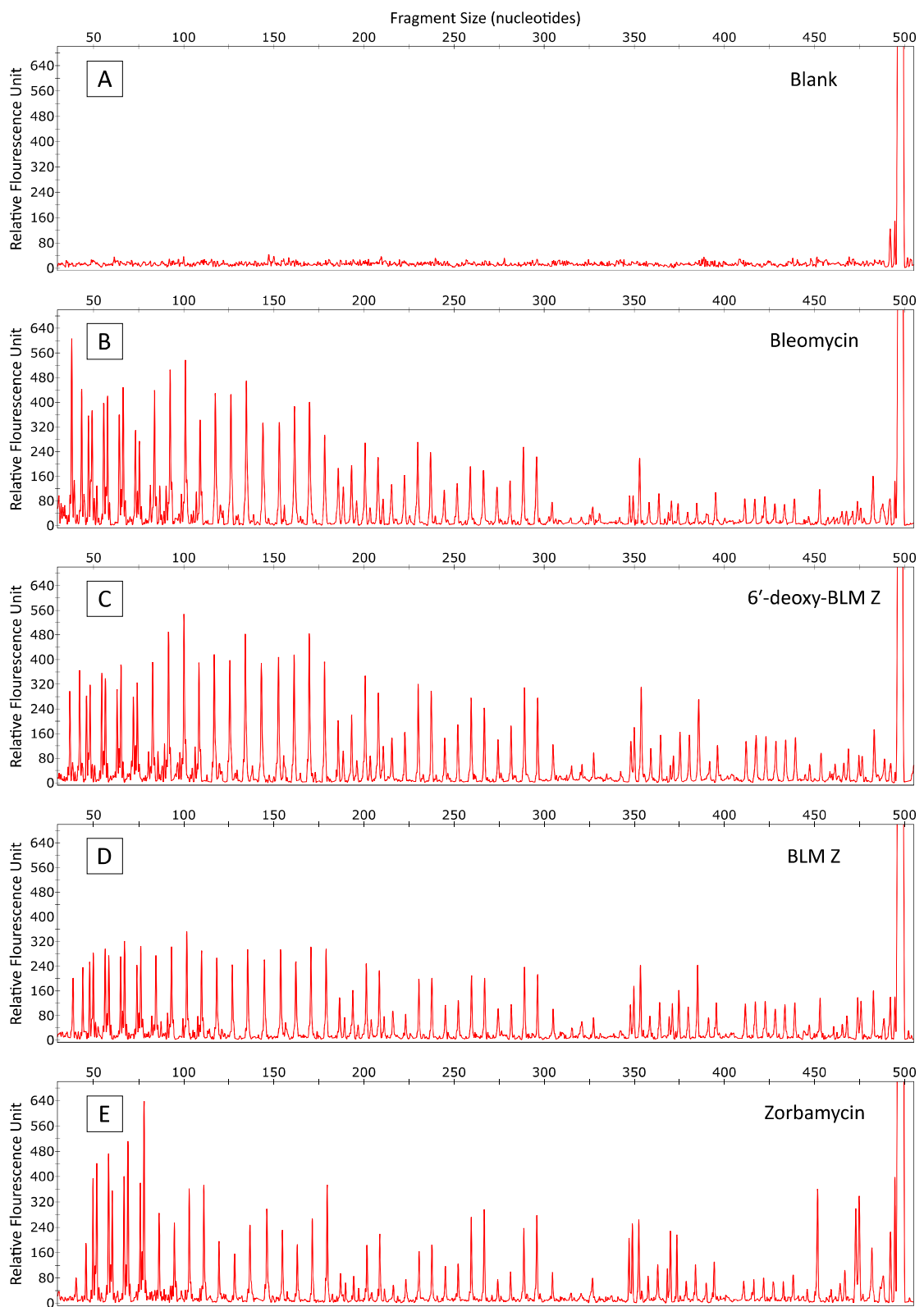
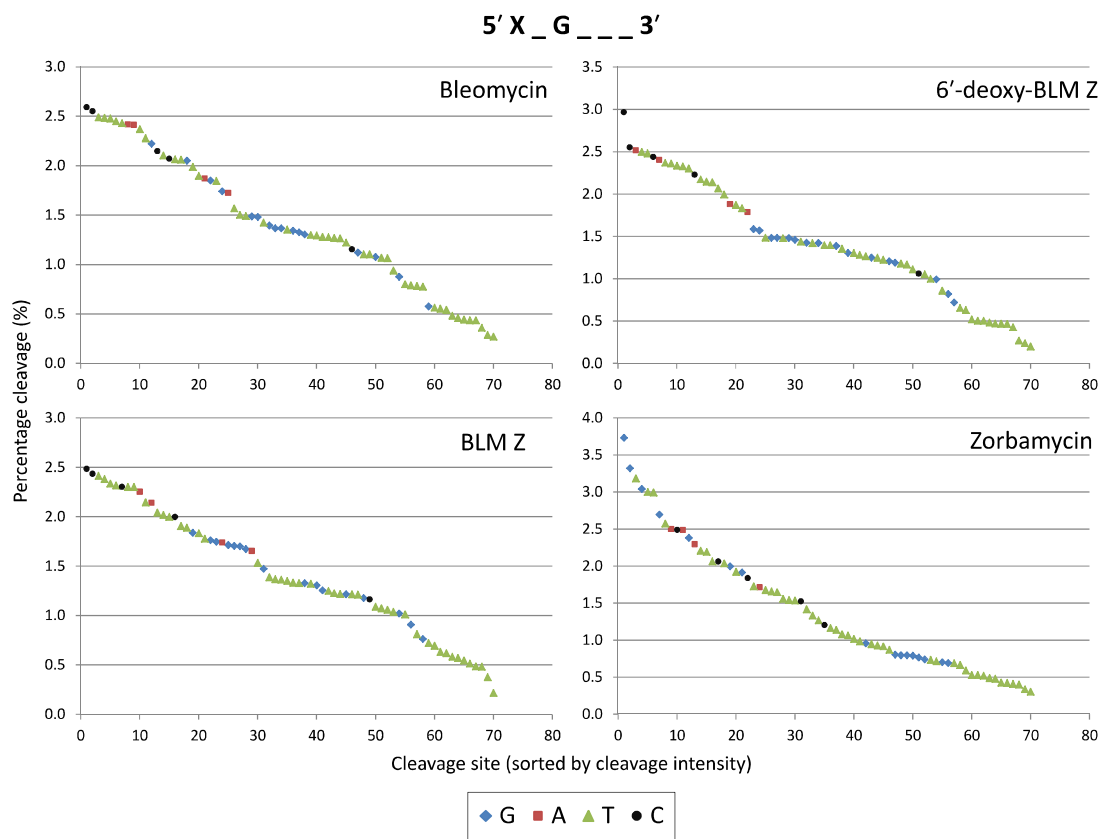


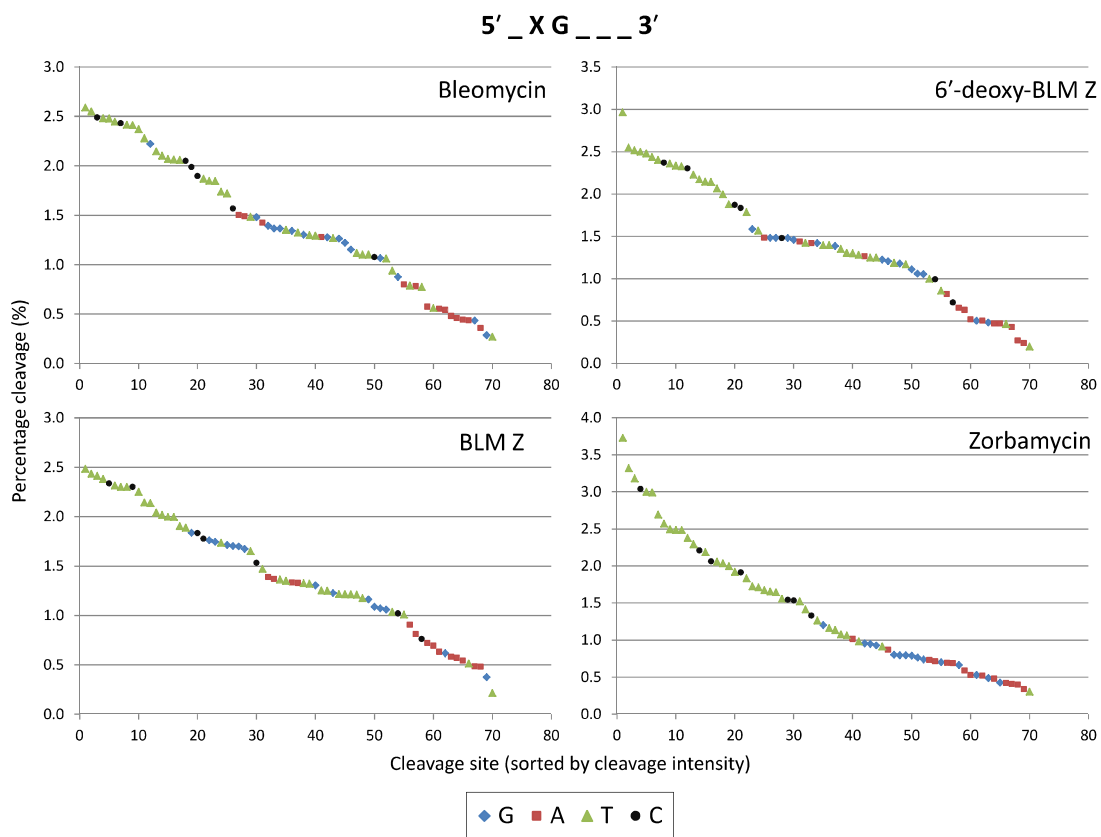
Supplementary Figure 1



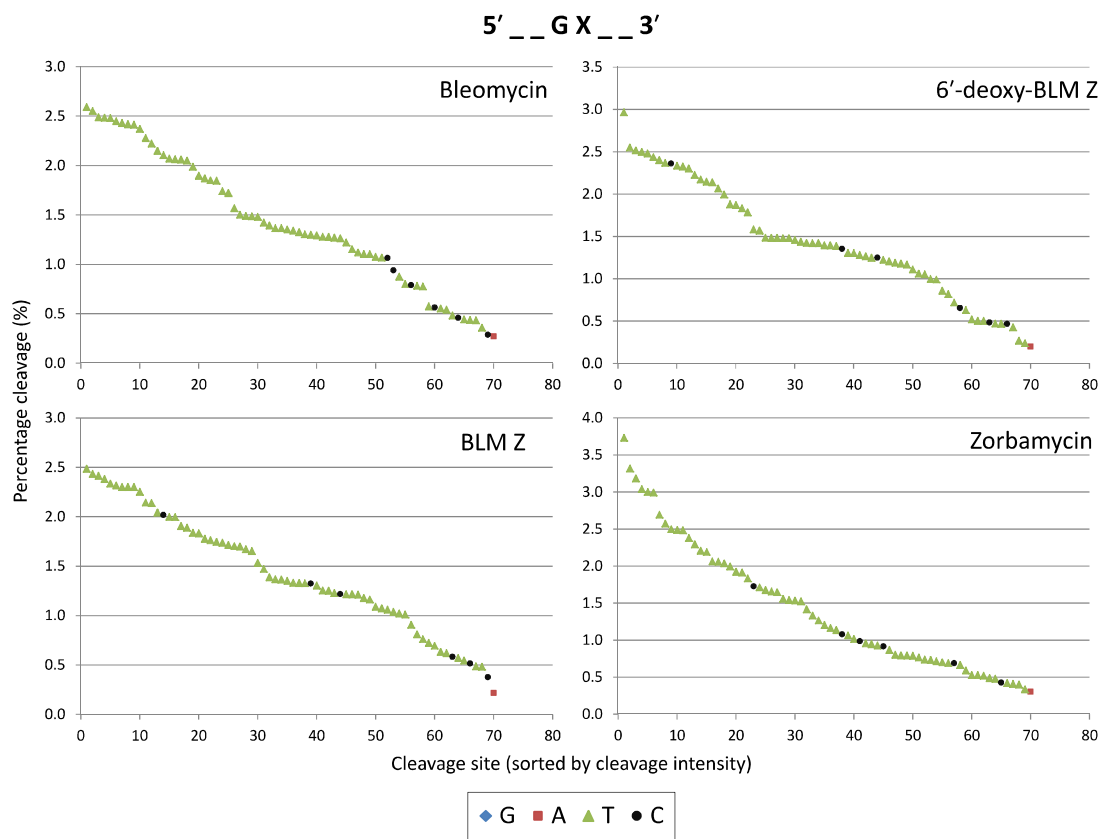
Supplementary Figure 2



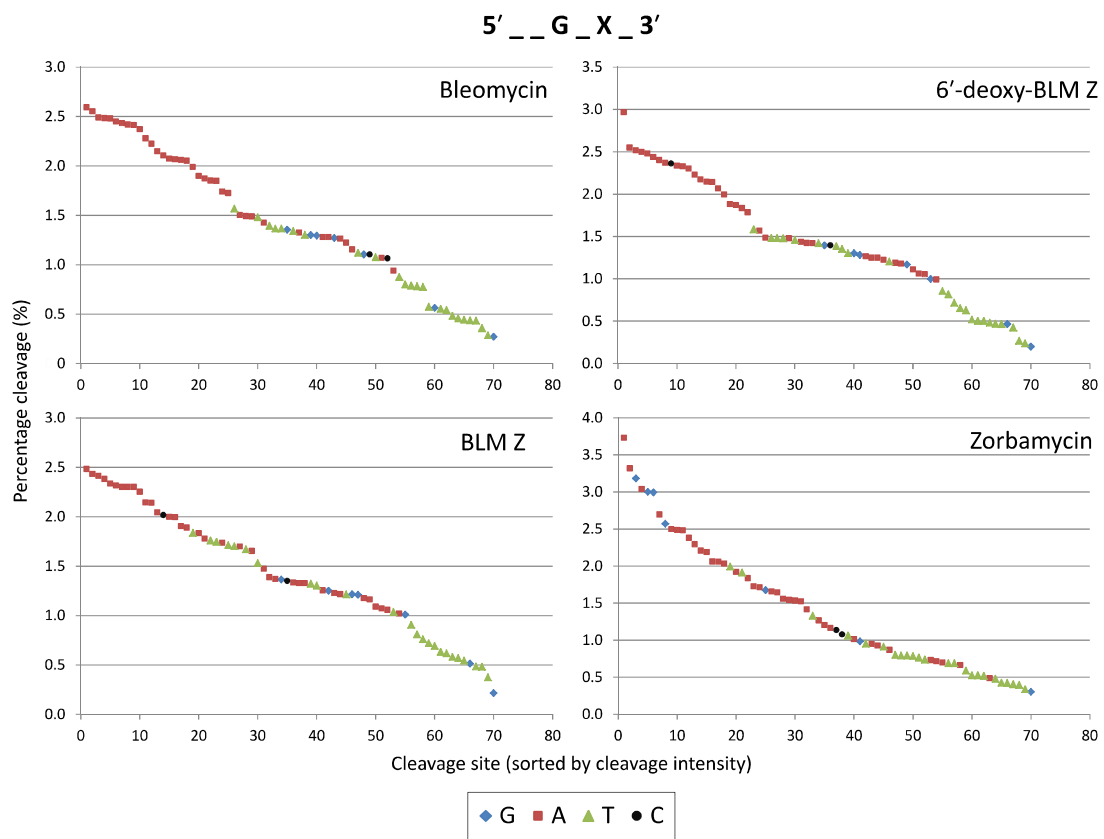
Supplementary Figure 3a



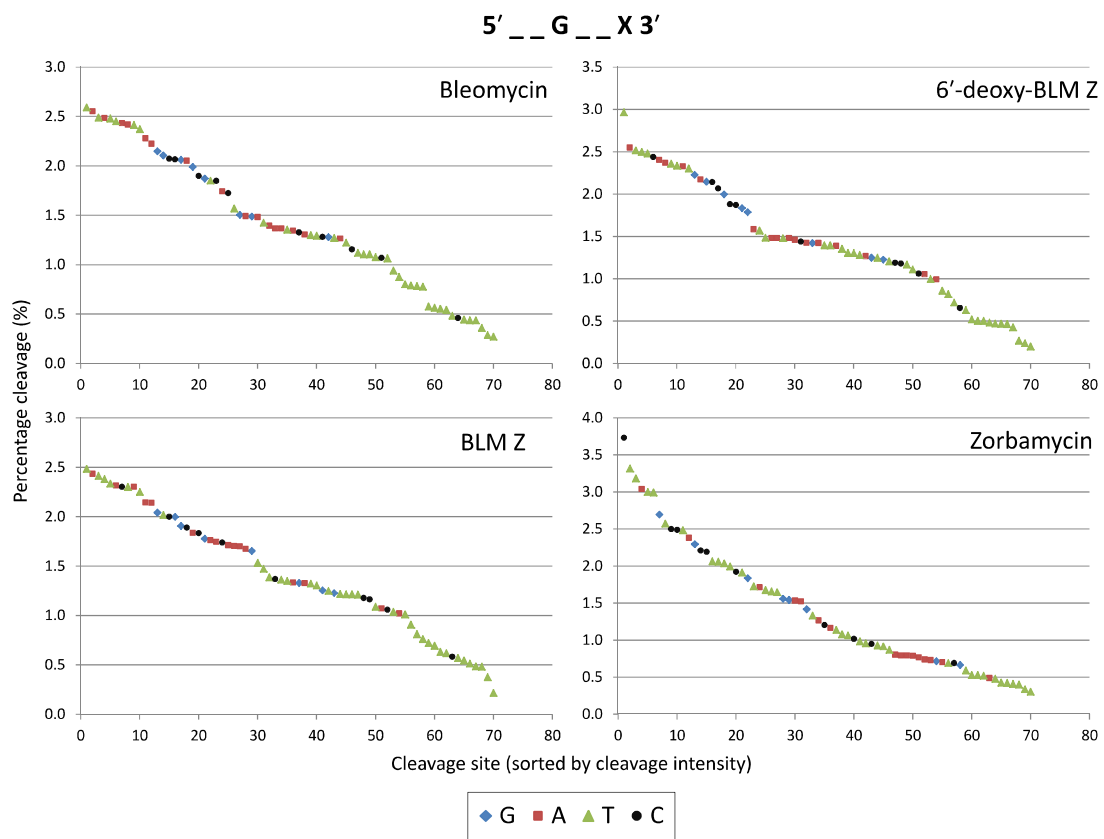
Supplementary Figure 3b



Supplementary Figure 3c



Supplementary Figure 3d



Supplementary Figure 3e

Supplementary Figure 1: Electropherograms showing DNA cleavage of 3'-FAM-labelled PCR products amplified from the RTGTAY plasmid.

The electropherograms show the cleavage profiles as observed from the 3'-end (FAM labelled). These samples were also viewed in the PET channel and are presented in Supplementary Fig. 2. The RTGTAY PCR construct was treated with BLM (B), 6'-deoxy-BLM Z (C), BLM Z (D) or ZBM (E) at a concentration of 0.2 mM. Electropherogram (A) shows the intact RTGTAY PCR construct and is the no BLM blank control.

Supplementary Figure 2: Electropherograms showing DNA cleavage of 5'-PET-labelled PCR products amplified from the RTGTAY plasmid.

The electropherograms show the cleavage profiles as observed from the 5'-end (PET labelled). The electropherograms presented here were from the same samples as those in Supplementary Fig. 1. The RTGTAY PCR construct was treated with BLM (B), 6'- deoxy-BLM Z (C), BLM Z (D) or ZBM (E) at a concentration of 0.2 mM. Electropherogram (A) shows the intact RTGTAY PCR construct and is the no BLM blank control.

Supplementary Figure 3: Nucleotide identities at the cleavage site.

Each cleavage site was sorted by its rank (x-axis) and its relative cleavage intensity (y-axis). The colour of the plot point represents the identity of the nucleotide at the indicated position for that particular cleavage site. This graphic enables a visual comparison of the important differences between the cleavage profiles of BLM and the analogues. Five nucleotide positions are shown where X is the examined nucleotide and G is always present at position -1: A. position -3 in 5'X-G--3', B. position -2 in 5'-XG---3', C. position 0 in 5'--GX--3', D. position 1 in 5'--G-X-3', E. position 2 in 5'--G--X3'. At the -2 position 5'-XG---3', a number of A and G nucleotides are present for BLM, BLM Z, 6'-deoxy-BLM Z in the 25-40 site region that are not present for ZBM. At the +2 position 5'--G--X3', a larger number of As are present for BLM, BLM Z, 6'-deoxy-BLM Z in the 20-40 site region than are found for ZBM.