

Supporting Information for:

## **Towards Voltammetric Point of Care Detection of Leuovorin**

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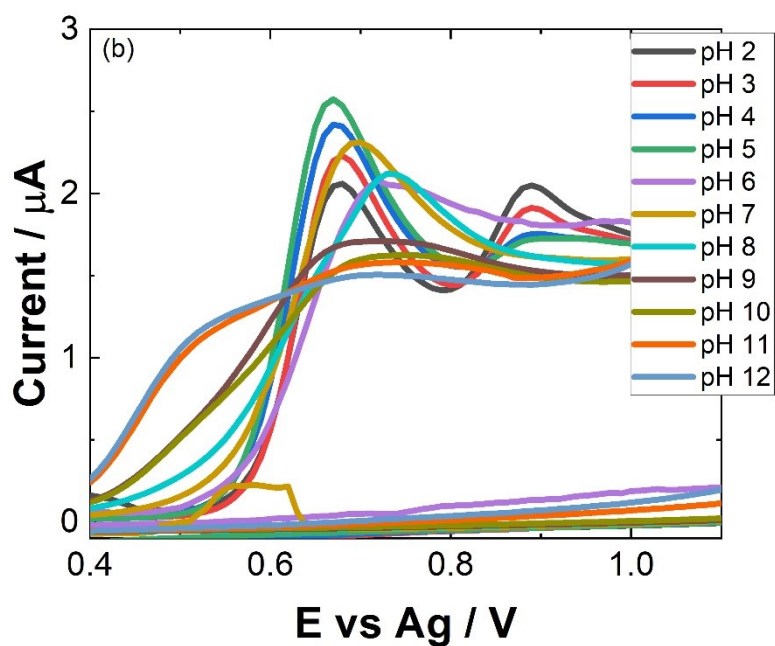
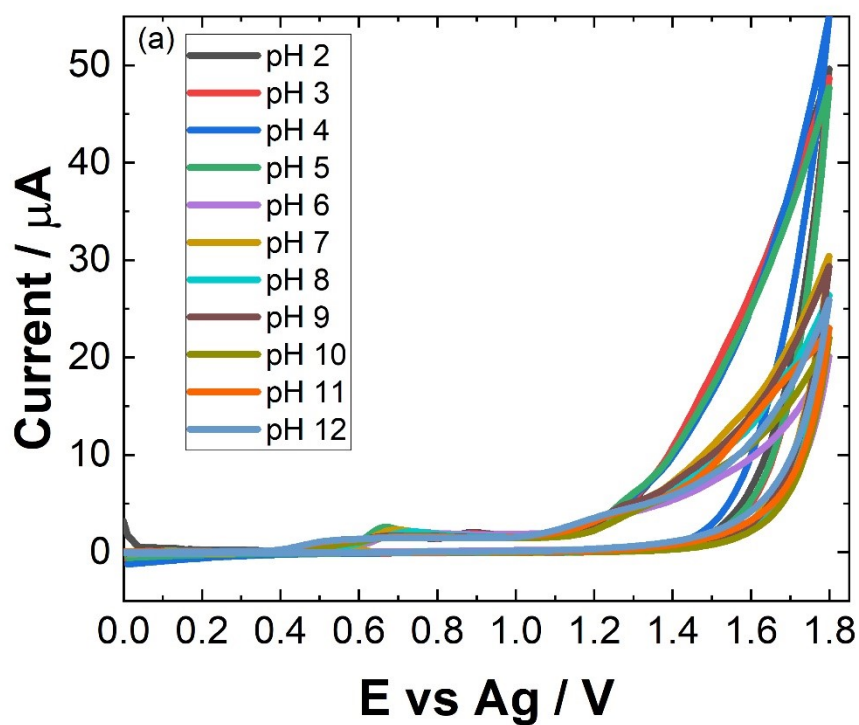
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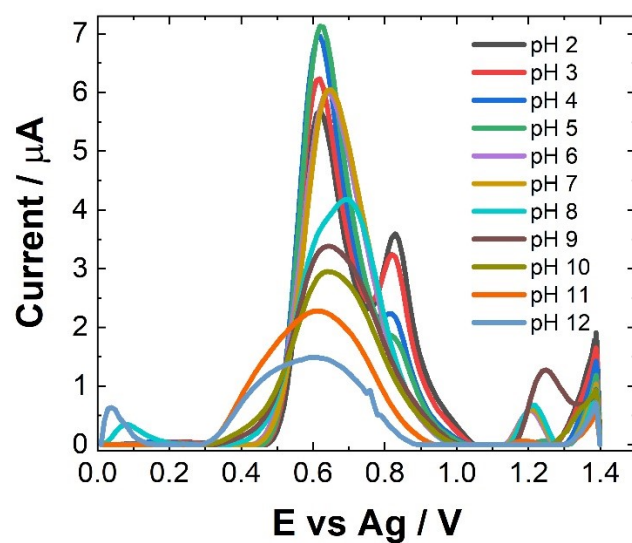
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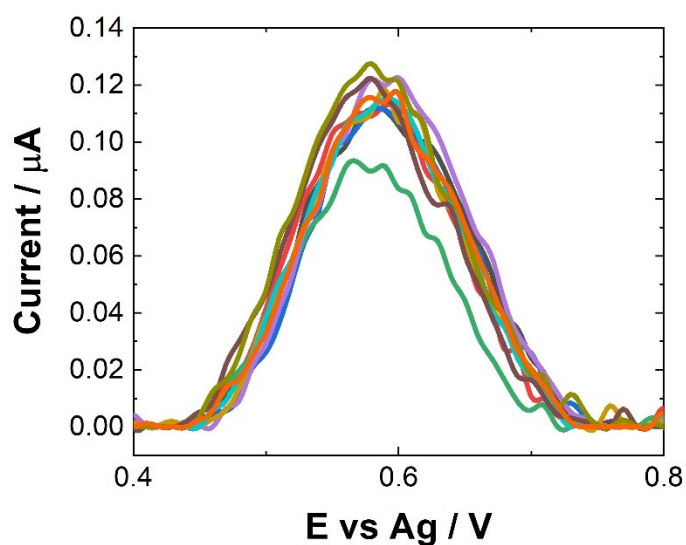
Supporting material includes CV (Figure S1) and SWV (Figure S2) responses for LV at different pH values as well as SWV responses for 10 replicates of four different LV concentrations (Figures S3 – S6) and Table S1 of the data presented in Figures S3-6 and spiked human pooled serum SWV responses following a 1:5 dilution with 0.1M NaCl (Figure S7).



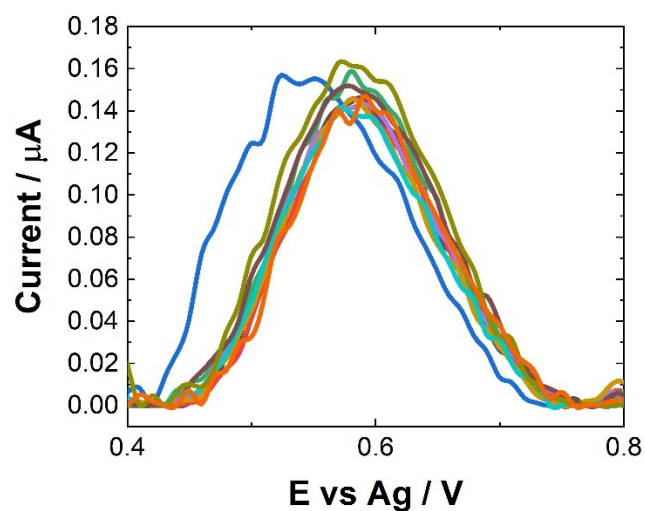
**Figure S1:** (a) Typical CV responses of 0.1 mM LV in 0.1 M NaCl at pH values  $2 \leq \text{pH} \leq 12$ , collected at a scan rate of  $100 \text{ mV s}^{-1}$  across a potential range of  $0.0 \leq E \leq 1.8 \text{ V vs Ag}$ . (b) Highlighted potential range of  $0.4 \leq E \leq 1.1 \text{ V vs Ag}$  for data presented in (a).



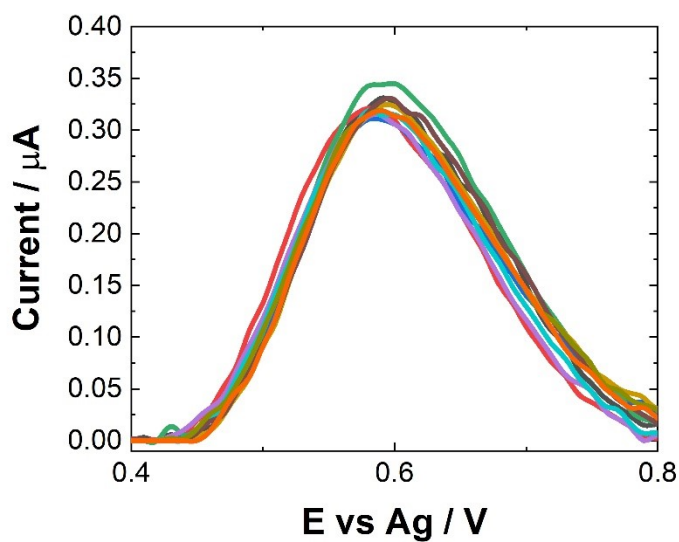
**Figure S2:** Typical SWV responses of 0.1 mM LV in 0.1 M NaCl at pH values  $2 \leq \text{pH} \leq 12$ , collected from an unmodified SPCE at pulse amplitude of 100 mV and frequency of 40Hz across a potential range of  $0.0 \leq E \leq 1.5$  V vs Ag.



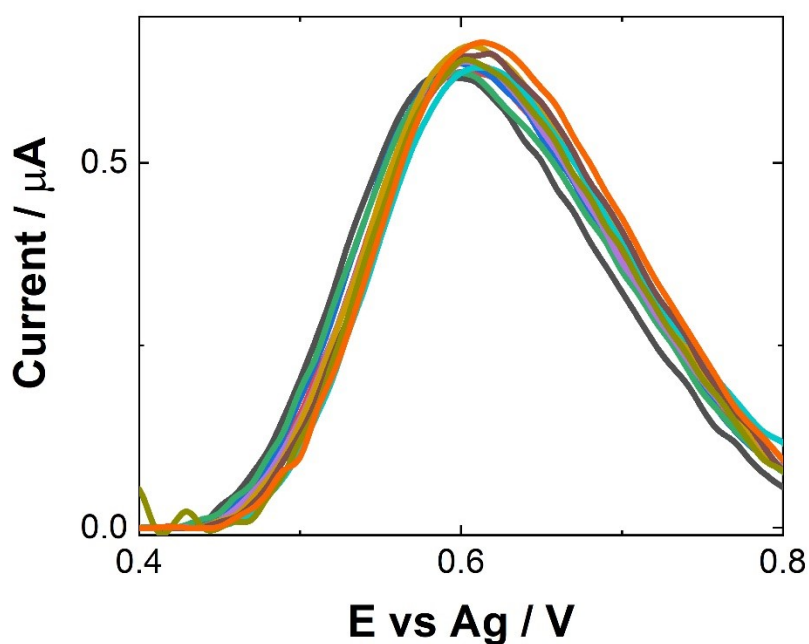
**Figure S3:** 10 replicates of SWV responses of 1  $\mu\text{M}$  LV in 0.1 M NaCl, collected from an unmodified SPCE at pulse amplitude of 100 mV and frequency of 40Hz across a potential range of  $0.0 \leq E \leq 1.5$  V vs Ag.



**Figure S4:** 10 replicates of SWV responses of 2  $\mu\text{M}$  LV in 0.1 M NaCl, collected from an unmodified SPCE at pulse amplitude of 100 mV and frequency of 40Hz across a potential range of  $0.0 \leq E \leq 1.5$  V vs Ag.



**Figure S5:** 10 replicates of SWV responses of 5  $\mu\text{M}$  LV in 0.1 M NaCl, collected from an unmodified SPCE at pulse amplitude of 100 mV and frequency of 40Hz across a potential range of  $0.0 \leq E \leq 1.5$  V vs Ag.



**Figure S6:** 10 replicates of SWV responses of 10  $\mu\text{M}$  LV in 0.1 M NaCl, collected from an unmodified SPCE at pulse amplitude of 100 mV and frequency of 40Hz across a potential range of  $0.0 \leq E \leq 1.5$  V vs Ag.

**Table S1:** Data of mean, standard deviation (SD) and relative standard deviation (RSD) of data presented in Figures S3-S6.

<i>Repetition / [LV]</i>	<i>1 <math>\mu\text{M}</math></i>	<i>2 <math>\mu\text{M}</math></i>	<i>5 <math>\mu\text{M}</math></i>	<i>10 <math>\mu\text{M}</math></i>
1	0.112	0.146	0.331	0.617
2	0.113	0.146	0.320	0.624
3	0.111	0.155	0.310	0.635
4	0.093	0.159	0.345	0.622
5	0.123	0.143	0.314	0.638
6	0.118	0.144	0.318	0.659
7	0.115	0.141	0.323	0.628
8	0.117	0.151	0.329	0.647
9	0.127	0.154	0.319	0.624
10	0.116	0.147	0.319	0.641
<i>Mean</i>	0.115	0.149	0.323	0.633
<i>SD</i>	0.009	0.006	0.010	0.013

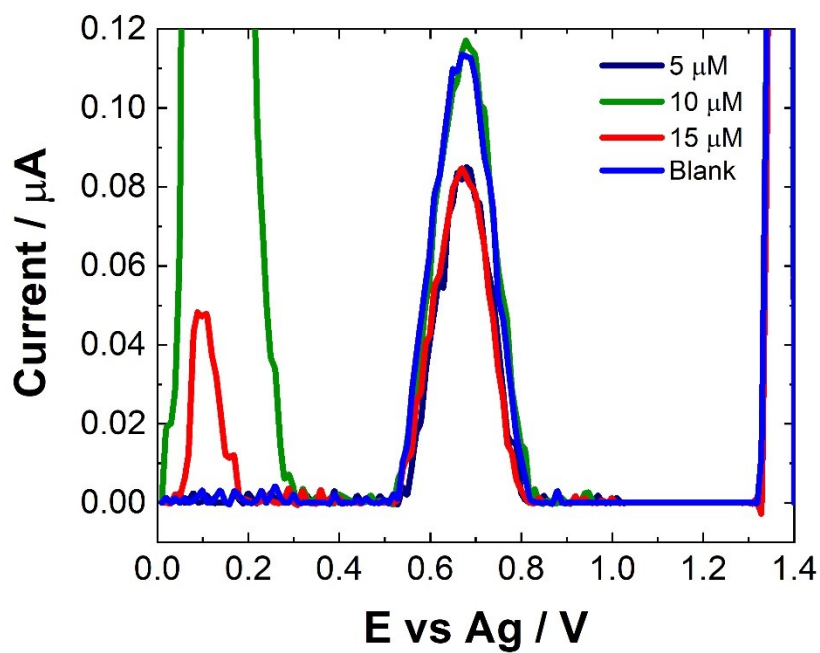
Relative SD

8.013

3.891

3.072

2.058



**Figure S7:** Typical SWV for 1: 5 dilutions of human pooled serum (blue line), and human pooled serum spiked with mM LV (5 – 15  $\mu\text{M}$ ) scanned over the potential range  $0 \leq E \leq 1.4$  V vs Ag at a pulse amplitude of 100 mV and frequency of 40Hz.