

Supplementary Material (ESI) for Analytical Methods

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## **Fieldable flow injection analysis system with 1,1'-oxalyldiimidazole chemiluminescence detection capable of quantifying acetylcholine**

(Electronic Supplementary Information)

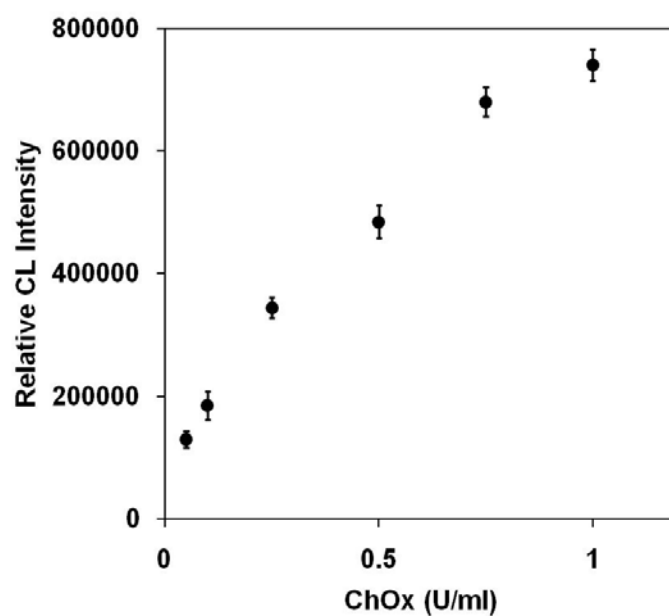
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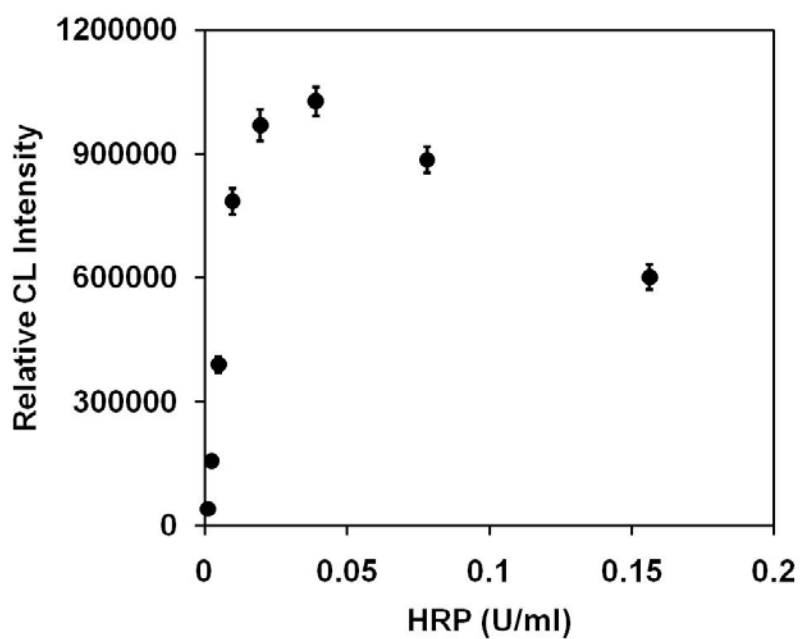
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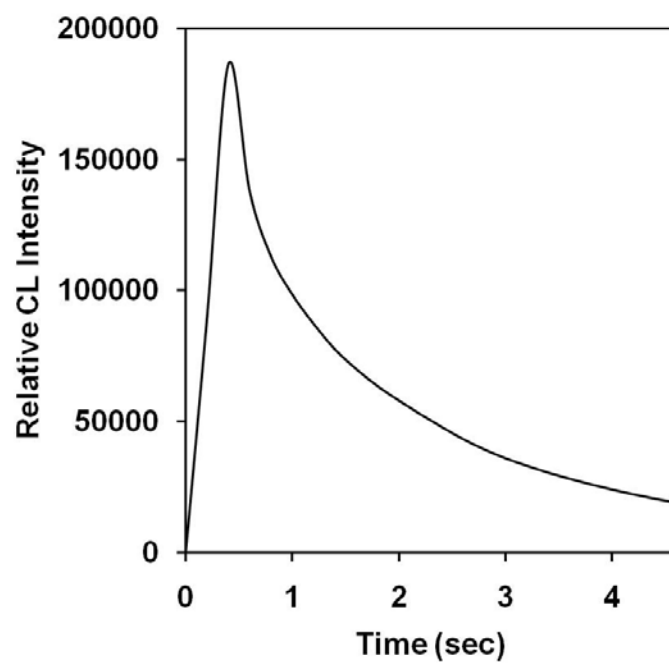
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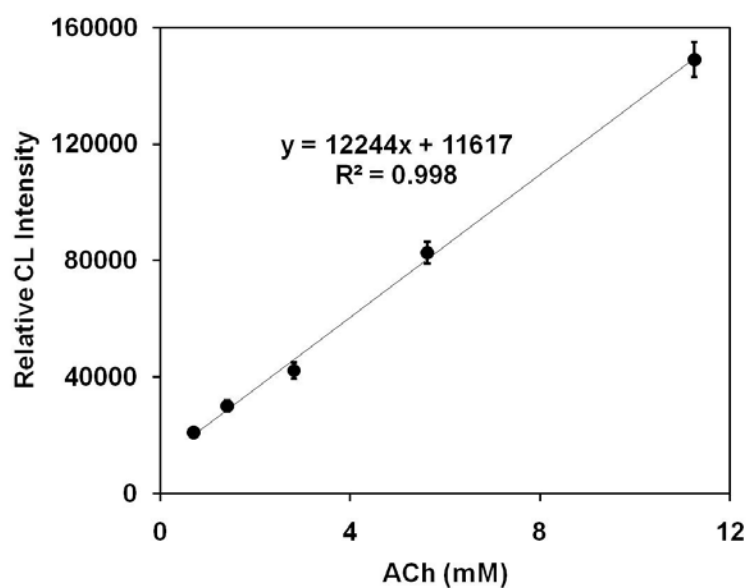
**Fig. S-1** Effect of ChOx. Condition: [ACh] = 3.0  $\mu$ M, [AChE] = 1.0 U/ml, [HRP] = 1.0 U/ml, [Amplex Red] = 1.25  $\mu$ M, [TCPO] = 15.0  $\mu$ M, [4MI<sub>m</sub>H] = 75.0  $\mu$ M, [H<sub>2</sub>O<sub>2</sub>] = 0.1 M, Incubation time: 20 minutes



**Fig. S-2** Effect of HRP. Condition: [ACh] = 3.0  $\mu$ M, [AChE] = 1.0 U/ml, [ChOx] = 0.5 U/ml, [Amplex Red] = 1.25  $\mu$ M, [TCPO] = 15.0  $\mu$ M, [4MI<sub>m</sub>H] = 75.0  $\mu$ M, [H<sub>2</sub>O<sub>2</sub>] = 0.1 M, Incubation time: 20 minutes



**Fig. S-3** CL emission of resorufin



**Fig. S-4** Linear calibration curve for the quantification of ACh using FIA system with ODI CL detection. Condition: [AChE] = 1.0 U/ml, [ChOx] = 0.5 U/ml [HRP] = 0.04 U/ml, [Amplex Red] = 1.00  $\mu$ M, [TCPO] = 10.0  $\mu$ M, [4MI<sub>m</sub>H] = 50.0  $\mu$ M, [H<sub>2</sub>O<sub>2</sub>] = 0.1 M, Incubation time: 15 minutes