




IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ashley, Robert	Examiner:	Tran, Susan T.
Serial No.:	11/876,478	Group Art Unit:	1615
Confirmation No:	6286	Docket:	512-53 DIV/CON
Filed:	October 22, 2007	Dated:	August 5, 2009
For:	METHODS OF TREATING ACNE		

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

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on August 5, 2009*

Signed:  8-5-9

AMENDMENT

Sir:

In the response to the February 5, 2009 Office Action, applicants file herewith the instant Amendment.

**Amendments to the Specification:** None.

**Amendments to Claims:** Begin on page 2 of this paper.

**Remarks:** Begin on page 19 of this paper.

**Amendments to the Claims**

*This listing of claims will replace all prior versions, and listings, of claims in the application.*

1. (currently amended) A method of treating acne in a human in need thereof comprising administering systemically to said human a tetracycline compound in an amount that is effective to treat acne but has substantially no antibiotic activity, without administering a bisphosphonate compound, wherein said tetracycline compound is a non-antibiotic tetracycline compound, or a pharmaceutically acceptable salt of a non-antibiotic tetracycline compound.

2. (previously presented) A method according to Claim 1, wherein said acne is acne vulgaris, cystic acne, acne atrophica, bromide acne, chlorine acne, acne conglobata, acne cosmetica, acne detergentans, epidemic acne, acne estivalis, acne fulminans, halogen acne, acne indurata, iodide acne, acne keloid, acne mechanica, acne papulosa, pomade acne, premenstrual acne, acne pustulosa, acne rosacea, acne scorbutica, acne scrofulosorum, acne urticata, acne varioliformis, acne venenata, propionic acne, acne excoriee, gram negative acne, steroid acne, or nodulocystic acne.

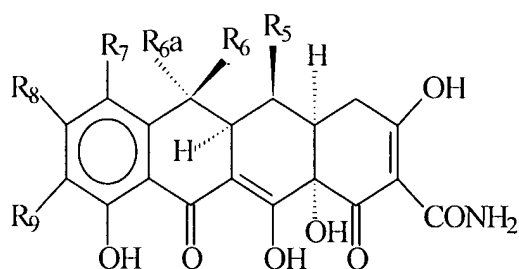
Claims 3-23 (canceled).

24. (currently amended) A method according to Claim 1 ~~Claim 23~~, wherein said non-antibiotic tetracycline compound is:

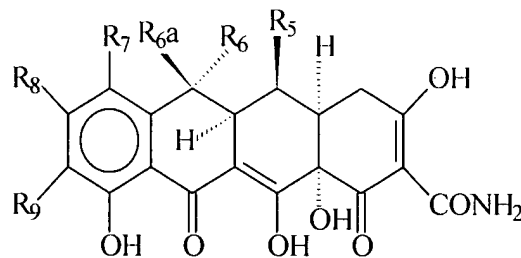
- 4-de(dimethylamino)tetracycline (CMT-1),
- tetracyclinonitrile (CMT-2),
- 6-demethyl-6-deoxy-4-de(dimethylamino)tetracycline (CMT-3),
- 4-de(dimethylamino)-7-chlorotetracycline (CMT-4),
- tetracycline pyrazole (CMT-5)
- 4-hydroxy-4-de(dimethylamino)tetracycline (CMT-6),
- 4-de(dimethylamino)-12 $\alpha$ -deoxytetracycline (CMT-7),
- 6- $\alpha$ -deoxy-5-hydroxy-4-de(dimethylamino)tetracycline (CMT-8),

4-de(dimethylamino)-12 $\alpha$ -deoxyanhydrotetracycline (CMT-9), or  
4-de(dimethylamino)minocycline (CMT-10),  
or pharmaceutically acceptable salts thereof.

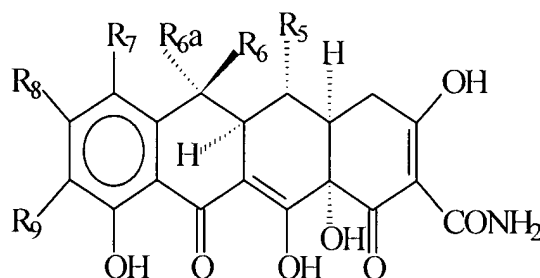
25. (currently amended) A method according to Claim 1 ~~Claim 23~~, wherein the non-antibiotic tetracycline compound is selected from the group consisting of:



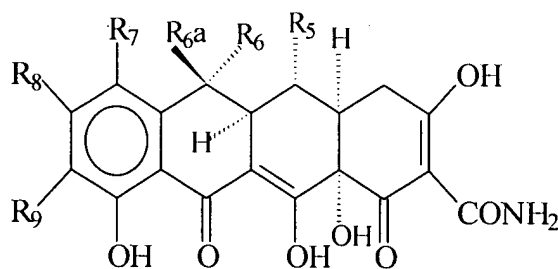
Structure C



Structure D



Structure E



Structure F

wherein:

R7 is selected from the group consisting of hydrogen, amino, nitro, mono(lower alkyl) amino, halogen, di(lower alkyl)amino, ethoxythiocarbonylthio, azido, acylamino, diazonium, cyano, and hydroxyl;

R6-a is selected from the group consisting of hydrogen and methyl;

R6 and R5 are selected from the group consisting of hydrogen and hydroxyl;

R8 is selected from the group consisting of hydrogen and halogen;

R9 is selected from the group consisting of hydrogen, amino, azido, nitro, acylamino, hydroxy, ethoxythiocarbonylthio, mono(lower alkyl) amino, halogen, diazonium, di(lower alkyl)amino and RCH(NH<sub>2</sub>)CO;

R is hydrogen or lower alkyl; and

pharmaceutically acceptable salts thereof; with the following provisos:

when either R7 and R9 are hydrogen then R8 must be halogen; and

when R6-a, R6, R5 and R9 are all hydrogen and R7 is hydrogen, amino, nitro, halogen, dimethylamino or diethylamino, then R8 must be halogen; and

when R6-a is methyl, R6 and R9 are both hydrogen, R5 is hydroxyl, and R7 is hydrogen, amino, nitro, halogen or diethylamino, then R8 is halogen; and

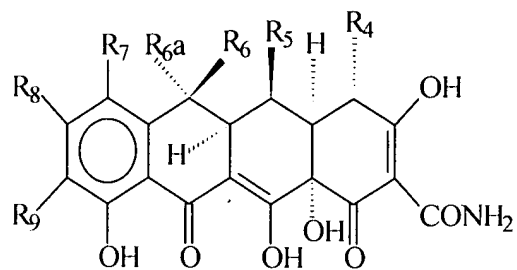
when R6-a is methyl, R6 is hydroxyl, R5, R7 and R9 are all hydrogen, then R8 must be halogen; and

when R6-a, R6 and R5 are all hydrogen, R9 is methylamino and R7 is dimethylamino, then R8 must be halogen; and

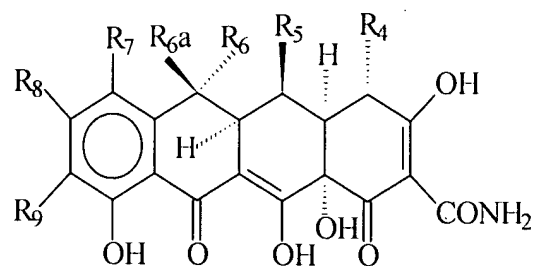
when R6-a is methyl, R6 is hydrogen, R5 is hydroxyl, R9 is methylamino and R7 is dimethylamino, then R8 must be halogen; and

when R6-a is methyl, R6, R5 and R9 are all hydrogen and R7 is cyano, then R8 must be halogen, and pharmaceutically acceptable salts thereof.

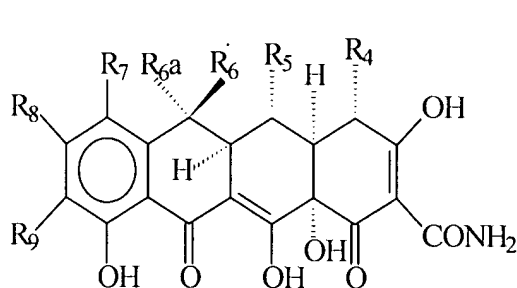
26. (currently amended) A method according to Claim 1 ~~Claim 23~~, wherein the non-antibiotic tetracycline compound is selected from the group consisting of:



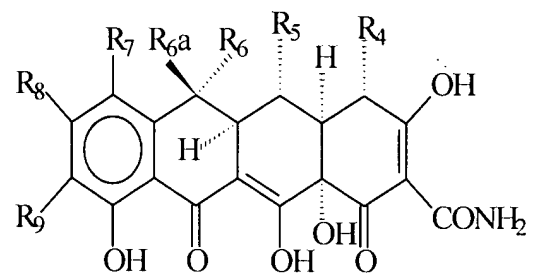
Structure G



Structure H



Structure I



Structure J

wherein:

R<sub>7</sub> is selected from the group consisting of hydrogen, amino, nitro, mono(lower alkyl) amino, halogen, and di(lower alkyl)amino, ethoxythiocarbonylthio, azido, acylamino, diazonium, cyano, and hydroxyl;

R<sub>6</sub>-a is selected from the group consisting of hydrogen and methyl;

R<sub>6</sub> and R<sub>5</sub> are selected from the group consisting of hydrogen and hydroxyl;

R<sub>4</sub> is selected from the group consisting of NOH, N-NH-A, and NH-A,

where A is a lower alkyl group;

R<sub>8</sub> is selected from the group consisting of hydrogen and halogen;

R<sub>9</sub> is selected from the group consisting of hydrogen, amino, azido, nitro, acylamino, hydroxy, ethoxythiocarbonylthio, mono(lower alkyl) amino, halogen, di(lower alkyl)amino and RCH(NH<sub>2</sub>)CO;

R is hydrogen or lower alkyl; and

pharmaceutically acceptable salts thereof; with the following provisos:

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