

Correction to “Magnetic Printing of a Biosensor: Inexpensive Rapid Sensing To Detect Picomolar Amounts of Antigen with Antibody-Functionalized Carbon Nanotubes”

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We found an error in the calculation of the molarity of the analyte used to evaluate the performance of the biosensor. Three analyte concentrations of the target c-myc antigen and one of

BSA reported in the manuscript as 40, 20, and 10 pM for the analyte and 40 pM for BSA were in fact 200, 100, and 50 nM and 200 nM, respectively.

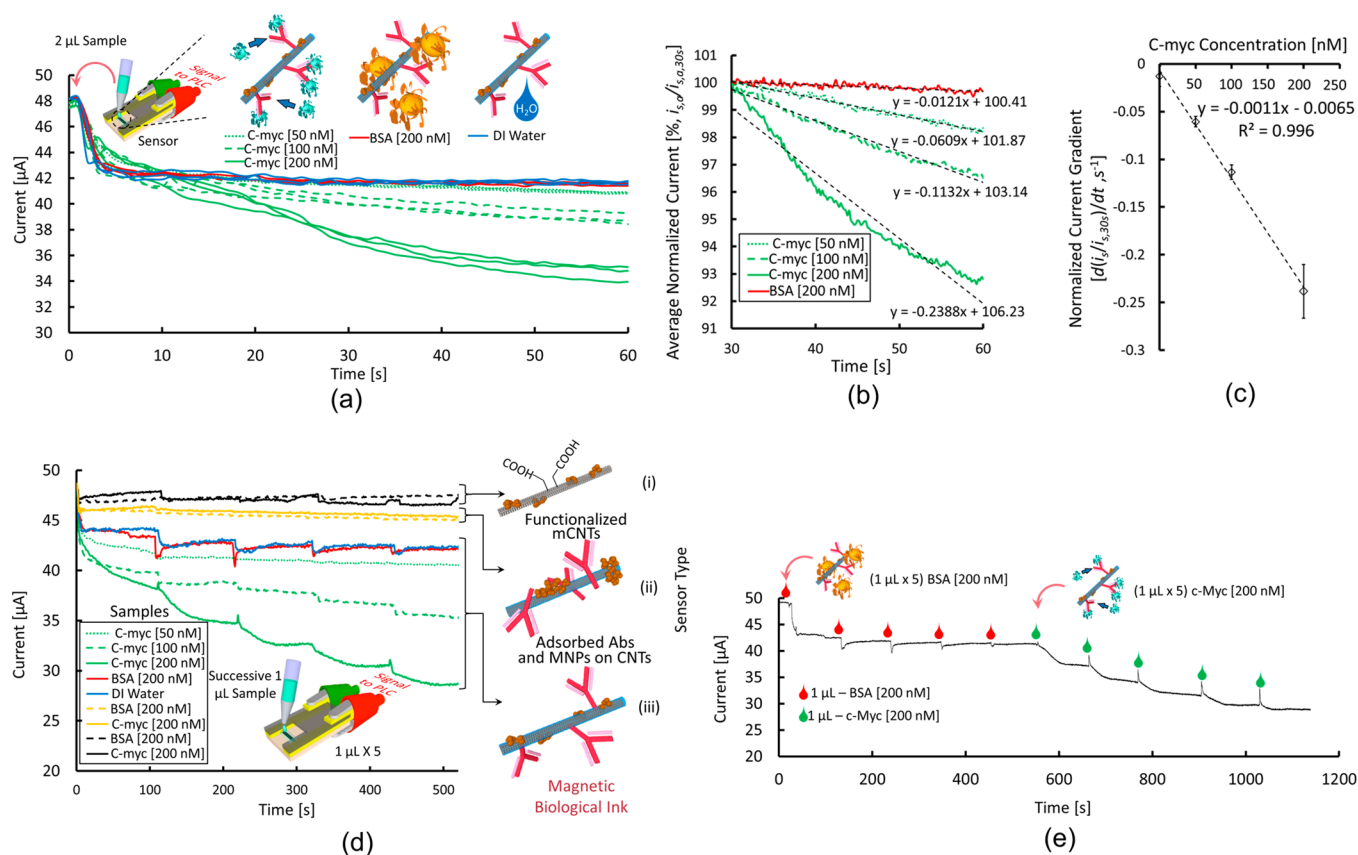


Figure 5. Biosensor transient response. (a) Immediately after 2 μL samples are deposited on the sensor strip, the DI water and BSA samples induce a rapid decrease in electrical current, which subsequently levels out. In contrast, since the sensor is inherently sensitive to c-Myc Ag interactions due to the anti-c-Myc Abs that are covalently bonded to the surfaces of CNTs, the current for all c-Myc samples decreases to levels below those measured for DI water and BSA deposition, which offers proof of targeted detection and sensor specificity to c-Myc Ags. The higher the c-Myc concentration in a sample, the larger the current decrease it induces. All of the deposited c-Myc samples produce a steady current decrease during the period $30\text{ s} < t < 60\text{ s}$. Normalizing the average current over that duration leads to the quasi-linear response shown in (b). There is a linear correlation in (c) between the normalized current gradients in (b) and the corresponding c-Myc concentrations. Biosensor response to successive 1 μL sample additions. (d) Acting as a control, magnetized CNTs that are not functionalized with Abs (i) cannot distinguish between 200 nM BSA and c-Myc samples, black dashed and solid curves, respectively. When anti-c-Myc is immobilized on the CNT surfaces through adsorption, again (ii) there is insufficient discrimination between these two samples. In contrast, a sensor fabricated using an ink in which anti-c-Myc is attached to the CNT surfaces through acid functionalization, (iii) clearly distinguishes between the two negative control samples, DI water and BSA, and the Ag of interest, c-Myc. (e) After the deposition of five successive 1 μL samples of BSA [200 nM], the biosensor response is relatively unchanged. Only after the introduction of c-Myc [200 nM] samples is the reduction in current observed, validating the specificity of the sensor to the target antigen in the presence of another protein.

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Since the biosensor detects analytes in the nanomolar range, the manuscript title should read as follows: *Magnetic Printing of a Biosensor: Inexpensive Rapid Sensing To Detect Nanomolar Amounts of Antigen with Antibody-Functionalized Carbon Nanotubes*.

To convert concentrations reported in the original article, readers can use the following table.

concentration of sample in original paper	correct concentration of sample
C-myc [40 pM]	C-myc [200 nM]
C-myc [20 pM]	C-myc [100 nM]
C-myc [10 pM]	C-myc [50 nM]
BSA [40 pM]	BSA [200 nM]

Although the principle enabling the biosensor still holds, it is viable for a higher analyte concentration than was reported in the original paper. The corrected [Figure 5](#) with legends and caption reporting the correct concentrations of the samples is included below.

The authors apologize for the calculation error.