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Corrigendum

Corrigendum to "Development and Characterization of an Electroless Plated Silver/Cysteine Sensor Platform for the Electrochemical Determination of Aflatoxin B_1"

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In the article titled "Development and Characterization of an Electroless Plated Silver/Cysteine Sensor Platform for the Electrochemical Determination of Aflatoxin B_1" [1], anti-Aflatoxin B_1-Peroxidase antibody produced in rabbit IgG fraction of antiserum (product number SAB4200829) (Sigma Aldrich, Saint Louis, MO, USA) was mistakenly used as a reagent instead of anti-aflatoxin B_1 antibody (product number A8679) (Sigma Aldrich, Saint Louis, MO, USA).

Also in the results, Section 3.2 Electrochemical immune detection of aflatoxin B_1 the reading was taken from positive potential which was due to impedance measurement. However, this paper is based on the electro-catalytic activity of horseradish peroxidase on the negative potential. In the method Section 2.3, therefore, entry 600 nm should be -600 nm. In the result section, the whole of Section 3.2 should be revised as follows:

3.2. Performance of the Electrochemical Immunosensor

In order to test the performance of the developed sensor platform for the analysis of aflatoxin B_1, the sensor platform served as a working electrode and a competitive immunosensing format (Figure 1; step 5) was performed both in the absence and presence of free aflatoxin B_1 (Section 2.3). The response of the sensor electrode was tested using different concentrations of aflatoxin B_1 (0-1 ng l^{-1}) and differential staircase voltammetry (DSCV) [20] was used for monitoring the signal (Figure 5). Figure 5(a) shows that the DSCV currents increase with a decrease in aflatoxin B_1 concentrations, suggesting that the peak potential is inversely proportional to aflatoxin B_1 concentration. Since the rate of reaction was dependent on the catalytic activity of HRP, the higher the concentration of bound anti-aflatoxin B_1 antibody-HRP the higher the rate of reaction [2]. Therefore, in the absence of aflatoxin in the solution, more anti-aflatoxin B_1 antibody-HRP bind on the sensor and the current generated was very high. While at high aflatoxin concentration, low level of anti-aflatoxin B_1 antibody-HRP was available to bind on the sensor, and the output current generated was low due to reduced catalytic activity from HRP.

In the Section 3.3, stability and selectivity of the immunosensor entries are 60 mV of the 4160 mV, 360 mV of the 4160 mV, and 760 mV of the 4160 mV should be 10 mV of the 716 mV, 62 mV of the 716 mV, and 130 mV of the 716 mV, respectively. The correct figure is as follows:

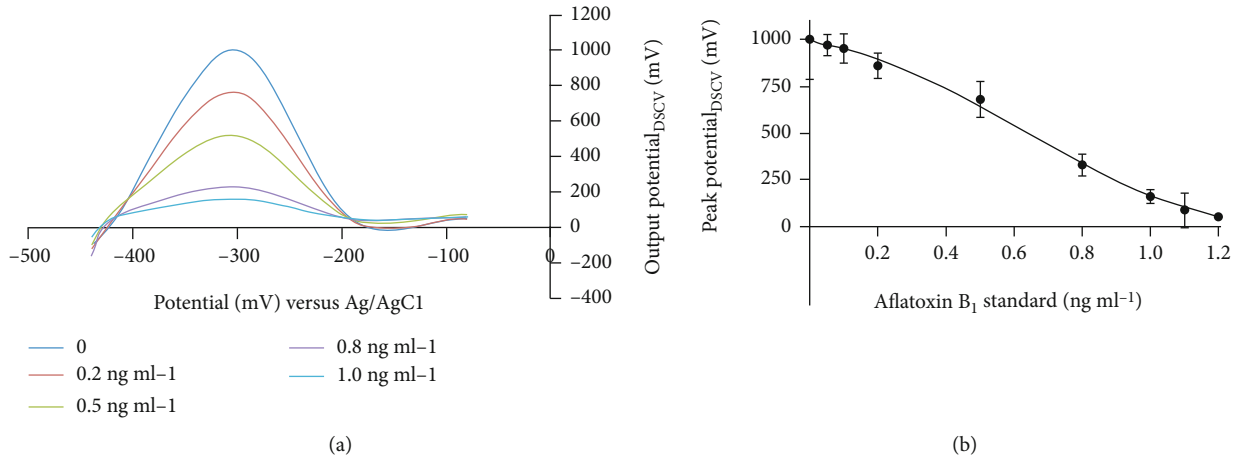

Figure 5: (a) DSCV response recorded for silver|cysteine|aflatoxin B_1|HRP-blocked immunoelectrode for 0-1 ng ml^{-1} of aflatoxin B_1 concentrations in a pH 6.5 acetate buffer solution using 0.5 μg ml^{-1} of anti-aflatoxin B_1 antibody-HRP (scan rate of 20 mV/s). (b) A calibration curve of peak DSCV potential (mV) versus aflatoxin B_1 concentration (ng ml^{-1}).

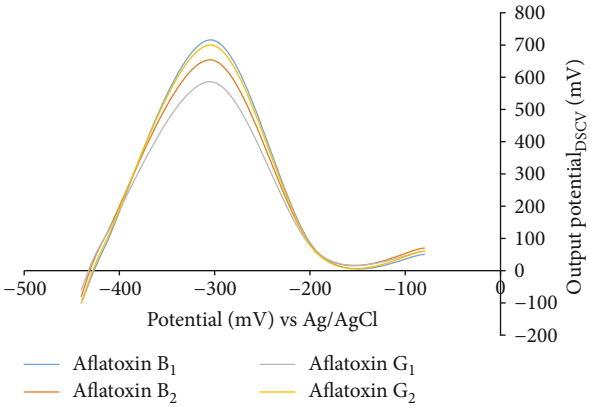

Figure 7: The specificity of the immunosensor platform toward aflatoxin 0.2 ng ml^{-1} B_1, 1.0 ng ml^{-1} B_2, 1.0 ng ml^{-1} G_1, and 1.0 ng ml^{-1} G_2.

Also, due to revision proposed for Section 3.2, Figure 6, Figure 7, and Figure 8 should be numbered as Figure 5, Figure 6, and Figure 7, respectively.

References

[1] P. A. Wacoo, M. Ocheng, D. Wendiro, P. C. Vuzi, and F. J. Hawumba, "Development and characterization of an electroless plated silver/cysteine sensor platform for the electrochemical determination of aflatoxin B_1," *Journal of Sensors*, vol. 2016, Article ID 3053019, 8 pages, 2016.

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