

*Supplementary file of*

**A ratiometric electrochemical probe for the quantification of apixaban in unprocessed plasma samples using carbon aerogel/BFO modified glassy carbon electrodes**

Payam Shahbazi-Derakhshi<sup>a,b</sup>, Mohammad Abbasi<sup>b</sup>, Amirhossein Akbarzadeh<sup>c</sup>, Ahad Mokhtarzadeh<sup>d</sup>, Hamid Hosseinpour<sup>e</sup>, Jafar Soleymani<sup>a,\*</sup>

<sup>a</sup> Pharmaceutical Analysis Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

<sup>b</sup> Liver and Gastrointestinal Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

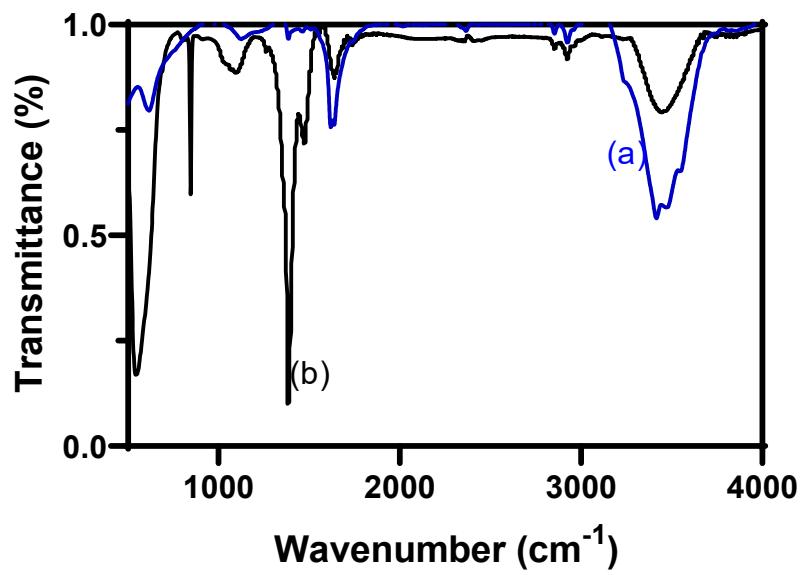
<sup>c</sup> Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

<sup>d</sup> Immunology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

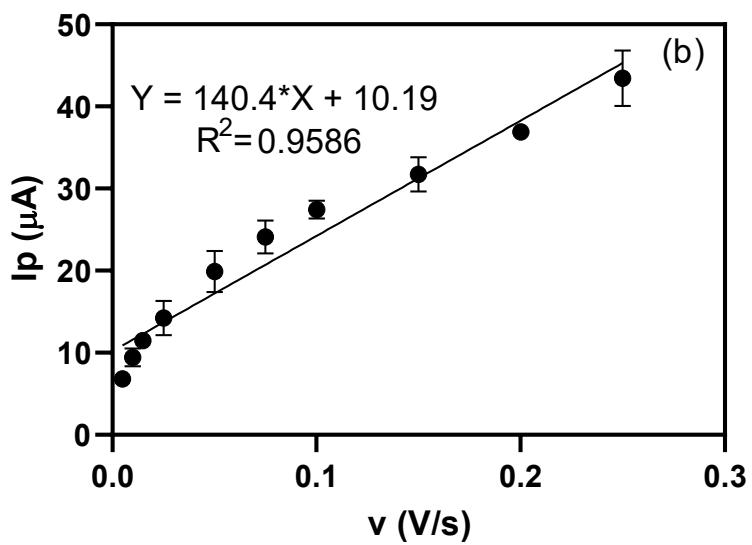
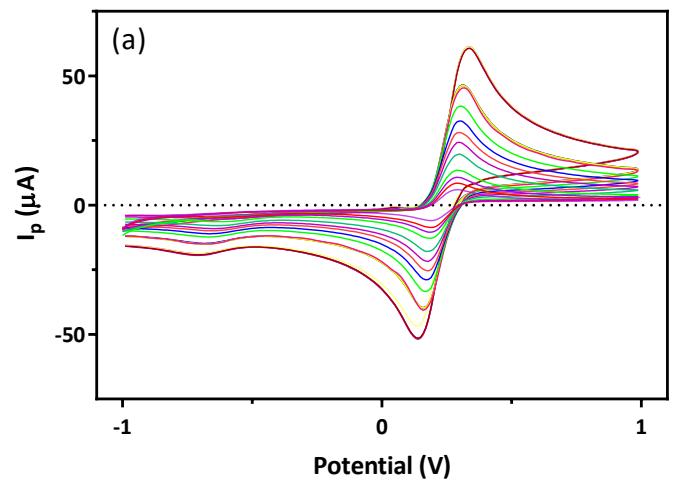
<sup>e</sup> Department of Neurosurgery, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran

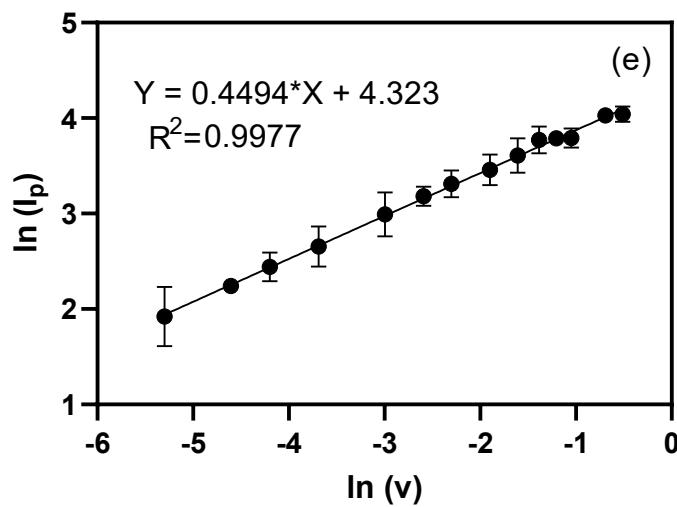
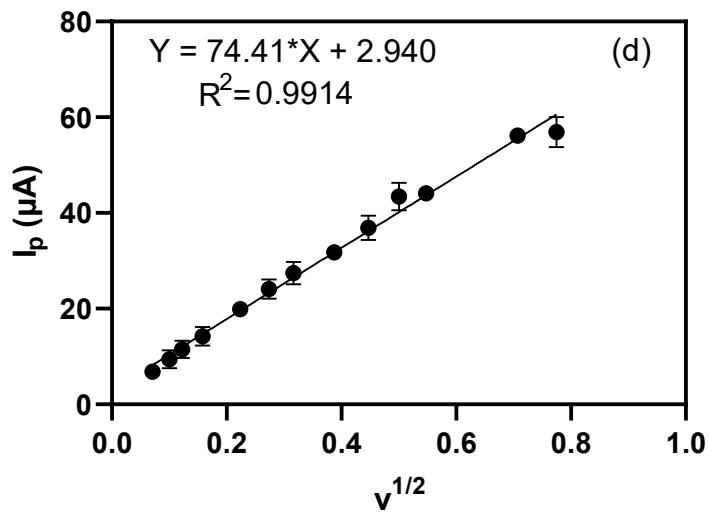
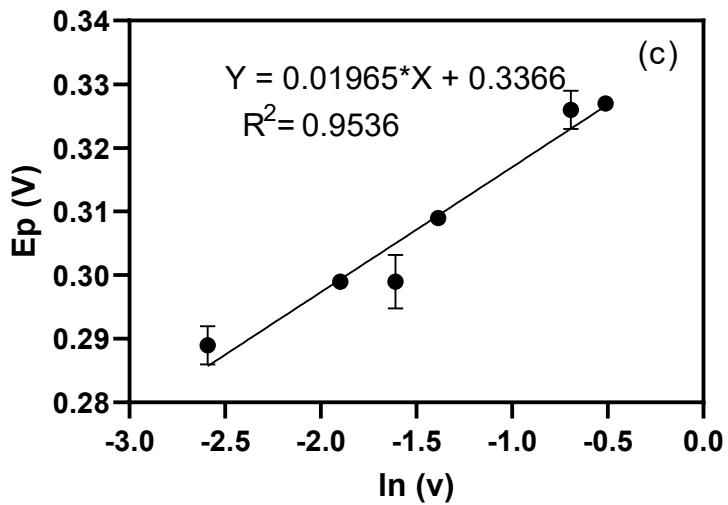
---

\* Corresponding author email: [jsoleymanii@gmail.com](mailto:jsoleymanii@gmail.com) and [soleymanij@tbzmed.ac.ir](mailto:soleymanij@tbzmed.ac.ir), Tel:+98413 337 9323.

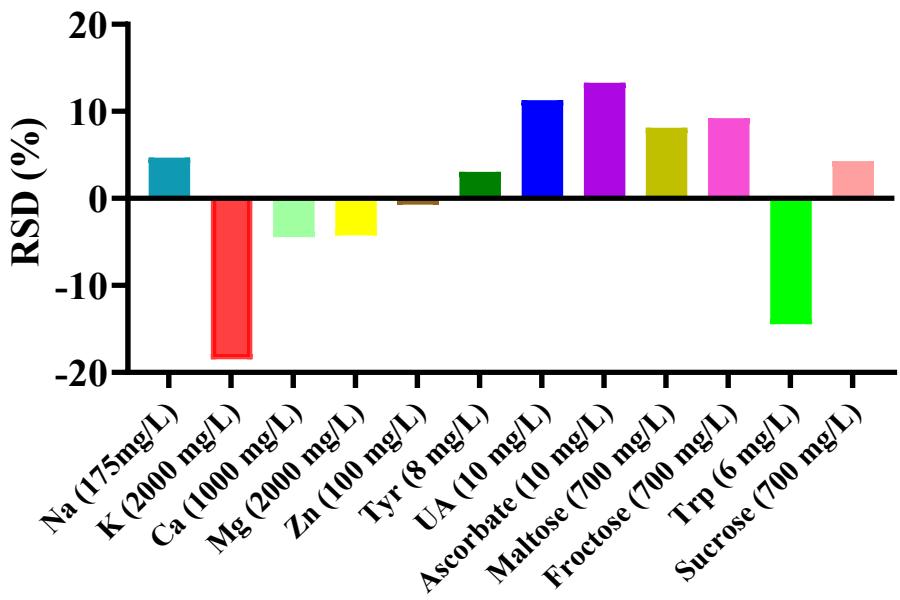


**Fig. 1S.** FTIR spectra of (a) EEGO AGs and (b) BFO NPs.

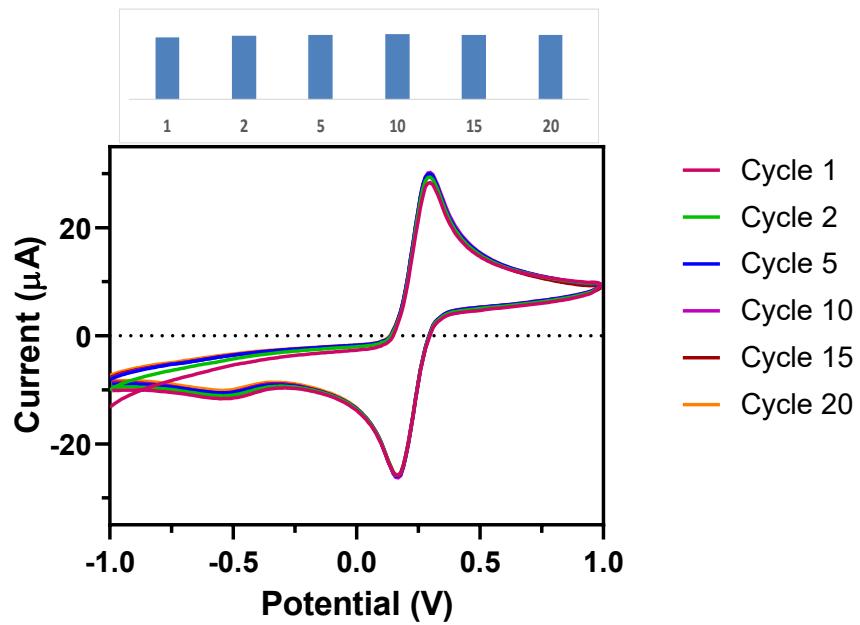




**Fig 2S.** (a) Scan rate CVs, (b)  $I_{pa}$  vis.  $v$ , (c)  $E_p$  vis.  $\ln(v)$ , (d)  $I_{pa}$  vis.  $v^{0.5}$ , and (e)  $\ln(I_{pa})$  vis.  $\ln(v)$  of BFO/EEGO-AGs/GCE.



**Fig. 3S.** Effects of common interferes on the determination of APX.



**Fig. 4S.** Stability of the fabricated BFO/EEGO AGs modified GCE probe towards different CV cycle numbers.