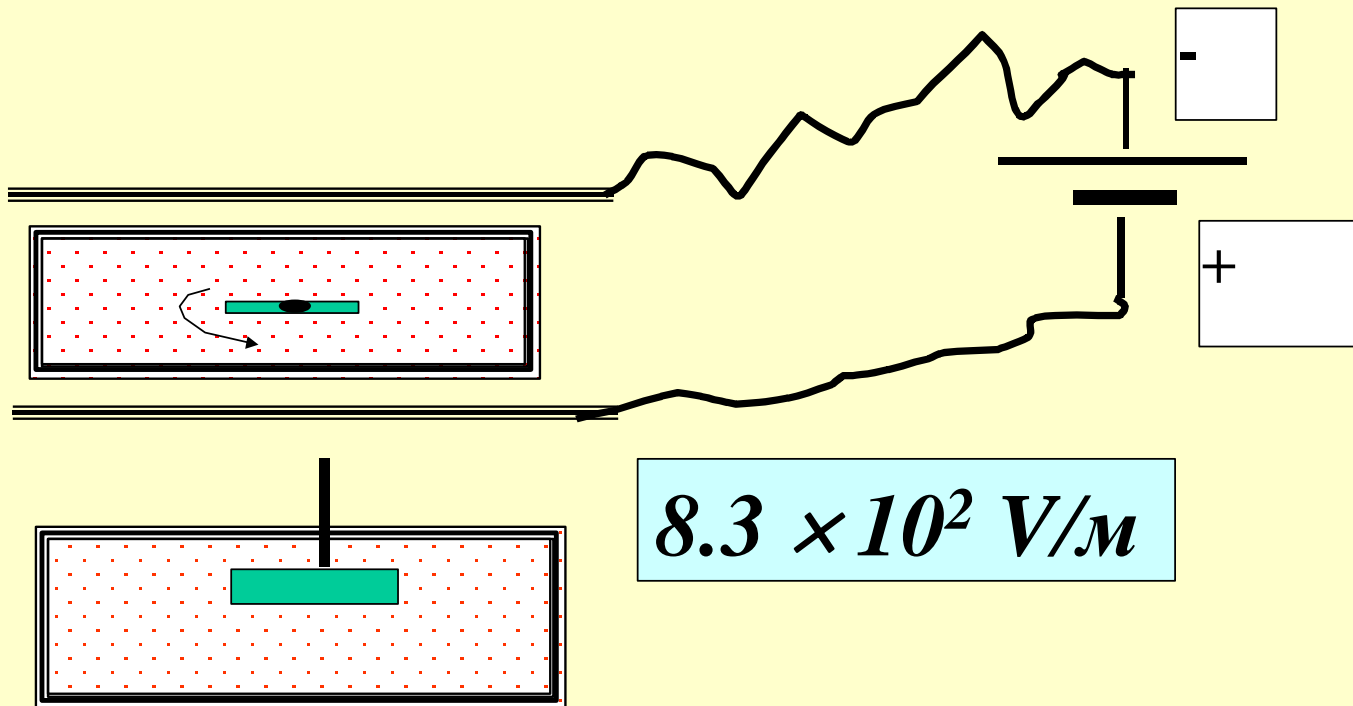


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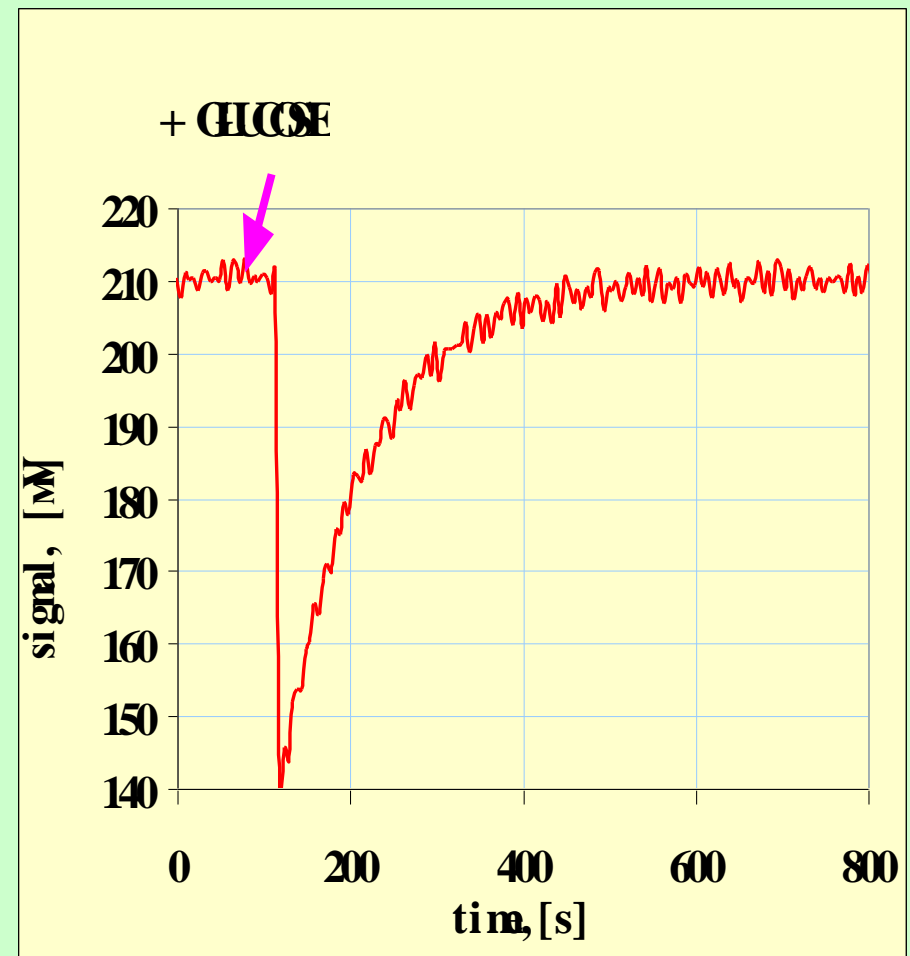
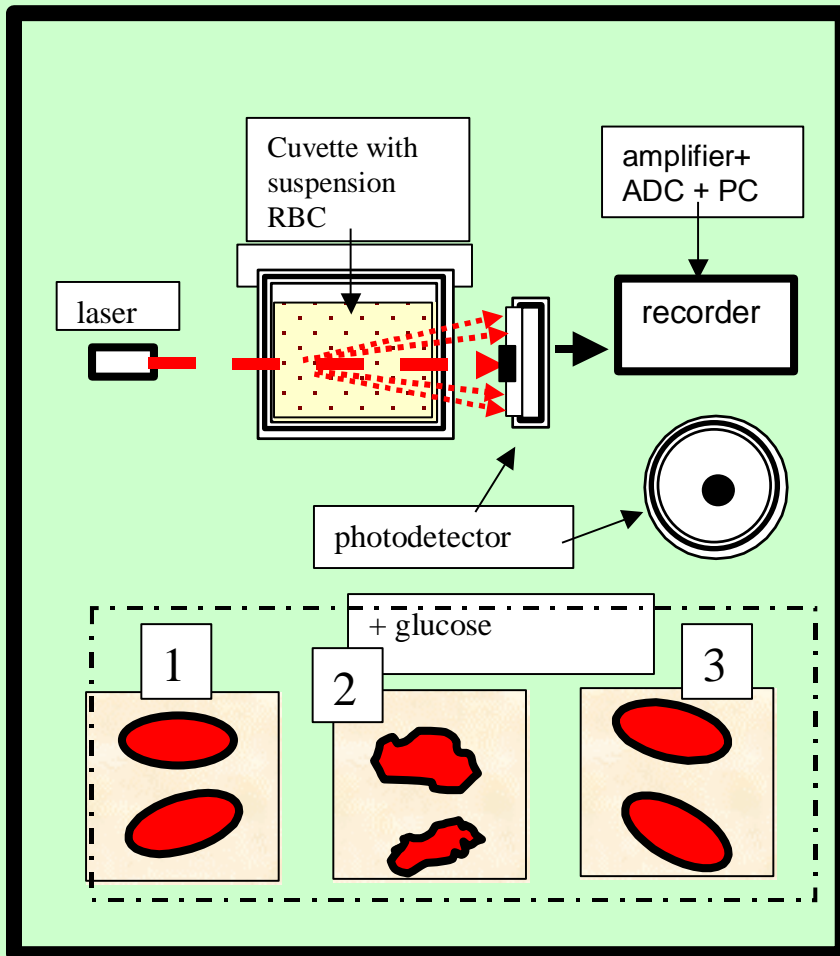
AUTOHEMOTHERAPY PENDULUM TYPE



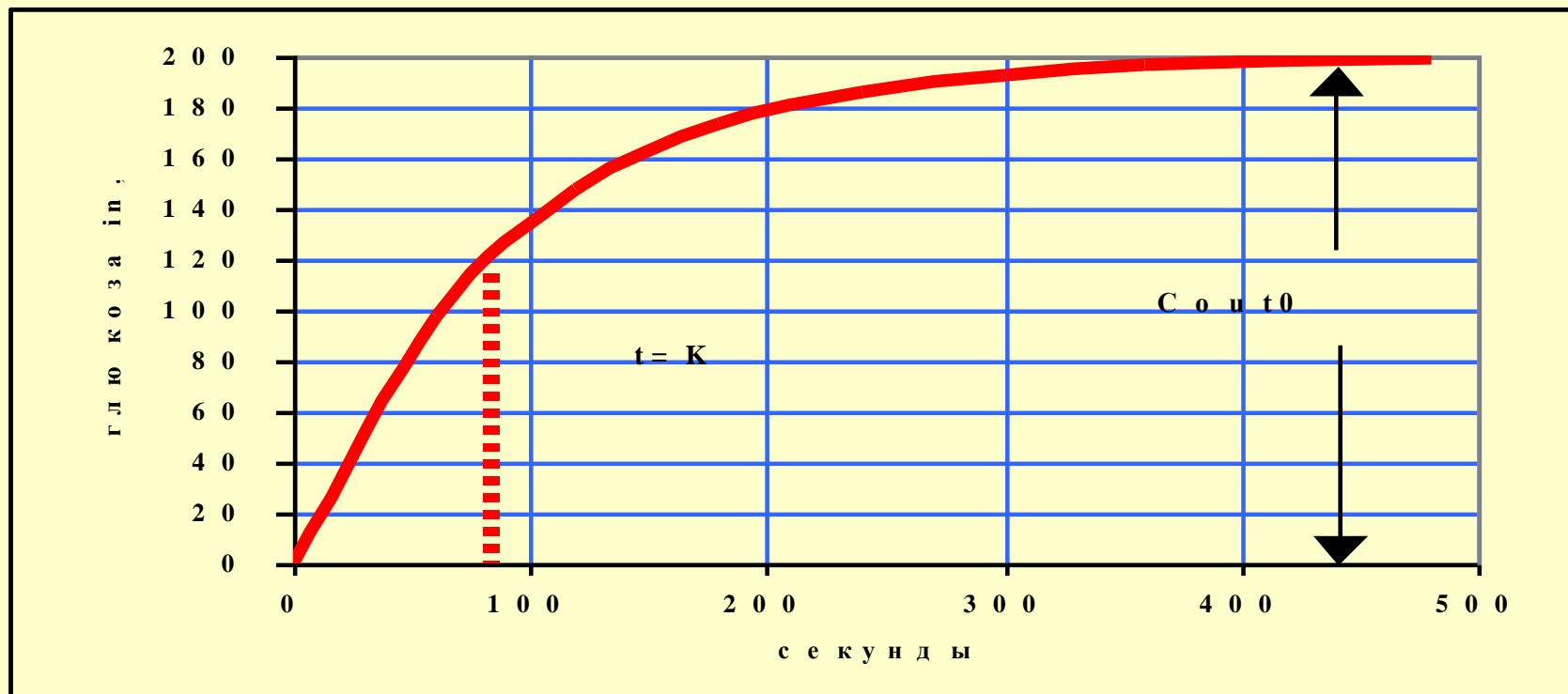
effect of a constant electric field on the
suspension of red blood cells of
laboratory rats



Registration the dynamic lens flare of erithrocytes in carbohydrate hyperosmotic pressure



$$C_{int} = C_{out0} \times \left[1 - \exp\left(-\frac{t}{K}\right)\right]$$



$$\frac{dm}{dt} = k(C_{out} - C_{in})$$

Transportation of water and glucose

$$\frac{dm_{H_2O}}{dt} = K_1 (C_{out}^{H_2O} - C_{in}^{H_2O})$$

$$\frac{dm_{gl}}{dt} = K_2 (C_{out}^{gl} - C_{in}^{gl})$$

$$K_1 \gg K_2$$

erithrocite's membrane permeability for glucose: change of comparative permeability rate constant under effect of constant electric field (ESF)

