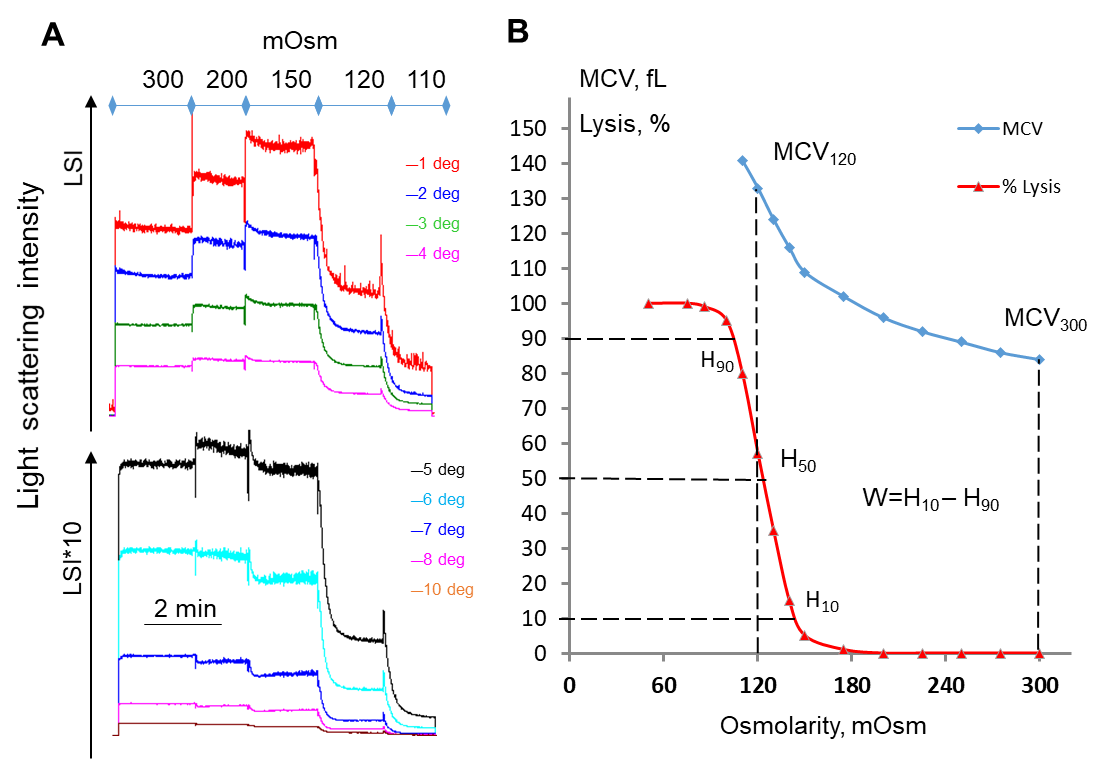
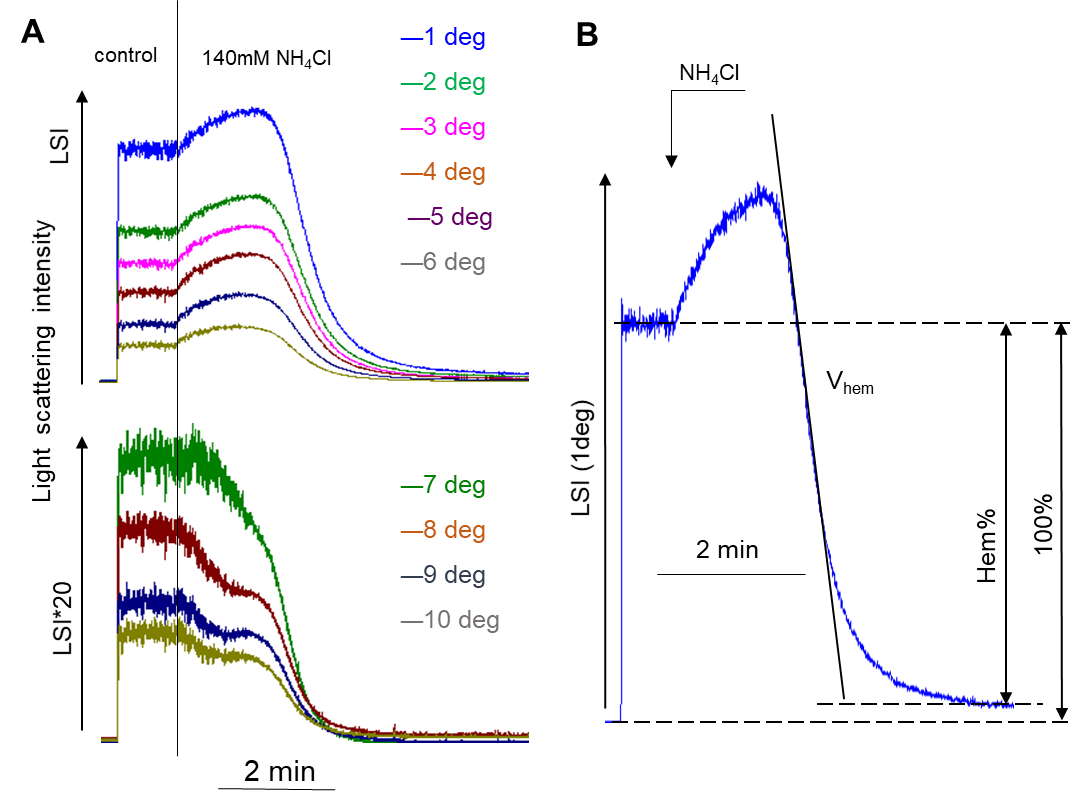
**Supplementary Information**

**Microvesicle formation induced by oxidative stress in human erythrocytes**

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**Supplementary Figure A1. Evaluation of RBCs osmotic fragility by laser diffraction method.** Light scattered intensity (LSI) was measured from RBCs (1x106 cells/ml) in 1 ml HEPES buffer with 2mM EGTA (osmolality 300 mOsm/kg H2O) then water and RBCs were added in indicated time to adjust the osmolality to the desired value and to keep RBCs concentration constant. (**A**) Original records from LaSca-TM analyzer of LSI changes in different angles. For angles 5 – 10 degree Y axes x10. (**B**) Distribution of cells volume (fL) dependent on buffer osmolality calculated by the original software LaSca v.1498. (**C)** Dependence of MCV (fL) and % of hemolysis from buffer osmolality. Initial MCV (MCV300) was taken from hematologic counter and was used for future calculations of MCV changes by software LaSca v.1498. MCV120 indicates the maximum cell volume during the osmotic fragility test, H10, 50, 90 indicate the osmolality at which 10, 50, and 90% of cells were lyzed. RBCs distribution width (W) calculates as W = H10 – H90 (mOsm/kg H2O).

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**Supplementary Figure A2**. **Basic principles of ammonium stress test.** This test was developed based on unique ability of RBCs to swell to critical values and lyse in isosmotic ammonium buffer (Buffer 2). Initially light scattered intensity (LSI) was measured from RBCs (1x106cells/ml) in 1 ml HEPES buffer with 2mM EGTA (Buffer 1, 300 mOsm/kg H2O), then the buffer was changed to ammonium buffer (Buffer 2, 300 mOsm/kg H2O). (**A)** Original records from LaSca-TM analyzer of LSI changes in different angles. For angles 7 – 10 degree Y axes x10. (**B**) Calculation of % of hemolyzed cells (%Hem), rate of hemolysis (Vhem) from the hemolysis curve in FS 1°.