

## Supplementary Information

### **Metallo-Curcumin-Conjugated DNA Complexes Induces Preferential Prostate Cancer**

### **Cells Cytotoxicity and Pause Growth of Bacterial Cells**

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**Supplementary Fig. S1.** DNA base sequences and pictorial representation of DNA rings.

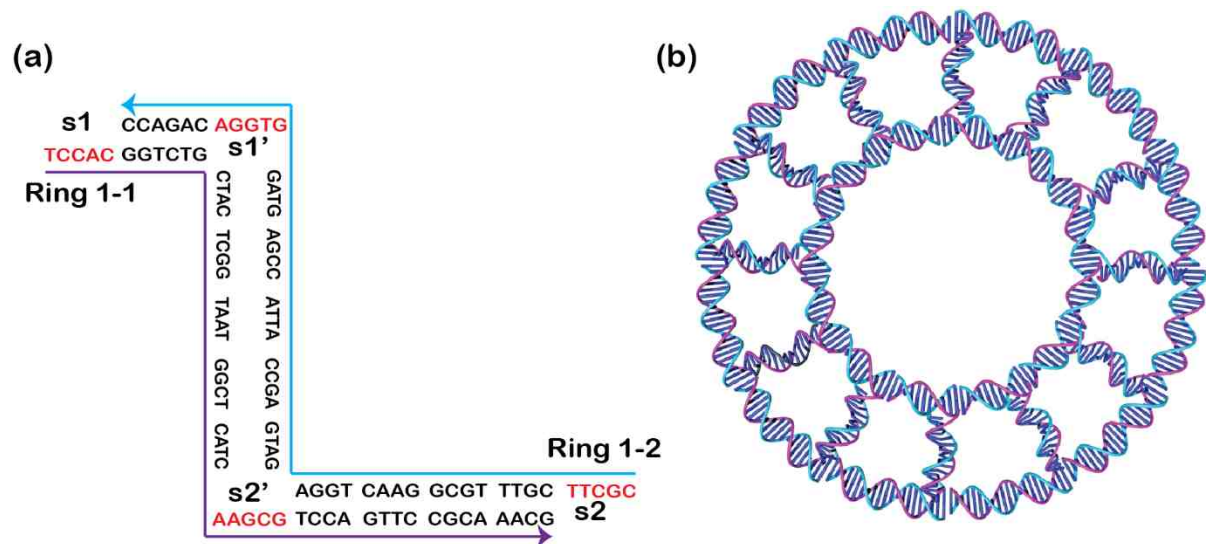
**Supplementary Fig. S2.** Representative negative ion mode TOF-SIMS images.

**Supplementary Table S1.** RDNA base sequence information.

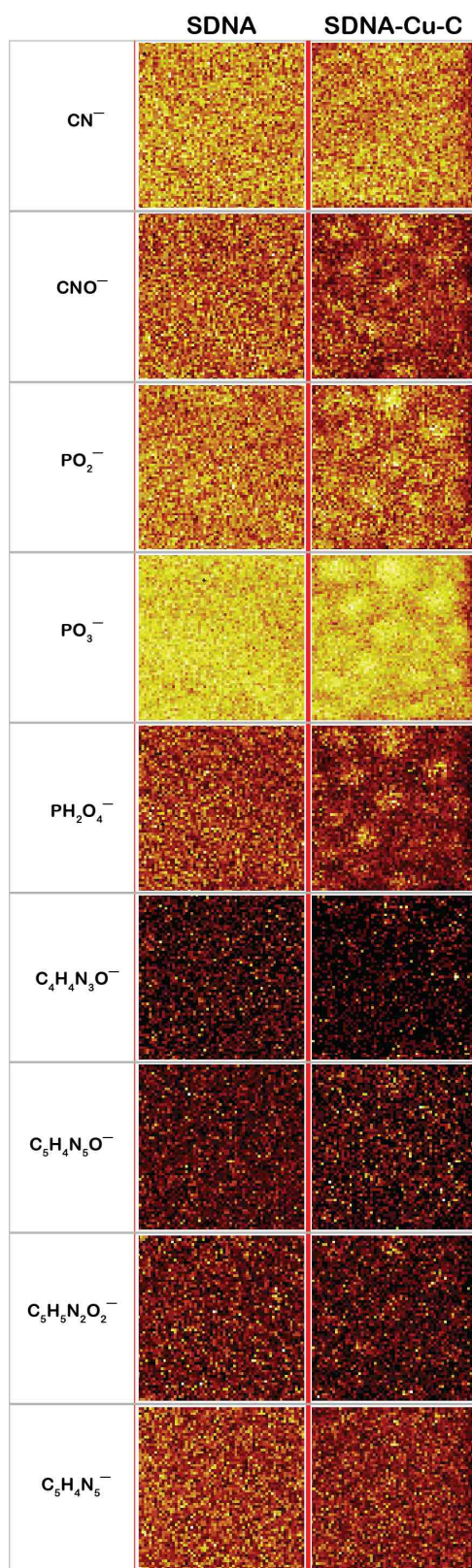
**Supplementary Table S2.** Sticky-end sequences for DNA rings.

**Supplementary Table S3.** FTIR absorption frequencies of SDNA and their spectral assignments.

**Supplementary Fig. S1.** DNA base sequences and pictorial representation of DNA rings. (a) A unit building block of RDNA containing two strands, Ring 1-1 and Ring 1-2. The complementary sticky-ends are indicated as s1, s1' and s2, s2'. (b) Schematic diagram of an RDNA. The outer and inner diameters of the RDNA were 29 and 13 nm, respectively.



**Supplementary Fig. S2.** Representative negative ion mode TOF-SIMS images (scan size of  $150 \times 150 \mu\text{m}^2$ ) showing the distribution of sugar, phosphate backbone, and nucleobases fragments in SDNA molecules and SDNA-Cu-C complexes.



**Supplementary Table S1.** RDNA base sequence information: strand name, total number of nucleotides, and base sequence.

<b>Strand Name</b>	<b>Total # of nucleotides</b>	<b>Sequence (5' to 3')</b>
Ring 1-1	52	TCCA CGGT CTGC TACT CGGT AATG GCTC ATCA AGCG TCCA GTTC CGCA AACG
Ring 1-2	52	CGCT TCGT TTGC GGAA CTGG AGAT GAGC CATT ACCG AGTA GGTG GACA GACC

**Supplementary Table S2.** Sticky-end sequences for DNA rings (RDNA).

	<b>5' to 3'</b>	<b>3' to 5'</b>	
<b>s1</b>	TCCAC	AGGTG	s1'
<b>s2</b>	CGCTT	GCGAA	s2'

**Supplementary Table S3.** FTIR absorption frequencies of SDNA and their spectral assignments.

<b>DNA band position [Wavenumber (cm<sup>-1</sup>)]</b>	<b>Band assignment</b>
780	Sugar vibrations
888	Deoxyribose ring vibrations
960	C-C and C-O stretching of the backbone
1018	C-O ribose
1058	C-O deoxyribose stretching
1083	PO <sub>2</sub> <sup>-</sup> symmetric stretch
1230	PO <sub>2</sub> <sup>-</sup> antisymmetric stretch
1371	Cytosine and Guanine
1486	Cytosine in-plane vibrations
1606	Adenine C7=N stretching
1648	Thymine (C2=O stretching)
3339	OH stretching