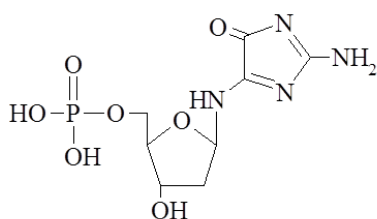
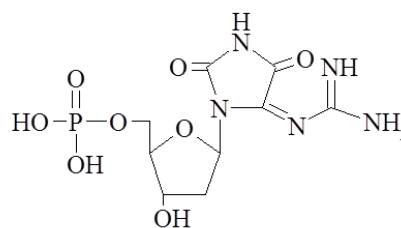


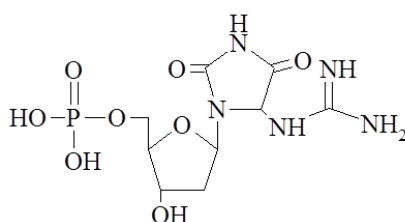
Supplementary Material



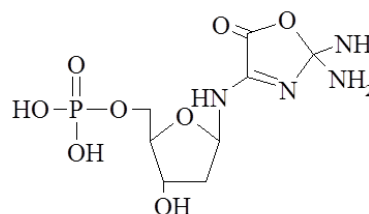
Imidazolone 5'-monophosphate (dIzMP)



Dehydroguanosine 5'-monophosphate (dDGhMP)



Guanidinohydantoin 5'-monophosphate (dGhMP)



Oxazolone 5'-monophosphate (dZMP)

Figure S1: Chemical structure of photosensitized oxidation products of dGMP

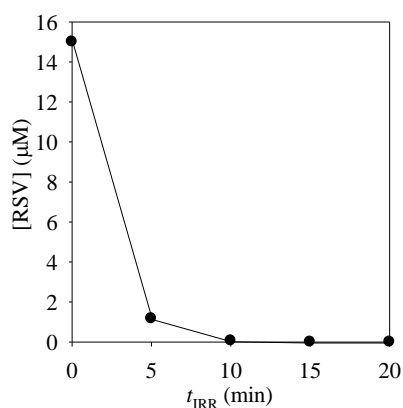


Figure S2: Time evolution of RSV during Ptr-photosensitized oxidation in air-equilibrated aqueous solutions (pH 6.0) as a function of irradiation time. $\lambda_{\text{IRR}} = 365 \text{ nm}$, $[\text{Ptr}]_0 = 60 \text{ }\mu\text{M}$, $[\text{RSV}]_0 = 5 \text{ }\mu\text{M}$.

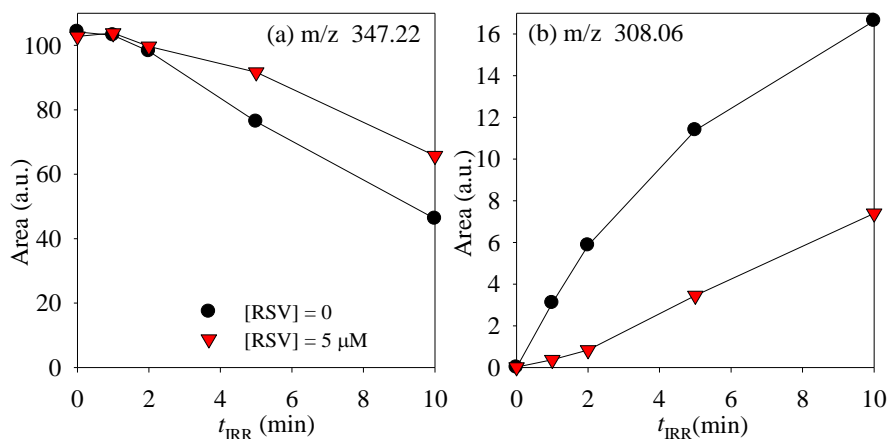


Figure S3: UPLC-QToF-MS analysis of irradiated air-equilibrated solutions containing dGMP (100 μM) and Ptr (100 μM). Area of the peak corresponding to (a) dGMP and (b) dIzMP, extracted from mass chromatograms recorded for the corresponding specific masses. Experiments performed in the absence of RSV (●) and in the presence of 5 μM RSV (▼).

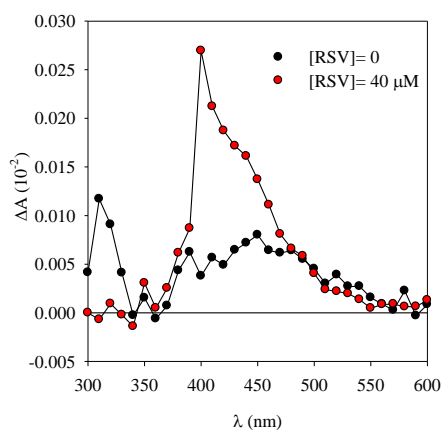


Figure S4: (a) Differential transient absorption spectra recorded 64 μs after the 355 nm laser pulse of Ar-saturated aqueous solutions containing Ptr (93 μM) and dGMP (700 μM) in the absence and in the presence of RSV (0 and 40 μM).

Reaction		Rate
$^3\text{Ptr}^*$	\longrightarrow Ptr	$1/\tau_T [^3\text{Ptr}^*]$
$^3\text{Ptr}^* + \text{dGMP}$	\longrightarrow $\text{Ptr}^{\bullet-} + \text{dGMP}^{\bullet+}$	$k_{qT}^{\text{dGMP}} [^3\text{Ptr}^*][\text{dGMP}]$
$^3\text{Ptr}^* + \text{RSV}$	\longrightarrow $\text{Ptr}^{\bullet-} + \text{RSV}^{\bullet+}$	$k_{qT}^{\text{RSV}} [^3\text{Ptr}^*][\text{RSV}]$
$^3\text{Ptr}^* + \text{O}_2$	\longrightarrow Ptr + $^1\text{O}_2$	$k_{qT}^{\text{O}_2} [^3\text{Ptr}^*][\text{O}_2]$

Scheme S1: Reactions involving $^3\text{Ptr}^*$. $\tau_T = 6.2(\pm 0.7) \mu\text{s}$, $k_{qT}^{\text{dGMP}} = 5.9 \times 10^9 \text{M}^{-1}\text{s}^{-1}$, $k_{qT}^{\text{RSV}} = 1.6 \times 10^9 \text{M}^{-1}\text{s}^{-1}$ and $k_{qT}^{\text{O}_2} = 4.94 \times 10^9 \text{M}^{-1}\text{s}^{-1}$.³¹