

SEQUENCE LISTING

<110> Universität Heidelberg
 <120> Means and methods for detecting plasmodia and for screening or
 diagnosing drug resistance or altered drug responsiveness of
 plasmodia
 <130> U30261PCT
 <150> US 61/288,926
 <151> 2009-12-22
 <160> 7
 <170> PatentIn version 3.3
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 <213> Plasmodium falciparum

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 35 40 45

Leu Pro Ala Gln His Arg Lys Leu Leu Phe Ile Ser Phe Val Cys Ala
 50 55 60

Val Leu Ser Gly Gly Thr Leu Pro Phe Phe Ile Ser Val Phe Gly Val
 65 70 75 80

Ile Leu Lys Asn Met Asn Leu Gly Asp Asp Ile Asn Pro Ile Ile Leu
 85 90 95

Ser Leu Val Ser Ile Gly Leu Val Gln Phe Ile Leu Ser Met Ile Ser
 100 105 110

Ser Tyr Cys Met Asp Val Ile Thr Ser Lys Ile Leu Lys Thr Leu Lys
 115 120 125

Leu Glu Tyr Leu Arg Ser Val Phe Tyr Gln Asp Gly Gln Phe His Asp
 130 135 140

Asn Asn Pro Gly Ser Lys Leu Arg Ser Asp Leu Asp Phe Tyr Leu Glu
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Gln Val Ser Ser Gly Ile Gly Thr Lys Phe Ile Thr Ile Phe Thr Tyr
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Ala Ser Ser Phe Leu Gly Leu Tyr Ile Trp Ser Leu Ile Lys Asn Ala
 180 185 190

Arg Leu Thr Leu Cys Ile Thr Cys Val Phe Pro Leu Ile Tyr Val Cys
 195 200 205

Gly Val Ile Cys Asn Lys Lys Val Lys Leu Asn Lys Lys Thr Ser Leu
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Leu Tyr Asn Asn Asn Thr Met Ser Ile Ile Glu Glu Ala Leu Met Gly
 225 230 235 240

Ile Arg Thr Val Ala Ser Tyr Cys Gly Glu Lys Thr Ile Leu Asn Lys
 245 250 255

Phe Asn Leu Ser Glu Thr Phe Tyr Ser Lys Tyr Ile Leu Lys Ala Asn
 260 265 270

Phe Val Glu Ala Leu His Ile Gly Leu Ile Asn Gly Leu Ile Leu Val
 275 280 285

Ser Tyr Ala Phe Gly Phe Trp Tyr Gly Thr Arg Ile Ile Ile Asn Ser
 290 295 300

Ala Thr Asn Gln Tyr Pro Asn Asn Asp Phe Asn Gly Ala Ser Val Ile
 305 310 315 320

Ser Ile Leu Leu Gly Val Leu Ile Ser Met Phe Met Leu Thr Ile Ile
 325 330 335

Leu Pro Asn Ile Thr Glu Tyr Met Lys Ala Leu Glu Ala Thr Asn Ser
 340 345 350

Leu Tyr Glu Ile Ile Asn Arg Lys Pro Leu Val Glu Asn Asn Asp Asp
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Gly Glu Thr Leu Pro Asn Ile Lys Lys Ile Glu Phe Lys Asn Val Arg

370		375		380											
Phe 385	His	Tyr	Asp	Thr	Arg 390	Lys	Asp	Val	Glu	Ile 395	Tyr	Lys	Asp	Leu	Ser 400
Phe	Thr	Leu	Lys	Glu 405	Gly	Lys	Thr	Tyr	Ala 410	Phe	Val	Gly	Glu	Ser	Gly 415
Cys	Gly	Lys	Ser 420	Thr	Ile	Leu	Lys	Leu 425	Ile	Glu	Arg	Leu	Tyr	Asp	Pro 430
Thr	Glu	Gly 435	Asp	Ile	Ile	Val	Asn 440	Asp	Ser	His	Asn	Leu 445	Lys	Asp	Ile
Asn 450	Leu	Lys	Trp	Trp	Arg	Ser 455	Lys	Ile	Gly	Val	Val	Ser	Gln	Asp	Pro
Leu 465	Leu	Phe	Ser	Asn	Ser 470	Ile	Lys	Asn	Asn	Ile 475	Lys	Tyr	Ser	Leu	Tyr 480
Ser	Leu	Lys	Asp	Leu 485	Glu	Ala	Met	Glu	Asn 490	Tyr	Tyr	Glu	Glu	Asn	Thr 495
Asn	Asp	Thr 500	Tyr	Glu	Asn	Lys	Asn	Phe 505	Ser	Leu	Ile	Ser	Asn	Ser	Met 510
Thr	Ser	Asn 515	Glu	Leu	Leu	Glu	Met 520	Lys	Lys	Glu	Tyr	Gln	Thr	Ile	Lys 525
Asp 530	Ser	Asp	Val	Val	Asp	Val 535	Ser	Lys	Lys	Val	Leu	Ile	His	Asp	Phe 540
Val 545	Ser	Ser	Leu	Pro	Asp 550	Lys	Tyr	Asp	Thr	Leu 555	Val	Gly	Ser	Asn	Ala 560
Ser	Lys	Leu	Ser	Gly 565	Gly	Gln	Lys	Gln	Arg 570	Ile	Ser	Ile	Ala	Arg	Ala 575
Ile	Met	Arg	Asn 580	Pro	Lys	Ile	Leu	Ile 585	Leu	Asp	Glu	Ala	Thr	Ser	Ser 590
Leu	Asp	Asn 595	Lys	Ser	Glu	Tyr	Leu 600	Val	Gln	Lys	Thr	Ile	Asn	Asn	Leu 605
Lys 610	Gly	Asn	Glu	Asn	Arg	Ile 615	Thr	Ile	Ile	Ile	Ala 620	His	Arg	Leu	Ser

Thr Ile Arg Tyr Ala Asn Thr Ile Phe Val Leu Ser Asn Arg Glu Arg
625 630 635 640

Ser Asp Asn Asn Asn Asn Asn Asn Asn Asp Asp Asn Asn Asn Asn Asn
645 650 655

Asn Asn Asn Asn Asn Lys Ile Asn Asn Glu Gly Ser Tyr Ile Ile Glu
660 665 670

Gln Gly Thr His Asp Ser Leu Met Lys Asn Lys Asn Gly Ile Tyr His
675 680 685

Leu Met Ile Asn Asn Gln Lys Ile Ser Ser Asn Lys Ser Ser Asn Asn
690 695 700

Gly Asn Asp Asn Gly Ser Asp Asn Lys Ser Ser Ala Tyr Lys Asp Ser
705 710 715 720

Asp Thr Gly Asn Asp Ala Asp Asn Met Asn Ser Leu Ser Ile His Glu
725 730 735

Asn Glu Asn Ile Ser Asn Asn Arg Asn Cys Lys Asn Thr Ala Glu Asn
740 745 750

Glu Lys Glu Glu Lys Val Pro Phe Phe Lys Arg Met Phe Arg Arg Lys
755 760 765

Lys Lys Ala Pro Asn Asn Leu Arg Ile Ile Tyr Lys Glu Ile Phe Ser
770 775 780

Tyr Lys Lys Asp Val Thr Ile Ile Phe Phe Ser Ile Leu Val Ala Gly
785 790 795 800

Gly Leu Tyr Pro Val Phe Ala Leu Leu Tyr Ala Arg Tyr Val Ser Thr
805 810 815

Leu Phe Asp Phe Ala Asn Leu Glu Tyr Asn Ser Asn Lys Tyr Ser Ile
820 825 830

Tyr Ile Leu Leu Ile Ala Ile Ala Met Phe Ile Ser Glu Thr Leu Lys
835 840 845

Asn Tyr Tyr Asn Asn Lys Ile Gly Glu Lys Val Glu Lys Thr Met Lys
850 855 860

Arg Arg Leu Phe Glu Asn Ile Leu Tyr Gln Glu Met Ser Phe Phe Asp
865 870 875 880

Gln Asp Lys Asn Thr Pro Gly Val Leu Ser Ala His Ile Asn Arg Asp
885 890 895

Val His Leu Leu Lys Thr Gly Leu Val Asn Asn Ile Val Ile Phe Ser
900 905 910

His Phe Ile Met Leu Phe Leu Val Ser Met Val Met Ser Phe Tyr Phe
915 920 925

Cys Pro Ile Val Ala Ala Val Leu Thr Phe Ile Tyr Phe Ile Asn Met
930 935 940

Arg Val Phe Ala Val Arg Ala Arg Leu Thr Lys Ser Lys Glu Ile Glu
945 950 955 960

Lys Lys Glu Asn Met Ser Ser Gly Val Phe Ala Phe Ser Ser Asp Asp
965 970 975

Glu Met Phe Lys Asp Pro Ser Phe Leu Ile Gln Glu Ala Phe Tyr Asn
980 985 990

Met His Thr Val Ile Asn Tyr Gly Leu Glu Asp Tyr Phe Cys Asn Leu
995 1000 1005

Ile Glu Lys Ala Ile Asp Tyr Lys Asn Lys Gly Gln Lys Arg Arg
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Ile Ile Val Asn Ala Ala Leu Trp Gly Phe Ser Gln Ser Ala Gln
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Leu Phe Ile Asn Ser Phe Ala Tyr Trp Phe Gly Ser Phe Leu Ile
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Lys Arg Gly Thr Ile Leu Val Asp Asp Phe Met Lys Ser Leu Phe
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Thr Phe Ile Phe Thr Gly Ser Tyr Ala Gly Lys Leu Met Ser Leu
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Lys Gly Asp Ser Glu Asn Ala Lys Leu Ser Phe Glu Lys Tyr Tyr
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Pro Leu Met Ile Arg Lys Ser Asn Ile Asp Val Arg Asp Asp Gly
1100 1105 1110

Gly Ile Arg Ile Asn Lys Asn Leu Ile Lys Gly Lys Val Asp Ile
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Lys Asp Val Asn Phe Arg Tyr Ile Ser Arg Pro Asn Val Pro Ile
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Tyr Lys Asn Leu Ser Phe Thr Cys Asp Ser Lys Lys Thr Thr Ala
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Ile Val Gly Glu Thr Gly Ser Gly Lys Ser Thr Phe Met Asn Leu
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Leu Leu Arg Phe Tyr Asp Leu Lys Asn Asp His Ile Ile Leu Lys
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Asn Asp Met Thr Asn Phe Gln Asp Tyr Gln Asn Asn Asn Asn Asn
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Ser Leu Val Leu Lys Asn Val Asn Glu Phe Ser Asn Gln Ser Gly
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Ser Ala Glu Asp Tyr Thr Val Phe Asn Asn Asn Gly Glu Ile Leu
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Leu Asp Asp Ile Asn Ile Cys Asp Tyr Asn Leu Arg Asp Leu Arg
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Asn Leu Phe Ser Ile Val Ser Gln Glu Pro Met Leu Phe Asn Met
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Ser Ile Tyr Glu Asn Ile Lys Phe Gly Arg Glu Asp Ala Thr Leu
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Glu Asp Val Lys Arg Val Ser Lys Phe Ala Ala Ile Asp Glu Phe
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Ile Glu Ser Leu Pro Asn Lys Tyr Asp Thr Asn Val Gly Pro Tyr
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Gly Lys Ser Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala
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Arg Ala Leu Leu Arg Glu Pro Lys Ile Leu Leu Leu Asp Glu Ala
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Thr Ser Ser Leu Asp Ser Asn Ser Glu Lys Leu Ile Glu Lys Thr
1340 1345 1350

Ile Val Asp Ile Lys Asp Lys Ala Asp Lys Thr Ile Ile Thr Ile

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Tyr	Val	Lys	Leu	Ala	Lys										
1415															