

Electronic supplementary information (ESI)

**The Mutagenic Mechanism of Oxygenated Alkylhydrazones Occurs
through Alkyl Radicals and Alkyldiazonium Ions**

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Contents

| | |
|---|----|
| Mutagenicity of MAPH in <i>Salmonella typhimurium</i> TA1535 and YG3001 (Table S1) | S1 |
| Mutagenicity of MAPH in <i>Salmonella typhimurium</i> YG7108 (Table S2) | S1 |
| Formation of 8-OHdG (▲) and <i>O</i> ⁶ -MedG (■) from the reaction of MAPH and DNA (Table S3) | S1 |

Table S1. Mutagenicity of MAPH in *Salmonella typhimurium* TA1535 and YG3001.

| Concentration (μmol) | Revertants/ plate | | | | | |
|--------------------------------------|-------------------|-------|----|--------|-------|-----|
| | TA1535 | | | YG3001 | | |
| 0 | 13 | \pm | 2 | 29 | \pm | 5 |
| 0.5 | 18 | \pm | 2 | 31 | \pm | 3 |
| 1.0 | 28 | \pm | 3 | 41 | \pm | 4 |
| 2.5 | 119 | \pm | 30 | 173 | \pm | 17 |
| 5.0 | 295 | \pm | 31 | 495 | \pm | 110 |

Table S2. Mutagenicity of MAPH in *Salmonella typhimurium* YG7108.

| Concentration (μmol) | Revertants/ plate |
|-----------------------------------|-------------------|
| 0 | 152 \pm 14 |
| 0.005 | 390 \pm 37 |
| 0.01 | 507 \pm 33 |
| 0.05 | 1177 \pm 97 |
| 0.1 | 2392 \pm 312 |

Table S3. Formation of *O*⁶-MedG and 8-OHdG from the reaction of MAPH and DNA.

| Concentration (μmol) | <i>O</i> ⁶ -MedG/ 10^2 dG | 8-OHdG/ 10^2 dG |
|--------------------------------------|--|-------------------|
| 0 | 0 \pm 0 | 0 \pm 0 |
| 50 | 5.1 \pm 0.6 | 1.0 \pm 0.2 |
| 100 | 6.1 \pm 0.6 | 1.0 \pm 0.1 |
| 300 | 7.5 \pm 1.2 | 1.6 \pm 0.2 |