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Organic electrochemical transistors as novel biosensing platforms to study the electrical response of whole blood and plasma

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Valentina Preziosi,[a*] Mario Barra,[b*] Giovanna Tomaiuolo,[a] Pasquale D'Angelo,[c] Simone Luigi Marasso,[c,d] Alessio Verna,[d] Matteo Cocuzza,[c,d] Antonio Cassinese[b,c] and Stefano Guido[a,f,g]

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Supplementary Figures S1-S5

[a]*Department of Chemical, Materials and Production Engineering - University Federico II – P.le Tecchio 80, I-80125 Naples, Italy*
[b]*CNR-SPIN, c/o Department of Physics "Ettore Pancini", P.le Tecchio, 80, I-80125 Napoli, Italy*
[c]*IMEM-CNR, Parco Area delle Scienze 37/A, I-43124 Parma, Italy*
[d]*Chi-Lab, Department of Applied Science and Technology, Politecnico di Torino, C.so Duca degli Abruzzi 24, 10129 Torino, Italy*
[e]*Department of Physics "Ettore Pancini", University Federico II – P.le Tecchio 80, I-80125 Naples, Italy*
[f]*National Interuniversity Consortium for Materials Science and Technology (INSTM), 50121 Firenze, Italy*
[g]*CEINGE, Advanced Biotechnologies, 80145 Napoli, Italy*
† Footnotes relating to the title and/or authors should appear here.
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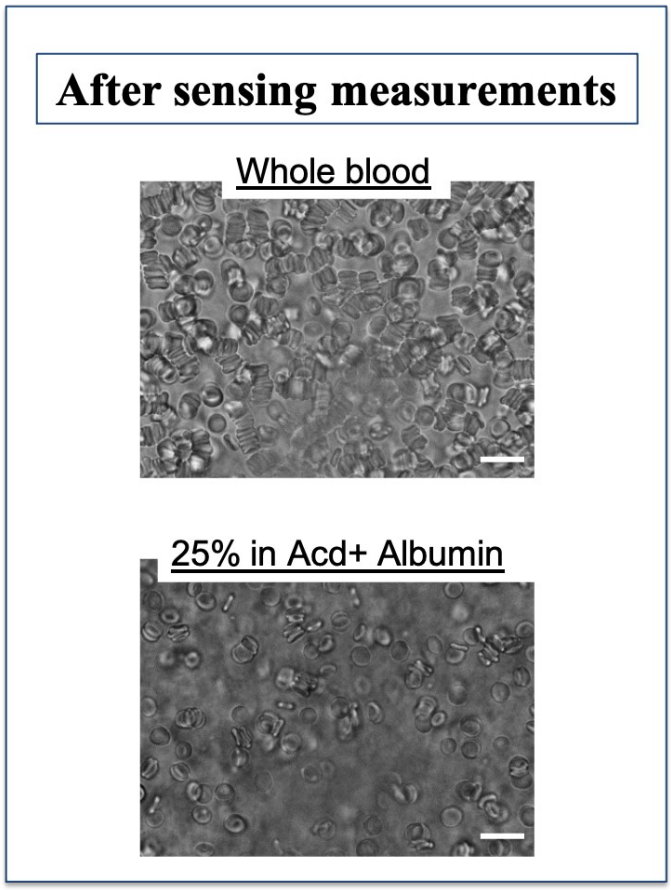

Fig. S1: Optical images of whole blood and of RBC at 25% suspended in ACD plus Albumin just after OECT experiments. Scale bar is 20 µm.

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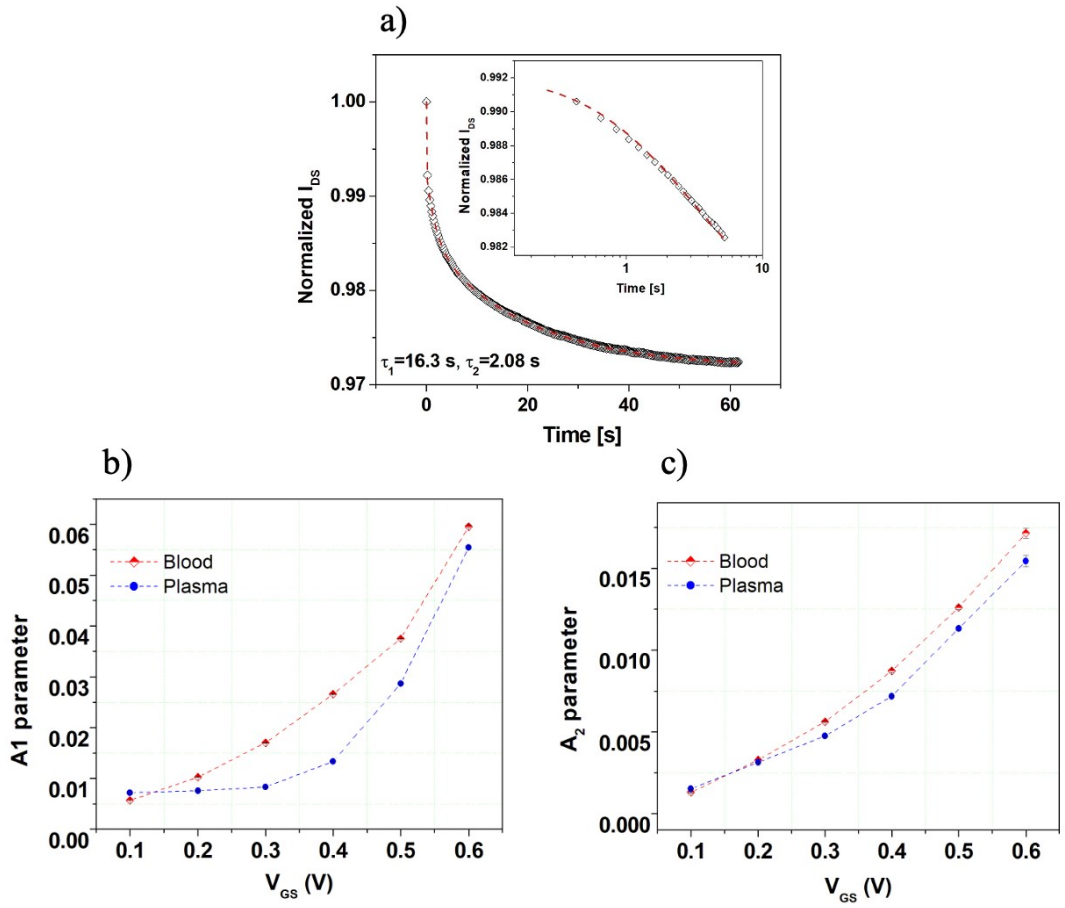

Fig. S2: a) An exemplificative single I_{DS} vs time curve (symbol) with the related fitting curve (dashed line). The semi-log plot in the inset provides a zoomed view of the curves during the first 10 seconds; b) A1 and c) A2 pre-factors as a function of V_{GS} extracted by fitting experimental $I_{DS}(t)$ curves with the equation 1 for whole blood and plasma.

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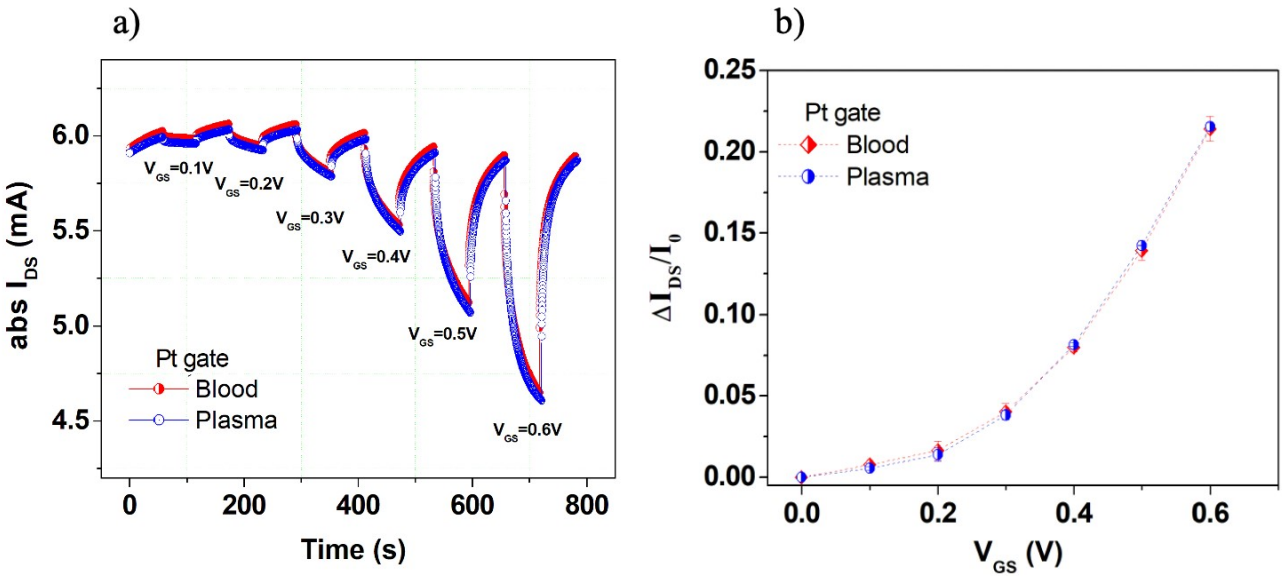

Fig. S3: OECT electrical response. a) OECT pulsed measurements reporting abs I_{DS} as a function of time for plasma and whole blood by using a platinum gate electrode; b) OECT modulation ratio ($\Delta I_{DS}/I_0$) as a function of V_{GS} for whole blood and plasma using a platinum gate electrode.

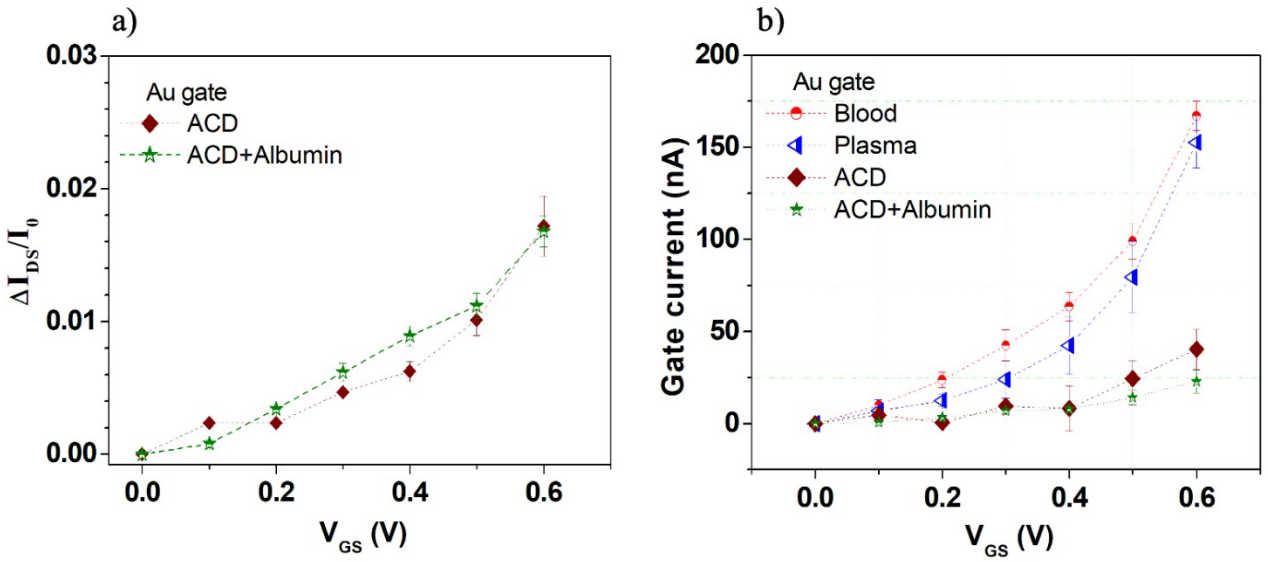

Fig. S4: a) OECT modulation ratio ($\Delta I_{DS}/I_0$) as a function of V_{GS} for ACD and ACD plus Albumin using a gold gate. b) Comparison of gate current as a function of V_{GS} for whole blood, plasma, ACD and ACD plus Albumin.

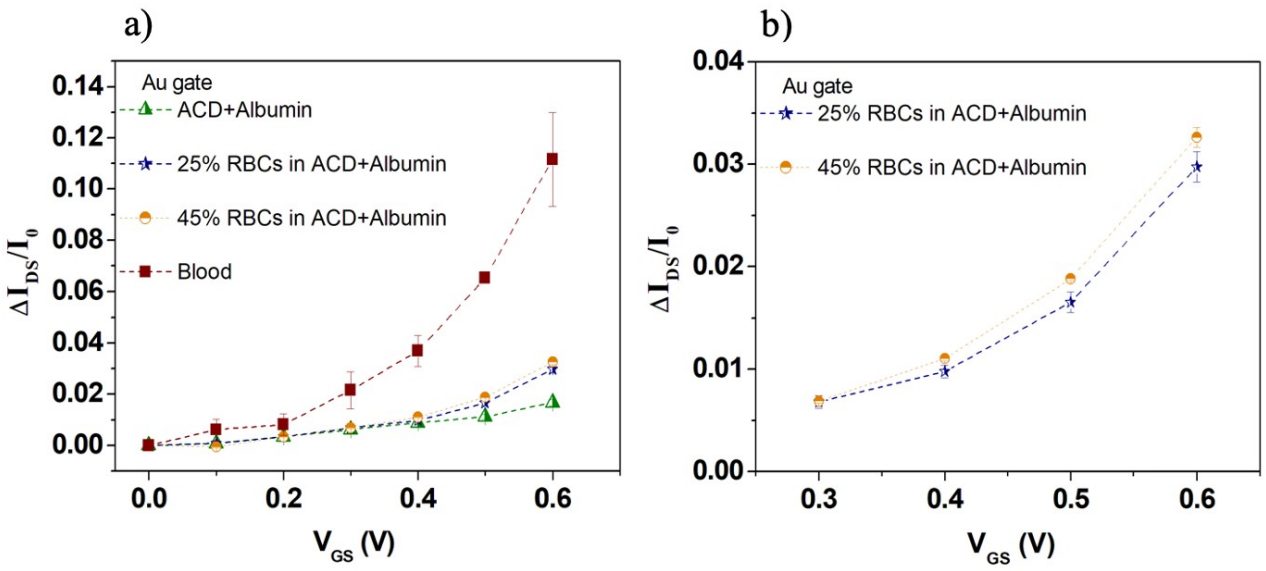

Fig. S5. a) OECT modulation ratio ($\Delta I_{DS}/I_0$) as a function of V_{GS} for ACD plus Albumin, 25% and 45% suspended in ACD plus Albumin and whole blood using a gold gate. b) Comparison of ($\Delta I_{DS}/I_0$) between 25% and 45% suspended in ACD plus Albumin.