Paradoxical hot spots for guanine oxidation by a chemical mediator of inflammation. Margolin et al. (p 365) describe the unusual sequence selectivity for DNA oxidation by an important chemical mediator of inflammation, nitrosoperoxycarbonate. Contrary to classical one-electron oxidants, which selectively produce damage at guanine bases having the lowest sequence-dependent ionization potential, this macrophage-derived oxidant produces the most damage at guanines in sequence contexts that confer the highest ionization potentials (see also News & Views by Cadet, Douki & Ravant, p 348). This observation complicates models that attempt to predict the location of oxidative DNA damage in cells. Cover art by Jeff Dixon (http://www.jeffdixon.ca) depicts an activated macrophage generating nitric oxide and superoxide that, along with carbon dioxide, react to form nitrosoperoxycarbonate. Homolytic bond cleavage produces nitrogen dioxide and carbonate radical anion, and the latter oxidizes a solvent-accessible guanine in DNA.
BRIEF COMMUNICATIONS

365  Paradoxical hotspots for guanine oxidation by a chemical mediator of inflammation
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367  The Atx1-Ccc2 complex is a metal-mediated protein-protein interaction
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369  Small molecule–based reversible reprogramming of cellular lifespan
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375 Visualization of nitric oxide in living cells by a copper-based fluorescent probe
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381 Combinatorial chemistry identifies high-affinity peptidomimetics against α4β1 integrin for in vivo tumor imaging
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390 ERRATA AND CORRIGENDA

NATURE CHEMICAL BIOLOGY CLASSIFIED

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