

Supporting Information

Evaluating the Combined Estrogenic Effects of Plant Growth Regulators via Electrochemical and E-Screen Methods

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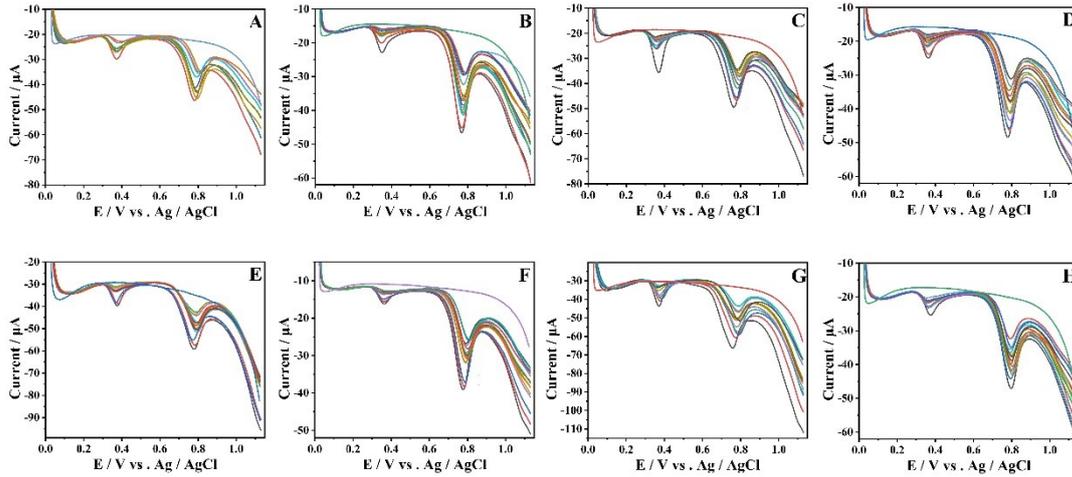


Fig. S1 LSV of estrogen free MCF-7 cells exposed to different doses of PGRs
 A. E2, B. GA3, C. ETH, D NAA, E. GA₃ : ETH = 1:1, F. GA₃ : NAA = 1:1, G. ETH : NAA = 1:1, H. GA₃ : ETH : NAA = 1:1:1
 Working electrode: MWCNTs/GCE, enrichment time: 360 s, applied potential: 0 V. Purine standards concentration: $5 \times 10^{-6} \text{ mol} \cdot \text{L}^{-1}$, cell concentration: $1 \times 10^6 \text{ cells} \cdot \text{dish}^{-1}$. Cell culture time: 96 h.

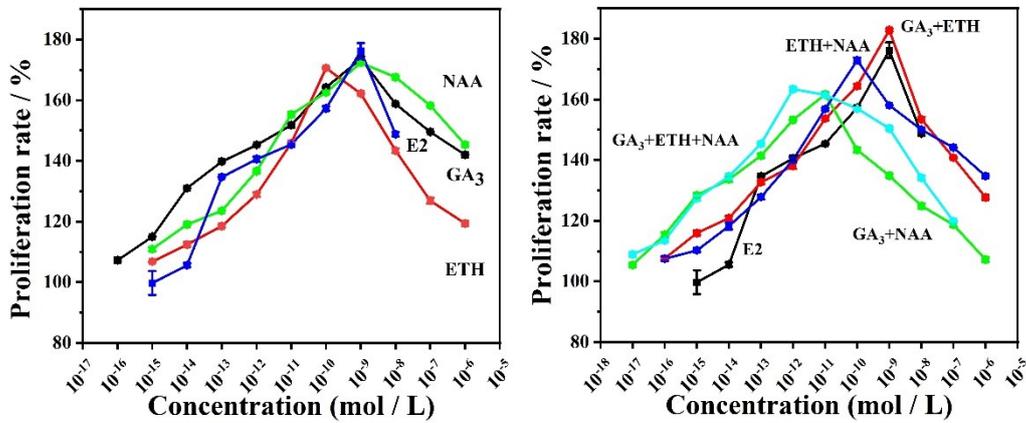


Fig. S2 E-Screen assay for the proliferation rate of Estrogen-free MCF-7 cells exposed to different doses of PGRs.
 A. Single action, B. Combined action.
 Cell concentration: $1 \times 10^5 \text{ cell} \cdot \text{well}^{-1}$, drug action time: 72 h. control group: E2, concentration ratios of the combined PGRs: GA₃ : ETH=1 : 1, GA₃ : NAA=1: 1, ETH: NAA=1: 1, GA₃ : ETH: NAA=1: 1: 1

Table S1. AI evaluation results for PGRs combined estrogenic effects type at isomolar concentration.

Mixtures	Electrochemistry		E-Screen	
	AI	Description	AI	Description
GA ₃ +ETH	-2.70	Antagonism	-0.40	Antagonism
GA ₃ + NAA	2.43	Synergism	3.97	Synergism
ETH + NAA	0	Additive	0	Additive
GA ₃ +ETH+NAA	68.98	Synergism	14.51	Synergism

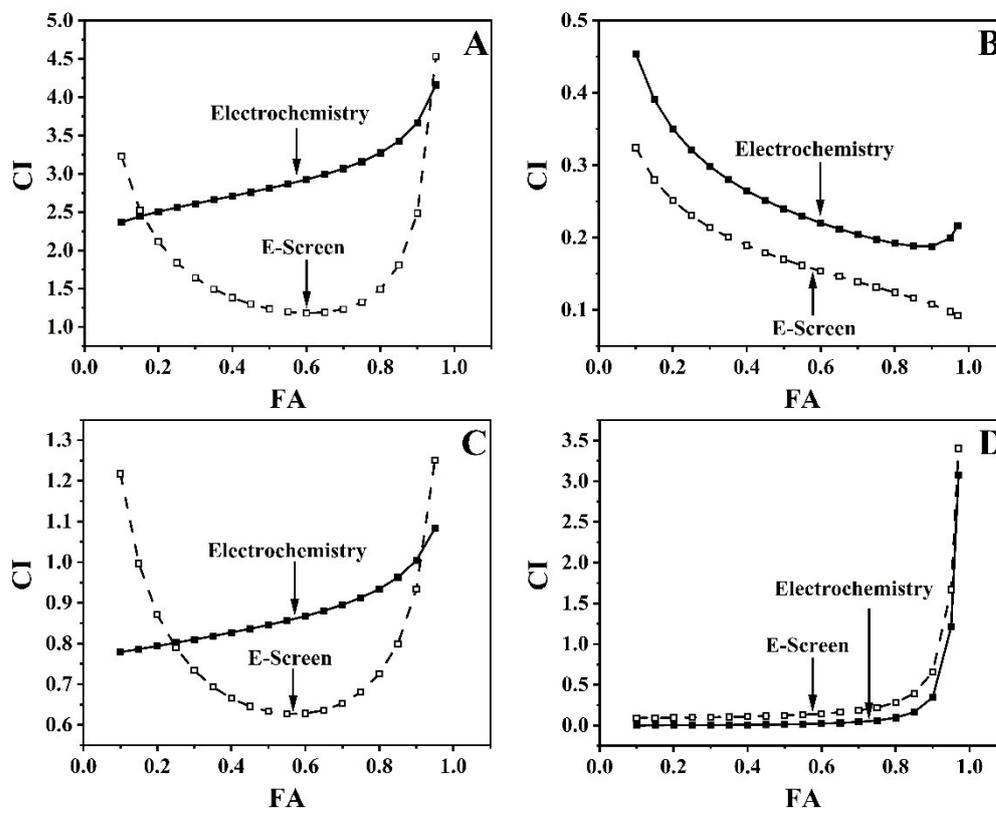


Fig. S3 FA-CI plot of PGRs combined estrogenic effects type at isomolar concentration.
 A. GA₃: ETH=1: 1, B. GA₃: NAA=1: 1, C. ETH: NAA = 1: 1, D. GA₃: ETH: NAA = 1: 1: 1