CLAIMS

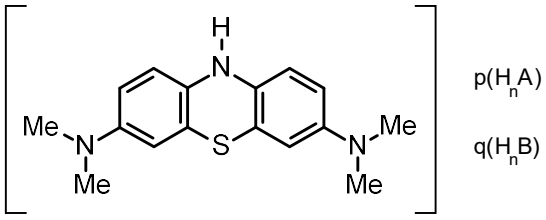
1. Use of an MT-containing compound in the manufacture of a medicament for use in a method of therapeutic or prophylactic treatment of COVID-19 in a subject,

which method comprises administering to said subject a methylthioninium (MT)-containing compound,

wherein said administration provides a total daily oral dose of between 10 and 30 mg of MT to the subject per day, optionally split into 2 or more doses,

or wherein said administration provides a total daily intravenous (IV) dose of between 10 and 25 mg of MT to the subject per day,

wherein the MT-containing compound has the following formula:



wherein each of H_nA and H_nB (where present) are protic acids which may be the same or different,
and wherein p = 1 or 2; q = 0 or 1; n = 1 or 2; (p + q) × n = 2,
or a hydrate or solvate thereof.

2. The use as claimed in claim 1 wherein the subject is a human who has been diagnosed with COVID-19, or wherein said method comprises making said diagnosis.

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3. The use as claimed in any one of claims 1 to 2 wherein the total daily dose is between 10 and 25 mg MT (IV) or 12 and 27 mg MT (oral).

4. The use as claimed in claim 3 wherein the total daily dose is between 14 and 20mg MT.

5. The use as claimed in claim 4 wherein the total daily dose is between 15 and 18 mg MT.

6 The use as claimed in any one of claims 1 to 2 wherein the total daily dose is 16 mg MT.

7 The use as claimed in any one of claims 1 to 6 wherein the total daily dose of the MT-containing compound is administered as a split oral dose twice a day or three times a day, or is a continuous infusion IV dose, or is an intermittent IV dose.

8. The use as claimed in claim 7, wherein the intermittent IV dose is 2, 4, or 6 times a day.

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9 The use as claimed in any one of claims 1 to 8 wherein the treatment is combined with a second compound or agent which is selected from the list consisting of: chloroquine or hydroxychloroquine, lopinavir-ritonavir; arbidol;
azithromycin, remdesivir, favipiravir, actemra; dexamethasone; convalescent plasma.

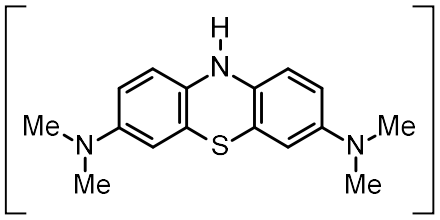
10 The use as claimed in claim 9 wherein the MT-containing compound and the second compound or agent are administered sequentially within 12 hours of each other.

11 The use as claimed in any one of claims 9 to 10 wherein the subject is pre-treated with the second compound or agent prior to commencement of the treatment with the MT-containing compound.

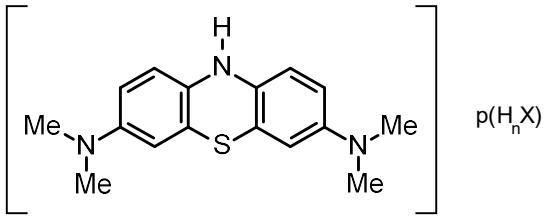
12 The use as claimed in claim 9 wherein the MT-containing compound and the second compound are administered simultaneously, optionally within a single dosage unit.

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13. The use as claimed in any one of claims 1 to 12 wherein the MT-containing compound has the following formula, where HA and HB are different mono-protic acids:

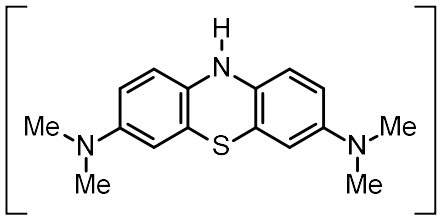


14. The use as claimed in any one of claims 1 to 12 wherein the MT-containing compound has the following formula:

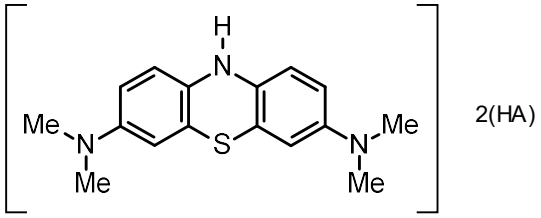


wherein each of H_nX is a protic acid.

15. The use as claimed in any one of claims 1 to 12 wherein the MT-containing compound has the following formula and H_2A is a di-protic acid:



16. The use as claimed in claim 14 wherein the MT-containing compound has the following formula and is a bis-monoprotic acid:



17. The use as claimed in any one of claims 1 to 16 wherein the or each protic acid is an inorganic acid.

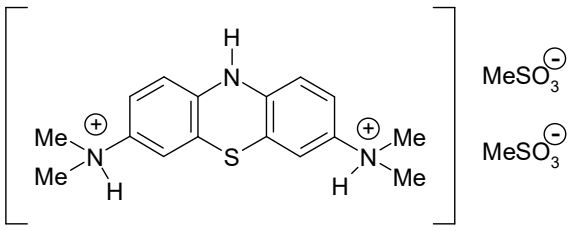
18. The use as claimed in claim 17 wherein each protic acid is a hydrohalide acid.

19. The use as claimed in claim 17 wherein the or each protic acid is selected from HCl; HBr; HNO_3; H_2SO_4.

20. The use as claimed in any one of claims 1 to 16 wherein the or each protic acid is an organic acid.

21. The use as claimed in claim 20 wherein the or each protic acid is selected from H_2CO_3; CH_3COOH; methanesulfonic acid, 1,2-ethanedisulfonic acid, ethansulfonic acid, naphthalenedisulfonic acid, p-toluenesulfonic acid.

22. The use as claimed in any one of claims 1 to 16, or claim 21 wherein the MT-containing compound is LMTM:



23. The use as claimed in claim 22 wherein the total daily dose of LMTM is around 17 mg/day.

24. The use as claimed in claim 23 wherein the dose of LMTM is 27 mg/once per day.

25. The use as claimed in any one of claims 1 to 12 wherein the MT-containing compound is selected from the list consisting of:

