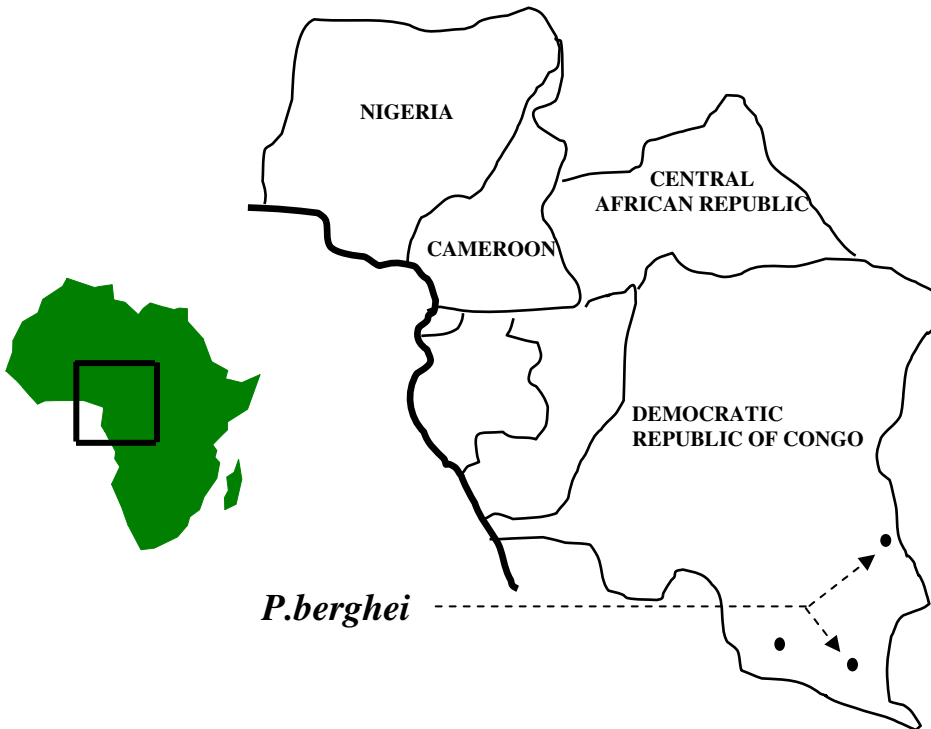


Plasmodium berghei

**Life-histories and stabilates (deep-frozen samples) of
isolates, lines and clones maintained at the University of Edinburgh**

	Page
Map - country of origin	2
General information - definitions of isolates, lines and clones - mixed species infections	3
Summary list of isolates and clones	4
Detailed life-histories	5
References	13

Plasmodium berghei: origins of isolates



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.

Also, note that *Plasmodium chabaudi* and *P. vinckei* do not normally infect intact laboratory rats (although they can be adapted to this host by passage through splenectomised rats). Uncloned isolates which have been passaged through laboratory rats, therefore, can be assumed to contain only *P. yoelii* or *P. berghei*.

P. berghei isolates and clones

<u>Isolates</u>	<u>Clones</u>
ANKA	ANKA1, ANKA5
K173 (N) → RC	
KSP11 → RLL	
LUKA	
NK65	
SP11	

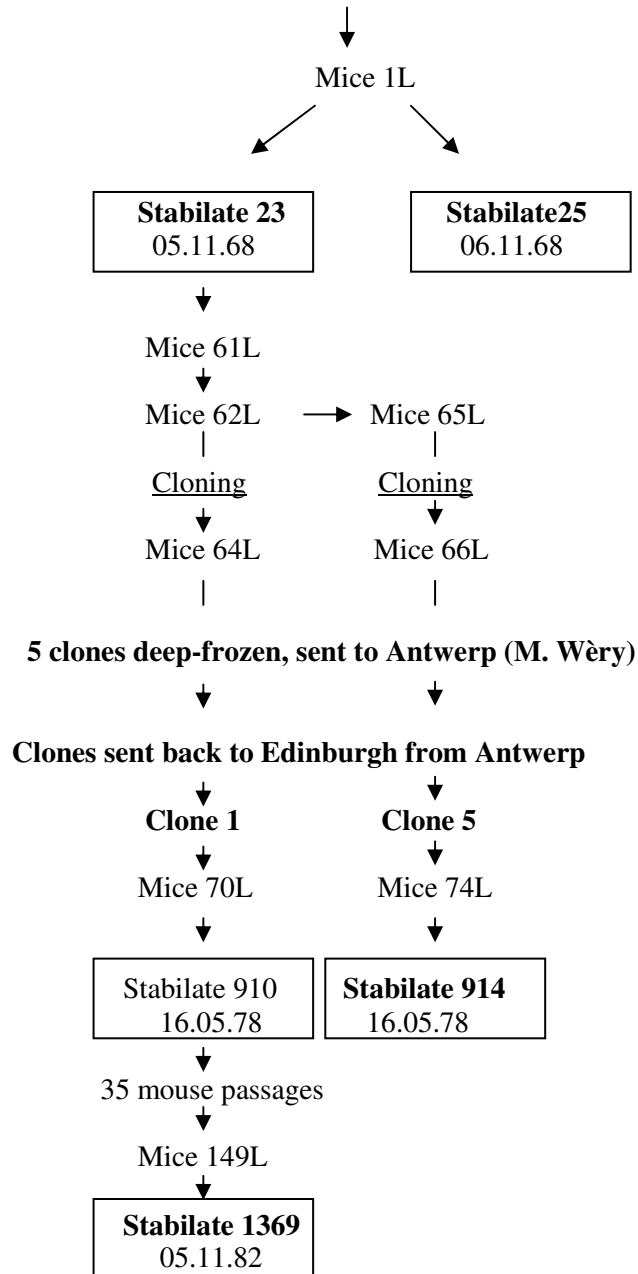
Important note : There is strong evidence that all these parasites, except RC and RLL, are genetically identical, since they have identical sequences for their *ama1*, *msh1* and *dhfr* genes.

See Saul, A., Prescott, N., Smith, F., Cheng, Q. and Walliker, D. (1997) Evidence of cross-contamination among laboratory lines of *Plasmodium berghei*. *Molecular and Biochemical Parasitology* **84**, 143 - 147

P. berghei (Democratic Republic of Congo)**Isolate ANKA**

Isolated from *Anopheles durenii millecampsii*,
 caught in forest gallery, River Kasapa, near Lubumbashi, by Vincke and Bafort, 07.03.65
 See Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237

Ampoules 1571, 1572 obtained from London SHTM.



P. berghei (Democratic Republic of Congo)

Isolate K173 (origin of N strain)

Isolated from *Grammomys surdaster* caught in forest gallery River Kisanga,
near Lubumbashi. by Vincke and Lips (1948).

See Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237

- (i) **K173** - mice obtained from Dr Clara Frontali, Rome, arrived 02.08.83



Stabilate 1388 13.08.83

- (ii) **N strain** (original 'Mill Hill' strain), taken from Mill Hill to Liverpool by D. Warhurst.
Progenitor of chloroquine-resistant RC strain

Mice received from W. Peters, Liverpool, 03.10.73, numbered 1DQ



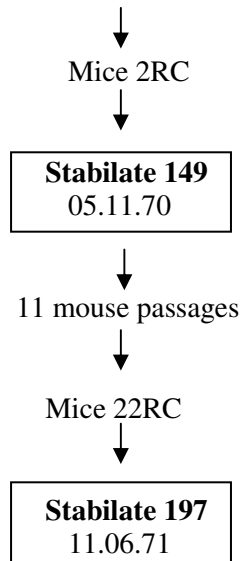
Stabilate 429 04.10.73

P. berghei (Democratic Republic of Congo)

RC strain

Derived from 'N' strain by chloroquine selection
- see Peters, W. (1965) *Experimental Parasitology* 17, 80-89.
See isolate K173 for details of original isolate.

Mice sent by W. Peters from Liverpool, 20.10.70,
numbered 1RC



P. berghei (Democratic Republic of Congo)

Isolate KSP11

Isolated from *Anopheles durenii millecampsii*,
caught in Katanga, 04.11.61. Received in New York University 17.11.61
See Yoeli, M. and Most, H. (1965) *Am. J. Trop. Med. Hyg.* 14, 700 - 714,
and Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237

Mice sent by Dr Rosa Vasquez, NIMR, Mill Hill, 20.02.78.

Line SPB6

Mice 1EO



Stabilate 874

24.02.78

Line PB19

Mice 2EO



Stabilate 875

24.02.78

P. berghei (Democratic Republic of Congo)

Isolate LUKA

Isolated from *Anopheles durenii millescampsii*,
caught in forest gallery, River Kasapa, near Lubumbashi, by Vincke and Bafort, 15.03.66
See Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237

Mouse no. 6739 sent by Dr J. Bafort, Liverpool, 02.10.71

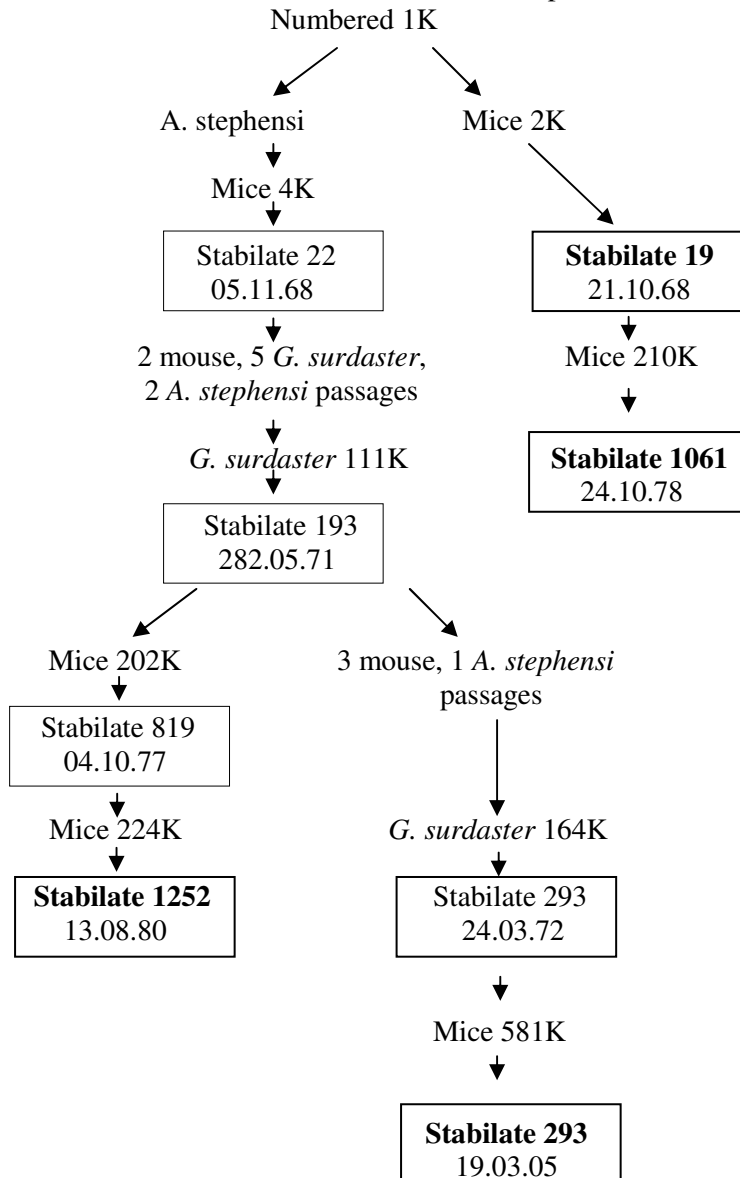


Stabilate 201 05.10.71

P. berghei (Democratic Republic of Congo)**Isolate NK65**

Isolated from *Anopheles dureni millecampsii*,
 caught in forest gallery, River Kisanga, near Lubumbashi, January, 1964, taken to New York, 04.01.64,
 used to infect *G. surdaster*. Then passaged through *A. quadrimaculatus* and hamsters.
 See Yoeli, M. *et al.* (1964) *Science* 144, 1580-1581, and Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237

Mice infected with NK65 obtained from Liverpool, arrived 15.10.68.



P. berghei (Democratic Republic of Congo)

Isolate SP11

Isolated from *Anopheles durenii millescampsii*,
caught in forest gallery, River Kasapa, near Lubumbashi, February, 1961
See Killick-Kendrick, R. (1974) *Parasitology* 69, 225-237
Progenitor of pyrimethamine-resistant line RLL

Ampoules obtained from R. Killick-Kendrick, Imperial College, 25.10.71.



Mice 2DH



Stabilate 226 03.11.71

P. berghei (Democratic Republic of Congo)**Line RLL**

Pyrimethamine-resistant line of isolate SP11
See SP11 for isolation details

Ampoules (1575, 1576) frozen since 06.09.68 obtained from London School of Hygiene
and Tropical Medicine.



Mice 1M



Stabilates 26, 27 07.11.68

References

These references represent a small selection of papers, books, etc. concerning some of the *P. berghei* isolates, lines and clones included in this file.

1. Overall summaries:

Killick-Kendrick, R. and Peters, W. eds (1978) *Rodent Malaria*. Academic Press, 1978

Killick-Kendrick, R. (1974) Parasitic protozoa of the blood of rodents: a revision of *Plasmodium berghei*. *Parasitology* 69, 225-237.

2. Original isolation of strain K173

Vincke, I.H. and Lips, M. (1948) Un nouveau plasmodium d'un rongeur sauvage du Congo: *Plasmodium berghei* n.sp. *Annales de la Société Belge de Médecine Tropicale* 28, 97-104.

3. Other isolations

SP11: Michiels, G. (1963) Observations sur la gamétogenèse du *Plasmodium berghei*. *Annales de la Société Belge de Médecine Tropicale* 43, 67-82.

KSP11: Yoeli, M. and Most, H. (1965) Studies on sporozoite-induced infections of rodent malaria. I. The pre-erythrocytic tissue stage of *Plasmodium berghei*. *American Journal of Tropical Medicine and Hygiene* 14, 700-714.

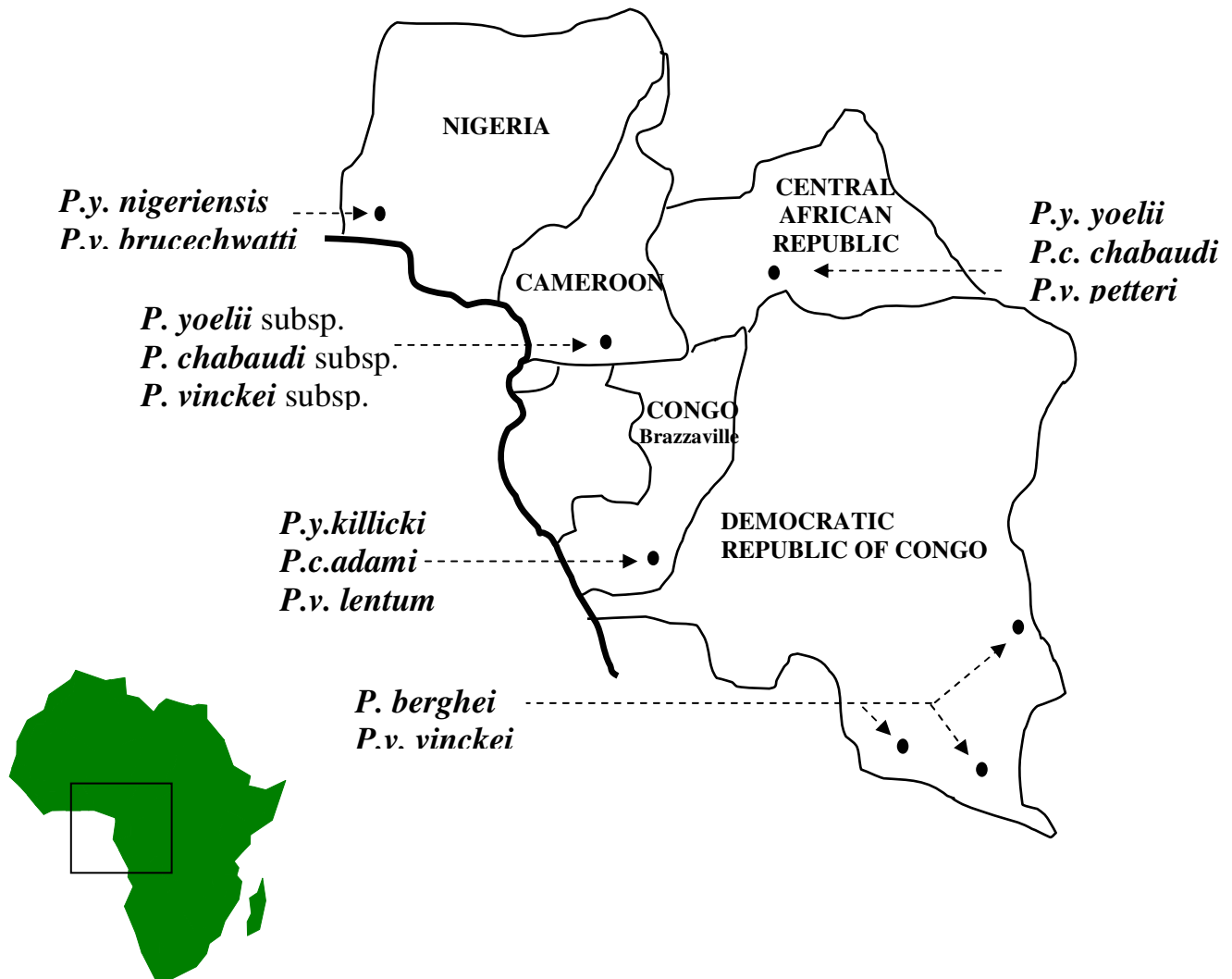
NK65: Yoeli, M., Most, H. and Boné, G. (1964) *Plasmodium berghei*: cyclical transmissions by experimentally infected *Anopheles quadrimaculatus*. *Science* 144, 1580-1581

ANKA, LUKA: Vincke, I. and Bafort, J. (1968) Méthodes de standardisation de l'inoculum de sporozoïtes de *Plasmodium berghei*. *Annales de la Société Belge de Médecine Tropicale* 48, 181-194.

Rodent malaria parasites supplied to MR4

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<i>P.c. chabaudi</i> (Central African Republic)	
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Isolate AS and derived lines/clones - summary	9
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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*

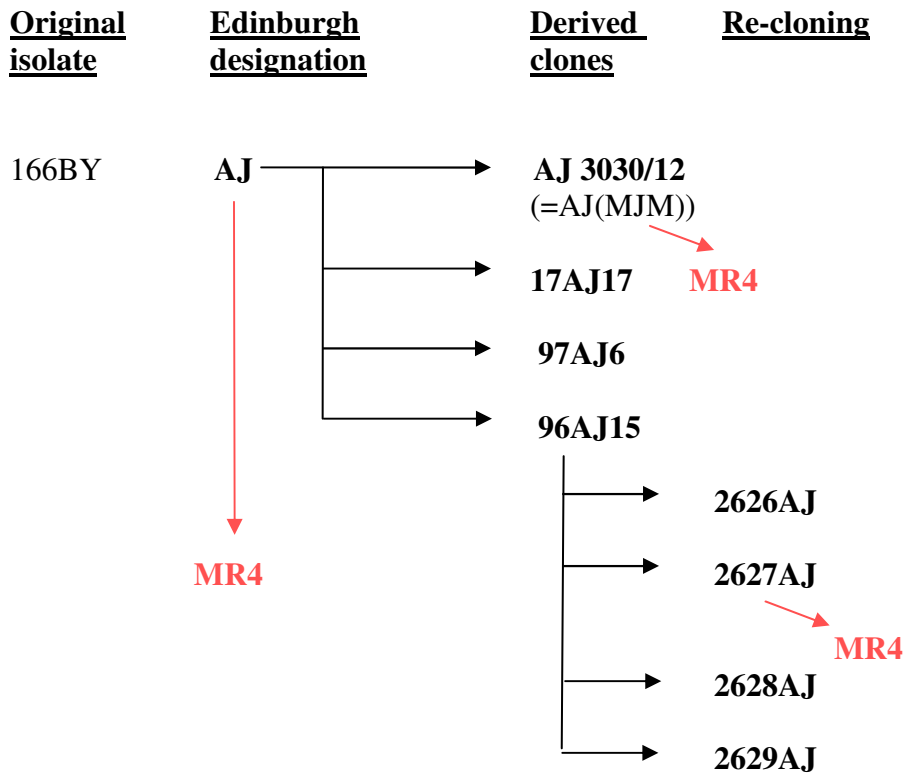
***P. vinckei brucechwatti* (Nigeria)**

- 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*

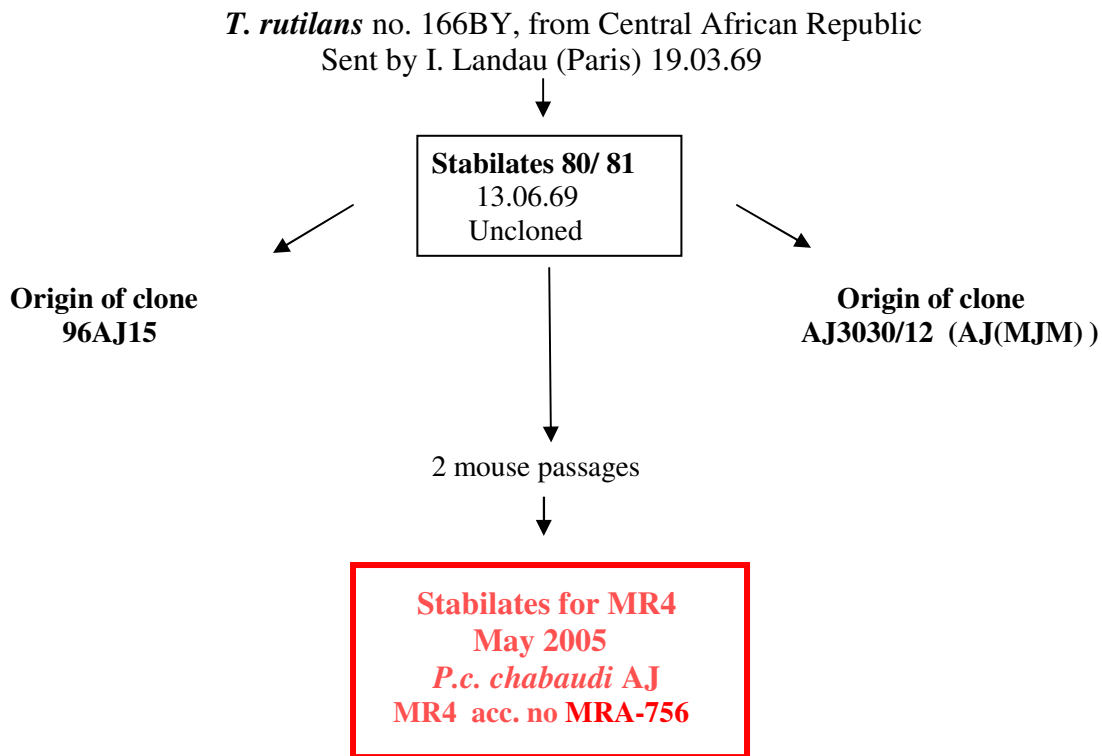
***P. chabaudi chabaudi* (Central African Republic)**

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 Unclassified

↓
 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

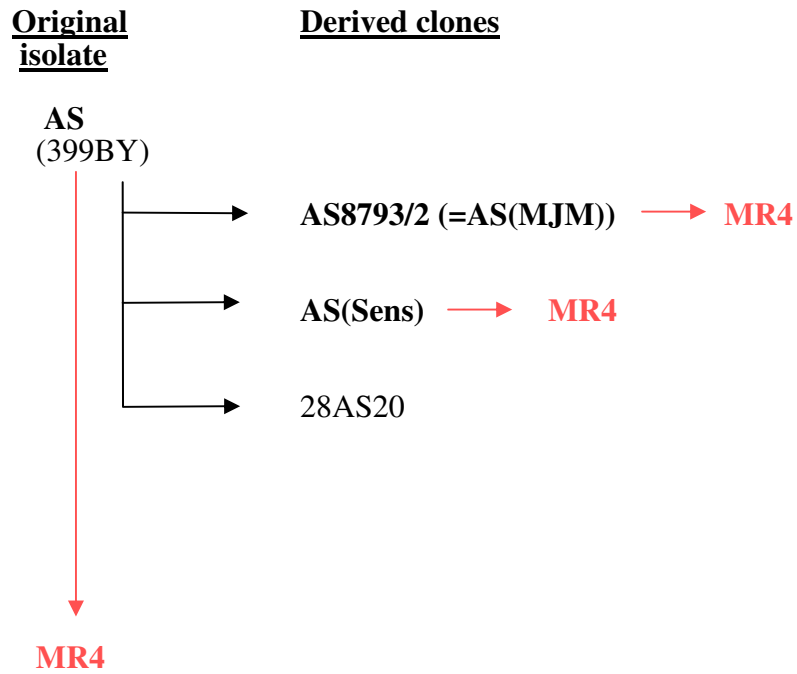
↓
 5 mouse passages, 3 deep-freezings

↓

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)**

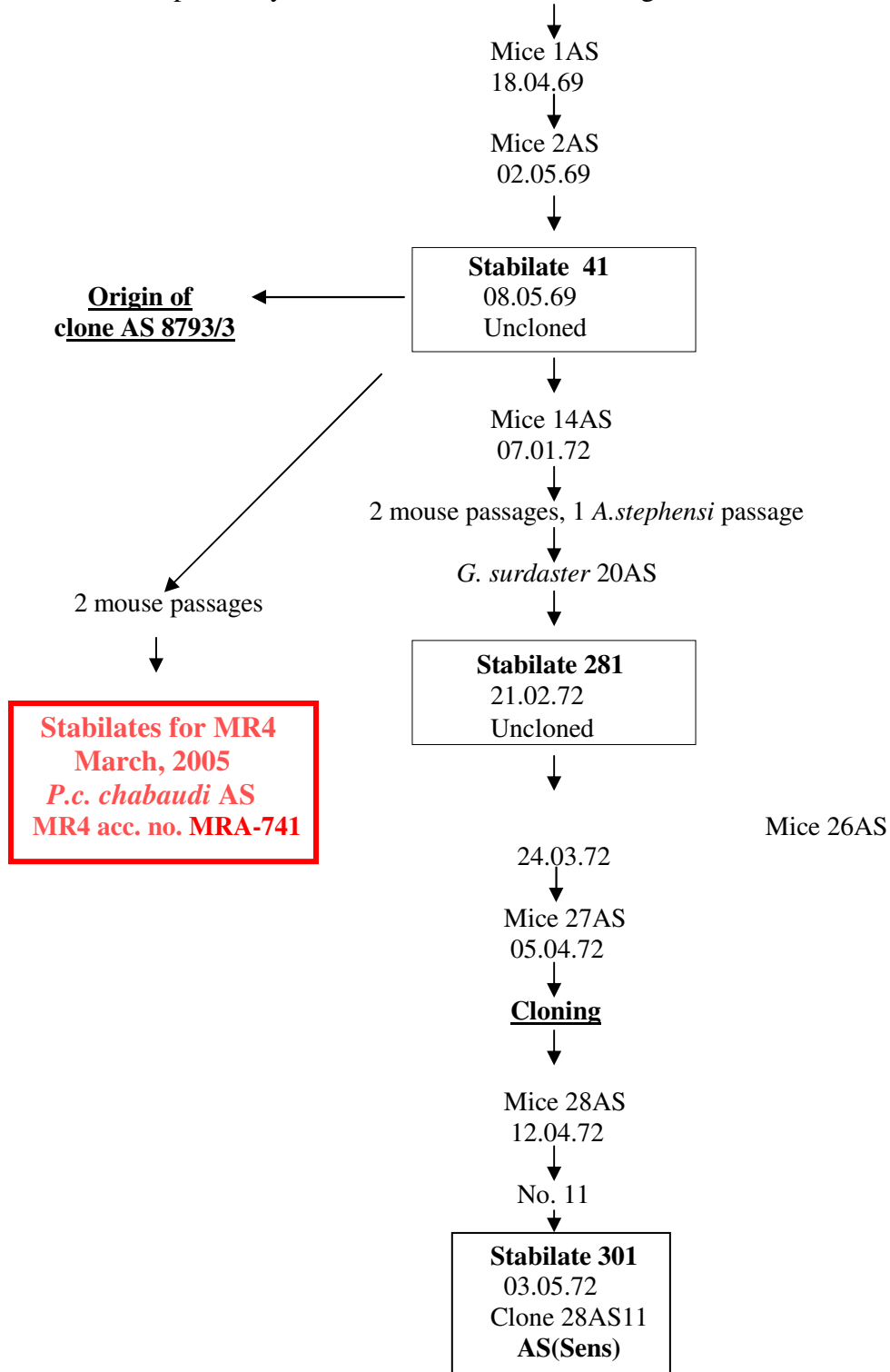
Isolate AS and derived clones resistant to chloroquine and to mefloquine, sent to MR4

<u>Original isolate</u>	<u>Derived clones</u>	<u>Response to :-</u>		
		<u>Pyrimethamine</u>	<u>Chloroquine</u>	<u>Mefloquine</u>
AS (399BY)	AS(Sens)	Sensitive	Sensitive	Sensitive
	AS(Pyr1)	Resistant	Sensitive	Sensitive
	AS(3CQ)	Resistant	Low resistance	Sensitive
	AS(15CQ)	Resistant	Medium resistance	Sensitive
	AS(30CQ)	Resistant	High resistance	Sensitive
	AS(15MF/2)	Resistant	Not tested	Unstable resistance
	AS(15MF/3)	Resistant	Medium resistance	Resistant
	MR4			

P. chabaudi chabaudi (Central African Republic)

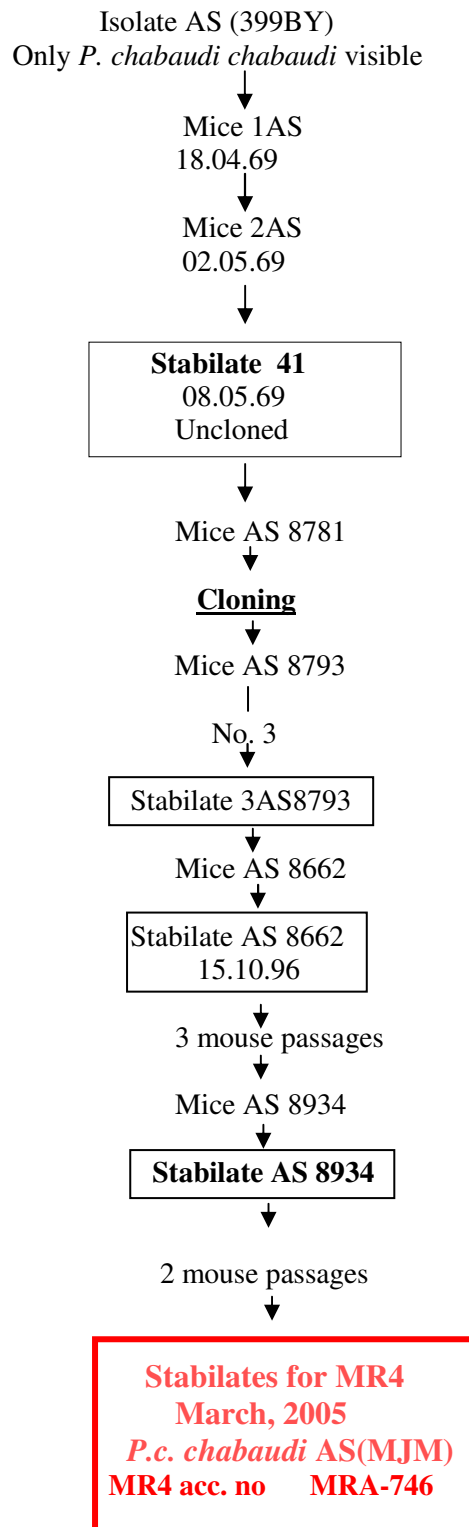
Isolate AS (only *P.c. chabaudi* visible)

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



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

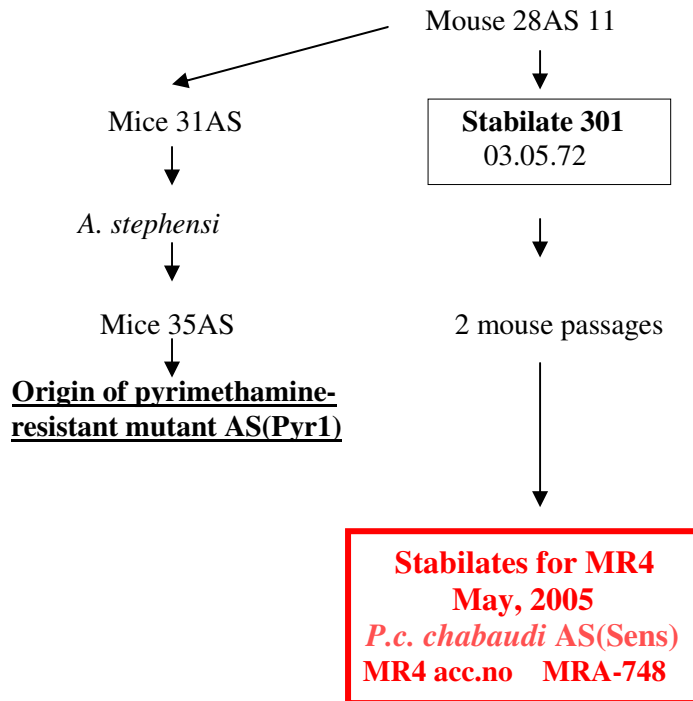
Clone AS 8793/3 (=AS(MJM))



P. chabaudi chabaudi (Central African Republic)

Clone AS(Sens)

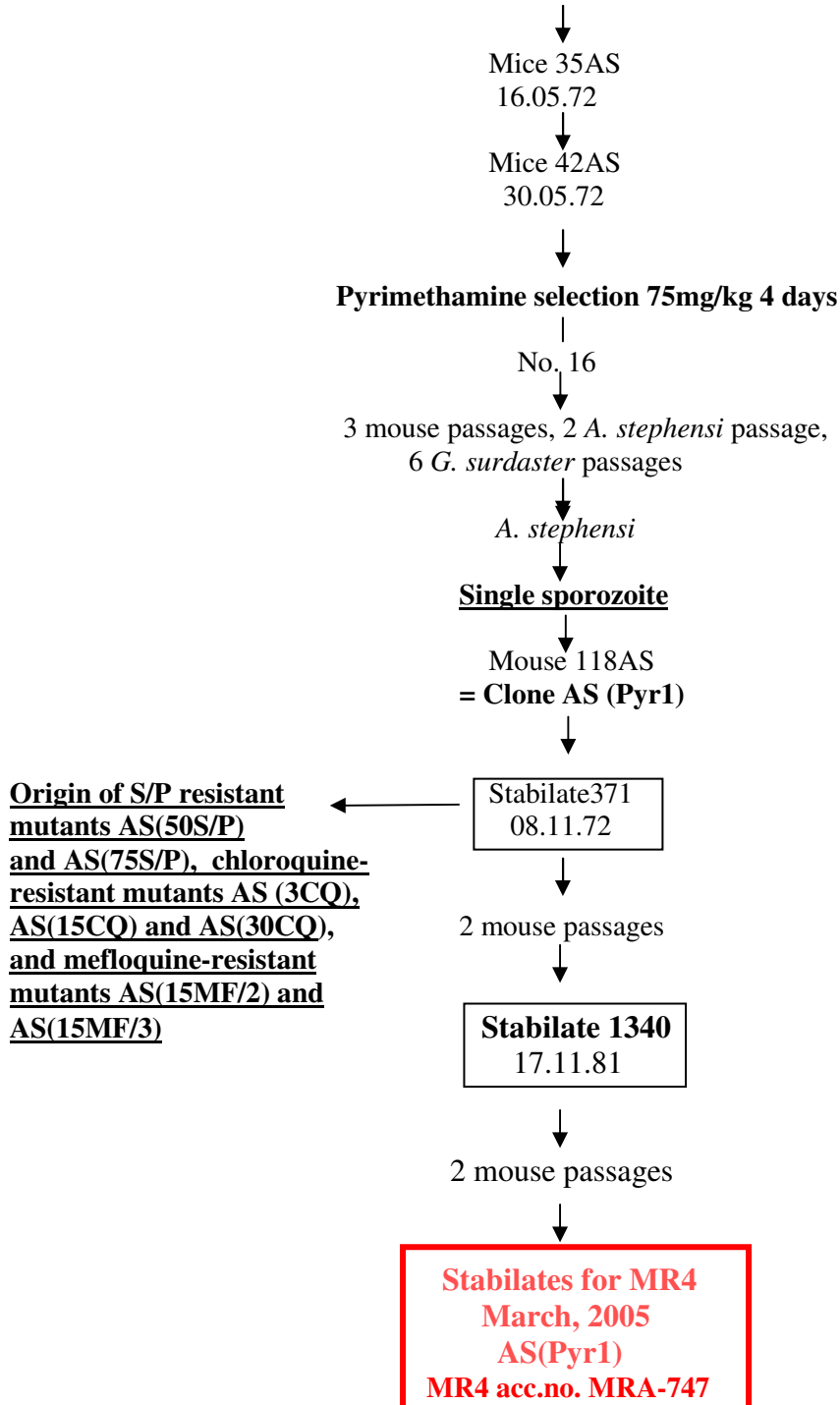
For previous history, see uncloned isolate AS (399BY)



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

Clone AS(Pyr1) (pyrimethamine-resistant)

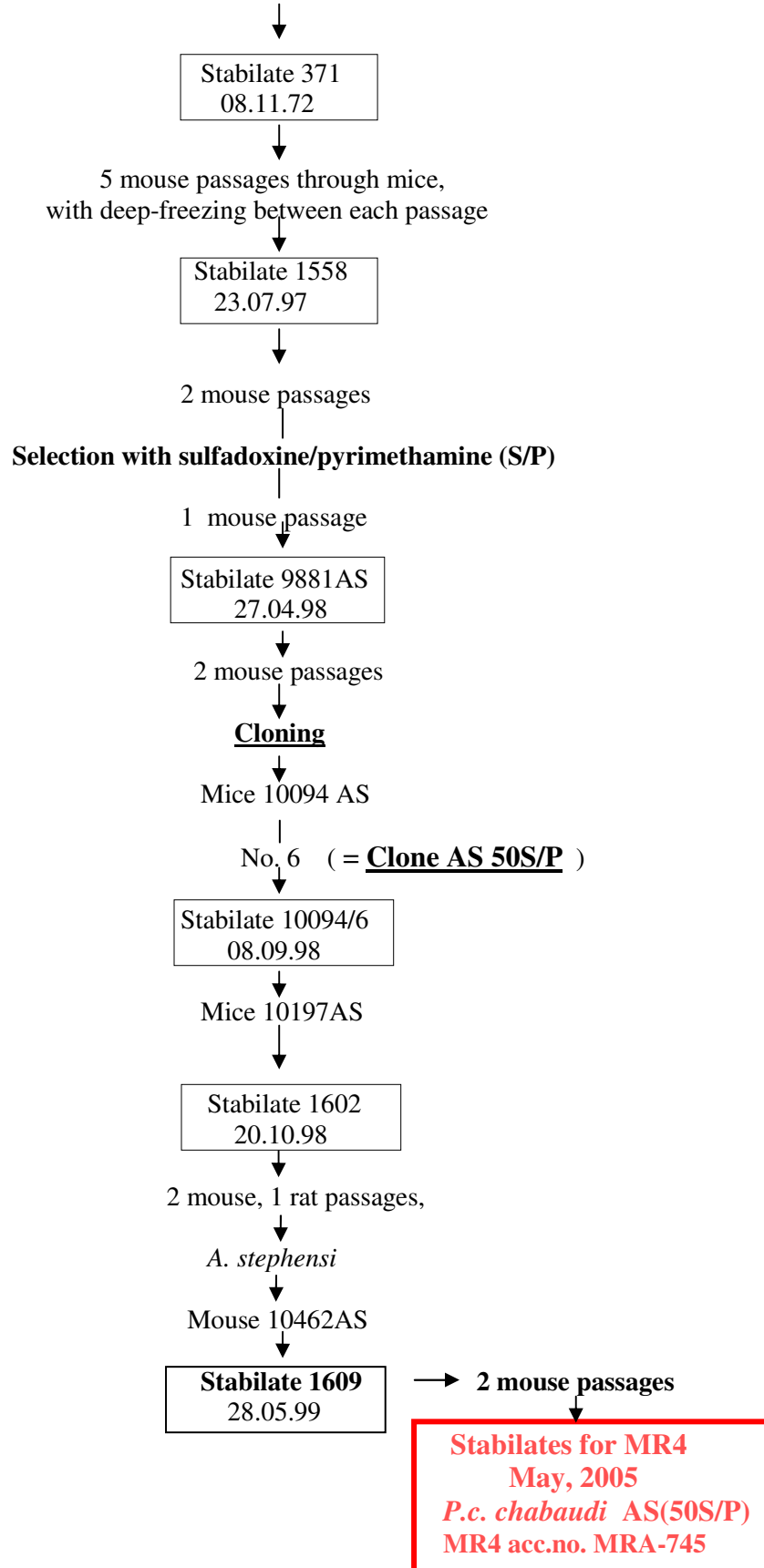
For previous history, see clone AS (Sens)



P. chabaudi chabaudi (Central African Republic)

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

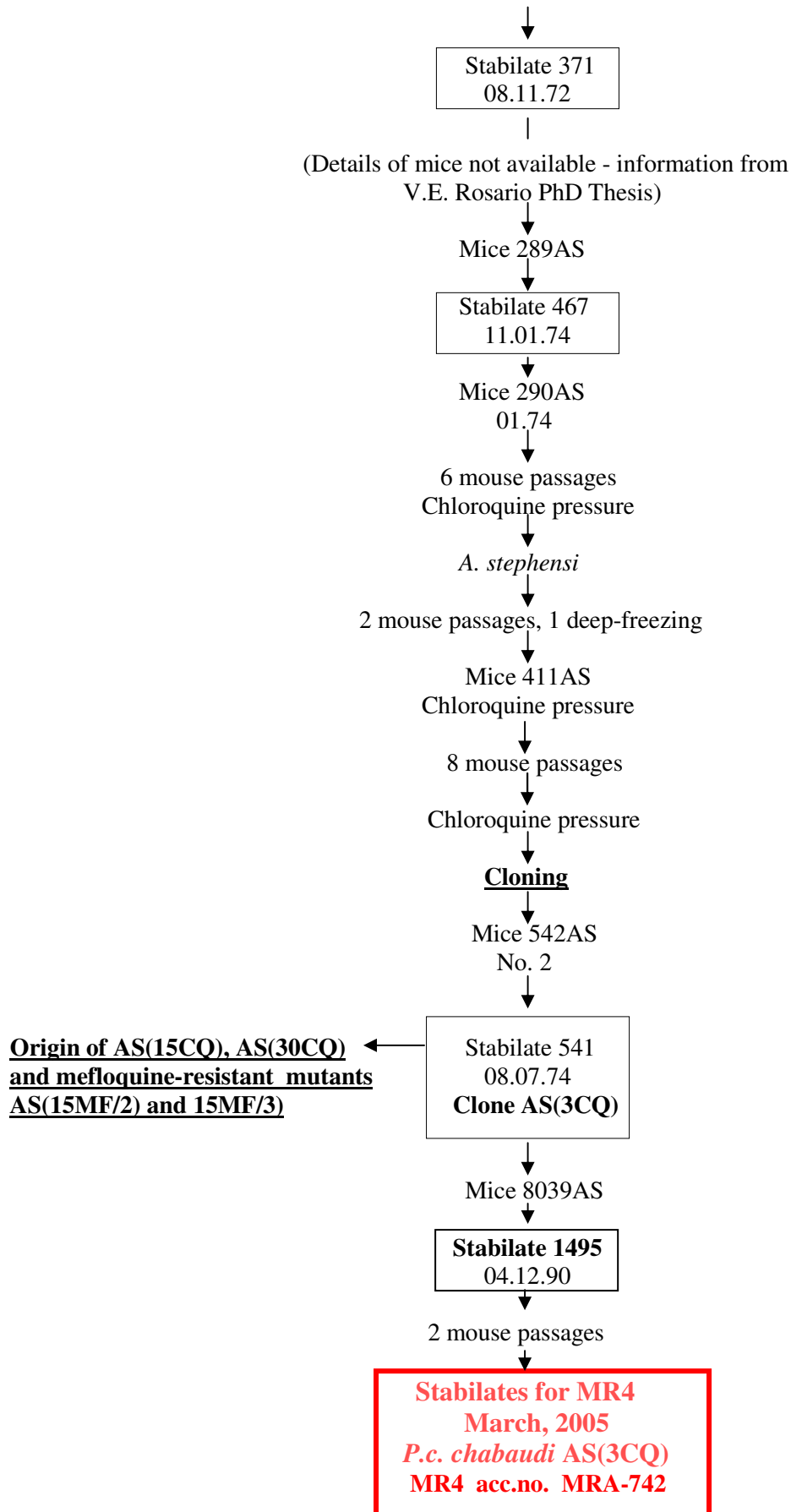
For previous history, see clone AS (Pyr1)



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

Clone AS(3CQ) (chloroquine-resistant)

For previous history, see clone AS (Pyr1)

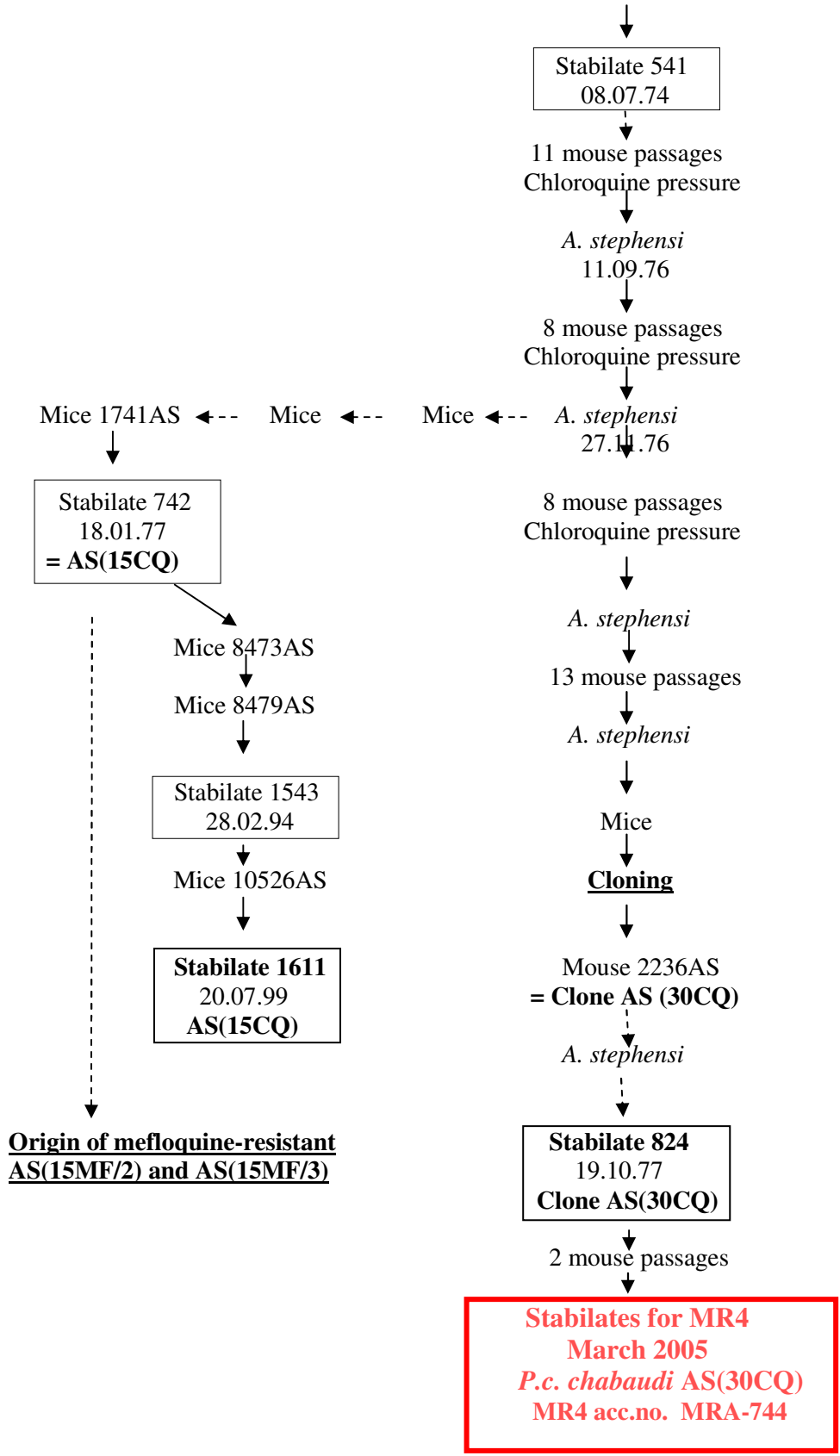


P. chabaudi chabaudi (Central African Republic)

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)

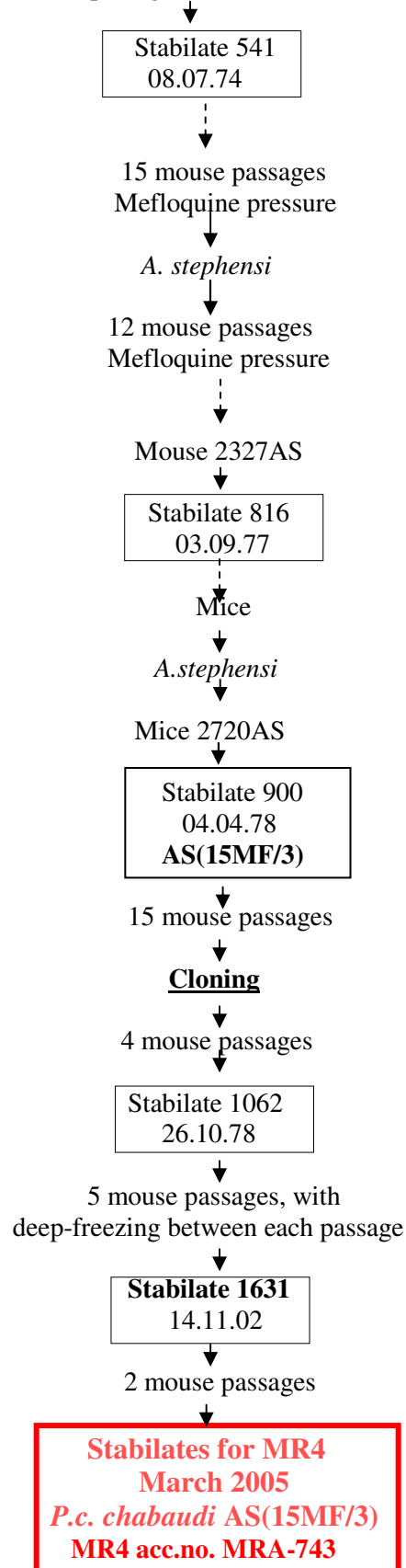


P. chabaudi chabaudi (Central African Republic)

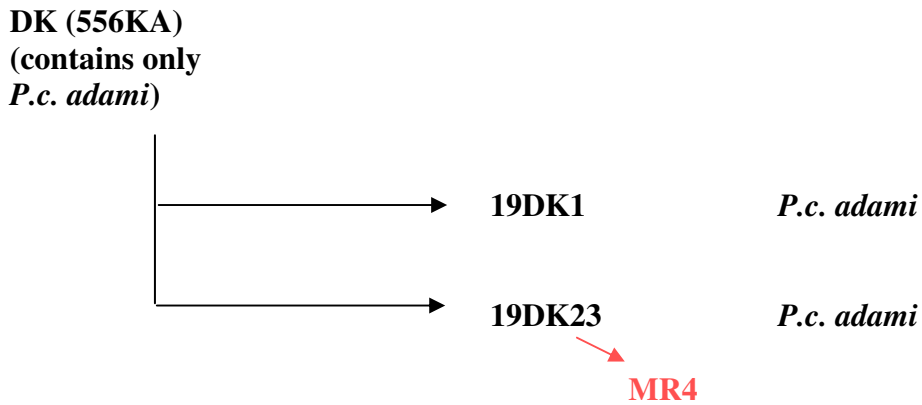
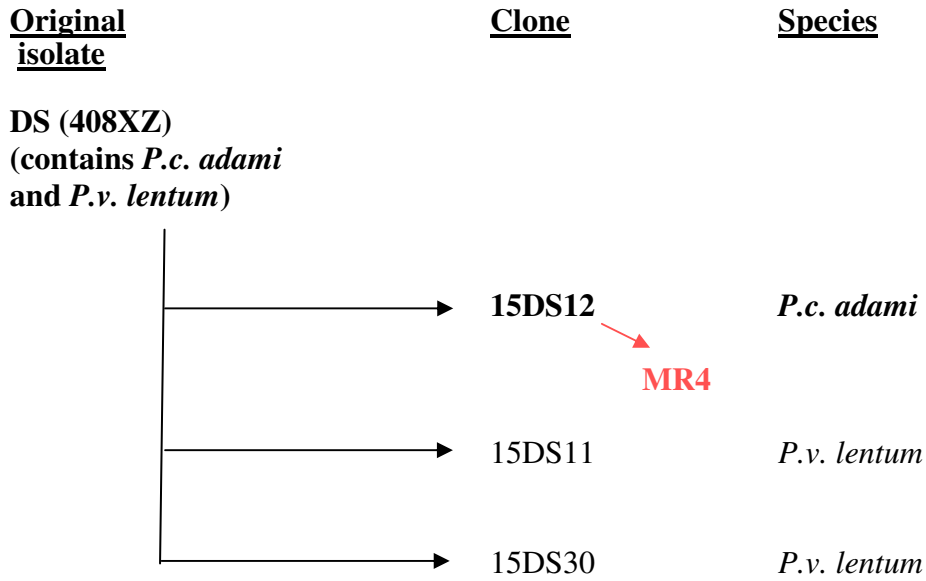
Clone AS(15MF/3) (mefloquine-resistant)

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

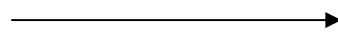
N48

1/69

***P. vinckei lentum* (Congo Brazzaville)**

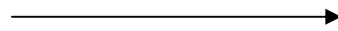
Uncloned isolates

170L (DE)



Derived clone
DE

408XZ (DS)



15DS30

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

Uncloned isolates

BS



Derived clones
4BS2

CR

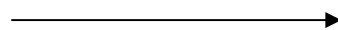


197CR27

***P. vinckei* subsp. (Cameroon)**

Uncloned isolate

Esekam IV (EL)



Derived clone

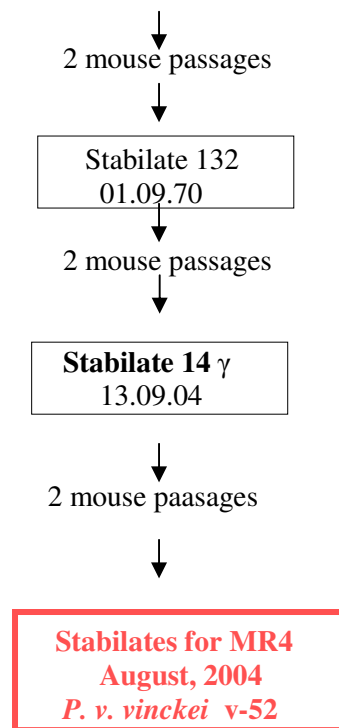
8EL8

***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

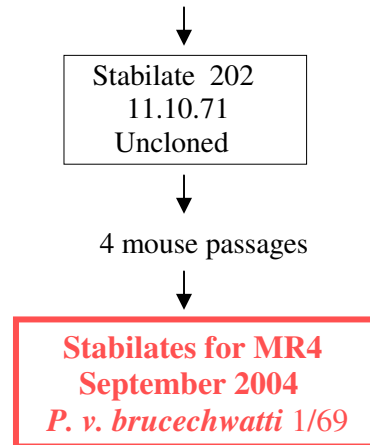


**Stabilates for MR4
September 2004
P. v. vinckei v-67**

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

Isolate 1/69 (DA)

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

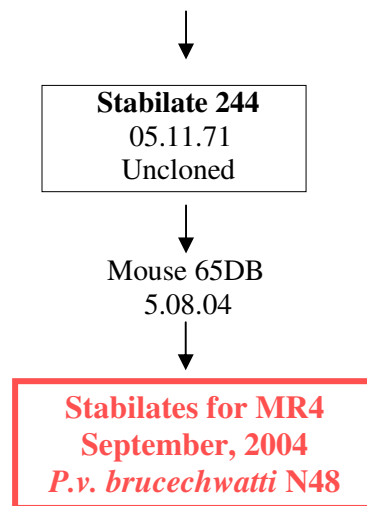


***P. vinckei brucechwatti* (Nigeria)**

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

↓
Stabilate 432
19.10.73
Uncloned

↓
Mice 14DS
19.07.74

↓
Cloning

↓
Mice 15DS

↓
no. 30

↓
Stabilate 546
06.08.74
P.v. lentum clone 15DS30

↓
5 mouse passages, 2 deep-freezings

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

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

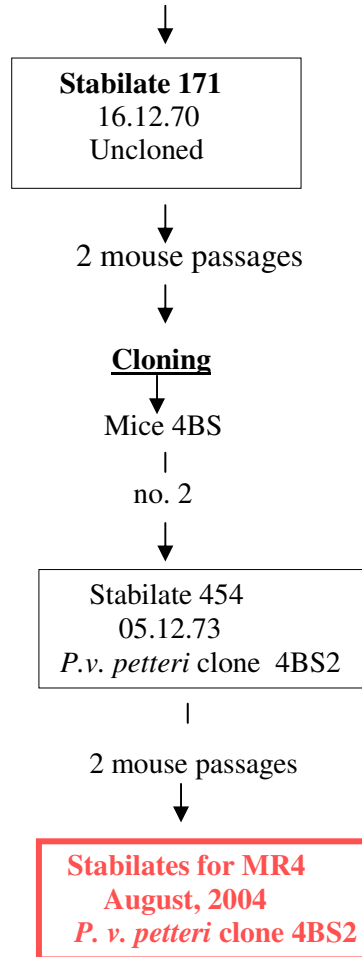
↓
3 mouse passages

↓
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

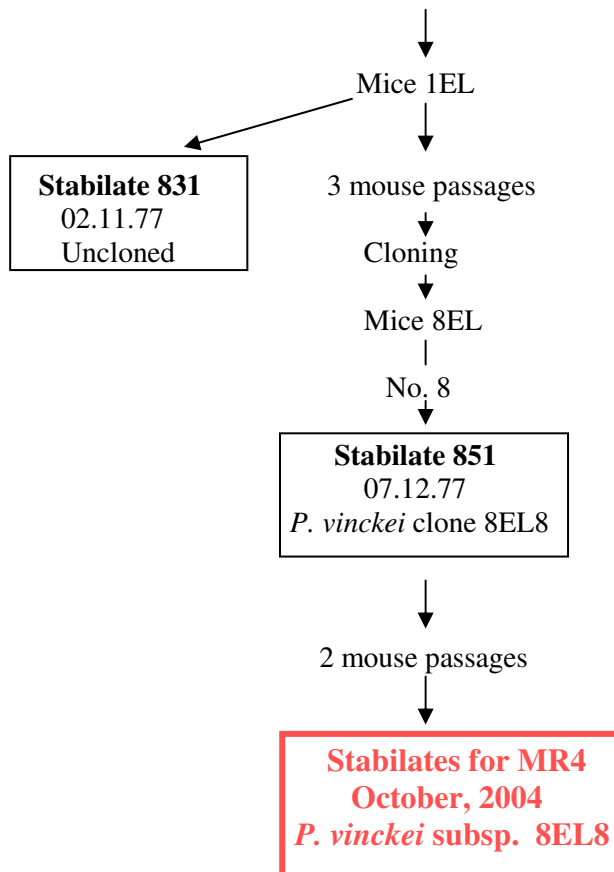
***P. v. petteri* clone 197CR27**

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*

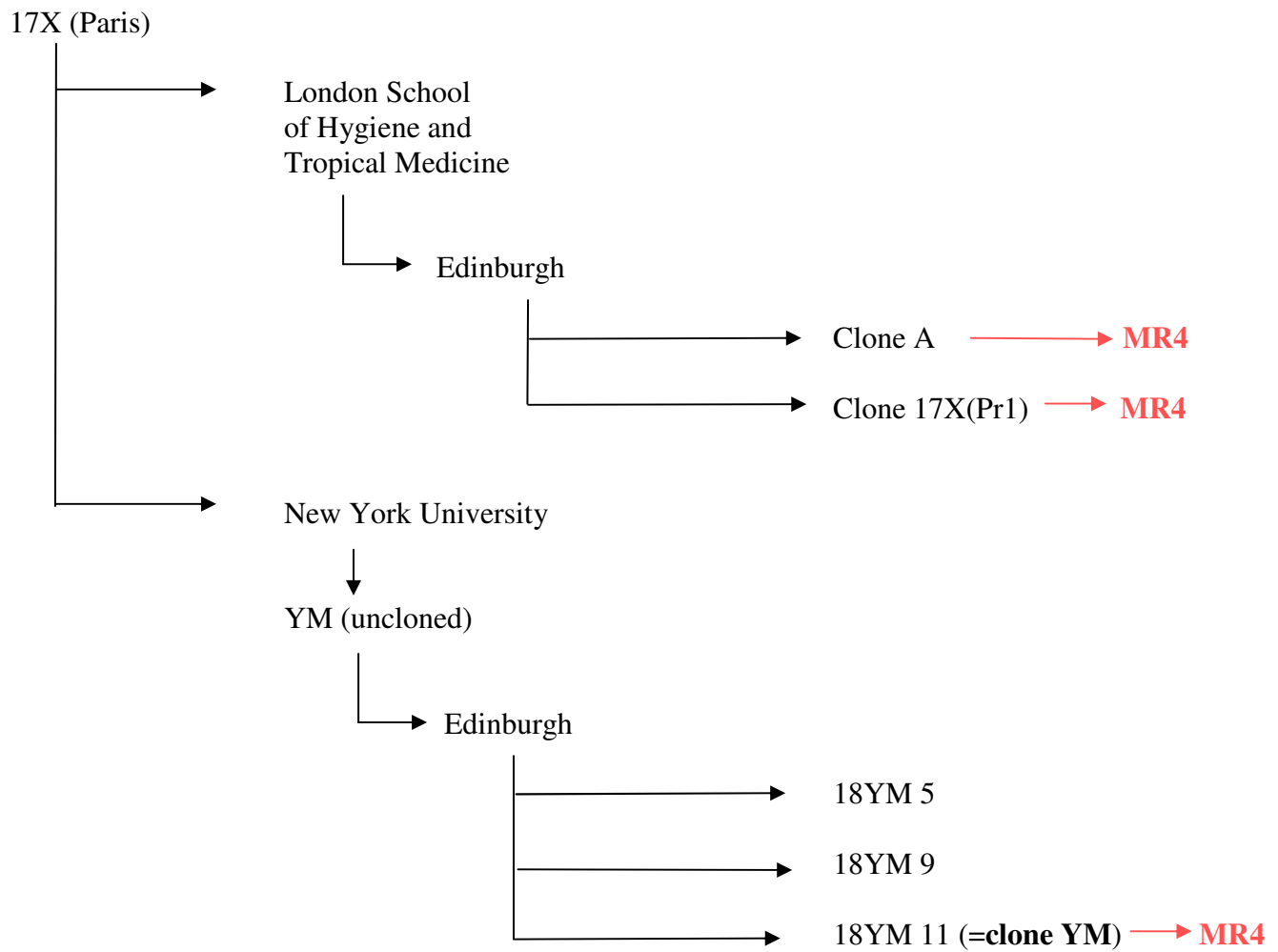


***P. yoelii yoelii* (Central African Republic)**

Isolate 17X and derived clones

Original uncloned isolate

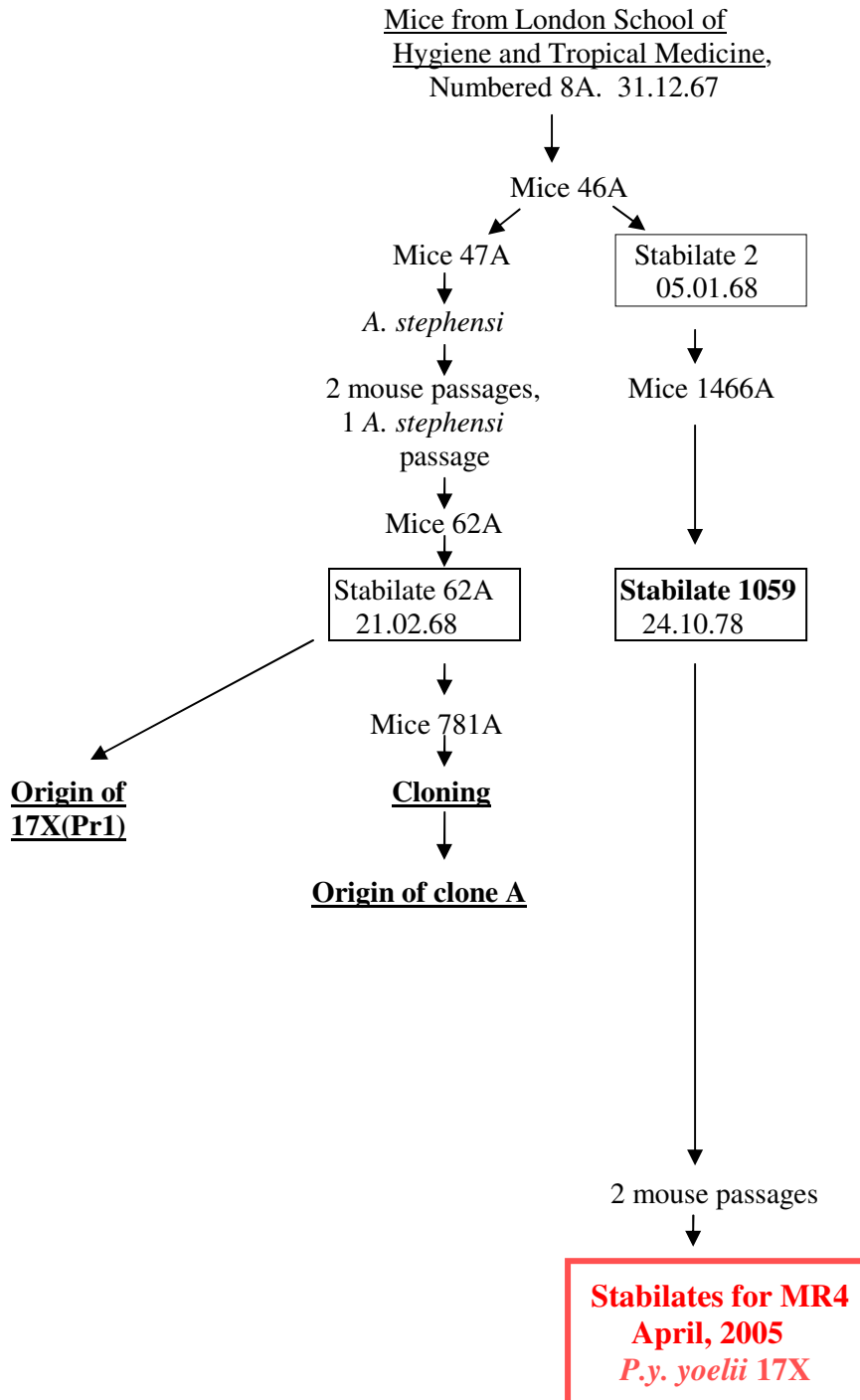
Derived clones



P.yoelii yoelii (Central African Republic)

Isolate 17X

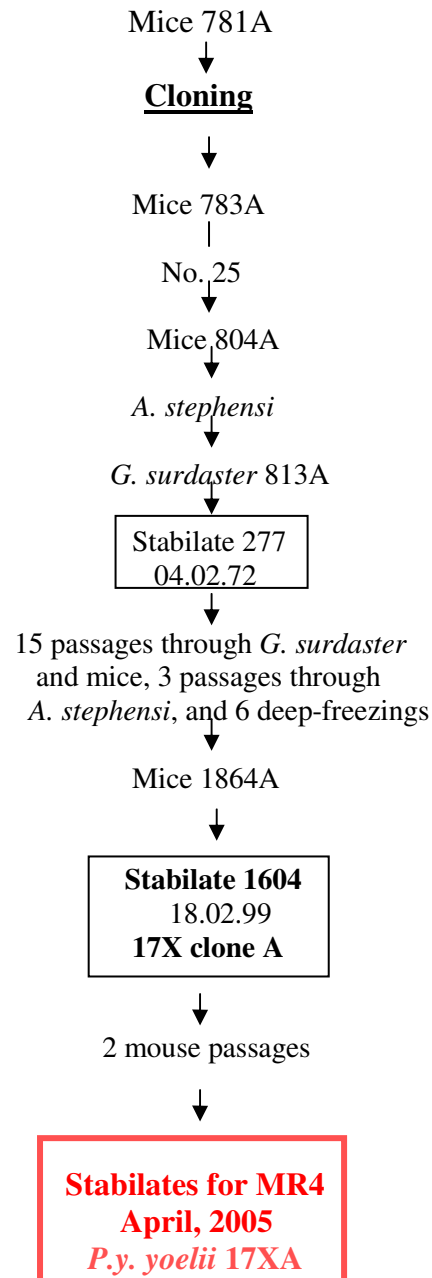
Isolated by I. Landau from *Thamnomys rutilans* no. 17X,
La Maboké Field Station, Central African Republic, April 1965
For passage history since isolation, see M. Wéry (1968)



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

Clone 17X A

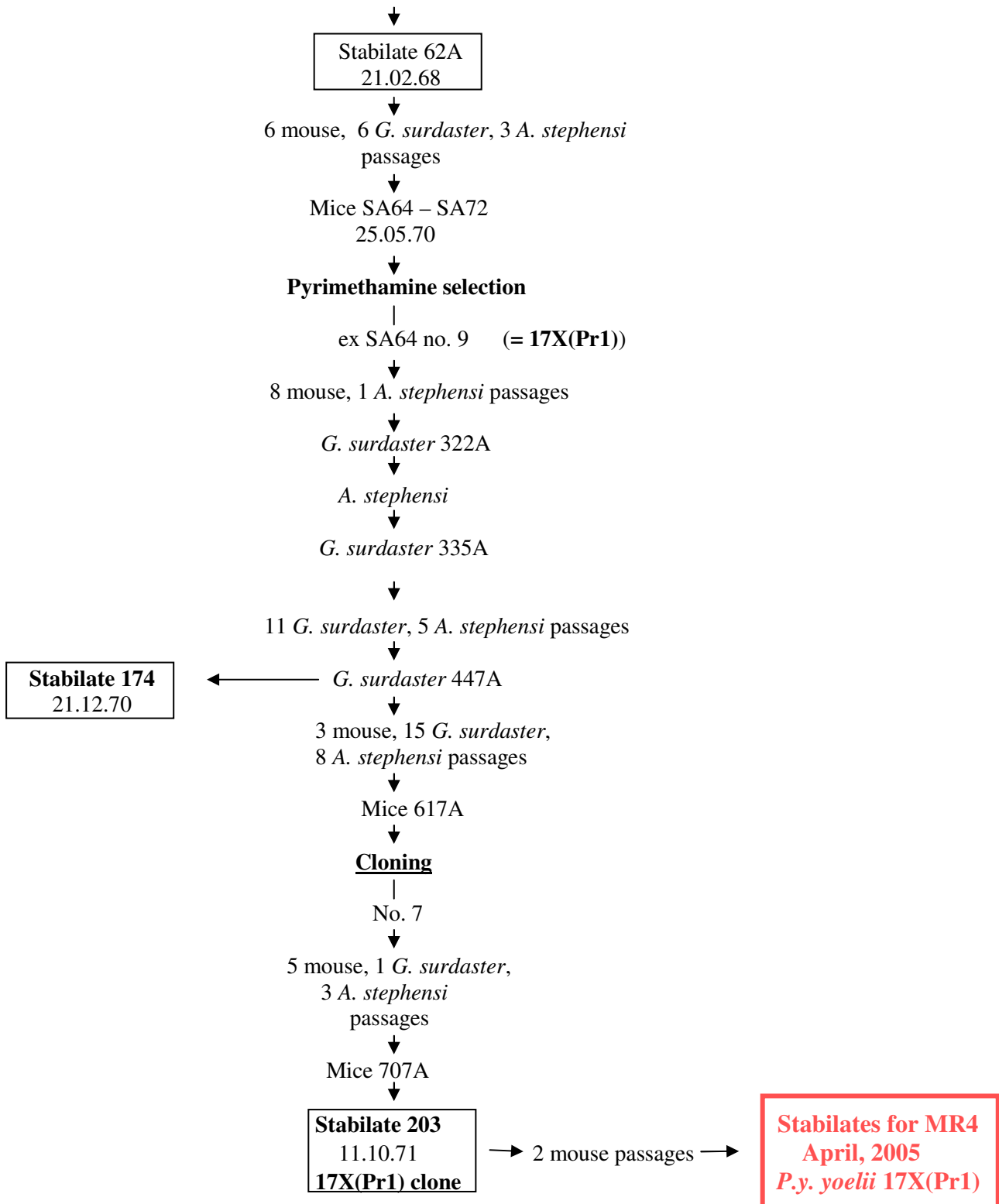
For previous history, see isolate 17X



P.yoelii yoelii (Central African Republic)

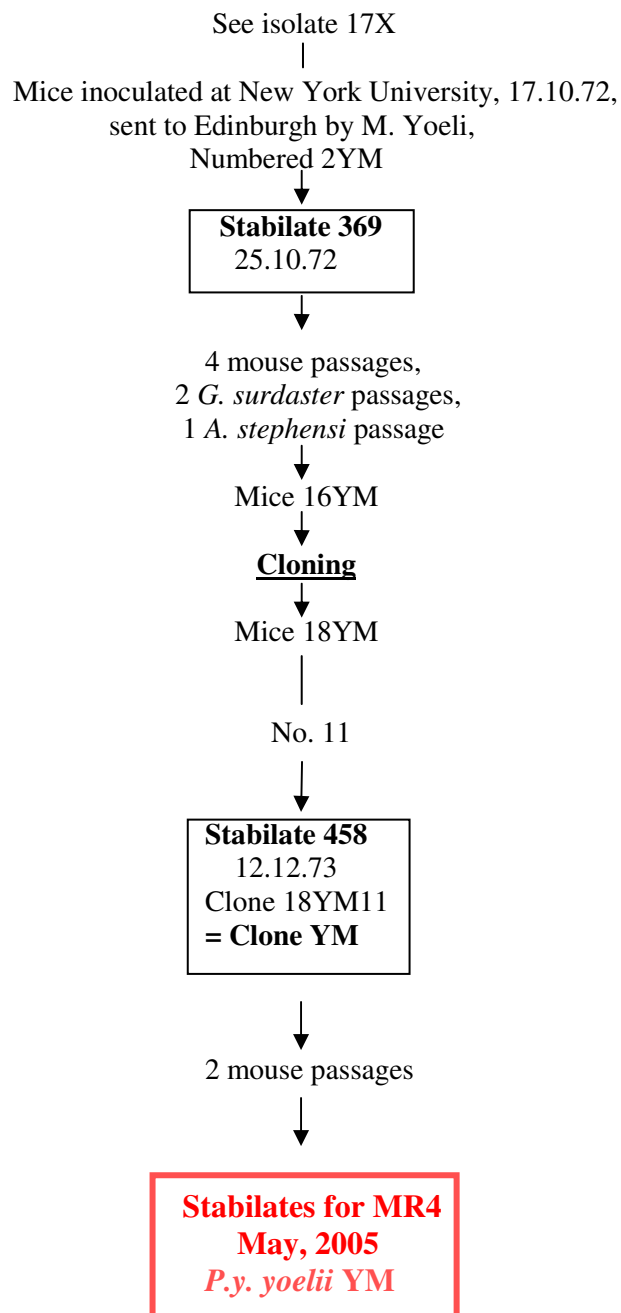
Clone 17X (Pr1)

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

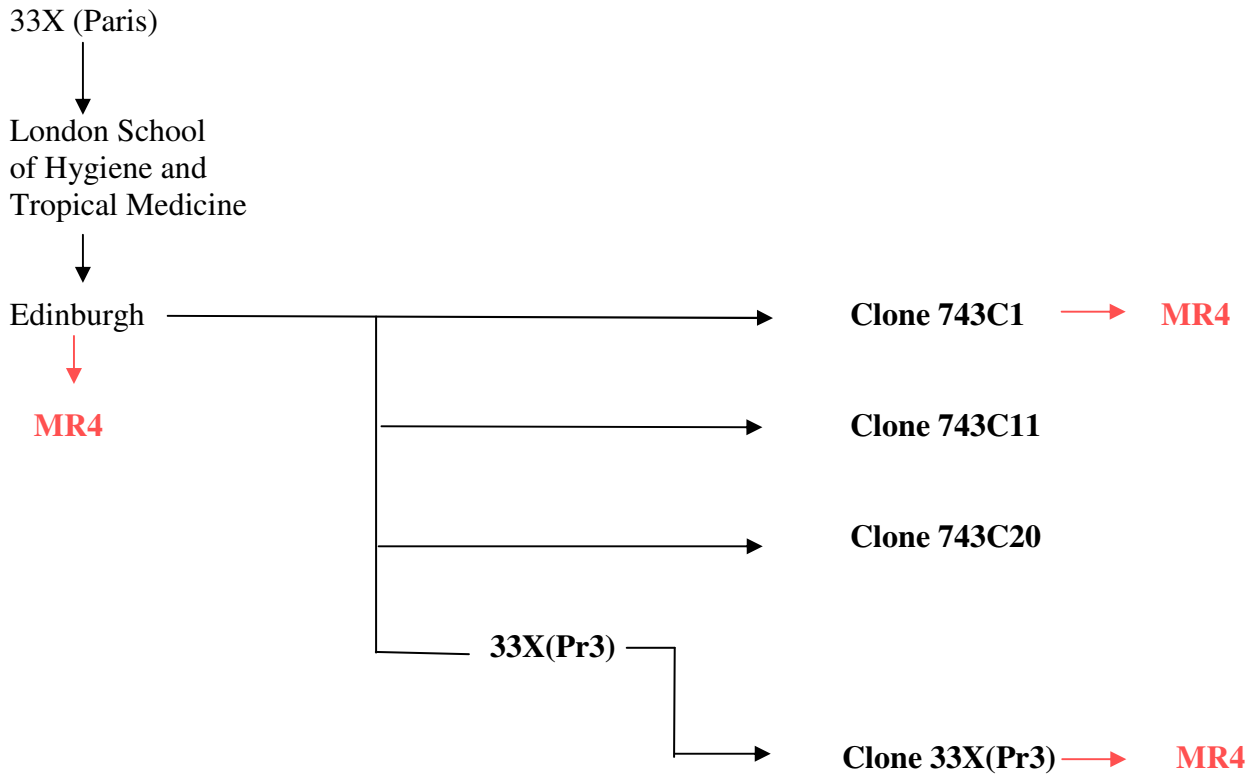
Clone 743C1 → MR4

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

