Supporting Information

Enzymatic reaction modulation of G-quadruplex formation for the sensitive homogeneous fluorescence sensing of cholinesterase and organophosphate pesticides

Xin Yuan\textsuperscript{a}, Sujuan Chen\textsuperscript{b}, Shan Li\textsuperscript{b}, Qiuyun Liu\textsuperscript{b}, Mengqian Kou\textsuperscript{b}, Ting Xu\textsuperscript{b}, Hong Luo\textsuperscript{b} *, Ke Huang,\textsuperscript{b} *, Mei Zhang\textsuperscript{a}

\textsuperscript{a} College of Pharmacy, Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, 611137, China

\textsuperscript{b} College of Chemistry and Material Science, Sichuan Normal University, Chengdu, Sichuan, 610068, China

*Corresponding authors.

E-mail address: huangke@sicnu.edu.cn (K. Huang)
Fig. S1. Effect of the formation of the G-quadruplex. (A) The ratio of NMM and probe DNA, (B) the concentration of K\(^{+}\), and (C) the reaction time between probe DNA and NMM.
Fig. S2. Effect of the formation of the T-Hg$^{2+}$-T hairpin structure. (A) and (B) Reaction time between the probe DNA with Hg$^{2+}$; (C) and (D) the ratio of Hg$^{2+}$ and probe DNA.
Fig. S3. Effect of the concentration of ATCh (A) and (B), and the enzymatic hydrolysis time between BChE and ATCh (C) and (D).
Fig. S4. Competitive reaction time between TCh (hydrolysate of ATCh) and the T-Hg^{2+}-T hairpin structure.