

Correction to Copper(II) Complexes of L-Arginine as Netropsin Mimics Showing DNA Cleavage Activity in Red Light

Ashis K. Patra,¹ Tuhin Bhowmick, Sovan Roy, Suryanarayananarao Ramakumar, and Akhil R. Chakravarty^{2*}

Inorg. Chem. 2009, 48 (7), 2932–2943. DOI: 10.1021/ic8017425

Supporting Information

Page 2941 and 2942. Gel images of Figures 7 and 9–11 are corrected. The gel lanes were earlier incorrectly sourced from different original gel images, which are now submitted as revised Supporting Information (SI). The original gels in some cases have additional lanes from other experiments, and those lanes are not given in the text figures. A few additional minor corrections are listed below.

Page 2942, right column of Figures 10 and 11b caption. The exposure time is corrected to 2 h from 1 h.

The following statement should be added at the end of the Figure 11 caption: “This figure is adapted from Figures S11 and 4(b) of the associated communication published in *Inorg. Chem.* 2007, 46, 9030–9032 (cited as ref 45), and *Inorg. Chem.* 2019, 58, 9514–9514, by the same group for [Cu(L-arg)](NO₃)₂ and [Cu(L-arg)(phen)Cl]Cl for a comparison of the data in the full article.”

The following statement should be added at the end of each caption of Figures 7 and 9–11: “This figure was made by a compilation of lane images sourced from different raw gels that are available in respective Figures S5–S8 in the SI.”

Page 2943. The footnote of Table 5 should read as “Photoexposure time (*t*) = 1 h [365 nm], 2 h [647.1 nm]”. Supporting Information Available: “... (Figures S3, S4); selected bonding ...” is revised to “... (Figures S3, S4); raw gel images (Figures S5–S8); selected bonding ...”.

We apologize for this mistake of combining lanes from different raw gels. The extent of plasmid DNA cleavage (observed as %NC) was determined from the band intensities (SC and NC forms of plasmid DNA) using a UVITECH Gel Documentation System. The %NC values are given in the figure captions. The estimated error in measuring %NC is ca. 5%. The corrections described here do not alter or invalidate any of the conclusions reported in the original publication.

Revised Figure 7:

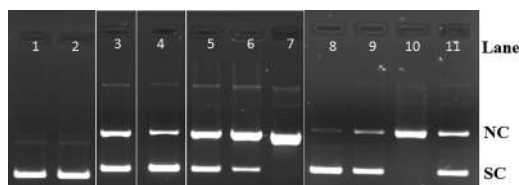


Figure 7. Gel electrophoresis diagram showing cleavage of SC pUC19 DNA (0.2 μg , 30 μM) by complexes 1–5 (5 μM) in the presence of 3-mercaptopropionic acid (MPA, 0.5 mM) in the dark [%NC value]: lane 1, DNA control [5]; lane 2, DNA + 3 [7]; lane 3, DNA + 1 + MPA [45]; lane 4, DNA + 2 + MPA [23]; lane 5, DNA + 3 + MPA

[62]; lane 6, DNA + 4 + MPA [81]; lane 7, DNA + 5 + MPA [97]; lane 8, DNA + distamycin (10 μM) + 3 + MPA [15]; lane 9, DNA + distamycin (10 μM) + 4 + MPA [22]; lane 10, DNA + distamycin (10 μM) + 5 + MPA [91]; lane 11, DNA + methyl green (10 μM) + 5 + MPA [31].

Revised Figure 9:

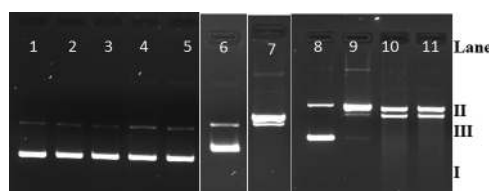


Figure 9. Gel electrophoresis diagram showing photoinduced oxidative cleavage of SC pUC19 DNA (0.2 μg , 30 μM) by netropsin (ntp, 50 μM) and complexes 1–5 in 50 mM Tris-HCl/NaCl buffer (pH 7.2) on irradiation with UV-A light of 365 nm for 1 h [%NC or % (NC + linear) form value]: lane 1, DNA control [5]; lane 2, DNA + 3 (dark) [5]; lane 3, DNA + L-arg (50 μM) [3]; lane 4, DNA + dpq (5 μM) [8]; lane 5, DNA + CuCl₂·2H₂O (50 μM) [6]; lane 6, DNA + ntp (50 μM) [16]; lane 7, DNA + 1 (50 μM) [88]; lane 8, DNA + 2 (10 μM) [18]; lane 9, DNA + 3 (10 μM) [93]; lane 10, DNA + 4 (10 μM) [97]; lane 11, DNA + 5 (10 μM) [90].

Revised Figure 10:

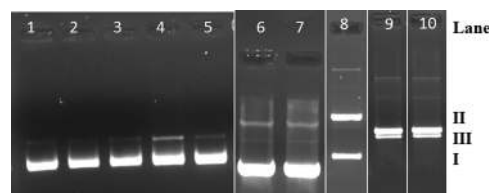


Figure 10. Red-light-induced cleavage of SC pUC19 DNA (0.2 μg , 30 μM) by netropsin (ntp, 50 μM) and complexes 1–5 in a 50 mM Tris-HCl/NaCl buffer (pH 7.2) using a 647.1 nm Ar–Kr CW laser (100 mW) for 2 h exposure time [%NC or % (NC + linear) value]: lane 1, DNA control [4]; lane 2, DNA + L-arg (50 μM) [5]; lane 3, DNA + CuCl₂·2H₂O (50 μM) [5]; lane 4, DNA + dpq (10 μM) [13]; lane 5, DNA + ntp (50 μM) [7]; lane 6, DNA + 1 (50 μM) [18]; lane 7, DNA + 2 (50 μM) [17]; lane 8, DNA + 3 (50 μM) [58]; lane 9, DNA + 4 (10 μM) [98]; lane 10, DNA + 5 (10 μM) [90].

Published: September 9, 2019

Revised Figure 11:

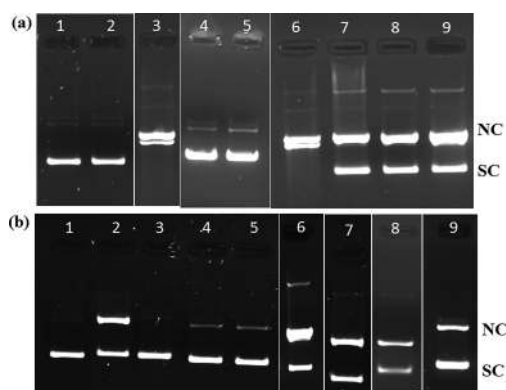


Figure 11. (a) Gel electrophoresis diagram showing the cleavage of SC pUC19 DNA (0.2 μg , 30 μM) by complex **1** (50 μM) using UV-A radiation of 365 nm (6 W) for 1 h exposure time in a 50 mM Tris-HCl/NaCl buffer (pH, 7.2) [%NC or %(NC + linear)]: lane 1, DNA control [3]; lane 2, DNA + **1** (dark) [5]; lane 3, DNA + **1** [89]; lane 4, DNA + **1** (under argon) [9]; lane 5, DNA + NaN₃ (100 μM) + **1** [12]; lane 6, DNA + D₂O (16 μL) + **1** [99]; lane 7, DNA + DMSO (2 μL) + **1** [70]; lane 8, DNA + catalase (4 units) + **1** [73]; lane 9, DNA + SOD (4 units) + **1** [80]. (b) Gel electrophoresis diagram showing photoinduced cleavage of SC pUC19 DNA (0.2 μg , 30 μM) by **3** (50 μM) at 647.1 nm laser wavelength for 2 h exposure time [%NC or %(NC + linear)]: lane 1, DNA control [4]; lane 2, DNA + **3** [58]; lane 3, DNA + [Cu(phen)₂(H₂O)]²⁺ (50 μM) [6]; lane 4, DNA + **3** (under argon) [12]; lane 5, DNA + NaN₃ (100 μM) + **3** [16]; lane 6, DNA + D₂O (16 μL) + **3** [74]; lane 7, DNA + DMSO (4 μL) + **3** [52]; lane 8, DNA + catalase (4 units) + **3** [44]; lane 9, DNA + SOD (4 units) + **3** [43].

Revisions of the SI file: Figures S5–S8 present full gel images in the revised SI. The details of the lanes along with the %NC are given in the figure captions of the revised figures. Revised Figure 7 is from Figure S5. Revised Figures 9–11 are made from Figures S6–S8, respectively. The lanes used to make the revised text figures are marked by color boxes in the raw gel images. The revised SI file (as a PDF) is submitted.

■ ASSOCIATED CONTENT

● Supporting Information

The Supporting Information is available free of charge on the ACS Publications website at DOI: 10.1021/acs.inorgchem.9b02484.

Cyclic voltammograms (Figure S1); unit cell packing diagram (Figure S2); energy-minimized docked structures showing noncovalent interactions (Figures S3, S4); raw gel images (Figures S5–S8); selected bonding parameters for complex **3**·2.5H₂O (Table S1) (PDF)