Electronic Supplementary Information (ESI)

Disposable biogenic amine biosensors for histamine determination in fish

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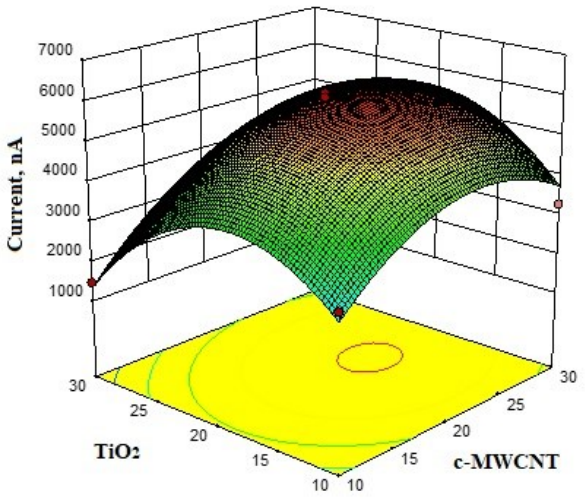

Fig. S1. Response surface plots of the amperometric current as a function of c-MWCNT and TiO_2 amounts.

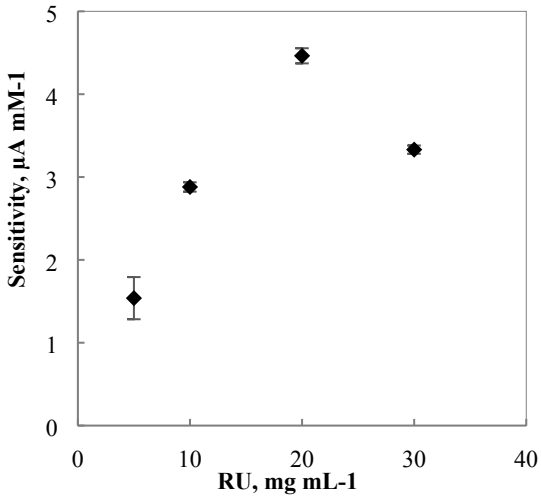

Fig. S2. Effect of RU on the response of DAO/TiO_2–c-MWCNT–RU–CS/SPCE (in 0.050 M pH 7.5, BR buffer solution at -0.30 V)

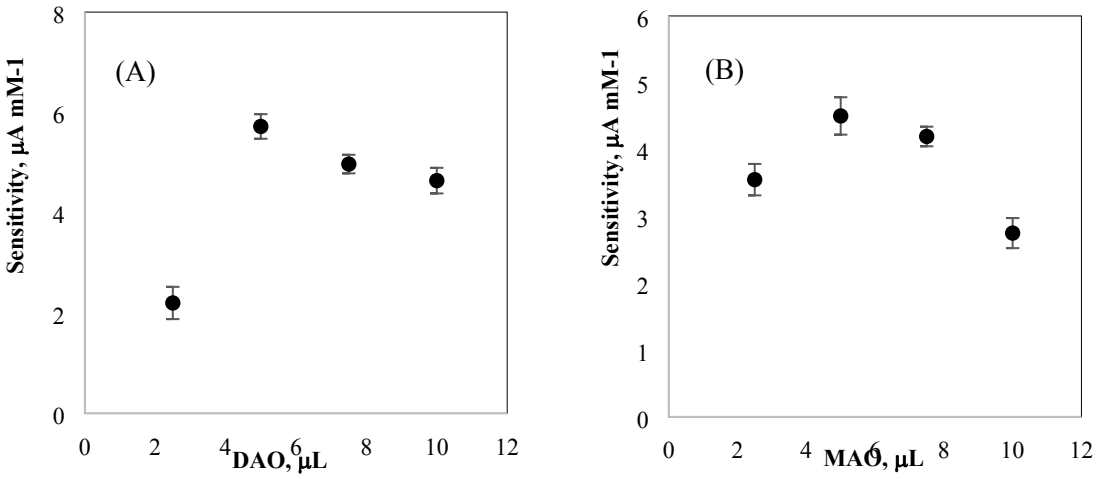

Fig. S3. Effects of (A) DAO and (B) MAO amounts on the response of Enzyme/TiO_2–c-MWCNT–RU–CS/SPCE (in 0.050 M BR buffer solution at -0.30 V)

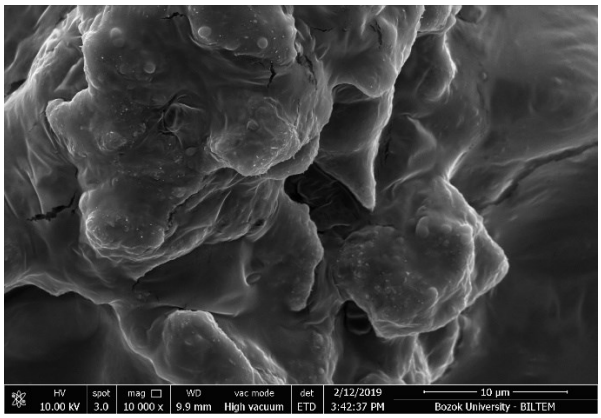

Fig. S4 SEM image of MAO/TiO_2-c-MWCNT-RU–CS/SPCE

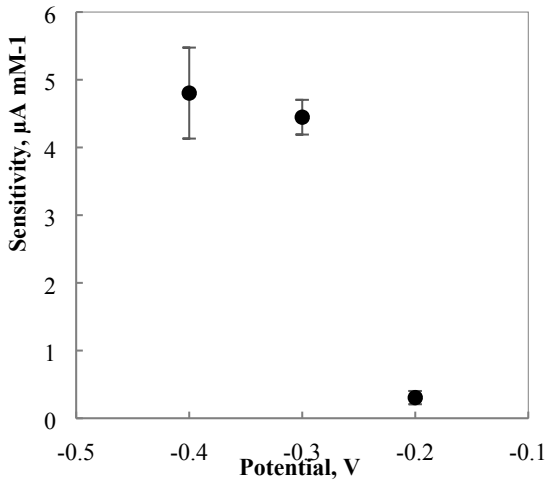

Fig. S5. Effect of operating potential on the response of DAO/TiO_2–c-MWCNT–RU–CS/SPCE (in 0.050 M pH 7.5, BR buffer solution)

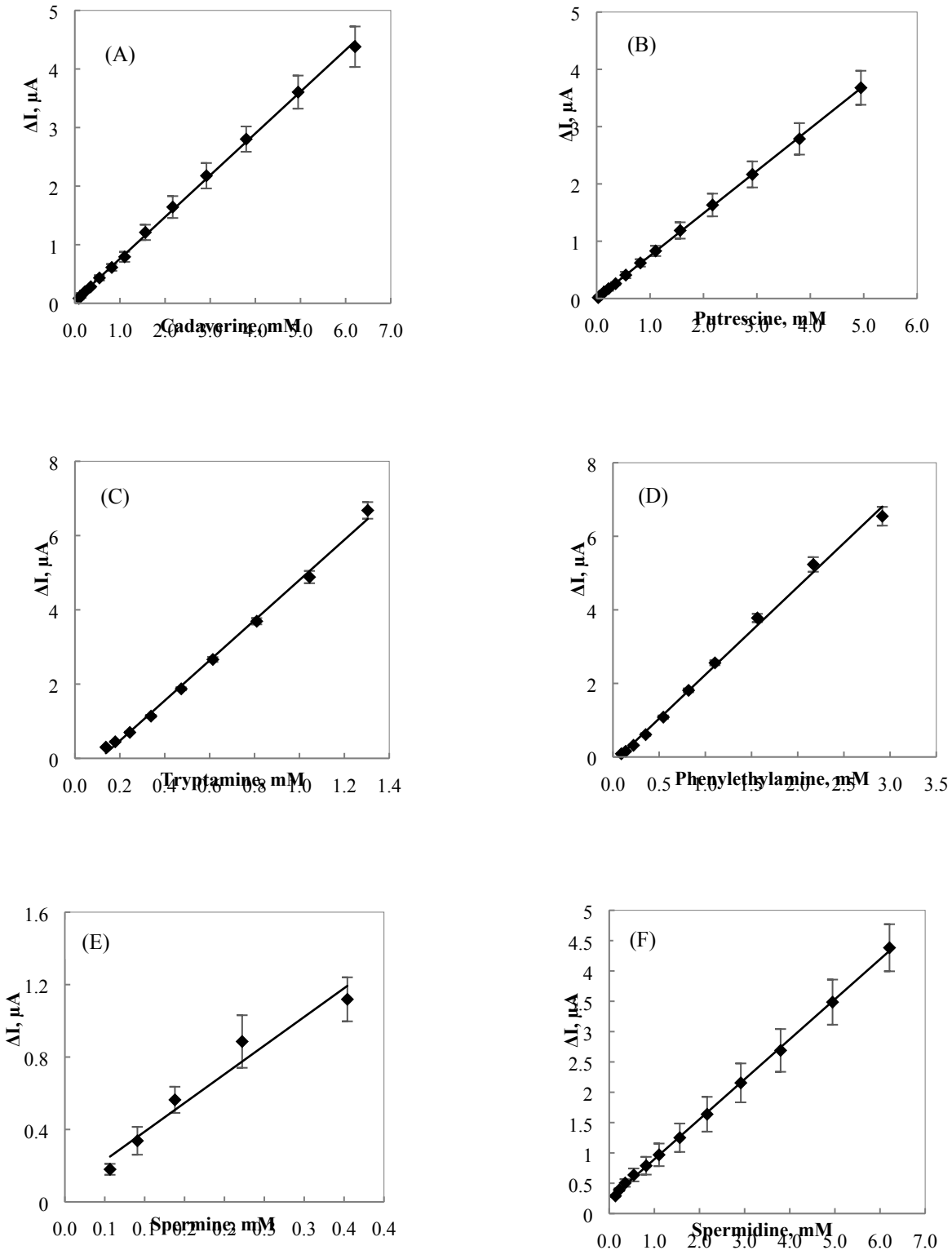

Fig. S6. Calibration graphs obtained at DAO/TiO_2–c-MWCNT–RU–CS/SPCE biosensor on successive additions of (A) cadaverine, (B) putrescine, (C) tryptamine, (D) phenylethylamine, (E) spermine and (F) spermidine in 0.05 M BR buffer solution at -0.30 V, error bars show the standard deviation of three measurements. Chronoamperometric responses were measured at optimum pH of each amine.

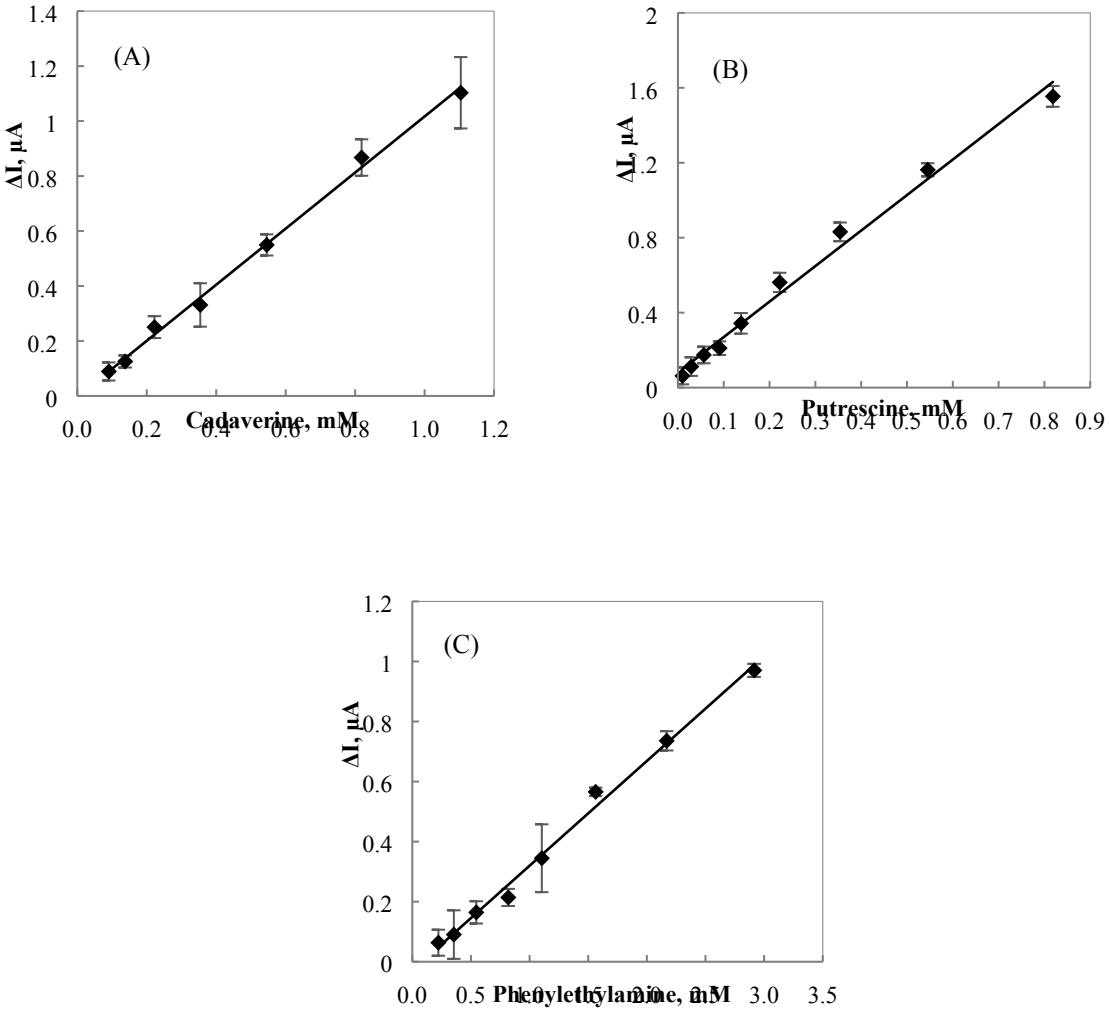

Fig. S7. Calibration graphs obtained at MAO/TiO_2–c-MWCNT–RU–CS/SPCE biosensor on successive additions of (A) cadaverine, (B) putrescine and (C) phenylethylamine in 0.05 M BR buffer solution at -0.30 V, error bars show the standard deviation of three measurements. Chronoamperometric responses were measured at optimum pH of each amine.