A combination of access to preassociation sites and local accumulation tendency in the direct vicinity of G-N7 controls the rate of platination of single-stranded DNA

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(SUPPLEMENTARY INFORMATION)

**Derivation of rate law**

Under present conditions with $C_{pt} \gg [\text{DNA-G}_{N7}^{-}-\text{M}^{n+}]$

$C_{pt} = [\text{Pt}^+] + [\text{DNA-P}_{1}^{-}\text{Pt}^+]$ (S1)

$[\text{DNA-P}_{1}^{-}\text{Pt}^+] = K_{ass,i}[\text{Pt}^+][\text{DNA-P}_{1}^{-}\text{M}^{n+}]/[\text{M}^{n+}]$ (S2)

$C_{pt} = [\text{Pt}^+] + K_{ass,i}[\text{Pt}^+][\text{DNA-P}_{1}^{-}\text{M}^{n+}]/[\text{M}^{n+}]$ (S3)

$[\text{Pt}^+] = C_{pt} [\text{M}^{n+}]/([\text{M}^{n+}] + K_{ass,i}[\text{DNA-P}_{1}^{-}\text{M}^{n+}])$ (S4)

Insertion of eq S4 into 4a gives eq S5

$k_{obs} = k_{2}K_{ass}C_{pt}/([M^{n+}] + K_{ass,i}[\text{DNA-P}_{1}^{-}\text{M}^{n+}])$ (S5)

Identification of the expression for $k_{2,app}$ from eq 4b gives eq 7

$k_{obs} = k_{2,app}C_{pt} [M^{n+}]/([M^{n+}] + K_{ass,i}[\text{DNA-P}_{1}^{-}\text{M}^{n+}])$ (7)

**Supporting information:** Derivation of rate equation assuming presence of non-productive phosphate-association.