

Rotation of erythrocytes, plant-cells and protoplasts in an outside rotating electric-field.

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Abstract: According to the method published by Arnold and Zimmermann 1982 human erythrocytes, suspension cultured cells of *Beta vulgaris*, protoplasts and isolated vacuoles were investigated. The cells rotate in the rotating electric field of a four electrode system. The rotation, defined as the torque per square field strength seems to be independent of the cellular diameter. The frequency for maximal rotation allows us to calculate specific membrane capacity or an effective capacity of plant cells surrounded by cell wall, resp. This method also provides a sensitive measure of changes in membrane resistance since ionophores incorporated into the membrane inhibit the torque in a reversible manner.

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