

Isolated from Zebu bovine blood, 8 September 1964 (1964-09-08), Uhembo/Alego/Nyanza/Kenya

795

1 mouse 8d

EATRO 795/
LUMP 571
(1964-09-16)

The first EATRO number that is explicitly mentioned in the original publication Onyango et al 1966 is 839, but it is clear they were preserved prior to this. It did not infect one human volunteer: another isolate (EATRO 835) did.

5 mice 5,3,11,2,4d

EATRO 839
(1964-12-14)

On 1970-04-29, I received a sample of EATRO 839 from John Baker, who made the 1964-12-14 stabilate at LSTMH. MIAG 008 & 013 were not taken with me when I left Cambridge.

1 mouse 21d

LUMP 18
(1965-12-14)

MIAG 008
(1970-5-11) &
013 (1970-5-12)

1 mouse 4d

LUMP 227
(1970-09-25)

Information to here is from Lumsden 1976-06-08

Lumsden to de Raadt/
Doyle in Lausanne,
1972-05-23

LUMP 227
(1973-05-23)

Cloned by Doyle.
ILTat 1.4 (Hirumi et al 1980)

clone
R72/9/3R

rabbit infected 10e7
A4/2/L for 9d then
recloned in mouse

clone
A4/2/LR

25 2- to 3-d
passages in
normal mice

clone
R72/9/3R
M

Tsetse in Basel then into mice STIB 367 D-K, of which H-K were irradiated mice infected with single metacyclic and grown for 6 d.

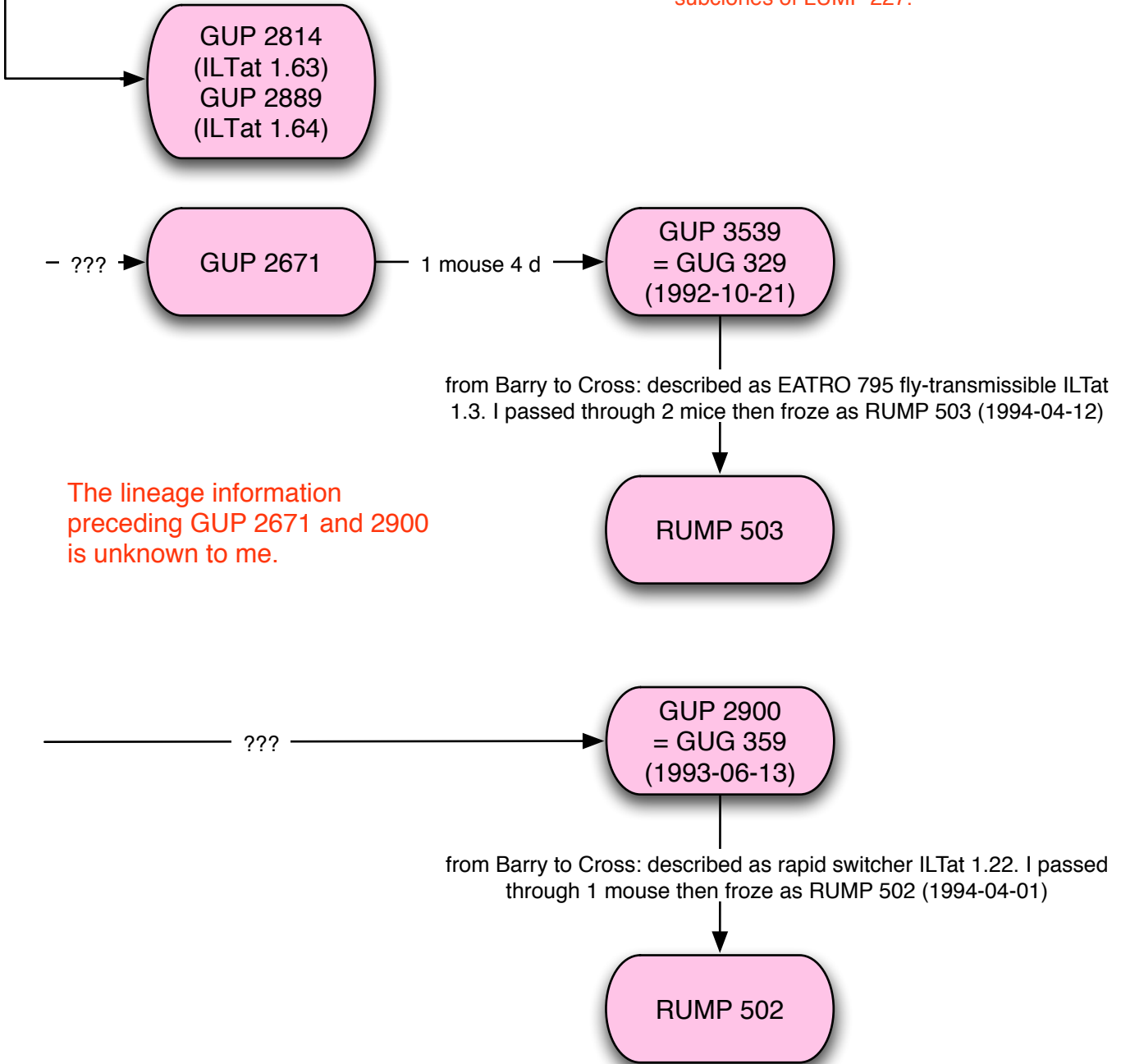
STIB 367

367 clones H and I were grown 3 d in mice by Cross. Antisera to a purified VSG from RUMP (MIAG) 100 showed that 100 and 101 populations were mixed).

RUMP 100
RUMP 101
(1975-05-19)

Apparently cloned before passing through tsetse then recloning in mice (Turner & Barry 1989: refers to "cloned stock of EATRO 795". When was this made?

I haven't established the connection between pedigree on the first page and some of the Glasgow derivatives on this page. I assume all ILRAD studies (perhaps all studies outside the Glasgow axis) were done with subclones of LUMP 227.



Isolation in **Onyango, R. J., K. Van Hove, and P. De Raadt**. 1966. The epidemiology of *Trypanosoma rhodesiense* sleeping sickness in Alego location, Central Nyanza, Kenya. I. Evidence that cattle may act as reservoir hosts of trypanosomes infective to man. *Trans R Soc Trop Med Hyg* **60**:175-182.

A detailed pedigree of the early incarnations was provided to me by Lumsden (letter of 8 June 1976), and is the basis for the early part of the chart. I also have an 'original copy' of the EATRO 839 stabilate form, sent to me with the strain on 29 April 1970 by John Baker, who made the 1964-12-14 stabilate at LSTMH. The two stabilates I made after 1 mouse passage (MIAG 008 & 013) were not taken with me when I left Cambridge. I don't know if they remained there.

EATRO 839 was negative in human volunteers (Onyango et al 1966) but that does not mean it was not *T. rhodesiense*: it might just not have been expressing an SRA gene, if it had one, in the tested population. This possibility was crucially demonstrated in the Etat series! Another isolate from the same batch of cattle (EATRO 835) was human-infective.

A key reference describing further derivatives made directly from a cloned stock of EATRO 795, given GUP stabilate numbers and ILTat numbers after IF analysis, is Turner CMR, Barry JD (1989) High frequency of antigenic variation in *Trypanosoma brucei rhodesiense* infections. *Parasitology* **99**:67-75. This paper refers to taking cloned stock EATRO 795 (calls it *Trypanosoma brucei rhodesiense*, but later papers correctly refer to *T. brucei*) expressing ILTat 1.2, then transmitting it through tsetse, into a mouse, then cloning to get GUP 2814 (>99% ILTat 1.63). A clone from a second transmission experiment was named GUP 2889 (>99% ILTat 1.64). Presumably, though not stated, they must have had direct access to EATRO 795 and cloned it themselves.

This is the paper where they found fast switching, but between variants that were also "expressed at high prevalence in metacyclics as well as in bloodstream forms", so possibly using metacyclic ES either directly or as preferred donors to B-ES. Switch rates varied depending on the VAT being switched to. Measured switching among VATs ILTat 1.22, 1.61, 1.62, 1.63, 1.64.

Molecular characterization of switches is presented in **Robinson, N. P., N. Burman, S. E. Melville, and J. D. Barry**. 1999. Predominance of duplicative VSG gene conversion in antigenic variation in African trypanosomes. *Mol. Cell. Biol.* **19**:5839-5846.

ILTat 1.22h/GUG359/GUP2900 given to me (as GUG359) by David Barry 'fast switcher', injected into a mouse and frozen as stabilate RUMP502 on 1 April 1994 after one 3-day expansion in a mouse. Dave also gave me, at the same time, GUG329 (=GUP3539), described as "EATRO 795 fly-transmissible ILTat 1.3.

The actual ILTat clones made by Doyle, Turner and used by ILRAD people (Williams, Donelson, etc) were derived from LUMP227 and from STIB derivatives derived from tsetse transmission of LUMP227 cloned by Doyle (records in my file from Doyle and STI, and see Hirumi et al 1980) and "a cloned EATRO 795" was put through tsetse then recloned in Glasgow by Turner & Barry.

Some details of lineage published in Miller & Turner 1981 *Parasitology* **82**, 63-80 are incorrect.