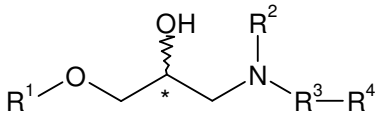
Claims

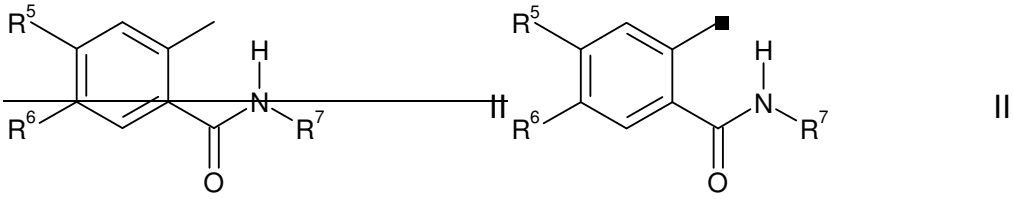
1. Use of a compound for preparation of a medicament for the treatment of disorders mediated by protozoan organisms causing malaria, wherein the compound is a compound of formula (I)



I

wherein

R^1 is a group of formula (II)



II

wherein the square denotes the point of attachment of formula (II) to formula (I),

R^2 is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

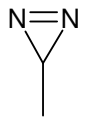
R^3 is not present, or R^3 is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^4 is

- H, if R^3 is present,
- (C_{5-12})cycloalkyl, which cycloalkyl optionally is substituted by (C_{1-4})alkyl, hydroxy;
- (C_{1-4})alkyl, optionally substituted by phenyl,

- if R^3 is present, R^4 is (C_{6-12})aryl, which aryl optionally is substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{2-6})alkynyl, (C_{1-6})alkyloxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, halogen, halogenated (C_{1-4})alkyl, phenylcarbonyl, or

- diazirinyl of formula (III)  III,

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,
or
R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and
R^7 is
(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III.

2. The use of claim 1, wherein in a compound of formula I
R^1 is as defined in claim 1,
R^2 is H, (C_{1-8})alkyl, optionally substituted by (C_{1-4})alkoxyphenyl or (C_{3-6})cycloalkyl,
R^3 is not present, or R^3 is (C_{1-8})alkylene, or
R^2 and R^3 together with the nitrogen atom to which they are attached form piperidinyl or piperazinyl;
R^4 is

- hydrogen,
- (C_{8-12})cycloalkyl, which optionally is substitued by (C_{1-4})alkyl,
- (C_{1-4})alkyl, substituted by phenyl,

- unsubstituted phenyl, or phenyl substituted by (C_{1-6})alkyl, phenylcarbonyl, diazirinyl of formula III, halogenated (C_{1-4})alkyl, (C_{1-4})alkoxy or HC≡C-(C_{1-6})alkylenoxy,

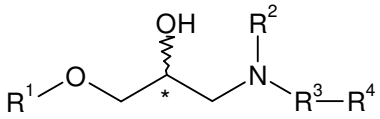
R^5 and R^6 independently of each other are H, halogen or HC≡C-(C_{1-6})alkylenoxy, and

R^7 is

(C_{1-8})alkyl, which alkyl optionally is substituted by (C_{1-4})alkoxyphenyl, halogenated phenyl, phenyl substituted by halogenated (C_{1-4})alkyl, diazirinyl of formula III or (C_{1-6})alkylphenyl, or

(C_{6-12})aryl, including naphthalinyl and phenyl, wherein phenyl is substituted by halogen, (C_{1-6})alkyl, or halogenated (C_{1-4})alkyl.

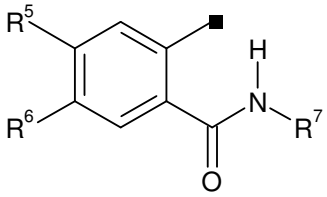
3. A compound of formula I



I

wherein

R^1 is a group of formula (II)



II

wherein the square denotes the point of attachment of formula (II) to formula (I),

~~, as defined in claim 1,~~ wherein R^4 is (C_{8-12})cycloalkyl and wherein

R^2 is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

R^3 is not present, or R^3 is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

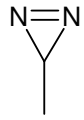
or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and

R^7 is

(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

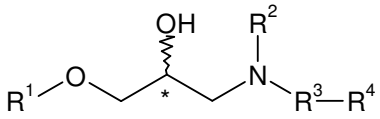
- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III



III

~~the other residues are as defined in claim 1~~.

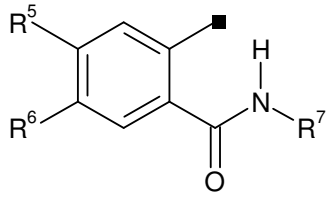
4. **A compound of formula I ~~as defined in claim 1~~**



I

wherein

R^1 is a group of formula (II)



II

wherein the square denotes the point of attachment of formula (II) to formula (I)**,**

wherein R^4 is phenyl, and wherein

R^2 is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

R^3 is not present, or R^3 is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

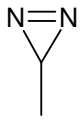
or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and

R^7 is

(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III



III and

especially the compounds

2-{2-Hydroxy-3-[4-(3-trifluoromethyl-3H-diazirin-3-yl)-benzylamino]-propoxy}-N-(3-methyl-butyl)-5-prop-2-ynyloxy-benzamide of formula I-44,

N-(4-Fluoro-phenyl)-2-{2-hydroxy-3-[4-(3-trifluoromethyl-3H-diazirin-3-yl)-benzylamino]-propoxy}-5-prop-2-ynyloxy-benzamide of formula I-45,

2-[3-(4-Benzoyl-benzylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-49,

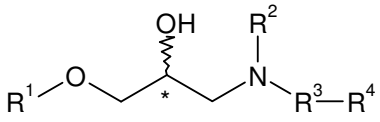
N-Benzyl-2-[2-hydroxy-3-(3-phenyl-propylamino)-propoxy]-benzamide of formula I-50,

2-(3-Benzylamino-2-hydroxy-propoxy)-N-(3-methyl-butyl)-benzamide of formula I-59,

2-[2-Hydroxy-3-(4-trifluoromethyl-benzylamino)-propoxy]-N-(3-methyl-butyl)-benzamide of formula I-60, and

N-Benzyl-2-{2-hydroxy-3-[(4-methoxy-3-prop-2-ynyloxy-benzyl)-propyl-amino]-propoxy}-benzamide of formula I-63.

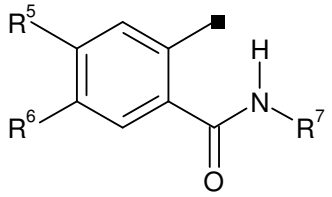
5. **A compound of formula I**



I

wherein

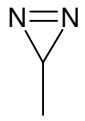
R^1 is a group of formula (II)



II

wherein the square denotes the point of attachment of formula (II) to formula (I)~~as defined in claim 1~~, **wherein R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, and wherein**

R^4 is

- H,
- (C_{5-12})cycloalkyl, which cycloalkyl optionally is substituted by (C_{1-4})alkyl, hydroxy;
- (C_{1-4})alkyl, optionally substituted by phenyl,
- R^4 is (C_{6-12})aryl, which aryl optionally is substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{2-6})alkynyl, (C_{1-6})alkyloxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, halogen, halogenated (C_{1-4})alkyl, phenylcarbonyl, or
- diazirinyl of formula (III) , III

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and

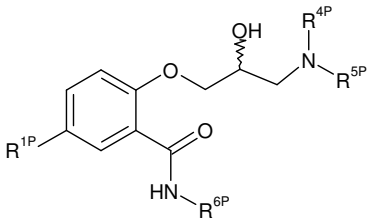
R^7 is

(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III

especially the compounds

of formula (IIp)



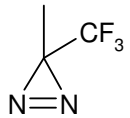
II_P

wherein

R^{1P} is hydrogen or halogen,

R^{4P} and R^{5P} together with the nitrogen atom to which they are attached form piperidinyl or piperazinyl, which piperidinyl or piperazinyl is substituted by $(C_{1-4})_n$-alkylene-$R^{7P}R^{8P}$, wherein n is 0 or 1 and R^{7P} and R^{8P} are phenyl or hydrogen, with the proviso that at least one of R^{7P} and R^{8P} is phenyl, and

R^{6P} ~~has the meaning of R^{3P}~~ is

- (C_{6-12})aryl, which aryl is unsubstituted or substituted, including aryl substituted by one or more, e.g. one or two
  - halogen,
  - (C_{1-4})alkyl,
  - (C_{2-4})alkenyl,
  - halo(C_{1-4})alkyl, or
  - (C_{1-4})alkoxy, or
- (C_{1-12})alkyl, which alkyl is unsubstituted or substituted by (C_{6-12})aryl, including aryl substituted by a group of formula  or substituted by one or more, e.g. one or two
  - halogen,
  - (C_{1-4})alkyl,
  - (C_{2-4})alkenyl,
  - halo(C_{1-4})alkyl, or
  - (C_{1-4})alkoxy,

including the compounds

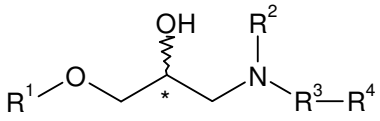
N-(4-Fluoro-phenyl)-2-[2-hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-benzamide of formula I-46,

2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-47,
2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-48,
2-{3-[4-(2,3-Dimethyl-phenyl)-piperazin-1-yl]-2-hydroxy-propoxy}-N-(4-methoxy-benzyl)-benzamide of formula I-51,
2-[2-Hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-67,
2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-68,
2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-prop-oxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-69,
N-(2-Fluoro-phenyl)-2-[2-hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-benzamide of formula I-77,
2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-N-(2-fluoro-phenyl)-benzamide of formula I-78,
2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-propoxy]-N-(2-fluoro-phenyl)-benzamide ~~benzamide~~ of formula I-79,
2-[2-Hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-N-p-tolyl-benzamide of formula I-80,
2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-N-p-tolyl-benzamide of formula I-81,
2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-propoxy]-N-p-tolyl-benzamide of formula I-82,
5-Chloro-2-[2-hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-83,
2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-5-chloro-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-84,
2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-propoxy]-5-chloro-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-85,
5-Bromo-N-(4-fluoro-phenyl)-2-[2-hydroxy-3-(4-phenyl-piperidin-1-yl)-propoxy]-benzamide of formula I-88,

2-[3-(4-Benzyl-piperidin-1-yl)-2-hydroxy-propoxy]-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-89, and

2-[3-(4-Benzhydryl-piperazin-1-yl)-2-hydroxy-propoxy]-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-90.

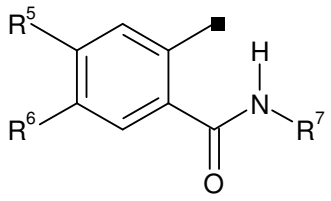
6. **A compound of formula I ~~as defined in claim1~~**



I

wherein

R^1 is a group of formula (II)



II

wherein the square denotes the point of attachment of formula (II) to formula (I)**,**

wherein R^3 is present and R^4 is hydrogen, and wherein

R^2 is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

R^3 is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

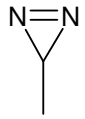
or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and

R^7 is

(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III



III

,

especially the compounds

2-(2-Hydroxy-3-propylamino-propoxy)-N-p-tolyl-benzamide of formula I-54,

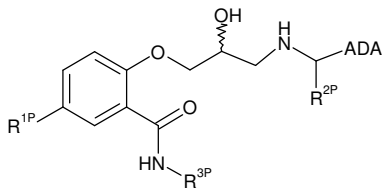
2-(3-Butylamino-2-hydroxy-propoxy)-N-(3-methyl-butyl)-benzamide of formula I-56,

2-(3-Dibutylamino-2-hydroxy-propoxy)-N-(3-methyl-butyl)-benzamide of formula I-57,

2-[2-Hydroxy-3-(3-methyl-butylamino)-propoxy]-N-(3-methyl-butyl)-benzamide of formula I-58,

2-(3-Dibutylamino-2-hydroxy-propoxy)-N-(4-fluoro-phenyl)-benzamide of formula I-61.

7. A compound of formula (Ip)



I_P

wherein ADA is adamantyl, which adamantyl optionally is substituted by (C_{1-4})alkyl, or hydroxy,

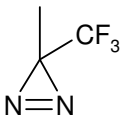
R^{1P} is hydrogen or halogen,

R^{2P} is

- hydrogen,

- (C_{1-8})alkyl, including unsubstituted alkyl, or alkyl substituted by phenyl, or
- (C_{3-6})cycloalkyl, and

R^{3P} is

- (C_{6-12})aryl, which aryl is unsubstituted or substituted, including aryl substituted by one or more, e.g. one or two
  - halogen,
  - (C_{1-4})alkyl,
  - (C_{2-4})alkenyl,
  - halo(C_{1-4})alkyl, or
  - (C_{1-4})alkoxy, or
- (C_{1-12})alkyl, which alkyl is unsubstituted or substituted by (C_{6-12})aryl, including aryl substituted by a group of formula  or aryl substituted as in the meaning of R^{3P},

particularly a compound selected from the group

2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-1,

2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-2,

2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-3,

2-[3-(3,5-Dimethyl-adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-4,

2-[3-(4-Adamantan-1-yl-piperazin-1-yl)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-5,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-6,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-7,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(4-methoxy-benzyl)-benzamide of formula I-8,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-phenethyl-benzamide of formula I-9,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-5-chloro-N-phenethyl-benzamide of formula I-10,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(3-phenyl-propyl)-benzamide of formula I-11,

2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-propyl-benzamide of formula I-12,

2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-13,

2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-(4-trifluoromethyl-benzyl)-benzamide of formula I-16,

2-[3-(Adamantan-2-yl-propyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-17,

2-[3-(Adamantan-2-yl-propyl-amino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-18,

2-[3-(Adamantan-2-yl-pentyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-19,

2-[3-(Adamantan-2-yl-cyclopropyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-20,

2-{3-[Adamantan-2-yl-(2-methoxy-benzyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-21,

2-[3-(Adamantan-2-yl-phenethyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-22,

2-{3-[Adamantan-2-yl-(3-phenyl-propyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-23,

2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-methyl-butyl)-benzamide of formula I-24,

2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-(3-methyl-butyl)-benzamide of formula I-25,

2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-27,

2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-28,

2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-methoxy-benzyl)-benzamide of formula I-29,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-trifluoromethyl-benzyl)-benzamide of formula I-30,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-phenethyl-benzamide of formula I-31,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-phenyl-propyl)-benzamide of formula I-32,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-phenethyl-benzamide of formula I-33,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-naphthalen-1-ylmethyl-benzamide of formula I-34,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-5-chloro-N-naphthalen-1-ylmethyl-benzamide of formula I-35,
2-[3-(Adamantan-1-ylmethyl-methyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-36,
2-[3-(Adamantan-1-ylmethyl-methyl-amino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-37,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-fluoro-phenyl)-benzamide of formula I-38,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2,4-difluoro-phenyl)-benzamide of formula I-39,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-p-tolyl-benzamide of formula I-40,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-p-tolyl-benzamide of formula I-41,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-42,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-[4-(3-trifluoromethyl-3H-diazirin-3-yl)-benzyl]-benzamide of formula I-43,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-fluoro-phenyl)-benzamide of formula I-55,

2-[3-(2-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-62,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-(4-*tert*-butyl-benzyl)-benzamide of formula I-64,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-pro-poxy}-5-chloro-N-(4-fluoro-phenyl)-benzamide of formula I-66,
2-[2-Hydroxy-3-(3-hydroxy-adamantan-1-ylamino)-propoxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-70,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-naphthalen-2-yl-benzamide of formula I-71,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-72,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-allyl-phenyl)-benzamide of formula I-73,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-bromo-phenyl)-benzamide of formula I-74,
2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-bromo-phenyl)-benzamide of formula I-75,
N-(4-Bromo-phenyl)-2-[2-hydroxy-3-(3-hydroxy-adamantan-1-ylamino)-propoxy]-benzamide of formula I-76,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-91, and
2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-92.

8. A compound according to claim 3 which is selected from
2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-1,
2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-2,
2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-3,

2-[3-(3,5-Dimethyl-adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-4,
2-[3-(4-Adamantan-1-yl-piperazin-1-yl)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-5,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-6,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-7,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(4-methoxy-benzyl)-benzamide of formula I-8,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-phenethyl-benzamide of formula I-9,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-5-chloro-N-phenethyl-benzamide of formula I-10,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-(3-phenyl-propyl)-benzamide of formula I-11,
2-[3-(Adamantan-2-ylamino)-2-hydroxy-propoxy]-N-propyl-benzamide of formula I-12,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-13,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-(4-trifluoromethyl-benzyl)-benzamide of formula I-16,
2-[3-(Adamantan-2-yl-propyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-17,
2-[3-(Adamantan-2-yl-propyl-amino)-2-hydroxy-propoxy]-N-(2-methoxy-benzyl)-benzamide of formula I-18,
2-[3-(Adamantan-2-yl-pentyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-19,
2-[3-(Adamantan-2-yl-cyclopropyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-20,
2-{3-[Adamantan-2-yl-(2-methoxy-benzyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-21,

2-[3-(Adamantan-2-yl-phenethyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-22,
2-{3-[Adamantan-2-yl-(3-phenyl-propyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-23,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-methyl-butyl)-benzamide of formula I-24,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-(3-methyl-butyl)-benzamide of formula I-25,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-methyl-butyl)-5-prop-2-ynyloxy-benzamide of formula I-26,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-benzyl-benzamide of formula I-27,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-28,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-methoxy-benzyl)-benzamide of formula I-29,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-trifluoromethyl-benzyl)-benzamide of formula I-30,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-phenethyl-benzamide of formula I-31,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-phenyl-propyl)-benzamide of formula I-32,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-phenethyl-benzamide of formula I-33,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-naphthalen-1-ylmethyl-benzamide of formula I-34,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-5-chloro-N-naphthalen-1-ylmethyl-benzamide of formula I-35,
2-[3-(Adamantan-1-ylmethyl-methyl-amino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-36,
2-[3-(Adamantan-1-ylmethyl-methyl-amino)-2-hydroxy-propoxy]-N-(4-fluoro-phenyl)-benzamide of formula I-37,

2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-fluoro-phenyl)-benzamide of formula I-38,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2,4-difluoro-phenyl)-benzamide of formula I-39,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-p-tolyl-benzamide of formula I-40,
2-[3-(1-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-p-tolyl-benzamide of formula I-41,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-42,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-[4-(3-trifluoromethyl-3H-diazirin-3-yl)-benzyl]-benzamide of formula I-43,
N-Benzyl-2-(3-cyclododecylamino-2-hydroxy-propoxy)-benzamide of formula I-52,
N-Benzyl-2-(3-cyclooctylamino-2-hydroxy-propoxy)-benzamide of formula I-53,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-fluoro-phenyl)-benzamide of formula I-55,
2-[3-(2-Adamantan-1-yl-ethylamino)-2-hydroxy-propoxy]-N-benzyl-benzamide of formula I-62,
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-N-(4-*tert*-butyl-benzyl)-benzamide of formula I-64,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-pro-poxy}-5-chloro-N-(4-fluoro-phenyl)-benzamide of formula I-66,
2-[2-Hydroxy-3-(3-hydroxy-adamantan-1-ylamino)-propoxy]-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-70,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-naphthalen-2-yl-benzamide of formula I-71,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-chloro-N-(3-trifluoromethyl-phenyl)-benzamide of formula I-72,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(2-allyl-phenyl)-benzamide of formula I-73,
2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-N-(4-bromo-phenyl)-benzamide of formula I-74,

2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-N-(4-bromo-phenyl)-benzamide of formula I-75,

N-(4-Bromo-phenyl)-2-[2-hydroxy-3-(3-hydroxy-adamantan-1-ylamino)-propoxy]-benzamide of formula I-76,

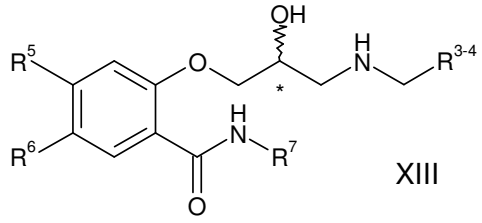
3-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-naphthalene-2-carboxylic acid (4-fluoro-phenyl)-amide of formula I-86,

3-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-naphthalene-2-carboxylic acid (4-fluoro-phenyl)-amide of formula I-87,

2-{3-[(Adamantan-1-ylmethyl)-amino]-2-hydroxy-propoxy}-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-91, and

2-[3-(Adamantan-1-ylamino)-2-hydroxy-propoxy]-5-bromo-N-(4-fluoro-phenyl)-benzamide of formula I-92.

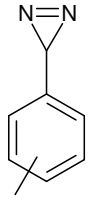
9. A compound ~~of formula I as claimed in claim 1, which is a compound~~ of formula (XIII)



XIII

wherein

R^{3-4} is 4-benzoylphenyl or a diazirinylphenyl of formula (IV)



IV

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

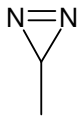
or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl and

R^7 is

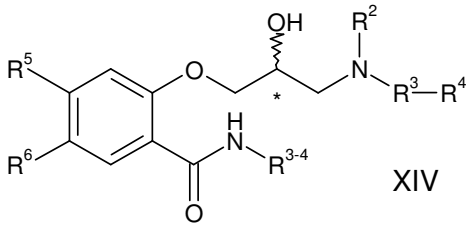
(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl is unsubstituted or substituted and aryl is substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III



III ~~and R^5, R^6 and R^7 are as defined in claim 1~~.

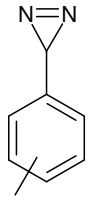
10. A compound ~~of formula I, as claimed in claim 1, which is a compound~~ of formula (XIV)



XIV

wherein

R^{3-4} is 4-benzoylphenyl or methyl, substituted by a diazirinylphenyl of formula (IV)



IV

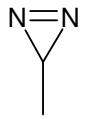
R^2 is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

R^3 is not present, or R^3 is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^2 and R^3 together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^4 is

- H, if R^3 is present,
- (C_{5-12})cycloalkyl, which cycloalkyl optionally is substituted by (C_{1-4})alkyl, hydroxy;
- (C_{1-4})alkyl, optionally substituted by phenyl,
- if R^3 is present, R^4 is (C_{6-12})aryl, which aryl optionally is substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{2-6})alkynyl, (C_{1-6})alkyloxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, halogen, halogenated (C_{1-4})alkyl, phenylcarbonyl, or
- diazirinyl of formula (III) , III

R^5 and R^6 independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy,

or

R^5 and R^6 together with the phenyl to which they are attached form an aromatic ring system, e.g.naphthalinyl~~and R^2, R^3, R^4, R^5 and R^6 are as defined in claim 1~~.

11. A compound as defined in any one of claims 3 to 10 in the form of a salt.

12. A use of a compound for preparation of a medicament for the treatment of disorders mediated by protozoan organisms causing malaria according to any of claims 1 or 2, wherein the compound according to formula I is in the form of a salt.

13. A compound of any one of claims 3 to 11 for use as a pharmaceutical.

14. A pharmaceutical composition comprising a compound of any one of claims 3 to 11 in association with at least one pharmaceutical excipient.

15. Use of a compound as defined in any one of claims 3 to 11, which compound comprises a photoaffinity label, for the identification of the molecular target(s) of arylamino alcohol containing drugs.

16. A compound selected from

5-Chloro-2-hydroxy-N-naphthalen-1-ylmethyl-benzamide,

N-(4-Fluoro-phenyl)-2-hydroxy-5-prop-2-ynyloxy-benzamide,

N-(2-Methoxy-benzyl)-2-oxiranylmethoxy-benzamide,

N-(4-Methoxy-benzyl)-2-oxiranylmethoxy-benzamide,

2-Oxiranylmethoxy-N-phenethyl-benzamide,

5-Chloro-2-oxiranylmethoxy-N-phenethyl-benzamide,

2-(Oxiran-2-ylmethoxy)-N-(3-phenylpropyl)benzamide,

N-(3-Methyl-butyl)-2-oxiranylmethoxy-benzamide,

2-Oxiranylmethoxy-N-(4-trifluoromethyl-benzyl)-benzamide,

5-Chloro-N-naphthalen-1-ylmethyl-2-oxiranylmethoxy-benzamide,

N-(4-Fluoro-phenyl)-2-oxiranylmethoxy-benzamide,

N-(2-Fluoro-phenyl)-2-oxiranylmethoxy-benzamide,

N-(2,4-Difluoro-phenyl)-2-oxiranylmethoxy-benzamide,

2-Oxiranylmethoxy-N-(3-trifluoromethyl-phenyl)-benzamide,

N-(4-Fluoro-phenyl)-2-oxiranylmethoxy-5-prop-2-ynyloxy-benzamide,

N-(2-Allyl-phenyl)-2-oxiranylmethoxy-benzamide,

5-Chloro-N-(4-fluoro-phenyl)-2-oxiranylmethoxy-benzamide,

5-Chloro-2-oxiranylmethoxy-N-(3-trifluoromethyl-phenyl)-benzamide,

N-Naphthalen-2-yl-2-oxiranylmethoxy-benzamide,

N-(2-Allyl-phenyl)-2-hydroxy-benzamide,

2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-benzoic acid methyl ester (INT-14), and

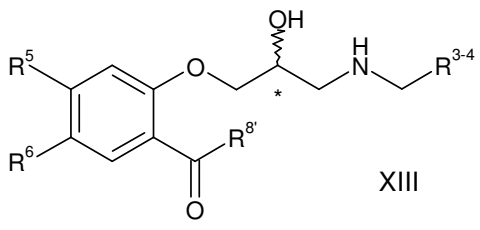
2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-benzoic acid (INT-15);

particularly

2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-benzoic acid methyl ester (INT-14), and

2-[3-(Adamantan-2-yl-methyl-amino)-2-hydroxy-propoxy]-benzoic acid (INT-15).

17. A compound of formula (XIII)



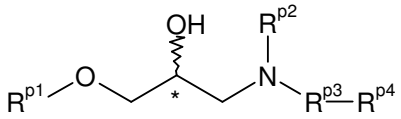
XIII

wherein

R^{3-4} is a diazirinylphenyl of formula IV as defined in claim ~~8~~9, or benzoylphenyl, and

$R^{8'}$ is methoxy or ethoxy.

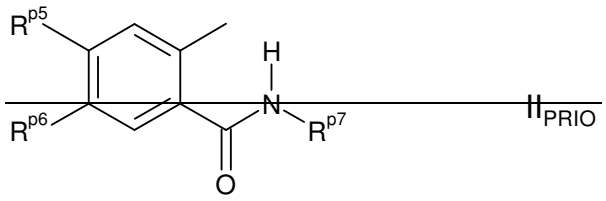
18. Use of a compound for preparation of a medicament for the treatment of disorders mediated by protozoan organisms causing malaria, wherein the compound is a compound of formula (I_{PRIO})



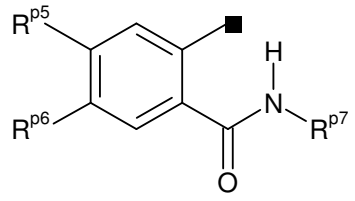
I_{PRIO}

wherein

R^{p1} is a group of formula (II_{PRIO})



II_{PRIO}



II_{PRIO}

wherein the square denotes the point of attachment of formula (II_{PRIO}) to formula (I_{PRIO}),

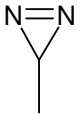
R^{p2} is H, (C_{1-8})alkyl, or (C_{3-6})cycloalkyl, wherein alkyl or cycloalkyl optionally are substituted by

- (C_{1-4})alkyl,
- (C_{1-4})alkoxy, or
- phenyl, which phenyl optionally is substituted one or morefold by (C_{1-6})alkoxy,

R^{p3} is not present or is (C_{1-8})alkylene, which alkylene is unsubstituted, or substituted by (C_{1-8})alkyl; or

R^{p2} and R^{p3} together with the nitrogen atom to which they are attached form a heterocyclic ring, optionally comprising a further heteroatom,

R^{p4} is

- H,
- (C_{5-12})cycloalkyl, which cycloalkyl optionally is substituted by (C_{1-4})alkyl;
- (C_{1-4})alkyl, optionally substituted by phenyl,
- if R^{p3} is present, (C_{6-12})aryl, which aryl optionally is substituted by (C_{1-6})alkyl, (C_{2-6})alkenyl, (C_{2-6})alkynyl, (C_{1-6})alkyloxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, halogen, halogenated (C_{1-4})alkyl, phenylcarbonyl, or
- diazirinyl of formula (III)  III,

R^{p5} and R^{p6} independently of each other are H, halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, and

R^{p7} is

(C_{1-8})alkyl or (C_{6-12})aryl, wherein alkyl or aryl is unsubstituted or substituted by

- halogen,
- (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl,
- halogenated (C_{1-4})alkyl,
- (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, or
- (C_{6-12})aryl, which aryl optionally is substituted by halogen, (C_{1-4})alkyl, (C_{2-4})alkenyl, (C_{2-4})alkynyl, halogenated (C_{1-4})alkyl, e.g. CF_3, (C_{1-4})alkoxy, (C_{2-6})alkenyl-(C_{1-4})alkylenoxy, HC≡C-(C_{1-6})alkylenoxy, phenylcarbonyl, or diazirinyl of formula III.