

FIGURE 6.11

Activation of mitomycin by a biomolecule containing a dithiol structural fragment.

is transformed into **6.9** by intramolecular nucleophilic attack of the amino group thus generated onto the ketone carbonyl. Evolution of this intermediate as described for **6.2** gives quinone methide intermediate **6.11**, which is very similar to mitomycin intermediate **6.5**, and leads to DNA cross-linking products by a similar mechanism involving amino groups at the guanine N-2 position (Figure 6.12).^{38,39} Covalent cross-linking between the DNA minor groove and DNA-binding proteins, including a minor groove-binding oncoprotein, has been described.⁴⁰

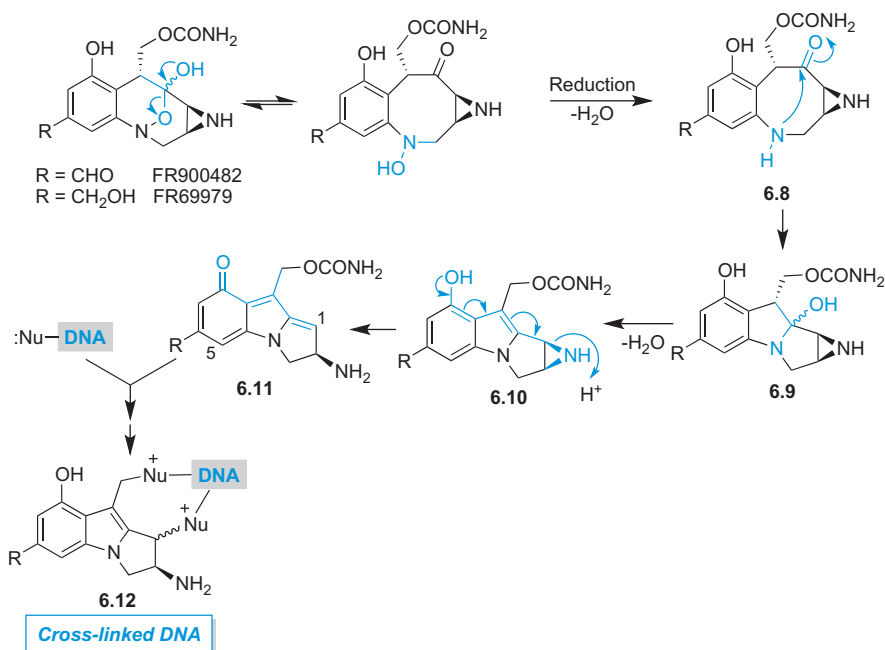


FIGURE 6.12

DNA cross-linking by other aziridine alkaloids.