

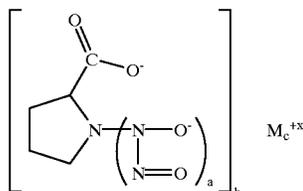
acetonitrile:tetrahydrofuran as the eluant: UV λ_{max} (ϵ) 230 nm ($8.7 \text{ mM}^{-1} \text{ cm}^{-1}$); NMR δ 2.02 (s, 3 H), 2.07 (m, 2 H), 2.11 (s, 3 H), 3.46 (m, 4 H), 3.83 (m, 4 H), 4.03 (s, 3 H), 5.15 (m, 1 H), 6.28 (b, 0.5 H), 6.35 (b, 0.5 H); IR 3297, 2931, 2847, 1645, 1546, 1497, 1441, 1223 cm^{-1} ; MS m/z (relative intensity, %), 333 (M^+ , 4), 318 (2), 304 (3), 303 (16), 288 (12), 260 (11), 259 (100), 258 (9), 214 (78), 184 (37), 183 (10), 174 (5), 146 (26), 142 (56), 141 (5), 104 (63), 61 (60); exact mass calcd for $C_{12}H_{23}N_5O_4S$ (M^+) 333.1470, found 333.1471.

All publications, patents, and patent applications cited herein are hereby incorporated by reference to the same extent as if each individual document were individually and specifically indicated to be incorporated by reference and were set forth in its entirety herein.

While this invention has been described with emphasis upon preferred embodiments, it will be obvious to those of ordinary skill in the art that the preferred embodiments may be varied. It is intended that the invention may be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications encompassed within the spirit and scope of the appended claims.

We claim:

1. A polymeric composition capable of releasing nitric oxide, said composition comprising a biopolymeric backbone wherein said backbone is of an oligonucleotide, a nucleic acid, a tissue-cell-, or tumor-specific antibody or fragment thereof, and a protein containing a recognition sequence for a receptor-ligand interaction favorable to tumor cell attachment, and at least one nitric oxide-releasing $N_2O_2^-$ functional group bound to said biopolymer, wherein said nitric oxide-releasing $N_2O_2^-$ functional group is of the formula:



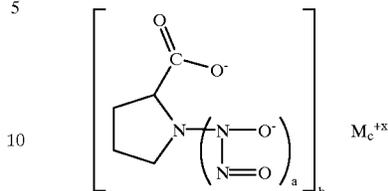
wherein M^{+x} is a pharmaceutically acceptable cation, and x is the valence of the cation.

2. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the polymeric composition of claim 1.

3. A method of treating a biological disorder in a mammal in which dosage with nitric oxide is therapeutic, comprising administering to said mammal the polymeric composition of

claim 1 in an amount sufficient to release a therapeutically effective amount of nitric oxide.

4. A compound of formula:



wherein M^{+x} is a pharmaceutically acceptable cation, x is the valence of the cation, a is 1, and b and c are the smallest integers that result in a neutral compound.

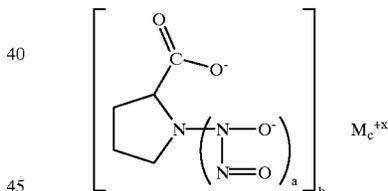
5. A composition comprising the compound of claim 4 and a carrier.

6. A pharmaceutical composition comprising the compound of claim 4 and a pharmaceutically acceptable carrier.

7. A method of treating a biological disorder in a mammal in which dosage with nitric oxide is therapeutic, comprising administering to said mammal the compound of claim 4 in an amount sufficient to release a therapeutically effective amount of nitric oxide.

8. A method of treating a biological disorder in a mammal in which dosage with nitric oxide is therapeutic, comprising administering to said mammal the composition of claim 6 in an amount sufficient to release a therapeutically effective amount of nitric oxide.

9. A polymeric composition capable of releasing nitric oxide, said composition comprising a polymer and a nitric oxide-releasing $N_2O_2^-$ functional group bound to said polymer, wherein said nitric oxide-releasing $N_2O_2^-$ functional group is of the formula:



wherein M^{+x} is a pharmaceutically acceptable cation, and x is the valence of the cation.

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