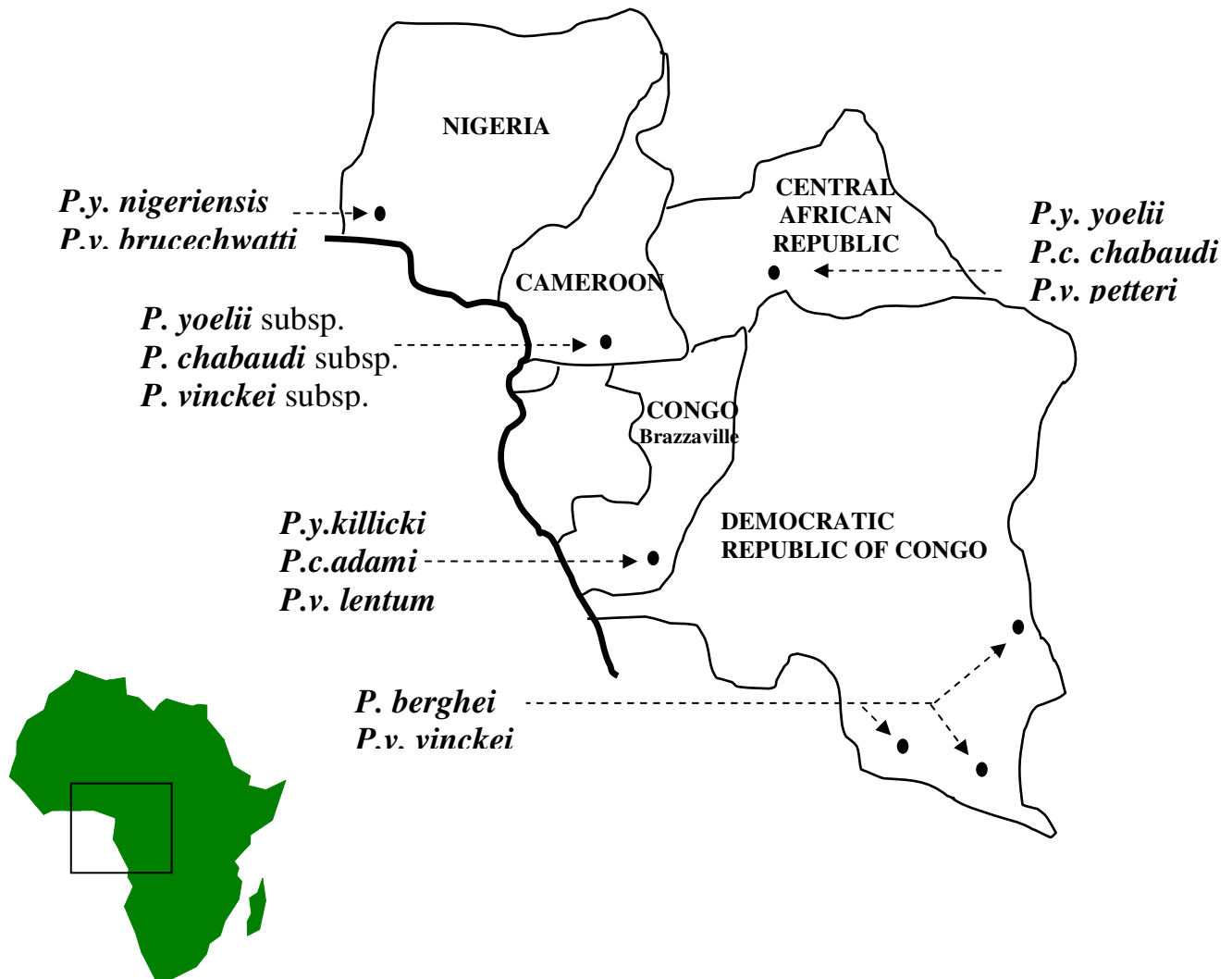


Rodent malaria parasites supplied to MR4

	Page
Map - countries of origin	2
General information	3
Summary list	4
Detailed life-histories :-	
<i>Plasmodium chabaudi</i>	
<i>P.c. chabaudi</i> (Central African Republic)	
Isolate AJ and derived lines/clones - summary	6
- details	7
Isolate AS and derived lines/clones - summary	9
- details	13
<i>P. chabaudi adami</i> (Congo-Brazzaville) - summary	21
- details	22
<i>Plasmodium vinckei</i> - summary	24
<i>P. vinckei vinckei</i> (Democratic Republic of Congo)	25
<i>P. vinckei brucechwatti</i> (Nigeria)	27
<i>P. vinckei lentum</i> (Congo-Brazzaville)	29
<i>P. vinckei petteri</i> (Central African Republic)	31
<i>P. vinckei</i> subsp. (Cameroon)	33
<i>P. yoelii yoelii</i> (Central African Republic)	
Isolate 17X and derived lines/clones - summary	34
- details	35
Isolate 33X and derived lines/clones - summary	39
- details	40

Rodent malaria species - countries of origin



General information

Isolates, lines and clones

An isolate is a sample of parasites collected from a wild-caught animal on a unique occasion. An isolate may contain more than species of parasite, and more than one genetically distinct clone of a given species.

A line refers to parasites which have undergone a particular passage or treatment. Parasites in a line usually have certain characteristics in common, but are not necessarily genetically identical.

A clone is an infection derived in the laboratory from a single haploid parasite, usually an asexual blood form, or sometimes a sporozoite.

Mixed species infections

Note that the majority of wild-caught rodents have been found to contain mixed infections of more than one species. It must be assumed, therefore, that uncloned isolates may contain such mixtures, even after prolonged passage through laboratory animals.

Numbering of stabilates

For historic reasons, different types of numbering system are used for denoting deep-frozen stabilate material. In general, recent samples are denoted according to their rodent passage number, while older stabilates have a simple number unrelated to passage.

Parasites sent to MR4

Parasites which have been supplied to the Malaria Reference and Research Reagent Resource Center (MR4) (American Type Culture collection) are indicated in the life-histories by red boxes, together with their MR4 accession numbers. Note that these accession numbers are uniquely allocated by MR4, and do not correspond with Edinburgh stabilate or passage numbers.

Parasites sent to MR4 - 2005

Plasmodium chabaudi

***P.chabaudi chabaudi* (Central African Republic)**

- AJ *uncloned isolate*
- AJ3030/12 (= AJ(MJM) *clone derived from isolate AJ*
- 96AJ15 *clone derived from isolate AJ*
- AS *uncloned isolate*
- AS8793/3 (=AS(MJM) *clone derived from isolate AS*
- AS(sens) *clone derived from isolate AS*
- AS(Pyr1) *pyrimethamine-resistant clone derived from clone AS(sens)*
- AS(50S/P) *sulfadoxine-pyrimethamine resistant clone derived from AS(Pyr1)*
- AS(3CQ) *chloroquine-resistant clone derived from AS(Pyr1)*
- AS(30CQ) *highly chloroquine-resistant clone derived from AS(3CQ)*
- AS(15MF/3) *mefloquine-resistant clone derived from AS(3CQ)*

***P.chabaudi adami* (Congo-Brazzaville)**

- 15DS12 *clone derived from isolate DS (408XZ)*
- 19DK23 *clone derived from isolate DK (556KA)*

Plasmodium vinckei

***P. vinckei vinckei* (Democratic Republic of Congo)**

- v 52 *uncloned isolate*
- v 67 *uncloned isolate*

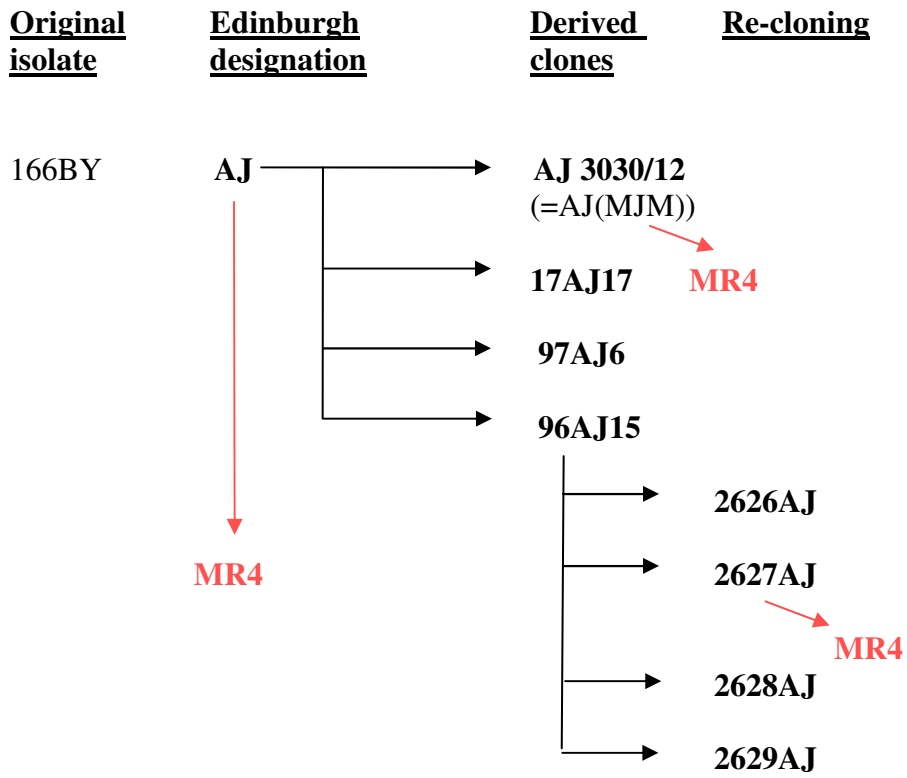
***P. vinckei brucechwatti* (Nigeria)**

- N48 *uncloned isolate*
- 1/69 *uncloned isolate*

P. vinckei lentum* (Congo-Brazzaville)**15DS30 *clone derived from isolate DS (408XZ)*170L *uncloned isolate*P. vinckei petteri* (Central African Republic)**4BS2 *clone derived from isolate BS*197CR27 *clone derived from isolate CR****P. vinckei* subsp. (Cameroon)**8EL8 *clone derived from isolate Esekam IV****Plasmodium yoelii******P. yoelii yoelii* (Central African Republic)**17X *uncloned isolate*17XA *clone derived from isolate 17X*17X(Pr1) *pyrimethamine-resistant clone derived from isolate 17X*YM *virulent clone derived from isolate 17X*33X *uncloned isolate*743C1 *clone derived from isolate 33X*33X(Pr3) *pyrimethamine-resistant virulent clone derived from isolate 33X*

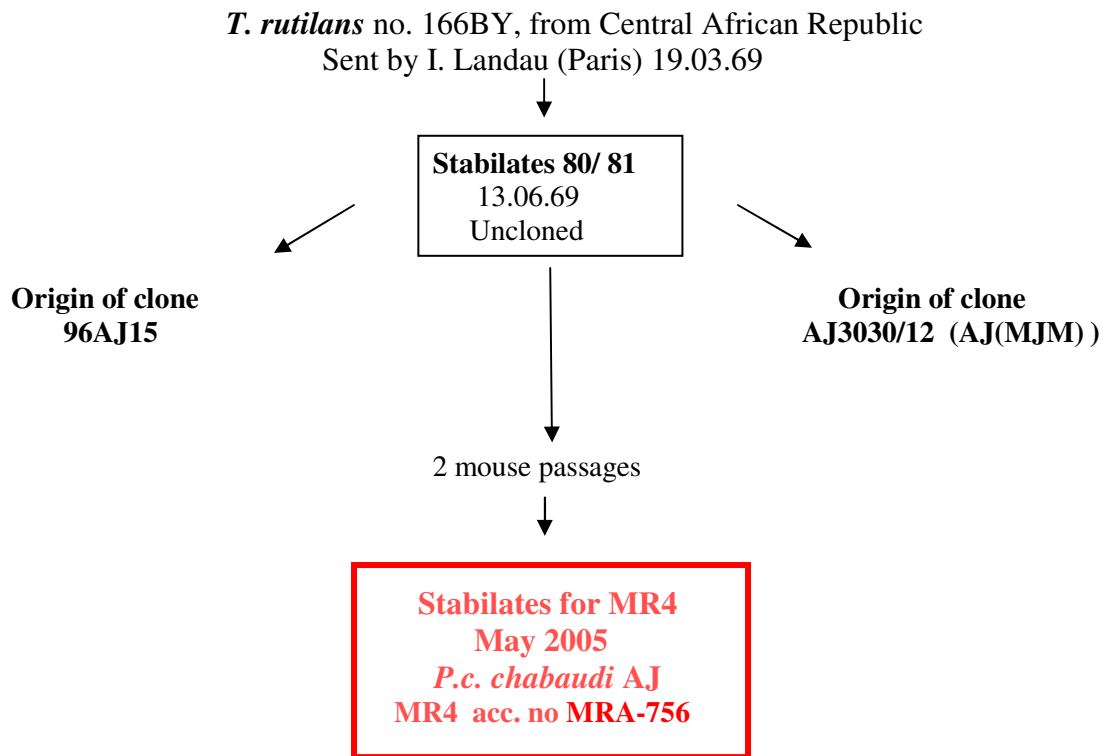
***P. chabaudi chabaudi* (Central African Republic)**

Isolate AJ and derived clones, sent to MR4



***P. chabaudi chabaudi* (Central African Republic)**

Isolate AJ (*P.c. chabaudi* and *P.v. petteri* visible)



P. chabaudi chabaudi (Central African Republic)

Clone 3030AJ12 (=AJ(MJM))

T. rutilans no. 166BY, from Central African Republic
Sent by I. Landau (Paris) 19.03.69

↓
Stabilates 80 & 81
13.06.69
Uncloned

↓
Mice AJ 3016
26.01.96

↓
Mice AJ 3023

↓
Cloning

↓
Mice AJ 3030
29.02.96

↓
no. 12

↓
Stabilate AJ 3030
02.96

↓
1 mouse passage

↓
Stabilate AJ 3045
31.07.96

↓
2 mouse passages

↓
Stabilates for MR4
March 2005
***P.c. chabaudi* AJ(MJM)**
MR4 acc. no. MRA-740

***P. chabaudi chabaudi* (Central African Republic)**

Clone 96AJ15

T. rutilans no. 166BY, from Central African Republic
Sent by I. Landau (Paris) 19.03.69

↓

Stabilates 80/81 13.06.69 Uncloned

↓
 4 *G. surdaster* passages, 8 mouse passages
 3 *A. stephensi* passages, 1 deep-freezing

↓
Cloning

↓
 Mice 96AJ

↓
 No. 15

↓

Stabilate 412 01.06.73 Clone 96AJ15
--

↓
 3 mouse passages, 1 deep-freezing

Mice 2410AJ

↓
Re-cloning

↓
 Mice 2622 AJ

↓
 no. e2

↓
 Mouse 2627AJ

↓

Stabilate 1504 03.01.02

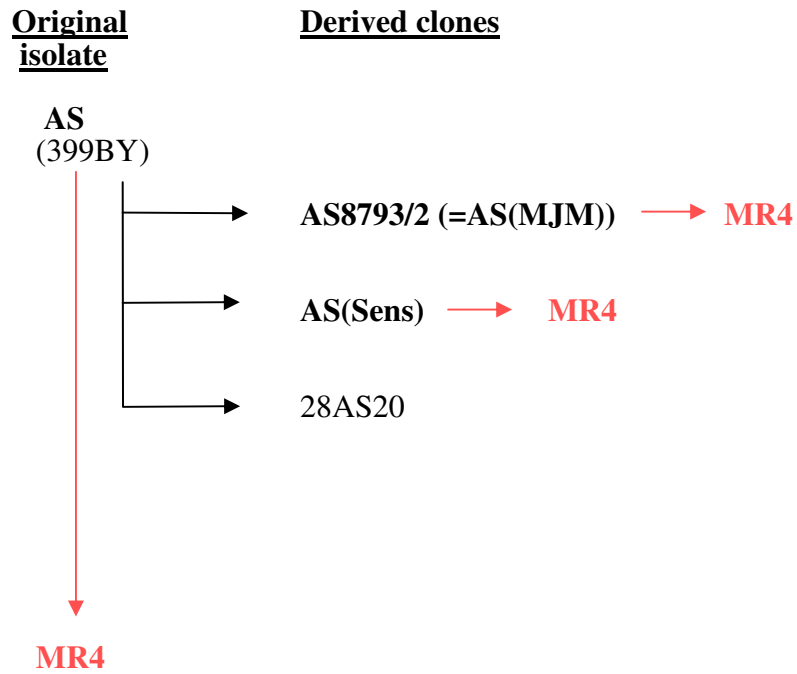
↓
 5 mouse passages, 3 deep-freezings

↓

Stabilates for MR4 March 2005 <i>P.c. chabaudi</i> 96AJ15 MR4 acc. no. MRA-757
--

***P. chabaudi chabaudi* (Central African Republic)**

Isolate AS and derived drug-sensitive clones, sent to MR4



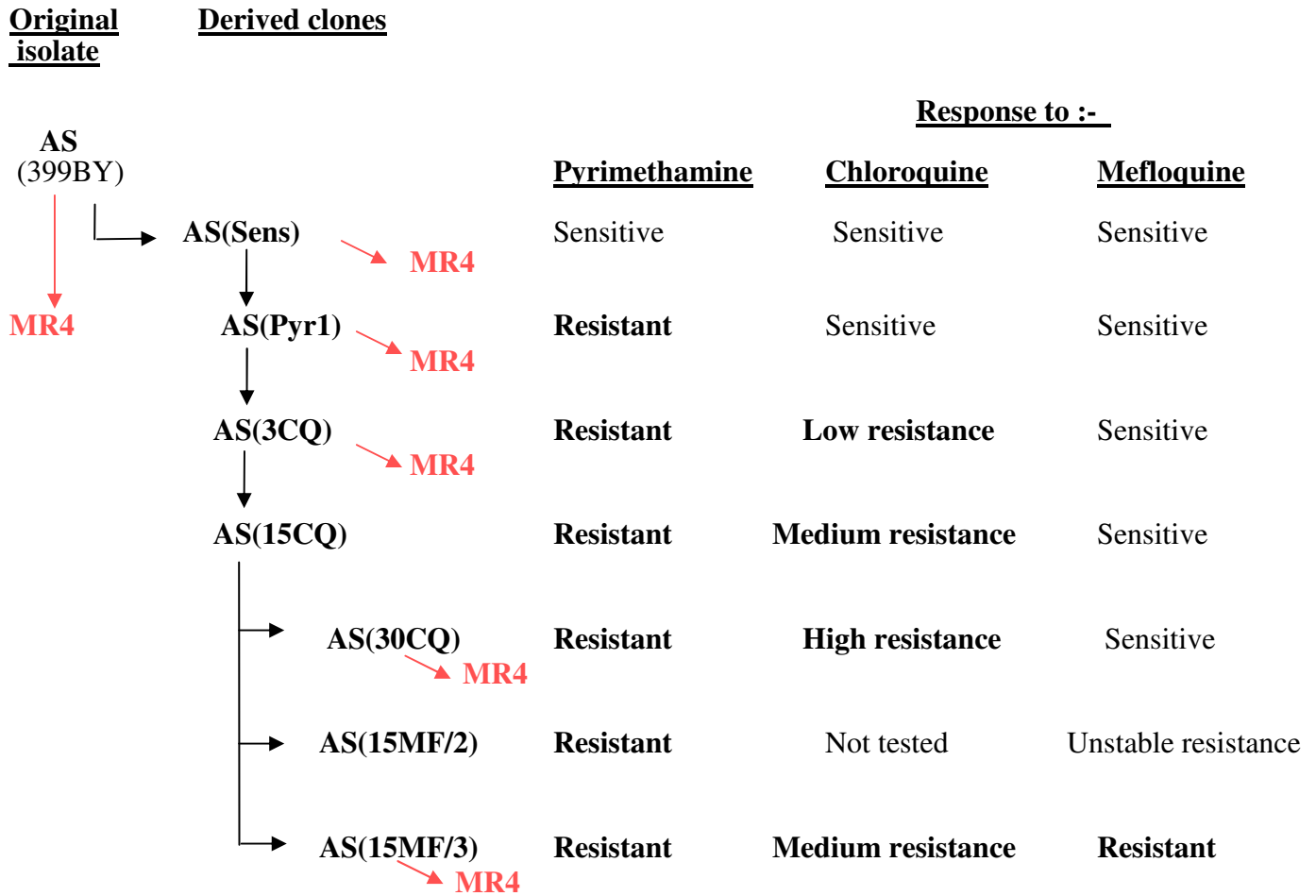
***P. chabaudi chabaudi* (Central African Republic)**

Isolate AS and derived clones resistant to pyrimethamine and to pyrimethamine/sulfadoxine (S/P), sent to MR4

<u>Original isolate</u>	<u>Derived clones</u>	<u>Response to :-</u>		
		<u>Pyrimethamine</u>	<u>Sulfadoxine</u>	<u>Sulfadoxine pyrimethamine (S/P)</u>
AS (399BY)	AS(Sens)	Sensitive	Resistant	Sensitive
MR4	MR4			
	42AS37	Resistant	Not tested	Not tested
	AS(Pyr1)	Resistant	Sensitive	Low resistance
	MR4			
	AS(50S/P)	Resistant	Low resistance	Resistant
	MR4			
	AS(75S/P)	Resistant	Low resistance	Resistant
	AS(Pyr2)	Resistant	Not tested	Not tested
	AS(Pyr3)	Resistant	Not tested	Not tested
	AS(Pyr4)	Resistant	Not tested	Not tested
	AS(Pyr5)	Resistant	Not tested	Not tested
	AS(Pyr6)	Resistant	Not tested	Not tested
	AS(Pyr7)	Resistant	Not tested	Not tested
	AS(Pyr8)	Resistant	Not tested	Not tested

***P. chabaudi chabaudi* (Central African Republic)**

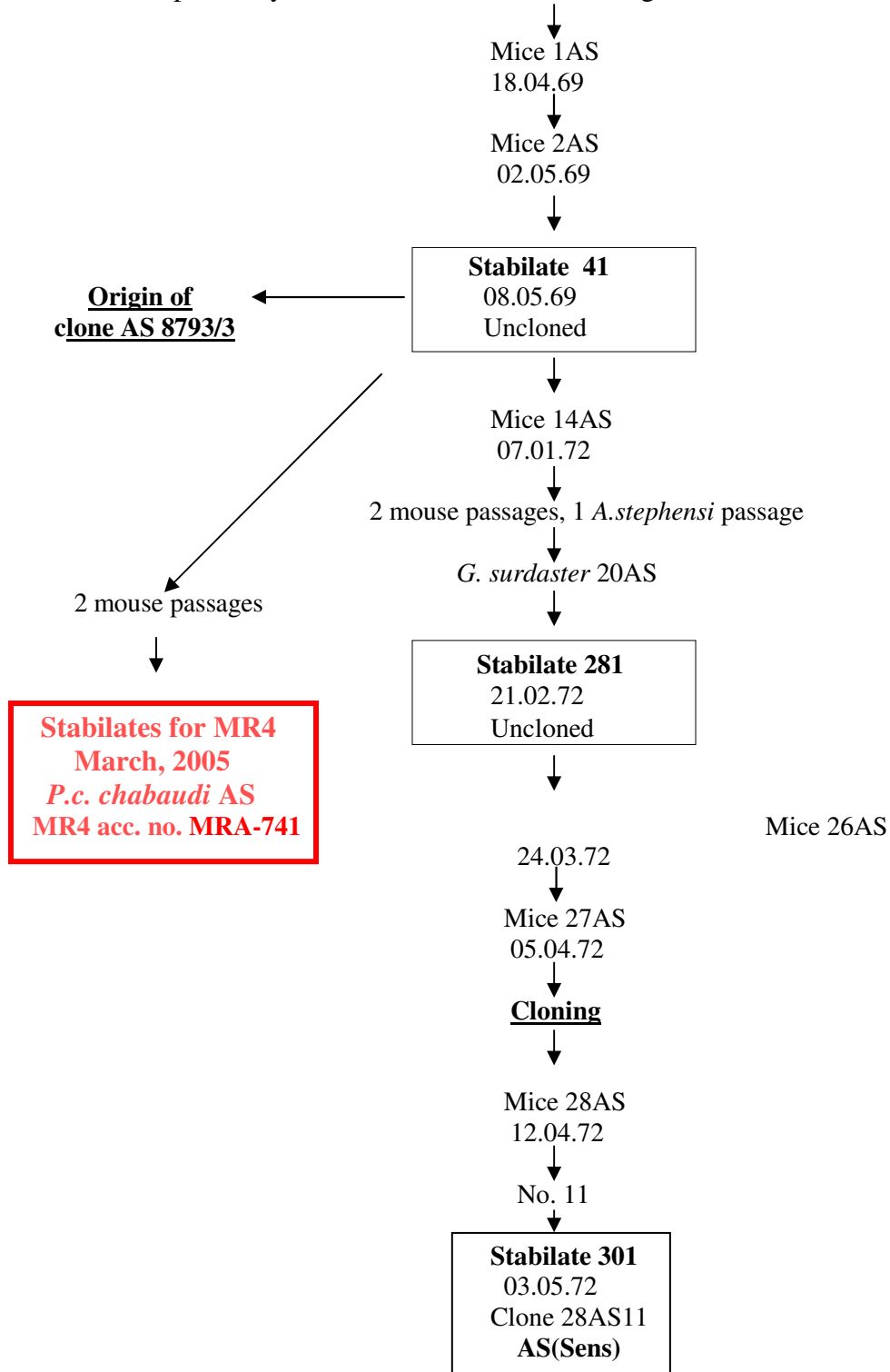
Isolate AS and derived clones resistant to chloroquine and to mefloquine, sent to MR4



P. chabaudi chabaudi (Central African Republic)

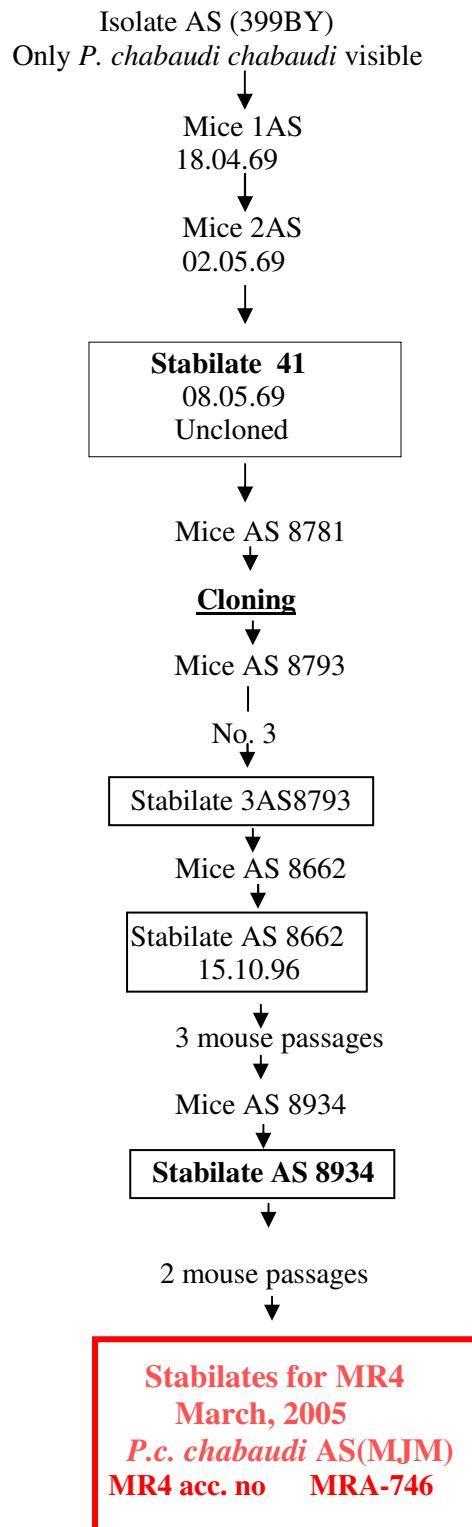
Isolate AS (only *P.c. chabaudi* visible)

Thamnomys rutilans 399BY from La Maboké field station, CAR.
Captured by Y. Boulard. Arrived Edinburgh 18.04.69



***P. chabaudi chabaudi* (Central African Republic)**

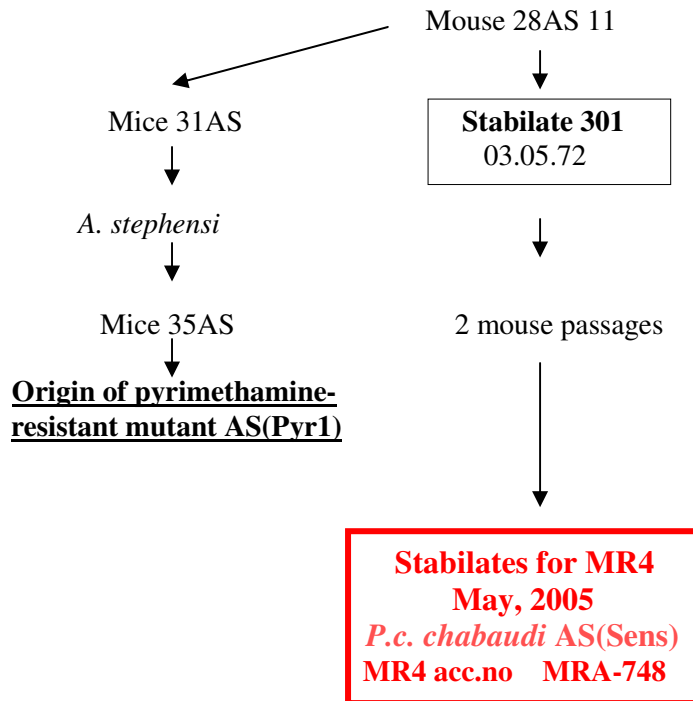
Clone AS 8793/3 (=AS(MJM))



P. chabaudi chabaudi (Central African Republic)

Clone AS(Sens)

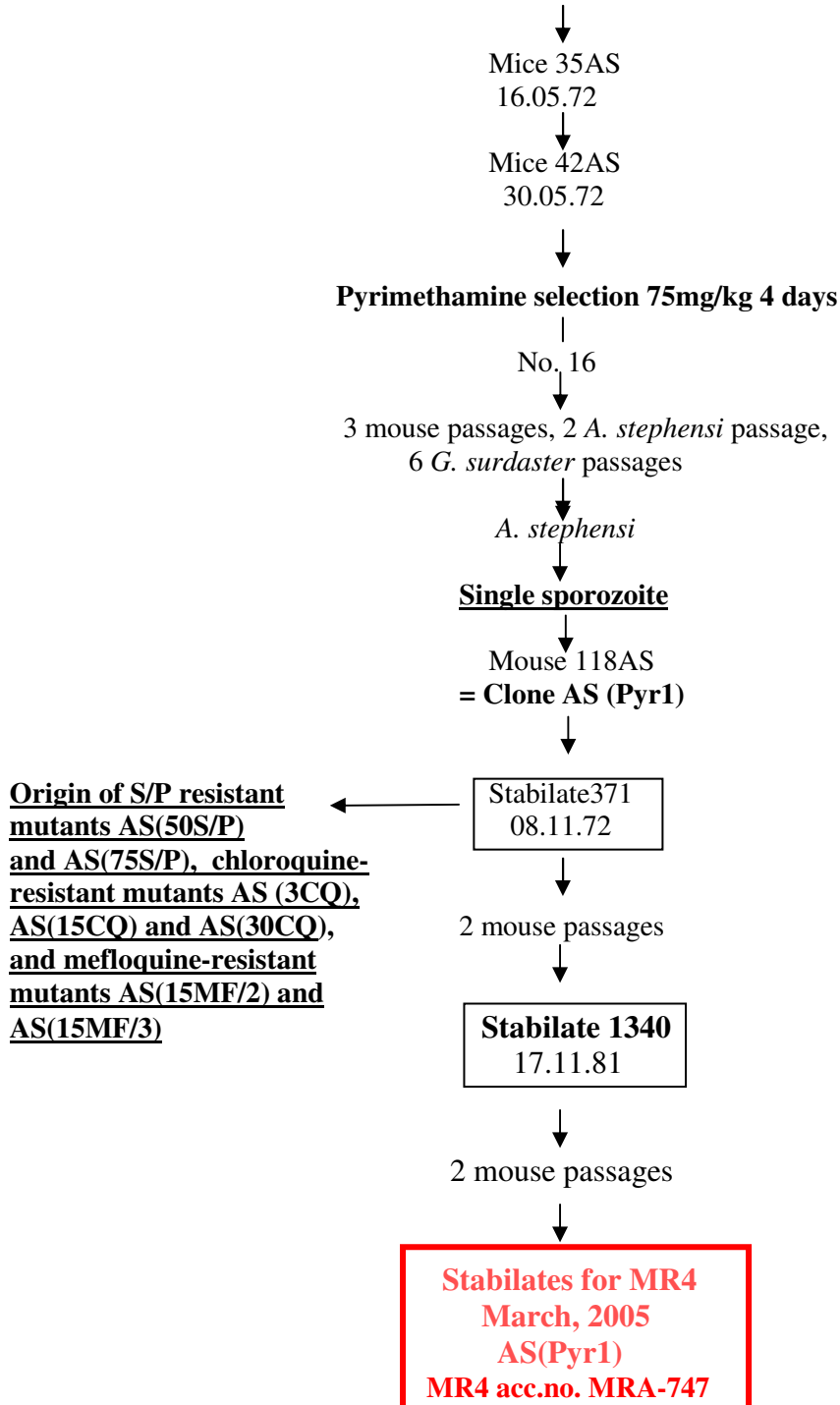
For previous history, see uncloned isolate AS (399BY)



***P. chabaudi chabaudi* (Central African Republic)**

Clone AS(Pyr1) (pyrimethamine-resistant)

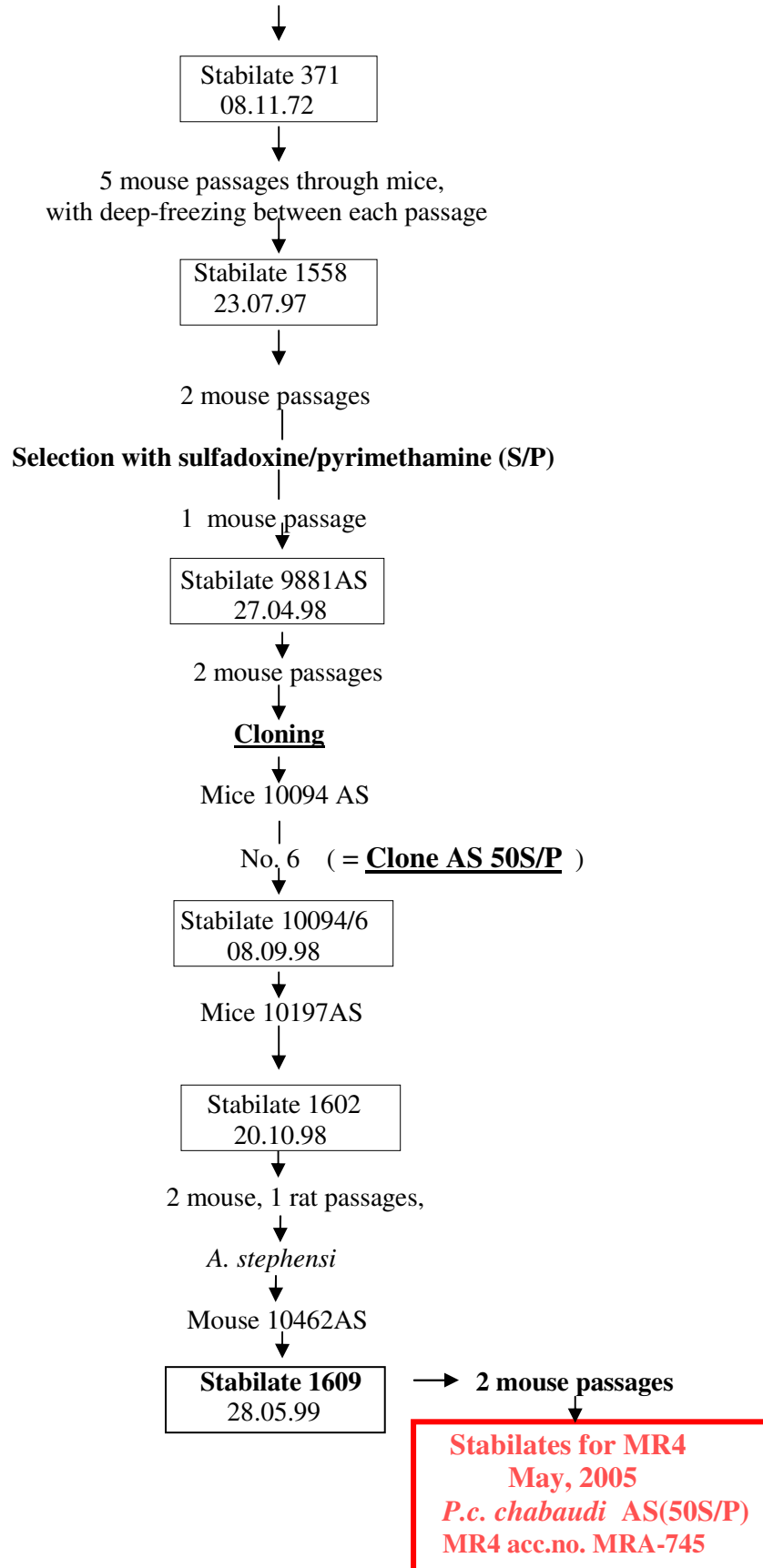
For previous history, see clone AS (Sens)



***P. chabaudi chabaudi* (Central African Republic)**

Clone AS(50S/P) (sulfadoxine-pyrimethamine resistant)

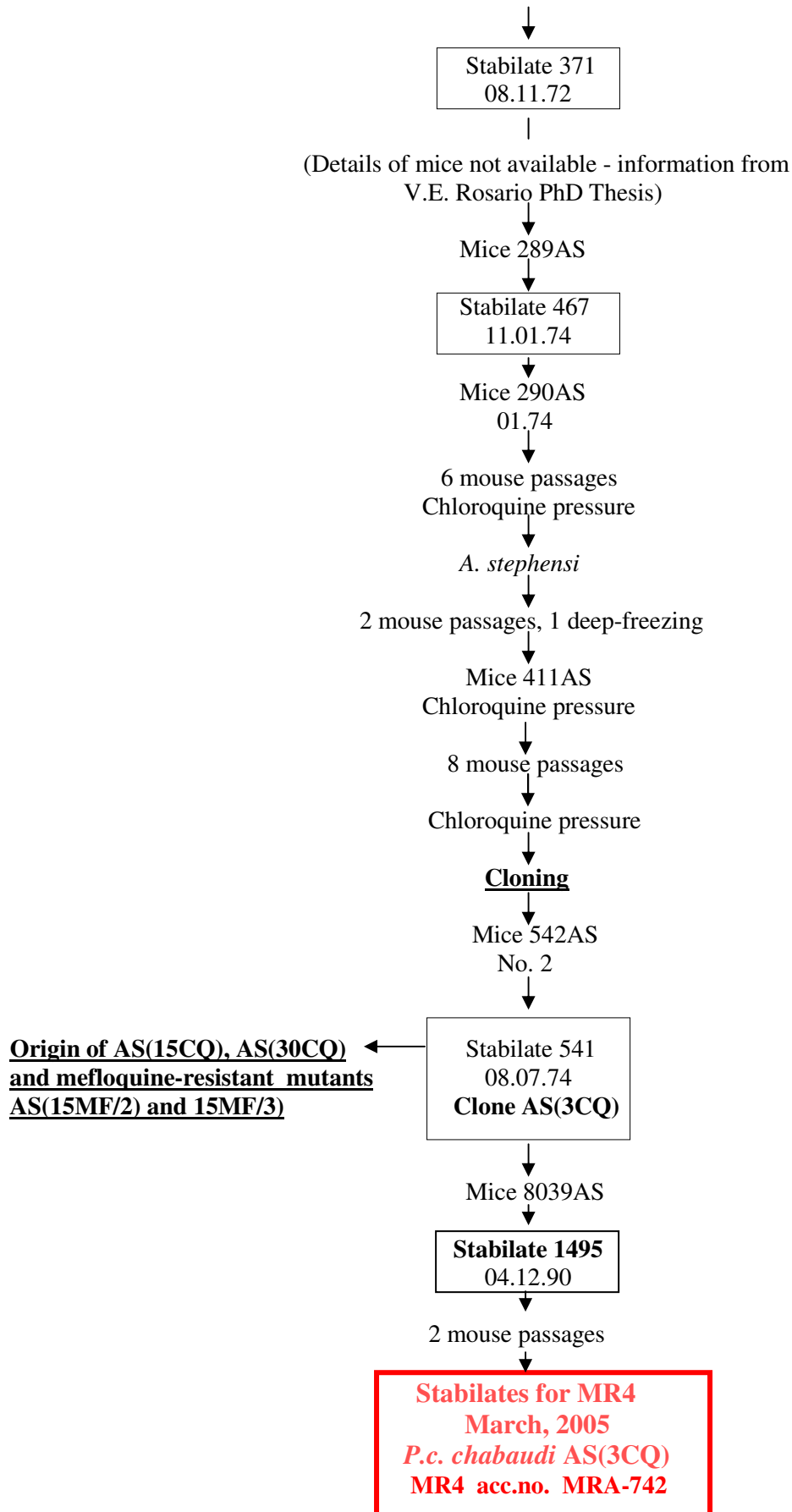
For previous history, see clone AS (Pyr1)



***P. chabaudi chabaudi* (Central African Republic)**

Clone AS(3CQ) (chloroquine-resistant)

For previous history, see clone AS (Pyr1)

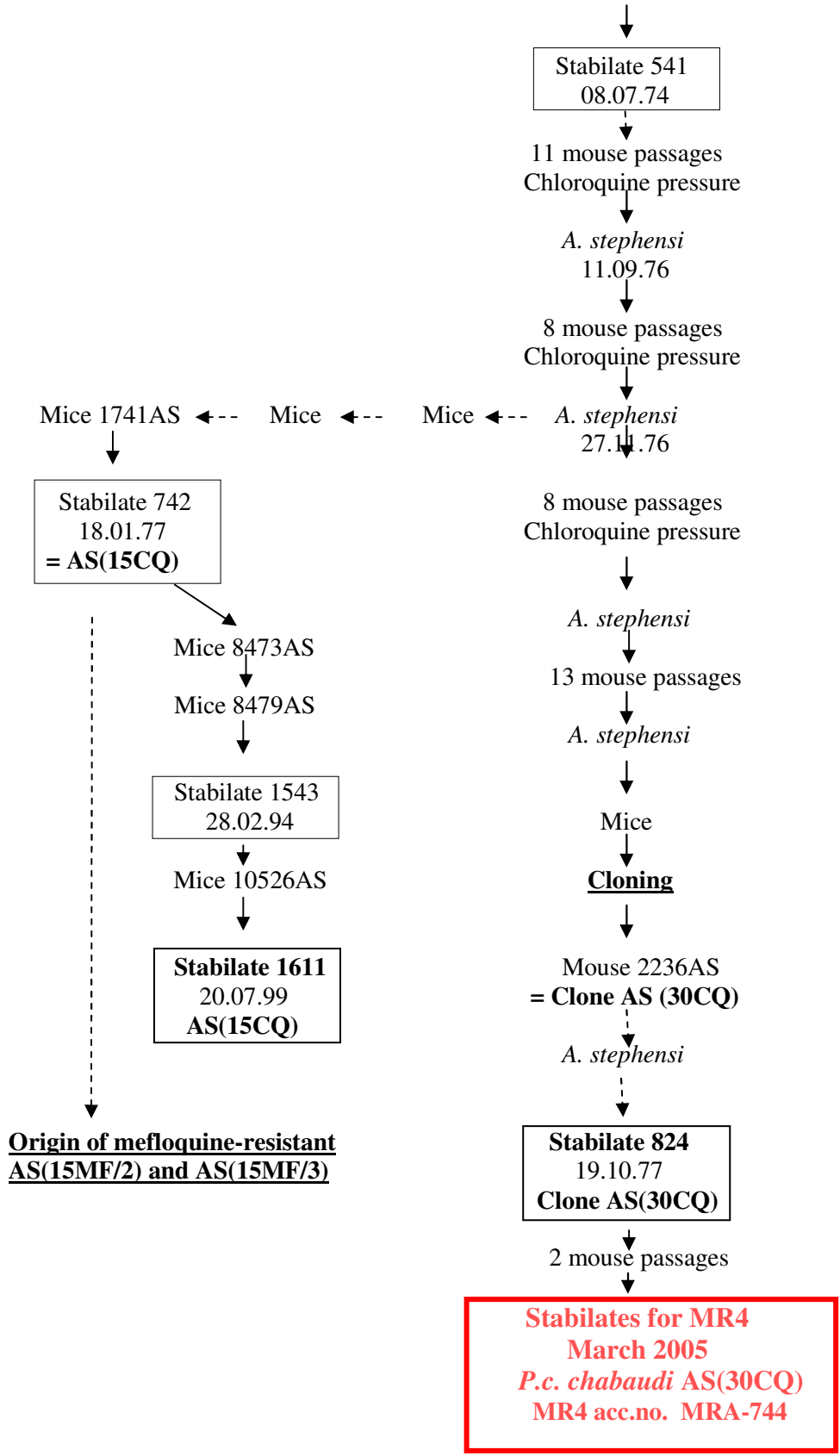


P. chabaudi chabaudi (Central African Republic)

Clone AS(30CQ) (highly chloroquine-resistant)

Information from R.A. Padua, PhD Thesis. Note: details of passages marked - - - - not available

For previous history, see clone AS (3CQ)

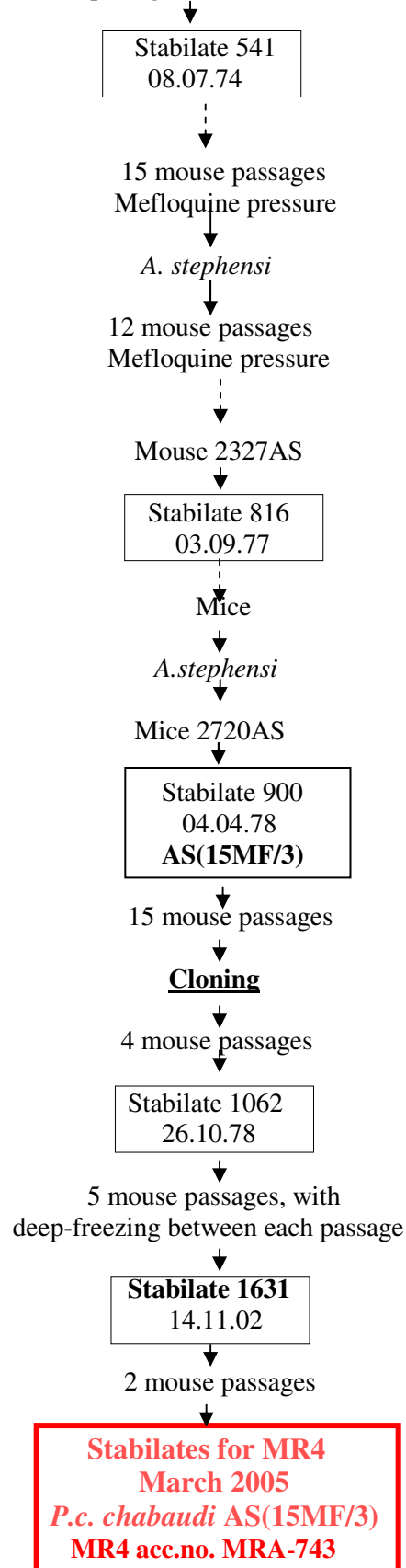


***P. chabaudi chabaudi* (Central African Republic)**

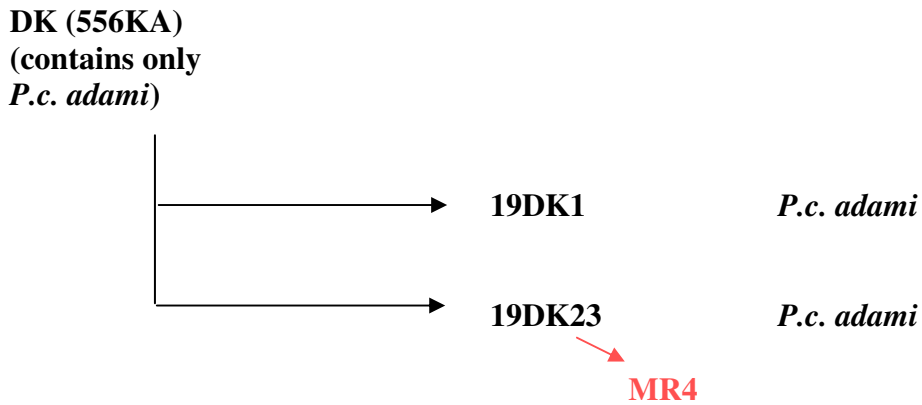
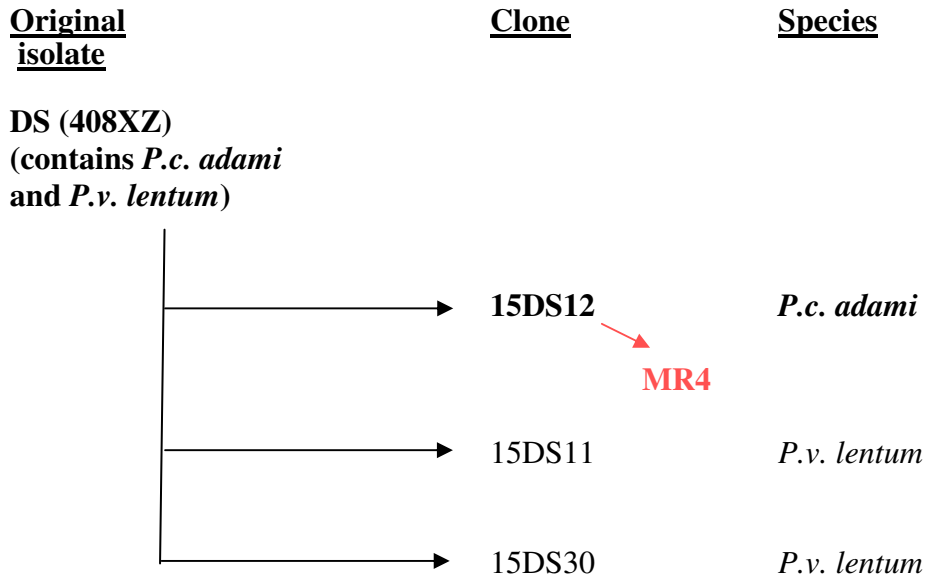
Clone AS(15MF/3) (mefloquine-resistant)

Information from R.A. Padua, PhD Thesis. For previous history, see clone AS (30CQ)

Note: details of passages marked - - - - not available



***P. chabaudi adami* (Congo Brazzaville) clones sent to MR4**



P. chabaudi adami (Congo Brazzaville)

Clone 15DS12

Isolate 408XZ (DS) (contains *P. chabaudi adami* and *P. vinckei lentum*)
from *Thamnomys rutilans* Congo-Brazzaville, 28.10.72

Frozen blood sent to Liverpool STM by Irene Landau.
Inoculated into CFW mice in Liverpool 28.9.73

↓
Mice inoculated 12.10.73,
sent to Edinburgh 18.10.73
Mice numbered 1DS

↓
Stabilate 432
19.10.73
Uncloned

↓
Mice 14DS
19.07.74

↓
Cloning

↓
Mice 15DS

↓
15DS12

↓
Stabilate 544
06.08.74
P.c. adami clone 15DS12

↓
18 mouse passages, 1 splenectomised rat passage,
3 *A. stephensi* passages

↓
Stabilate 1372
14.12.82

↓
2 mouse passages

↓
Stabilates for MR4
March 2005
***P.c. adami* 15DS12**
MR4 acc.no. MRA-758

P. chabaudi adami (Congo Brazzaville)

Clone 19DK23

Isolate 556KA from *Thammomys rutilans* in Congo-Brazzaville

History: *T. rutilans* 556KA → 2 mouse passages → Deep-freeze → 4 mouse passages →
Mice sent to Edinburgh 04.12.71
Mice numbered 1DK

Stabilate 262

10.12.71

Uncloned

↓
3 mouse passages

↓
A. stephensi

↓
Grammomys surdaster 16DK

13.11.73

Stabilate 440

20.11.73

Uncloned

↓
Mice

↓
Cloning

↓
Mice 19DK

28.05.74

↓
no. 23

Stabilate 523

10.06.74

Clone 19DK23

↓
2 mouse passages

Stabilates for MR4

March 2005

***P.c. adami* 19DK23**

MR4 acc.no. MRA-759

Plasmodium vinckei isolates and clones sent to MR4

P. vinckei vinckei (Democratic Republic of Congo)

Uncloned isolates

v-52

v-67

P. vinckei brucechwatti (Nigeria)

Uncloned isolates

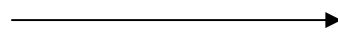
N48

1/69

P. vinckei lentum (Congo Brazzaville)

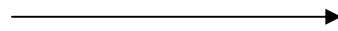
Uncloned isolates

170L (DE)



Derived clone
DE

408XZ (DS)



15DS30

P. vinckei petteri (Central African Republic)

Uncloned isolates

BS



Derived clones
4BS2

CR

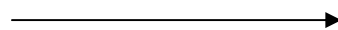


197CR27

P. vinckei subsp. (Cameroon)

Uncloned isolate

Esekam IV (EL)



Derived clone

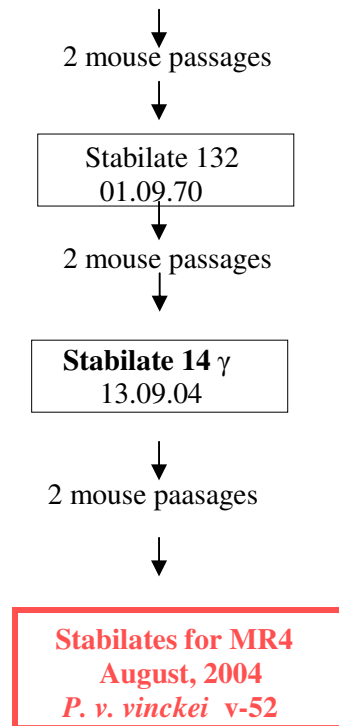
8EL8

***P. vinckei vinckei* (Democratic Republic of Congo)**

Isolate v-52

Original Mukata isolate from *Anopheles durenii millescampsii*
Isolated in Kamena (River Kinga), Katanga, Congo, by I.H. Vincke in 1952.

Mice 39B from R. Killick-Kendrick, Imperial College, Ascot, 13.08.70



***P. vinckei vinckei* (Democratic Republic of Congo)**

Isolate v-67

Original v-67 isolate from *Anopheles durenii millescampsii* in Kamena (River Kinga), Katanga, Congo, 1967,
made by J.M. Bafort.

Mice number 3934 from J.M. Bafort,
Liverpool, 02.10.71



Stabilate 200
05.10.71
Uncloned



2 mouse passages

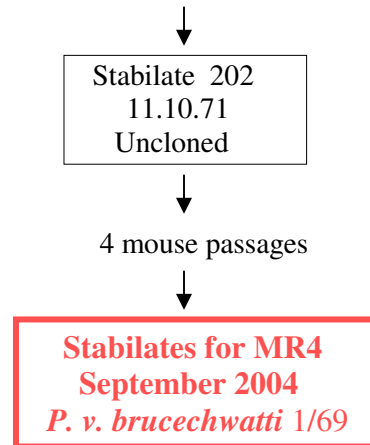


**Stabilates for MR4
September 2004
P. v. vinckei v-67**

***P. vinckei brucechwatti* (Nigeria)**

Isolate 1/69 (DA)

Collected in Nigeria in 1969. Sent by R. Killick-Kendrick, Imperial College Ascot, 08.10.71

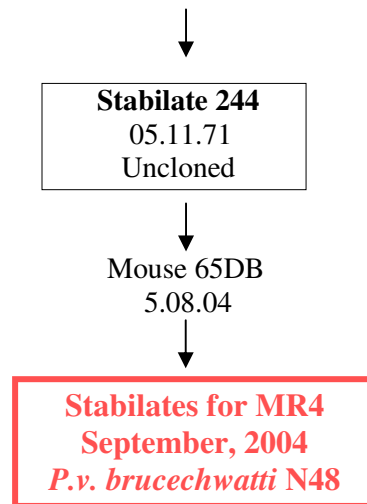


***P. vinckei brucechwatti* (Nigeria)**

Isolate N48 (DB)

Collected in Nigeria in 1967.

Mice inoculated from deep-frozen sample (=3rd passage from wild, frozen 09.09.67), sent by R. Killick- Kendrick, Imperial College Ascot, 25.10.71.



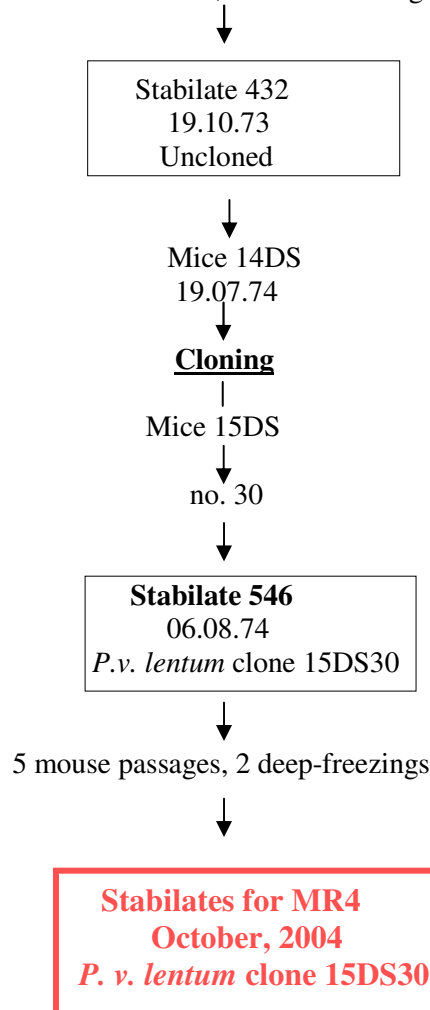
P. vinckei lentum (Congo Brazzaville)

Clone 15DS30

Isolate 408XZ from *Thamnomys rutilans*, Congo-Brazzaville
(contains *P. vinckei lentum* and *P. chabaudi adami*)

Frozen blood sent to Liverpool STM by Irene Landau

Mice inoculated 12.10.73, sent to Edinburgh 18.10.73



P. vinckei lentum (Congo Brazzaville)

Isolate 170L (DE)

Isolated Congo-Brazzaville from *Thamnomys rutilans*

History: *Thamnomys rutilans* 170L → Mice 79K/2 → Mice 82K/1 → Mice 86K
→ Deep-frozen 10.08.66

↓
Deep-frozen material received from R. Killick- Kendrick, Imperial College,
25.10.71

↓
Mice 1DE

↓
Stabilate 241
04.11.71
Uncloned

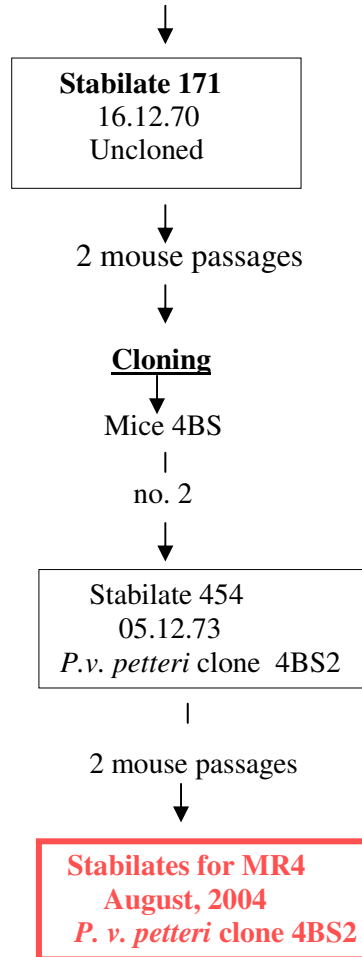
↓
3 mouse passages

↓
**Stabilates for MR4
October, 2004
P. v. lentum clone 15DS30**

***P. vinckei petteri* (Central African Republic)**

Clone 4BS2

T. rutilans no. 3, from Central African Republic
(contains *P. vinckei petteri* and *P. chabaudi chabaudi*)
Sent by I. Landau (Paris) 25.09.70
Named 1BS



P. vinckei petteri (Central African Republic)

Clone 197CR27

T. rutilans no. 26, from Central African Republic
(contains *P. vinckei petteri* and *P. chabaudi chabaudi*)

Sent by I. Landau (Paris) 25.09.70

↓
Grammomys surdaster 4CR

11.05.71

↓
2 mouse passages

↓
Stabilate 196

11.06.71

↓
Mice 193CR

01.11.73

↓
Cloning

↓
Mice 197CR

↓
no. 27

↓
Stabilate 447

28.11.73

P.v. petteri clone 197CR27

↓
2 mouse passages

↓
Stabilate 1456

02.12.86

↓
2 mouse passages

↓
Stabilates for MR4

August, 2004

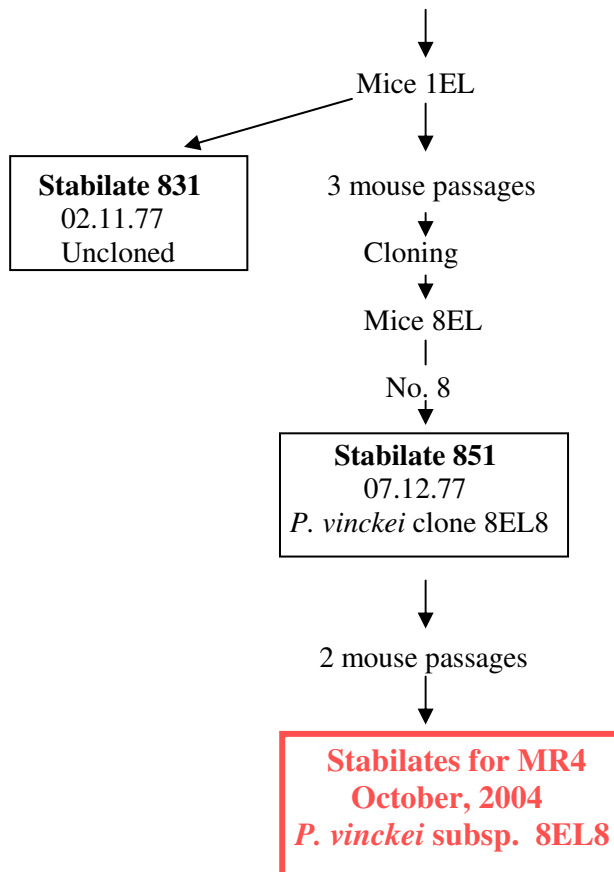
***P. v. petteri* clone 197CR27**

P. vinckei (Cameroon)

Clone 8EL8

Original Esekam IV isolate from *T. rutilans* in Cameroon, March 1974, made by J..M. Bafort.

Deep-freeze samples 3312 sent to Edinburgh 24.10.77 by Marc Wéry, Antwerp
Contains *P. vinckei* and *P. yoelii*

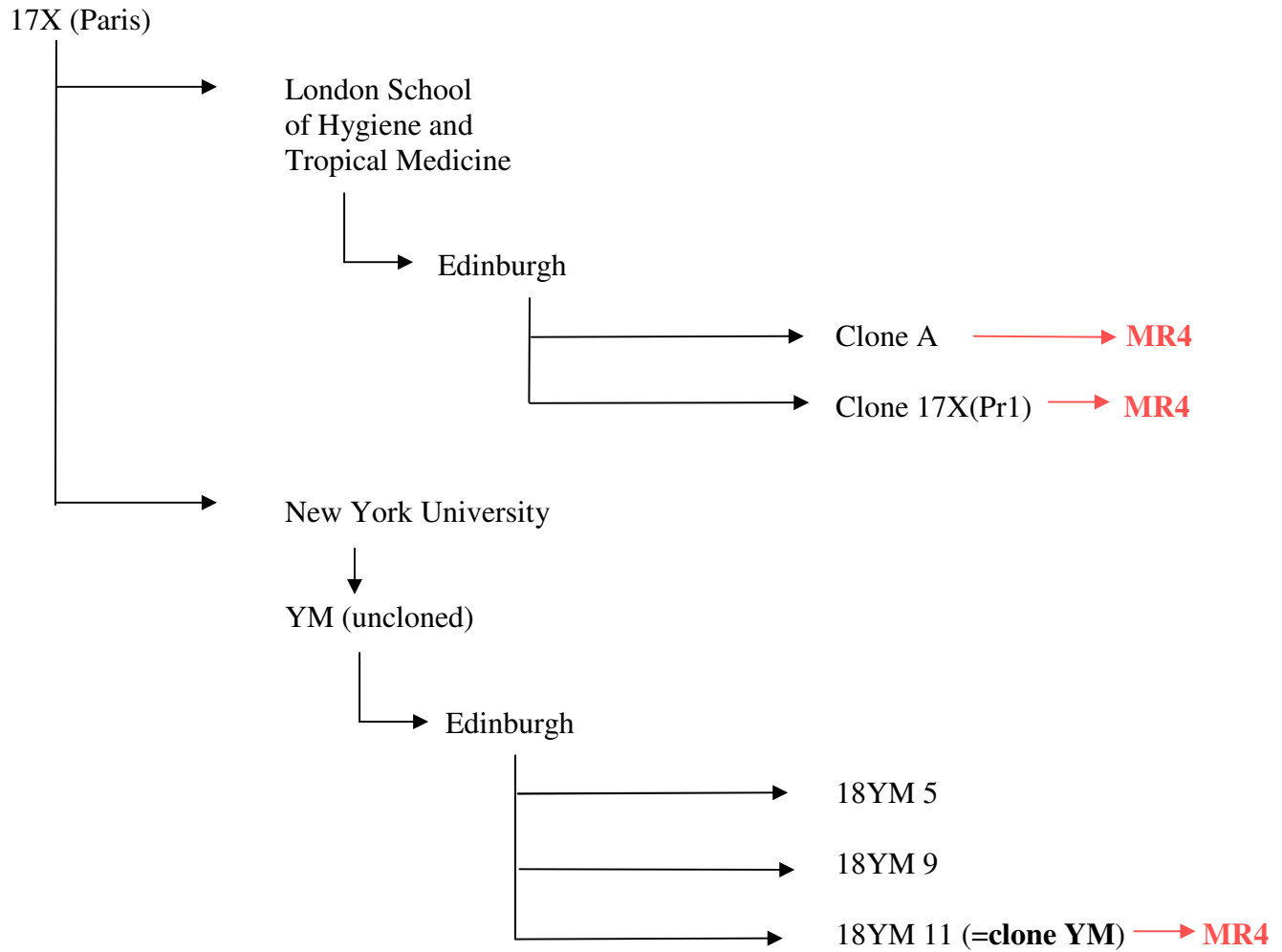


***P. yoelii yoelii* (Central African Republic)**

Isolate 17X and derived clones

Original uncloned isolate

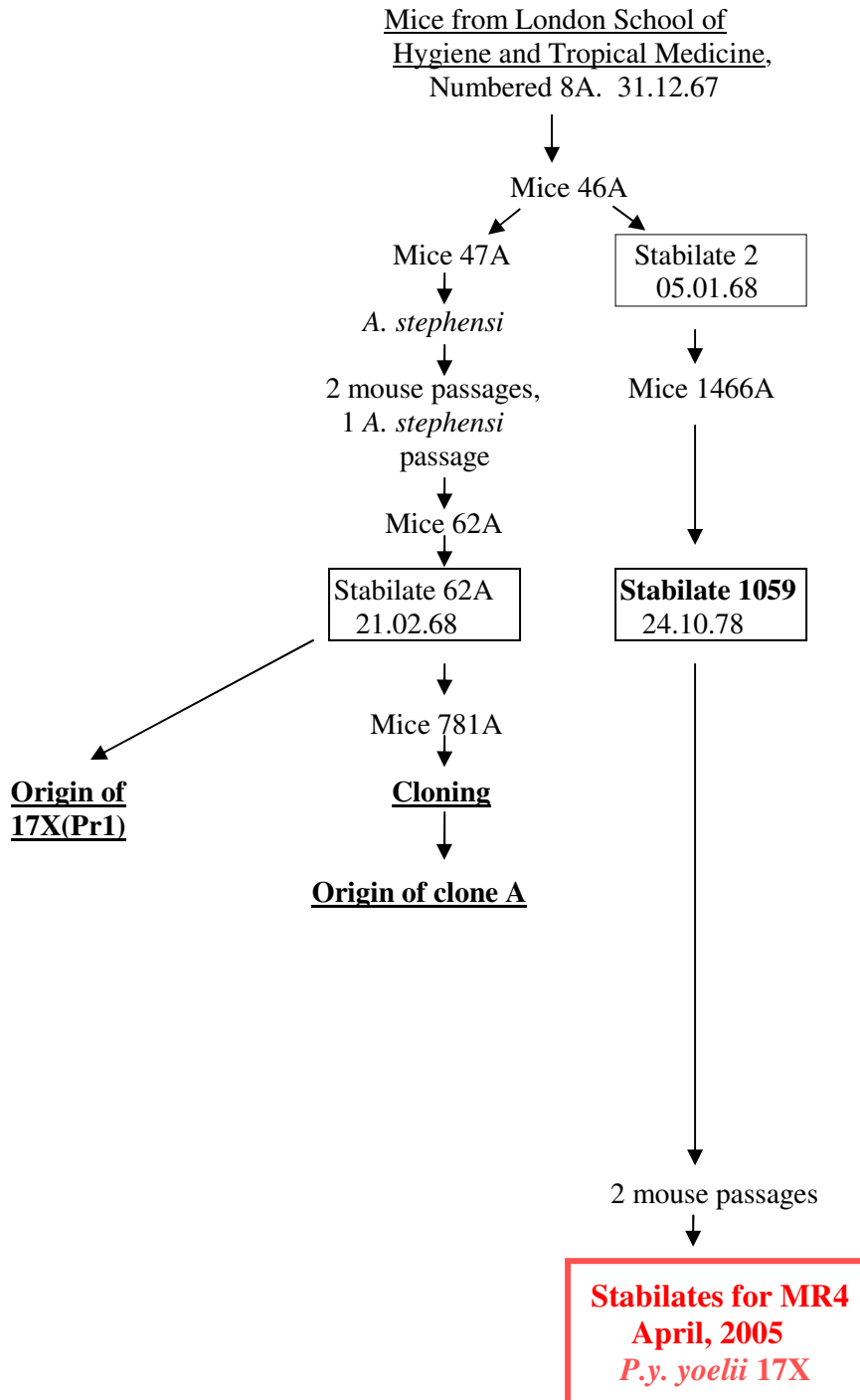
Derived clones



P.yoelii yoelii (Central African Republic)

Isolate 17X

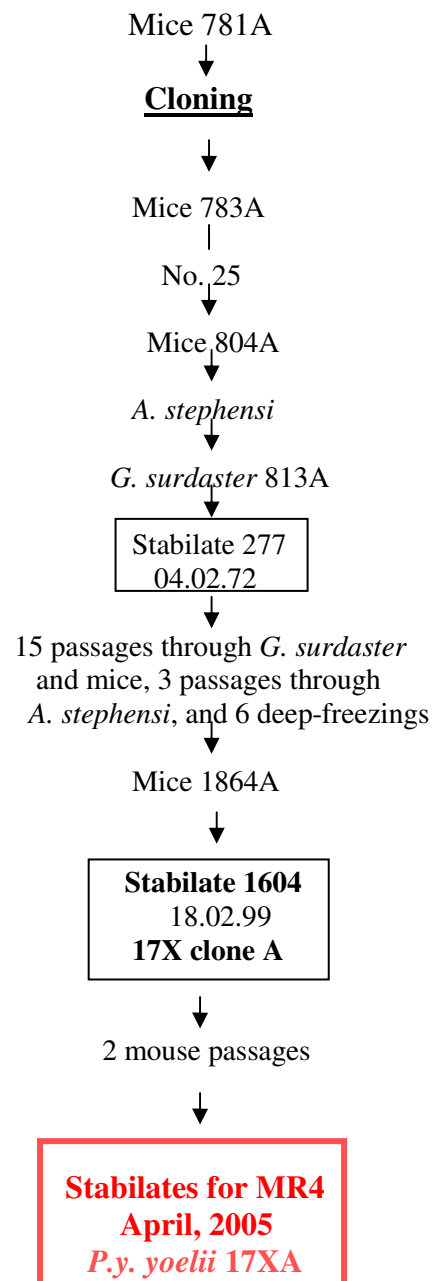
Isolated by I. Landau from *Thamnomys rutilans* no. 17X,
La Maboké Field Station, Central African Republic, April 1965
For passage history since isolation, see M. Wéry (1968)



***P.yoelii yoelii* (Central African Republic)**

Clone 17X A

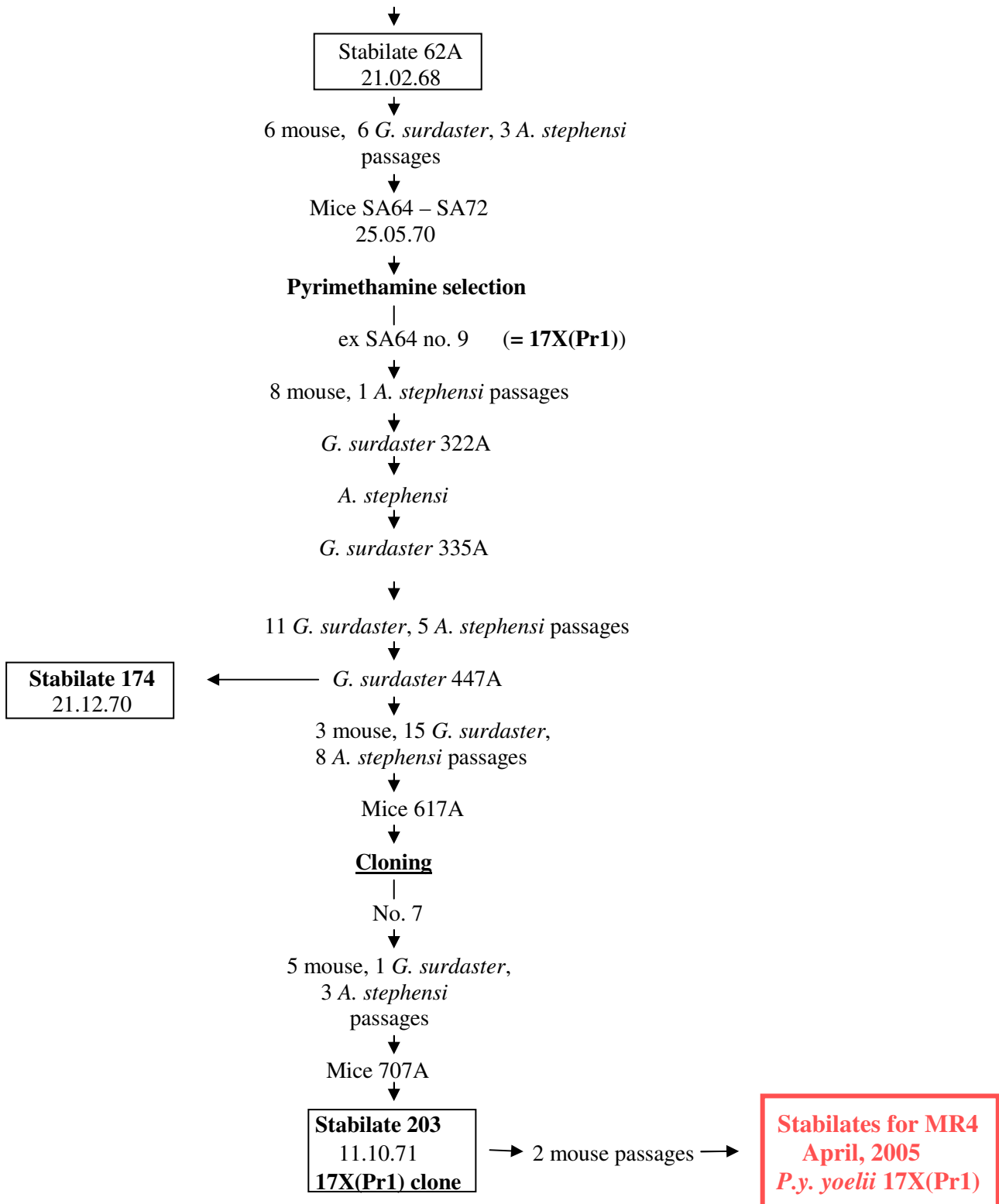
For previous history, see isolate 17X



P.yoelii yoelii (Central African Republic)

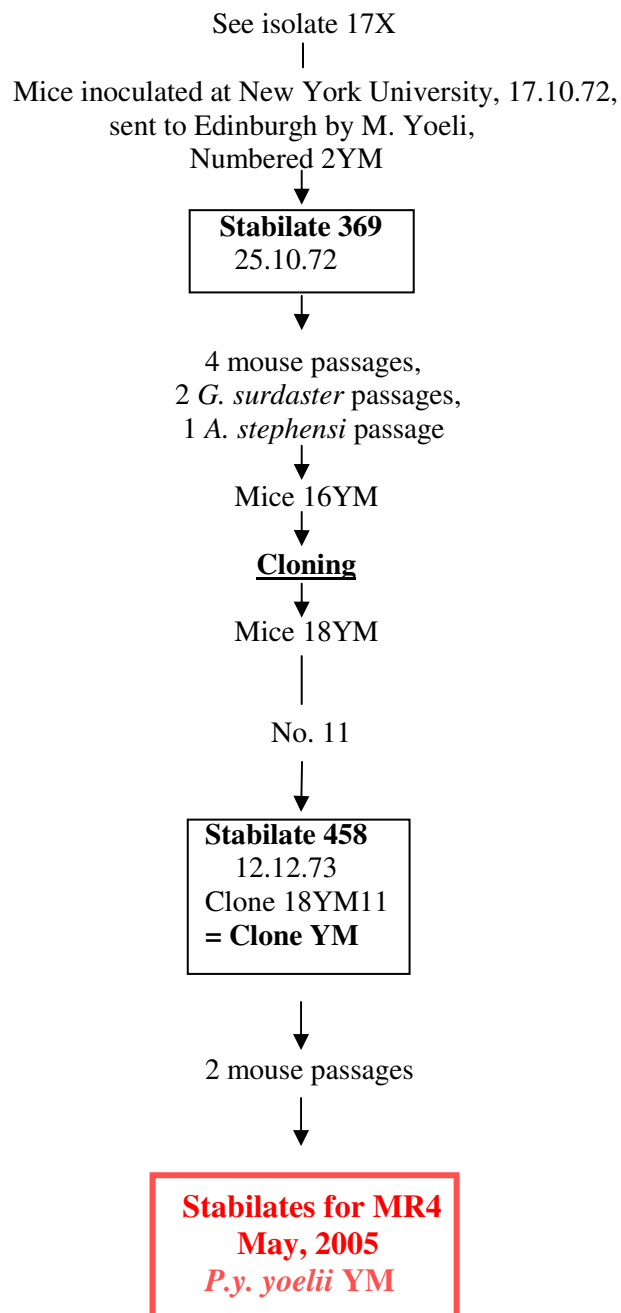
Clone 17X (Pr1)

For previous history, see isolate 17X



P. yoelii yoelii (Central African Republic)

Clone YM



***P. yoelii yoelii* (Central African Republic)**

Isolate 33X and derived clones

Original uncloned isolate

33X (Paris)



London School
of Hygiene and
Tropical Medicine



Edinburgh



MR4

Derived clones

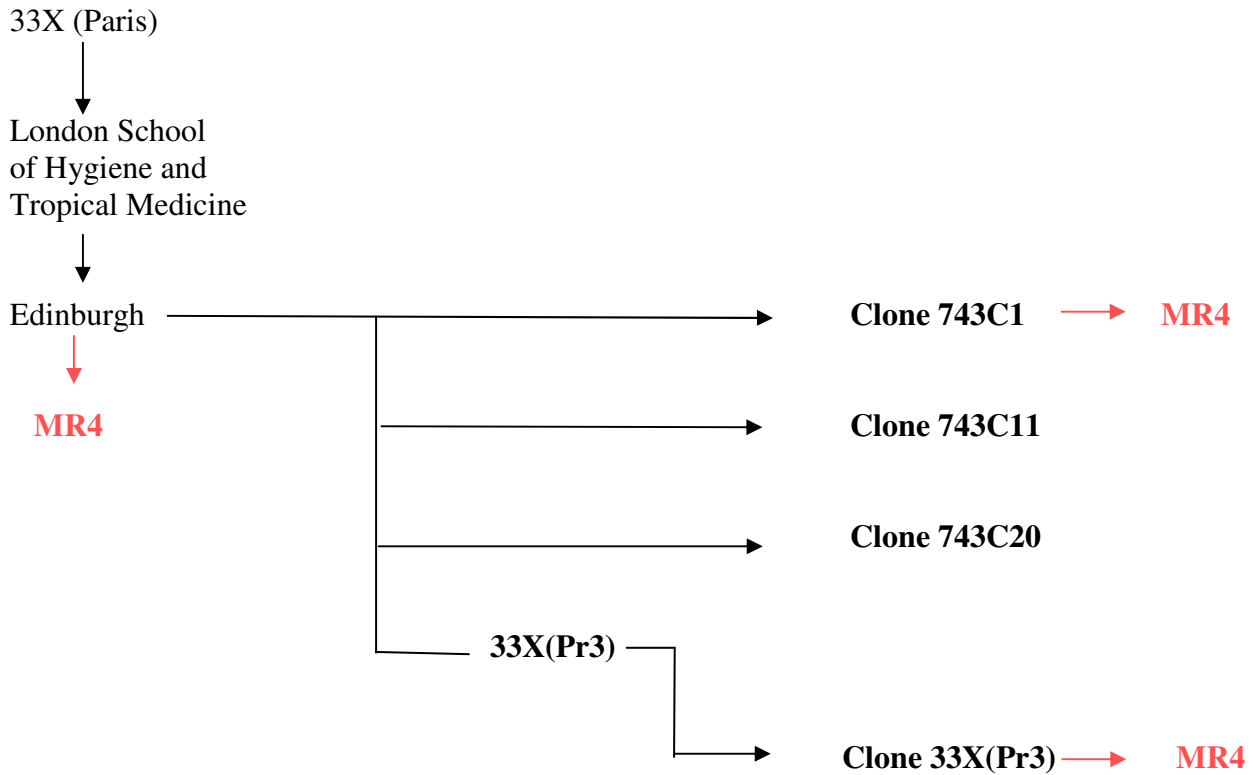
Clone 743C1 → MR4

Clone 743C11

Clone 743C20

33X(Pr3)

Clone 33X(Pr3) → MR4



P.yoelii yoelii (Central African Republic)

Isolate 33X and origin of clones

Isolated by I. Landau from *Thamnomys rutilans* no. 33X,
La Maboké Field Station, Central African Republic, April 1965
For passage history since isolation, see M. Wéry (1968)

↓
Ampoule 173W
from London School of Hygiene and Tropical Medicine

↓
Mice 1C
16.05.68

↓
Stabilate 12
22.05.68

→ 2 mouse passages →

Stabilates for MR4
June, 2005
***P.y. yoelii* 33X**

↓
Mice 14C

↓
Stabilate 15
19.08.68

↓
1 mouse, 1 *G. surdaster*, 1 *A. stephensi* passage

↓
G. surdaster SC23
03.08.70

→ **Origin of 33X(Pr3)**

↓
Stabilate 130
11.08.70

↓
3 mouse, 1 *A. stephensi* passages

↓
Mice 711C

↓
Stabilate 509
08.05.74

↓
Mice 742C

↓
Cloning

↓
Mice 743C
26.07.74

↓
No. 1

↓
Stabilate 547
06.08.74

⇒ 2 mouse passages ⇒

Stabilates for MR4
May, 2005
33X(743C1)

***P.yoelii yoelii* (Central African Republic)**

Clone 33X(Pr3)

For previous history, see Isolate 33X

