

# TSETSE AND TRYPANOSOMIASIS INFORMATION QUARTERLY

**Index**  
**Volume 23**  
**Part 1–4, 2000**  
**Numbers 11199–11725**



**DFID**



Cirad-emvt

## SUBJECT INDEX

Numbers refer to the abstract and bibliographic reference numbers appearing in the *Tsetse and Trypanosomiasis Information Quarterly*, volume 23 (2000). For organisations, see page 251.

### Africa

- central
  - trypanosomiasis in humans, 11596
  - control, 11340
- East
  - trypanosomiasis in humans, 11202
  - tsetse control, 11338
- southern
  - trypanosomiasis control, 11359
  - trypanosomiasis in cattle, 11359
  - tsetse control, 11338, 11359
- sub-Saharan
  - tsetse control
    - effect on non-target organisms, 11477
- trypanosomiasis
  - control, costs, 11454
  - in humans, 11338
- West
  - G. p. palpalis* in, 11219
  - trypanosomiasis in cattle, 11216
  - trypanosomiasis in humans, control, 11340
  - trypanotolerance in cattle, 11592
  - tsetse control, 11338

### Angola

- trypanosomiasis in humans, 11381, 11451
  - gambiense*, 11495, 11498, 11630
  - Quiçama focus, 11495

### antibodies

- see also* immune response
- anti-*T. evansi* equine, 11266
- complement-fixing, 11257
- detection
  - by indirect ELISA, 11633
  - in CSF, 11232
  - in diagnosis, 11240, 11266
  - in serum, 11232
- IgG, 11247
- in human trypanosomiasis
  - anti-galactocerebroside, 11627, 11628
  - in serum and CSF, 11627, 11628
  - auto-, 11628
- in *T. evansi*-infected camels, 11389
- monoclonal, 11275
  - in diagnostic tests, 11388
- neutralising, 11271
- non-specific

- IgM, 11247
- parasite-specific isotypes
  - IgG, 11254
  - IgM, 11254
- polyclonal, 11275
- antigen**
  - see also* variant surface glycoprotein
  - trypanosome
    - circulating, 11389, 11391
    - detection, 11388, 11389, 11391
    - in diagnosis, 11231, 11240, 11242, 11244, 11388, 11389
    - in ELISA, 11388, 11391
    - soluble
      - in *T. evansi*-infected guinea pigs, 11409
      - T. b. gambiense*, 11232, 11240
      - T. b. rhodesiense*, 11231
      - T. evansi*, 11242
      - circulating, 11257
      - variable surface, 11232

### antigenic variants

- T. brucei*, sequential dominance, 11301

### antigenic variation

- in African trypanosomes, 11713
- T. brucei*, 11328, 11438, 11447

### attractants/attractiveness for tsetse

- 11337, 11362
- host animal, 11363
- ox odour, synthetic, 11473, 11474
- targets, coloured, 11472
- Vavoua traps, 11222

### autosterilisation, tsetse

- 11363

### *Bacillus thuringiensis*

- $\delta$ -endotoxin
  - effect on *G. m. morsitans*, 11223

### baits

- 11610
- see also* odour attractants
- acetone, 11220
- catch, 11357
- mobile, 11357
- 1-octen-3-ol, 11220
- techniques, 11359

### barriers

- insecticide-treated, 11502

- odour-baited, 11502
- barriers to re-invasion** 11368
  - insecticide-treated cattle
    - evaluation, Zimbabwe, 11224
  - insecticide-treated odour-baited targets
    - efficacy, Zimbabwe, 11224
- biting flies**
  - density, Ethiopia, 11512
- Botswana**
  - G. m. centralis* in, 11371, 11595
  - Okavango delta
    - tsetse control, 11595
  - trypanosomiasis
    - in animals, 11595
    - in cattle, incidence, 11371
    - in humans, 11371, 11595
  - tsetse control, 11371
- buffalo**
  - Cape, serum trypanocidal activity, 11642
  - T. brucei* infection, 11260
  - T. congolense* infection, 11260
  - trypanosome infection
    - immune response, 11260
  - trypanotolerance, 11260
- Burkina Faso**
  - Bobo-Dioulasso
    - trypanosomiasis in humans, 11496
  - cattle productivity, 11200
  - G. m. submorsitans* in, 11200, 11455
  - G. p. gambiensis* in, 11216, 11217, 11465, 11471, 11607, 11609
  - G. tachinoides* in, 11200, 11455, 11609
  - Sideradougou
    - entomological survey, 11609
    - parasitological survey, 11609
    - tsetse distribution studies, 11609
  - trypanosomiasis in cattle, 11200, 11230, 11245
    - constraint to production, 11200
    - epidemiology, 11230
    - incidence, 11200
  - tsetse control, 11200
  - tsetse infestation
    - impact on wild animal productivity, 11455
- bushbuck**
  - host for tsetse, 11489
- camels**
  - T. congolense* infection, 11264
  - T. evansi* infection, 11229, 11389, 11393, 11640
    - clinico-haematological aspects, 11640
    - diagnosis, 11204, 11238, 11239, 11240, 11243, 11246, 11389, 11507
    - distribution, 11229
    - economic significance, 11229
    - effects
      - on haematological parameters, 11504
      - on productivity, 11504
      - on protein constituents, 11504
    - electrophoretic profiles, 11507
    - epidemiology, 11203, 11229
    - immune response, 11507
    - incidence, 11229
    - in Kenya, 11369
    - in Niger, 11246
    - in Nigeria, 11393
    - in Sudan, 11203, 11239
    - in Tunisia, 11507
    - prevalence, 11229, 11239, 11240, 11389
      - in Chad, 11504
    - rate, 11504
    - therapy, drug, 11204, 11369
    - transmission, 11203
  - T. evansi* infection (exp.)
    - C3 characterisation, 11256
    - complement depletion, 11257
    - drug treatment, 11257, 11261
    - immune response, 11256, 11257
  - trypanosomiasis
    - aetiology, 11639
    - blood constituents, 11636
    - control, 11639
    - diagnosis, 11243, 11246, 11639
    - epidemiology, 11639
      - in Chad, 11504
      - in Kenya, 11264
    - pathology, 11639
    - prevalence, Uganda, 11243
    - ruminal constituents, 11636
    - treatment, 11639
      - failure, 11264
- Cameroon**
  - reservoir of human infection, 11621
  - trypanosome infection in wild animals
    - prevalence, 11621
  - trypanosomiasis in humans, 11616
    - Bafia focus, 11458
    - Bipindi focus, 11616, 11621
    - Campo focus, 11493, 11624
    - epidemics, 11458
    - gambiense*, 11624
    - prevalence, 11615
- cattle**
  - as reservoir hosts, 11396
  - Boran
    - treatment with homidium bromide
      - pharmacokinetic studies, 11403
    - T. congolense* infection

- cytokine responses, 11252
- immune response, 11247, 11259
- T. congolense* infection (exp.)
  - changes in blood and bone marrow, 11638
  - macrophage function, 11635
- trypanosusceptibility, 11252, 11259, 11635, 11638
- distribution mapping, Burkina Faso, 11230
- Friesian
  - treatment with homidium bromide pharmacokinetic studies, 11403
- Gobra zebu
  - exposure to trypanosomiasis challenge
    - clinical response, 11637
    - parasitological response, 11637
  - trypanosusceptibility, 11594
- Gobra × N'Dama crossbred
  - exposure to trypanosomiasis challenge
    - clinical response, 11637
    - parasitological response, 11637
- insecticide-treated
  - barriers to re-invasion, 11224
  - sentinel herds, 11224
- N'Dama
  - drug treatment, prophylactic, 11263
  - exposure to trypanosomiasis challenge
    - clinical response, 11637
    - parasitological response, 11637
  - productivity
    - in Ghana, 11199
    - in Senegal, 11248
  - trypanoresistance, 11590
  - T. congolense* challenge (exp.)
    - effect on health and productivity, 11251
    - susceptibility to, 11251
  - T. congolense* infection, 11335
  - T. congolense* infection (exp.)
    - changes in blood and bone marrow, 11638
    - cytokine responses, 11252
    - effect of body condition, 11394
    - effect of nutrition, 11394
    - effect on health and productivity, 11394
    - immune response, 11259
    - macrophage function, 11635
  - T. congolense/T. vivax* superchallenge (exp.)
    - effect on health and productivity, 11251
    - susceptibility to, 11251
  - T. vivax* challenge (exp.)
    - effect on health and productivity, 11251
    - susceptibility to, 11251
  - trypanosome infection
    - effects on productivity, 11248
    - prevalence, Senegal, 11248
    - rate, Mali, 11263
- trypanosomiasis
  - in Gambia, 11335
  - incidence, Mali, 11263
- trypanotolerance, 11199, 11251, 11252, 11259, 11594
  - role of bone marrow, 11635, 11638
  - socio-economic importance, 11641
- Orma Boran
  - treatment with cypermethrin pour-on, 11611
- trypanosome infection, prevalence, 11611
- sentinel herds
  - in monitoring transmission of trypanosomes, 11370
  - in monitoring tsetse density, 11361
- treatment
  - drug
    - diminazene aceturate, 11370, 11404, 11514
    - homidium bromide, 11402, 11404
    - in control of trypanosomiasis, 11369
    - isometamidium chloride, 11404, 11514
    - Trypan, 11262
  - insecticide, 11359, 11361, 11610, 11611
    - α-cypermethrin, 11479
    - cyfluthrin, 11479
    - deltamethrin, 11200, 11221, 11224, 11339, 11370, 11479
    - dip, 11224, 11610
    - pour-on, 11200, 11224, 11361, 11611, 11612
    - Spot on, 11479
  - prophylaxis, 11610
    - isometamidium, 11263
- T. brucei* infection, 11391, 11396
- T. b. brucei* infection, 11370
- T. congolense* infection, 11360, 11370
  - effect of rinderpest vaccination, 11258
- T. vivax* infection, 11370
  - effect of rinderpest vaccination, 11258
- trypanosome infection
  - in Burkina Faso, 11488
  - rates, 11404
- cattle** (cont.)
  - trypanosome prevalence, impact, 11251
  - trypanosomiasis
    - control, 11341, 11360, 11371, 11404, 11514
    - diagnosis, 11245, 11387, 11390, 11502
    - distribution
      - Malawi, 11502
      - Uganda, 11390
    - epidemiology, 11502
    - field assessment, 11341

- impact of tsetse control, 11632
- in Africa, southern, 11359
- in Botswana, 11371
- in Burkina Faso, 11200, 11230, 11245
- in Ethiopia, 11391
- in Gambia, 11341
- in Kenya
  - incidence, 11258
  - risk, 11258
- in Malawi, 11502
- in Namibia, 11501
- in Nigeria, 11505
- in Sudan, 11404
- in Tanzania, 11610
- in Togo
  - prevalence, 11201
  - risk, 11201
  - survey, 11201
- in Uganda, 11632
- in Zambia, 11360, 11514
- in Zimbabwe
  - incidence, 11224
  - prevalence, 11224
- mixed infection, 11390
- prevalence, 11387
  - in Ethiopia, 11391
  - in Namibia, 11501
  - in Togo, 11201
  - in Uganda, 11390, 11632
  - in Zambia, 11360
  - in Zimbabwe, 11224
- prophylaxis, 11515
- risk
  - in Kenya, 11258
  - in Togo, 11201
  - in Zambia, 11360
- role of IL-4 and IL-6, 11252
- T. brucei* infection, 11200, 11390, 11505
- T. congolense* infection, 11200, 11201, 11390, 11501
- T. vivax* infection, 11200, 11201, 11390, 11501, 11505
- trypanosusceptibility
  - effect on performance, Ghana, 11199
- trypanotolerance, 11592
  - effect on performance, Ghana, 11199
  - genetics, 11397, 11398, 11399, 11400, 11401
- West African Shorthorn
  - trypanotolerance
    - socio-economic importance, 11641
- Zebu
  - mixed infection, 11392
  - productivity, Ghana, 11199
- T. brucei* infection, 11392
- T. congolense* infection, 11392
  - in Ethiopia, 11512
  - prevalence, 11512
  - productivity, 11512
  - treatment, 11512
- T. vivax* infection, 11392
- T. vivax* infection (exp.)
  - effect of artificial insemination, 11252
  - effect of lactose infused in saline, 11508
  - effect of prostaglandin F<sub>2α</sub>, 11252
  - effect on oestrous activity, 11252
  - effect on ovarian activity, 11252
  - serum electrolyte alterations, 11508
- trypanosome infection
  - haematological changes, 11392
- trypanosomiasis
  - in Ethiopia, 11598, 11612
  - in Togo, 11201
  - trypanosusceptibility, 11199
- Central African Republic**
  - trypanosomiasis in humans, 11615
    - gambiense*, 11483
    - Haut Mbomou focus, 11622
    - Nola-Bilolo focus, 11615
    - Nola focus, 11622
    - Ouham focus, 11622
- central nervous system (CNS)**
  - involvement in human trypanosomiasis, 11384, 11627
- cerebrospinal fluid (CSF)**
  - drug distribution into, 11532
  - in human trypanosomiasis
    - anti-galactocerebroside antibodies in, 11627, 11628
    - cell counts, 11382, 11626, 11627
    - determination of drug levels in, 11500
    - proteins in, 11382, 11626, 11627
    - trypanosomes in, 11232, 11237, 11382, 11491, 11492, 11626, 11627
- Chad**
  - trypanosomiasis in camels, prevalence, 11504
- challenge**
  - trypanosome
    - to goats, Gambia, 11255
    - to sheep, Gambia, 11255
  - trypanosomiasis
    - to cattle, response, 11637
  - tsetse, 11368
    - to cattle,
      - response, 11637
    - Senegal, 11248
- characterisation**
  - see also* detection, identification

- isoenzyme, *T. evansi*, 11243
- of trypanosomes
  - orthogonal field alternation gel electrophoresis, 11675
  - PCR, 11488
  - recombinant DNA hybridisation, 11675
  - Trypanozoon* isolates, 11540
- procyclic transformation test
  - T. congolense*, 11264
  - T. evansi*, 11264
- chemoprophylaxis**
  - in control of trypanosomiasis, 11369
  - efficiency in cattle, 11404
- chemotherapy**
  - 1-amino-2,5-anhydro-1-deoxy-D-mannitol, 11282
  - arylamino derivatives, 11282
  - cysteine protease inhibitors, 11286, 11527
  - in control of trypanosomiasis, 11369
  - efficiency in cattle, 11404
  - in human trypanosomiasis, 11527
- chimpanzees**
  - hosts for tsetse, Tanzania, 11380
- chitin synthesis inhibitors**
  - triflumuron, 11364
- Congo (D.R. and P.R.)**
  - trypanosomiasis in humans, 11383, 11451
  - gambiense*, 11483, 11491, 11627
- control, trypanosomiasis**
  - chemoprophylaxis, 11369
  - chemotherapy, 11369
  - community participation, 11341, 11359, 11360, 11369
  - cost, 11454, 11478, 11610, 11611
  - cost-effectiveness, 11341, 11343
  - GIS in, 11336, 11340, 11388
  - in Angola, 11451, 11495
  - in Botswana, 11371, 11595
  - in Burkina Faso, 11200
  - in Cameroon, 11458
  - in Central African Republic, 11622
  - in Congo, 11451
  - in Equatorial Guinea, 11494
  - in Ethiopia, 11339, 11612
  - in Gambia, 11341
  - in Ghana, 11358
  - in Kenya, 11369, 11611
  - in Mali, 11222
  - in Sudan, breakdown, 11234
  - in Tanzania, 11610
  - in Uganda, 11478, 11491
  - in Zambia, 11360
  - integrated, 11336, 11362
  - monitoring, 11343, 11388
  - socio-economics, 11369
  - trypanocidal drugs, 11251, 11359, 11610
  - vaccine research, 11454
  - vector control, 11200, 11222, 11251, 11337, 11343, 11371, 11459, 11478, 11610, 11611, 11612
- control, tsetse** 11204
  - attractants, 11363
  - autosterilisation, 11363
  - baits, 11610
  - barriers, 11368
  - biological, 11368, 11369
  - bush clearing, 11371
  - cattle treatment, 11221, 11339, 11359, 11361, 11369, 11512, 11610, 11611
  - community participation, 11359, 11360, 11478
  - cost, 11347, 11359, 11363, 11369, 11372, 11478, 11595, 11610, 11612
  - cost-effectiveness, 11368, 11369
  - effects, 11596
  - environmental considerations, 11369
  - environmental sustainability, 11368
  - fungi, 11368
  - game destruction, 11371
  - genetic, 11350
  - GIS in, 11452
  - impact, 11452
    - on trypanosomiasis prevalence, 11632
  - in Africa
    - eastern, 11338
    - southern, 11338, 11359
    - sub-Saharan, 11477
    - western, 11338
  - in Botswana, 11371, 11595
  - in Burkina Faso, 11200
  - in Côte d'Ivoire, 11364
- control, tsetse (cont.)**
  - in Ethiopia, 11339, 11391, 11457, 11512, 11596, 11612
  - in Ghana, 11358
  - in Kenya, 11364, 11369, 11372
  - in Malawi, 11502
  - in South Africa, 11474
  - in Tanzania, 11610
  - in Uganda, 11478, 11632
  - in Zambia, 11359, 11360
  - in Zanzibar, 11388, 11613
    - Unguja Island, 11361
  - in Zimbabwe, 11211, 11212, 11221, 11359, 11364, 11365, 11479
  - insect growth regulators, 11364
  - insecticide, 11363, 11364, 11369
    - cyfluthrin, 11479
    - cypermethrin, 11479, 11480, 11611, 11612

- DDT, 11359, 11477  
deltamethrin, 11200, 11221, 11339, 11365,  
11370, 11479, 11480  
dieltrin, 11371  
dips, 11369, 11610  
endosulfan, 11477  
pour-on, 11369, 11611, 11612, 11613  
pyrethroid, 11365, 11369, 11610, 11613  
integrated, 11221, 11337, 11362, 11363,  
11364, 11369  
management, 11368  
monitoring, 11388, 11391, 11452, 11501  
nets, electric, 11212, 11220  
parasite, 11363  
remote sensing in, 11452  
screens, 11343, 11360, 11361, 11369, 11479,  
11480, 11613  
socio-economics, 11368, 11369, 11595, 11612  
spraying, 11364, 11610  
aerial, 11359, 11478  
ground, 11359, 11369, 11371  
sterile insect technique, 11337, 11347, 11358,  
11361, 11362, 11363, 11364, 11367, 11369,  
11370, 11476, 11610, 11613  
targets, 11200, 11220, 11359, 11360, 11364,  
11365, 11369, 11371, 11474, 11478, 11502,  
11595, 11610  
traps, 11343, 11359, 11368, 11369, 11372,  
11478, 11608
- Côte d'Ivoire**  
Daloa  
*G. p. palpalis* in, 11614  
trypanosomiasis in humans  
surveillance, 11227  
transmission, 11227, 11614  
epidemiological study, sheep parasites, 11241  
*G. longipalpis* in, 11489  
*G. medicorum* in, 11489  
*G. n. nigrofuscus* in, 11227  
*G. p. pallicera* in, 11227  
*G. p. palpalis* in, 11375  
*G. p. gambiensis* in, 11489  
*G. p. palpalis* in, 11227, 11482, 11487, 11489  
trypanosomiasis in humans, 11382, 11496,  
11626  
epidemiological risk, 11233  
foci, 11483  
Daniafla, 11487  
Gagnoa, 11487  
Sinfra, 11487  
Vavoua, 11487  
Zoukougbeu, 11482, 11487  
*gambiense*, 11483  
tsetse control, 11364  
tsetse trapping, 11227
- crocodiles**  
as hosts for tsetse, 11609
- culture**  
*T. evansi*, 11204
- cyfluthrin**  
effects on tsetse, 11479
- Cymelarsan**  
efficacy in *T. brucei*-infected dogs and mice,  
11644
- cypermethrin**  
 $\alpha$ -  
effects on tsetse, 11479  
impregnated screens, 11480  
pour-on cattle treatment, 11512, 11611, 11612
- DDT**  
effect on non-target organisms, 11477  
ground spraying, 11359
- deltamethrin**  
cattle treatment, 11221, 11339, 11370  
dip, 11224  
pour-on, 11200, 11224  
effects on tsetse, 11479  
impregnated screens, 11480  
on odour-baited targets, 11365
- detection**  
of homidium bromide in serum  
by ELISA, 11402, 11403  
of trypanosomes, 11598, 11637  
by dissection, 11619  
by dot-ELISA, 11619  
by PCR, 11381, 11382, 11492, 11503,  
11619  
in CSF, 11382  
in diagnosis, 11381  
of *T. congolense* antibodies  
by indirect ELISA, 11633  
of *T. evansi*, by PCR, 11648
- diagnosis**  
comparison of techniques, 11238, 11239,  
11240, 11243, 11245, 11246  
DNA-based, 11503  
evaluation of techniques, 11231, 11232, 11238,  
11242, 11244, 11245, 11493, 11494  
field, 11231, 11238, 11242, 11388, 11494  
in animals, 11204, 11205, 11238, 11239,  
11240, 11242, 11243, 11244, 11245, 11246,  
11337, 11370, 11387, 11388, 11389, 11390,  
11392, 11501, 11502, 11503, 11504, 11507,  
11516, 11637, 11645  
in humans, 11231, 11232, 11234, 11236,  
11237, 11381, 11451, 11459, 11491, 11492,  
11493, 11596, 11622, 11625, 11626, 11627

- parasitological, 11232, 11234, 11236, 11237, 11238, 11239, 11240, 11242, 11243, 11244, 11245, 11246, 11370, 11381, 11388, 11389, 11390, 11391, 11392, 11491, 11492, 11493, 11494, 11495, 11501, 11502, 11503, 11504, 11516, 11625, 11626, 11627, 11637
- sensitivity, 11231, 11238, 11240, 11242, 11244, 11246, 11388, 11389, 11391, 11494, 11502
- serological, 11231, 11232, 11234, 11238, 11239, 11240, 11242, 11243, 11244, 11245, 11246, 11370, 11381, 11388, 11389, 11391, 11392, 11493, 11494, 11495, 11501, 11502, 11503, 11504, 11507, 11516, 11591, 11626, 11633, 11637, 11645, 11646, 11647
- specificity, 11231, 11238, 11246, 11391, 11494
- diagnostic techniques**
- antigen detection latex agglutination (Suratex), 11240, 11242
- blood examination, 11234, 11239, 11240, 11243
- blood film, 11238, 11625
- blood smear, 11240, 11389, 11391, 11501, 11504, 11675
- buffy coat, 11239, 11245, 11390, 11675
- phase contrast, 11633
- quantitative, 11493, 11626
- CATT, 11240, 11246, 11491, 11494, 11495, 11626
- 1.3, 11493
- /EDTA, 11494
- latex, 11493
- comparison, 11626, 11633, 11645
- competitive immunoassay, 11647
- complement fixation, 11503, 11645
- cost-effectiveness, 11493
- CSF examination, 11626
- dark ground/buffy coat, 11388
- double centrifugation, 11382, 11492, 11626
- ELISA, 11243, 11244, 11392, 11501, 11502, 11503
- Ag, 11239, 11339, 11370, 11388, 11391, 11637
- antibody, 11591
- antigen detection, 11505
- competitive, 11645
- indirect, 11633
- evaluation, 11626, 11633, 11645
- formol gel test (FGT), 11238
- haematocrit capillary, 11391
- haematocrit centrifugation (HCT), 11238, 11503
- IFAT, 11494
- immune trypanolysis, 11246
- immunoblotting, 11645, 11646
- indirect haemagglutination (IHA), 11240
- indirect immunofluorescence, 11507
- KIVI, 11493, 11626
- latex agglutination (LAT), 11232, 11243, 11246, 11389
- antigen test, 11504
- latex card agglutination, 11494
- lymph examination, 11626
- lymph node fluid examination, 11234, 11237, 11493
- mercuric chloride test (MCT), 11238
- microhaematocrit centrifugation (mHCT), 11243, 11370, 11389, 11501
- microscopic examination, 11245
- miniature anion exchange centrifugation (mAEC), 11238, 11493, 11626
- modified Knott's technique (MKT), 11238
- modified single centrifugation (MSC), 11626
- mouse infectivity, 11675
- mouse inoculation, 11491
- new, 11459
- PCR, 11245, 11381, 11382, 11388, 11492, 11503, 11516
- rat inoculation, 11491
- sensitivity, 11645
- Suratex, 11240, 11242
- thick Giemsa-stained smears, 11238
- diagnostic techniques (cont.)**
- thin Giemsa-stained smears, 11238
- thymol turbidity test, 11238
- trypanosomiasis agglutination card test (TACT), 11231
- dieldrin**
- ground spraying, Botswana, 11371
- difluoromethylornithine (DFMO, eflornithine)**
- treatment
- in *T. b. brucei*-infected rabbits, 11289
- of human trypanosomiasis, 11385, 11386, 11496, 11589, 11599
- diminazene**
- sensitivity testing
- in *T. evansi*, 11284
- diminazene aceturate**
- control of animal trypanosomiasis, 11369
- resistance to, 11643
- treatment of trypanosome-infected cattle, 11370, 11404, 11512, 11514
- DNA**
- trypanosome
- amplification by PCR, 11381
- binding protein, 11422
- c, *T. brucei*, 11235
- coding sequence, 11540



- extraction method, 11226
  - hybridisation, in characterisation, 11675
  - in diagnosis, 11381, 11503
  - k
    - T. brucei*, 11265
    - T. b. gambiense*, 11307
    - T. b. rhodesiense*, 11307
    - T. evansi*, 11265, 11307
  - nucleosides, 11565
  - PCR analysis, 11415
  - probe hybridisation, 11503
  - repetitive sequences
    - RFLP analysis, 11542
  - ribosomal
    - nucleotide sequences, 11541
    - probes, 11676
    - T. brucei*, 11225
  - tsetse
    - microsatellite, polymorphism, 11216, 11465
    - mitochondrial, diversity, 11213, 11468
    - ribosomal
      - ITS-2 locus sequence analysis, 11461
    - virus, 11215
  - dogs**
    - trypanosomiasis
      - diagnosis, 11390
      - distribution, Uganda, 11390
      - in Nigeria, 11643, 11644
      - prevalence, Uganda, 11390
      - T. brucei* infection, 11390, 11643, 11644
      - T. brucei* infection (exp.)
        - drug effects, 11644
      - T. congolense* infection, 11643
  - domestic animals**
    - as reservoir hosts of human trypanosomiasis, 11202
    - hosts for tsetse, 11489
  - dourine**
    - diagnosis, 11645, 11646
    - in Ethiopia, 11503
    - T. equiperdum* infection, 11645
  - drugs**
    - chemical equivalence, 11405
    - combinations
      - isometamidium and DFMO, 11289
    - cost-effectiveness, 11515
    - designated, for human trypanosomiasis, 11342
    - detection in serum, 11402, 11403
    - development, 11596
    - effectiveness, 11515
    - failure rate
      - melarsoprol, 11499
    - in animal model of trypanosomiasis, 11410
    - pharmacokinetics
      - homidium bromide, 11402, 11403
    - prophylactic, 11263, 11515
    - regimen, 11630
    - relapse, 11498
    - resistance, 11339, 11402, 11589, 11598, 11610, 11612
      - diminazene aceturate, 11643
      - in *T. brucei*, 11563, 11570
      - in *T. b. gambiense*, 11535
      - in *T. b. rhodesiense*, 11535
      - in *T. congolense*, 11264, 11512
      - in *T. evansi*, 11264
    - isometamidium chloride, 11643
    - melarsomine, 11264
    - melarsoprol, 11386, 11563, 11599
    - quinapyramine sulphate, 11264
  - side effects, 11631
    - melarsoprol, 11498, 11639
  - sustained release device, 11263
  - therapy, 11204
    - failure, 11631
    - strategy, 11631
  - treatment protocols, 11498
- trypanocidal, 11610, 11631
  - chloroquine, 11529
  - Cymelarsan, 11644
  - DFMO, 11289, 11385, 11386, 11496, 11589, 11599
  - diminazene, 11261, 11284
  - diminazene aceturate, 11262, 11369, 11404, 11512, 11514, 11643
  - homidium bromide, 11290, 11369, 11402, 11403, 11404, 11413
  - homidium chloride, 11369, 11667
  - isometamidium, 11263, 11289, 11405, 11534
  - isometamidium chloride, 11369, 11494, 11514, 11643
  - megazol, 11283, 11526, 11665
  - melarsen oxide, 11531
  - melarsomine, 11261, 11264, 11369
  - melarsoprol, 11236, 11237, 11382, 11383, 11384, 11386, 11496, 11498, 11499, 11500, 11531, 11536, 11563, 11589, 11599, 11630, 11669
  - metronidazole, 11529
  - nitroimidazole, 11526
  - pentamidine, 11412, 11537, 11589, 11599, 11625
  - quinapyramine, 11261, 11673
  - quinapyramine sulphate, 11264
  - suramin, 11236, 11384, 11589, 11599, 11625, 11662

trypacide salts, 11369  
Trypan, 11261, 11262

**eflornithine** *see* difluoromethylornithine  
**endosulfan**

effect on non-target organisms, 11477

**epidemics**

of trypanosomiasis in humans, 11202  
animal reservoirs, 11542  
foci, modelling, 11542  
in Angola, 11451  
in Cameroon, 11458  
in Congo, 11451

**epidemiology**

of parasites in sheep, Côte d'Ivoire, 11241  
of trypanosomiasis, 11541  
in camels, 11204, 11229, 11639  
Chad, 11504  
Sudan, 11203  
in cattle, 11216, 11336  
Burkina Faso, 11230  
Malawi, 11502  
Togo, 11201  
in humans, 11340, 11343, 11482, 11487,  
11493, 11542, 11614, 11615, 11616  
Côte d'Ivoire, 11227  
East Africa, 11202  
of trypanosomes, in tsetse, 11618

**Equatorial Guinea**

*G. caliginea* in, 11470  
*G. p. palpalis* in, 11470  
trypanosomiasis in animals, 11470  
trypanosomiasis in humans, 11381, 11470  
*gambiense*, 11494  
Mbini focus, 11494  
tsetse trapping, 11470

**ethidium** *see* homidium bromide

**Ethiopia**

Ghibe Valley  
*G. m. submorsitans* in, 11512  
*G. pallidipes* in, 11512  
trypanosomiasis in livestock, 11457, 11512,  
11598  
tsetse control, 11512, 11598  
*G. f. fuscipes* in, 11339  
*G. longipennis* in, 11339  
*G. m. submorsitans* in, 11339  
*G. pallidipes* in, 11213, 11339  
*G. tachinoides* in, 11339  
south-west  
trypanosomiasis in cattle, 11612  
tsetse control, 11612  
trypanosomiasis in horses, prevalence, 11503  
trypanosomiasis in livestock, 11391

control, 11339  
prevalence, 11339, 11391  
tsetse control, 11339, 11391, 11457

**fly belt**

common, 11360  
Mozambique, 11221  
Zambia, 11468  
Zimbabwe, 11468

**fly rounds** 11348

**fungi, entomopathogenic**

*Metarhizium anisopliae*  
susceptibility of tsetse to, 11366

**Gambia, The**

productivity of goats, 11255  
productivity of sheep, 11255  
trypanosomiasis  
in cattle, 11335, 11341  
prevalence, 11341

**Gambia, The (cont.)**

trypanosomiasis (cont.)  
risk to goats, 11511  
risk to livestock, 11255  
risk to sheep, 11511  
tsetse density, 11255

**genetics**

of trypanosomiasis in humans, 11202  
of trypanotolerance, 11252, 11259, 11592  
chromosomes, 11397, 11398  
DNA markers, 11513  
gene mapping, 11401  
heritability, 11513  
markers, 11397, 11398, 11399, 11401  
quantitative trait loci, 11397, 11398, 11399,  
11401  
resistance traits, 11513  
trypanosome  
alleles, group-specific, 11540  
chromosomes, 11415  
*CYC2* and *CYC3* cyclin, 11698  
differential RNA elongation, 11721  
diversity, 11542  
DNA  
PCR analysis, 11415  
target sequences, 11381  
exchange, 11415, 11433, 11542  
gene/s, 11334, 11415, 11579  
conversion, 11328  
editing, 11298, 11300  
expression, 11294, 11421, 11581, 11588,  
11725  
expression sites, 11293, 11294, 11323,  
11381, 11421, 11559, 11721

- expression system, 11700
- glutamate dehydrogenase, 11300
- H2B, 11428
- marker, 11687
- novel, 11682
- phosphoenolpyruvate carboxykinase, 11725
- procyclic acidic repetitive protein, 11307, 11311
- resistance, 11459
- ribosomal RNA, 11331
- RNA, kinetoplast spliced leader, 11688
- 60S ribosomal protein L27a (L29), 11297
- transcription, 11293, 11294, 11310, 11311, 11323, 11332, 11428, 11548, 11555, 11559, 11688
- VSG, 11293, 11311, 11323, 11328, 11421, 11559, 11721
- genome, 11310, 11420, 11436, 11540
  - microsatellites, 11540
- genotype, 11415
  - composition, 11542
  - group-specific, 11540
- inheritance, 11415
- mapping, 11459
- markers, minisatellite, 11415
- ploidy, 11433
- population, 11542
- regulatory 3' untranslated region, 11425
- RNase HI, 11701, 11702
- RNA
  - binding, *cis*-splicing proteins, 11308
  - editing, 11694
  - guide, 11298
  - kinetoplast, editing, 11298
  - m, mitochondrial, editing, 11300
  - multiple transferrin receptor, 11294
  - NEO*, 11310
  - r, 11311
  - r, small subunit, maturation, 11303
  - ribosomal, genes, 11331
  - sno, U3, 11303
  - spliced leader transcript sequence
    - variation, 11674
  - t, 11318, 11333
  - t, dicistronic, precursor, 11312
  - telomere maintenance, length regulation, 11699
  - U insertion, 11298
- tsetse, 11362
  - allele frequencies, 11468
  - autosomes, 11350
  - backcrosses, 11350
  - differentiation, 11468
  - gene flow, 11216
  - genetic differentiation, 11213
  - genetic drift, 11213
  - genetic variation, 11213
  - genome characterisation, 11376
  - haplotype diversity, 11468
  - hybrid male sterility, 11350
  - isoenzyme characterisation, 11376
  - loci, 11213, 11376
  - mapping
    - haplotypes, 11213
    - linkage groups, 11209
  - Mendelian inheritance, 11216
  - mitochondrial DNA, diversity, 11213
  - phylogeny, molecular, 11461
  - size polymorphisms, 11216
  - variability, 11216
  - X chromosome, 11209, 11350
  - Y chromosome, 11350, 11376
- geographical information systems (GIS)** 11597
  - impact, modelling, 11454
  - in assessment of impact of control, 11388, 11452
  - in prediction of tsetse abundance, 11593
  - in trypanosomiasis control, 11336, 11340
  - in trypanosomiasis management, 11593
  - in tsetse distribution and abundance mapping, 11218
  - in tsetse distribution studies, 11609
- Ghana**
  - cattle profitability and efficiency, 11199
  - G. p. palpalis* in, 11358
  - G. tachinoides* in, 11358
  - trypanosomiasis in animals, 11358
  - tsetse control studies, 11358
- global positioning systems (GPS)**
  - in assessment of impact of control, 11452
- Glossina**
  - biology, 11337, 11459
    - attractants, 11362
    - bacteriome, 11208
    - biometrics, 11207
    - blood meals, 11483, 11488
    - cuticle, 11346
    - defence against trypanosome invasion, 11490
    - endosymbionts, 11347
      - bacteria, 11347
      - midgut, 11347
    - hydrocarbon profiles, 11349
    - life cycle, 11606
    - mating incompatibility, 11347
    - midgut, 11208

infection, 11490  
 ovary  
   symbiotic bacteria, 11347  
 physiological age distribution, 11606, 11607  
 pupal stage duration, 11607  
 puparium, 11346  
 refractoriness to trypanosome infection,  
   11347, 11490  
 reproduction, viviparous, 11606  
 sex, 11346  
 sex pheromones, 11349  
 species recognition, 11349  
 survival rate, age-dependent, 11606  
 survival rate, pupae, 11607  
 survival rates, female, 11606, 11607  
 symbionts, 11462  
   P, *Wigglesworthia glossinidia*, 11208,  
     11601  
   primary, 11601  
   role, 11601  
   S, 11208  
   secondary, 11601  
   *Sodalis glossinidius*, 11601  
   *Wolbachia*, 11208, 11347  
   *Wolbachia pipientis*, 11601  
 transmission of nagana, 11453  
*T. brucei* infection, 11415  
*T. b. gambiense* infection, 11490  
*T. b. rhodesiense* infection, 11490  
*T. congolense* infection, 11355  
*T. vivax* infection, 11355  
 trypanosome infection, 11488  
   rates, 11355  
 trypanosome interactions, 11337  
 trypanosome refractoriness, 11347  
 vector competence, 11347, 11490  
 wings, 11207  
 control, 11204  
   autosterilisation, 11363  
   in Africa  
     East, 11338  
     southern, 11338, 11359  
     West, 11338  
   in Botswana, 11371  
   in Burkina Faso, 11200  
   in Ethiopia, 11339, 11457, 11512, 11596  
   in Kenya, 11369  
   in Malawi, 11502  
   in Uganda, 11632  
   in Zambia, 11359, 11360  
   in Zimbabwe, 11221, 11359  
   monitoring, 11388  
   parasite release, 11363  
   SIT, 11337, 11347, 11363

ecology  
 abundance  
   in Togo, 11593  
   mapping, 11218  
 density, 11336  
 distribution, 11336, 11456  
   mapping, 11218  
 emigration, 11615  
 habitats, 11355, 11363, 11456, 11502  
 populations, 11456, 11606, 11607, 11615  
   dynamics, 11212  
 reinvasion, 11615

***Glossina*** (cont.)

genetics, 11337, 11362  
 autosomes, 11350  
 backcrosses, 11350  
 DNA, ribosomal, sequences, 11461  
 hybrid male sterility, 11350  
 phenotypes, refractory, 11347  
 phylogeny, molecular, 11028, 11461  
 taxonomy, monophyletic, 11028  
 X chromosome, 11350  
 Y chromosome, 11350  
 rearing, 11337, 11362, 11363

***Glossina austeni***

abortion rate, 11475  
 behaviour, 11361  
   sexual, 11344  
 breeding rate, 11475  
 control, 11474, 11480  
   by SIT, 11344, 11345, 11361, 11367,  
     11370, 11373, 11374  
 cyclical transmission, 11376  
 ecology, 11361  
 eradication, 11613  
 gamma sterilisation, 11374, 11613  
 genetic/s  
   characterisation, 11352  
   loci, isoenzyme, 11376  
   phylogeny, molecular, 11461  
   Y chromosome, 11376  
 habitat, 11475  
 hydrocarbons, 11349  
 in South Africa, 11472, 11473, 11474, 11608  
 in Zanzibar, Unguja Island, 11344, 11345,  
   11367, 11370, 11373, 11374, 11475, 11480,  
   11613  
 in Zululand, 11356, 11361  
 isoenzyme characterisation, 11376  
 marking, 11344  
 metacyclogenesis, 11376  
 midgut infections, 11376  
 population density, 11475

pupae, 11344, 11345, 11367  
rearing, mass, 11345, 11361, 11367, 11374  
release, 11374  
response to odour, 11473, 11474  
response to traps, 11608  
salivary gland infection, 11376  
susceptibility to infection, 11379  
trapping, 11356, 11373, 11475, 11608  
*T. b. brucei* infection, 11376, 11379  
*T. congolense* infection, 11376, 11379  
*T. vivax* infection, 11379  
vectorial capacity, 11376  
visual response, 11474  
*Wolbachia* infection, 11602

***Glossina brevipalpis***

control, 11474, 11610  
habitat, 11610  
in Malawi, 11502  
in South Africa, 11472, 11473, 11474, 11608  
in Tanzania, 11355, 11610  
in Zululand, 11356  
puparium, 11346  
response to odour, 11474  
response to traps, 11608  
susceptibility to infection, 11379  
trapping, 11355, 11356, 11608  
*T. b. brucei* infection, 11379  
*T. congolense* infection, 11379  
*T. vivax* infection, 11379  
trypanosome infection rates, 11379  
visual response, 11474  
*Wolbachia* infection, 11602

***Glossina caliginea***

in Equatorial Guinea, 11470  
trapping, 11470

***Glossina fusca***

molecular phylogeny, 11208, 11461

***Glossina fusca fusca***

density, 11336  
distribution, 11336  
mapping, Togo, 11218  
in Togo, 11218

***Glossina fuscipes*** 11602

puparium, 11346  
trapping, 11368

***Glossina fuscipes fuscipes***

flight, 11219  
genetic characterisation, 11352  
in Ethiopia, 11339  
in Kenya, 11219  
in Uganda, 11478, 11632  
in Zambia, 11360  
olfactory cells, 11467  
response to carbon dioxide, 11219

response to odour, 11467  
susceptibility to infection, 11379  
trapping, 11219  
*T. b. brucei* infection, 11379  
*T. congolense* infection, 11379  
*T. vivax* infection, 11379  
trypanosome infection rates, 11379

***Glossina longipalpis***

blood meals, 11489  
density, 11336  
distribution, 11336  
mapping, Togo, 11218  
feeding, 11489  
habitats, 11489  
hosts, 11489  
in Côte d'Ivoire, 11489  
in Guinea-Bissau, 11605  
in Togo, 11218

***Glossina longipennis***

blood meals, 11380  
in Ethiopia, 11339  
in Tanzania, 11380  
midgut infection, 11619  
proboscis infection, 11619  
*T. brucei* infection, 11619  
*T. congolense* infection, 11619  
*T. vivax* infection, 11619  
*Wolbachia* infection, 11602

***Glossina medicorum***

blood meals, 11489  
density, 11336  
distribution, 11336  
mapping, Togo, 11218  
feeding, 11489  
habitats, 11489  
hosts, 11489  
in Côte d'Ivoire, 11489  
in Togo, 11218

***Glossina morsitans***

corpora cardiaca, ultrastructure, 11464  
in Tanzania, 11355  
in Zimbabwe, 11224, 11356  
molecular phylogeny, 11208, 11461  
parturition hormone activity, 11469  
trapping, 11355, 11356, 11368

***Glossina morsitans centralis***

accessory reproductive glands, 11215  
control, 11610  
DNA virus infection, effects, 11215  
habitat, 11610  
hybridisation experiments, 11350  
in Botswana, 11371, 11595  
in Namibia, 11501  
in Tanzania, 11610

- in Zambia, 11360
  - larvae, 11215, 11353
  - larviposition, 11353
  - larviposition pheromones, 11353
  - mating, 11215
  - Metarhizium anisopliae* infection
    - effect of age and sex, 11366
  - pupae, 11353
  - spermatheca, 11215
  - spermatophore, 11215
  - susceptibility to infection, 11379
  - transmission, mechanical, 11486
  - trapping, 11595
  - T. b. brucei* infection, 11379, 11486
  - T. congolense* infection, 11379, 11485, 11486
  - T. vivax* infection, 11379, 11486
  - trypanosome infection rates, 11379
  - uterus, 11215
  - Wolbachia* infection, 11602
- Glossina morsitans morsitans***
- abortion rate, 11212
  - adult mortality, 11357
  - age, 11354, 11357, 11617
    - female, 11214
  - behaviour, trap-orientated, 11357
  - blood meals, 11378, 11380, 11484
  - control, 11221, 11610
  - effect of *Bacillus thuringiensis* endotoxin, 11223
  - fat content, 11214, 11348
  - feeding, 11479
    - rate, 11348
  - genetic differentiation, 11468
  - habitat, 11610
  - haematin, 11348
  - hybridisation experiments, 11350
  - in Malawi, 11502
  - in Mozambique, 11468
  - in Tanzania, 11380, 11610
  - in Zambia, 11348, 11360, 11468
  - in Zimbabwe, 11212, 11221, 11228, 11354, 11357, 11468
  - landing response, 11479
  - larvae, 11353, 11354
  - larviposition, 11353
  - larviposition pheromones, 11353
  - longevity, 11214
  - meso-procyclic index, 11484
  - metacyclic index, 11484
  - metacyclogenesis, 11376
  - Metarhizium anisopliae* infection
    - effect of age and sex, 11366
  - mitochondrial DNA diversity, 11468
  - nutritional levels, 11348
  - nutritional status, 11214
  - olfactory cells, 11467
  - oocytes, 11212
  - ovarian age, 11212, 11354
  - ovarian cycle, 11354
- Glossina morsitans morsitans*** (cont.)
- ovary, 11212
  - populations, 11468
  - pregnancy state, 11354
  - pupae, 11353
  - pupal period, 11357
  - reproductive abnormalities, 11212, 11357
  - reproductive loss, 11212
  - reproductive status, 11357
  - residual dry mass, 11214, 11348, 11354
  - response to odour, 11467
  - salivary gland infection, 11376
  - sex composition, 11357
  - sex pheromones, 11349
  - size, 11354
  - spermatheca, 11212
  - survival, female, 11214
  - trapping, 11212, 11354, 11357
  - T. brucei* infection
    - development, post-mesocyclic, 11225
    - foregut, 11225
    - midgut, 11225
    - proboscis, 11225
    - proventriculus, 11225
    - salivary gland, 11225
  - T. congolense* infection, 11228, 11263, 11484, 11617
    - mesoprocyclic index, 11377
    - metacyclic index, 11377
  - T. godfreyi* infection, 11228
  - T. simiae* infection, 11228
  - vectorial competence, 11377, 11484, 11617
  - wing fray, 11348, 11354
  - wing length, 11354
  - wing-vein length, 11348
  - Wolbachia* infection, 11602
- Glossina morsitans submorsitans***
- control, 11512
  - density, 11336
  - distribution, 11336
    - mapping, 11218
  - genetic/s
    - linkage groups I, II and III, loci, 11209
    - mapping, 11209
    - X chromosome, 11209
  - hybridisation experiments, 11350
  - in Burkina Faso, 11200, 11455
  - in Ethiopia, 11339, 11512
  - in Guinea-Bissau, 11605

- in Senegal, 11248
- in Togo, 11218
- T. congolense* infection, 11248
- T. vivax* infection, 11248
- Glossina nigrofusca nigrofusca***
- in Côte d'Ivoire, 11227
- Glossina pallicera pallicera***
- in Côte d'Ivoire, 11227
- Glossina pallidipes***
- abortion rate, 11212
- adult mortality, 11357
- age, 11357
- antenna, 11466
- behaviour, trap-orientated, 11357
- blood meals, amino acids in, 11211
- breeding structure, 11213
- capture probability, 11211
- control, 11221, 11512, 11610
- ecology, 11213
- eggs, 11210
- fat levels, 11210, 11211
- feeding, 11211, 11479
- feeding interval, 11210
- feeding probabilities, 11210
- feeding rate, 11348
- genetic/s
  - differentiation, 11213
  - drift, 11213
  - loci, 11213
    - haplotypes, 11213
  - mitochondrial DNA, diversity, 11213
  - variation, 11213
- genital armature, 11460
- habitat, 11610
- haematin, 11210, 11211
- head, 11460
- in Ethiopia, 11213, 11339, 11512
- in Kenya, 11213, 11372, 11379, 11611
- in Malawi, 11502
- in Mozambique, 11213
- in Tanzania, 11355, 11610
- in Uganda, 11460, 11600
- in Zambia, 11360
- in Zimbabwe, 11210, 11211, 11212, 11213, 11221, 11224, 11228, 11348, 11354, 11356, 11357, 11365, 11460, 11473, 11479, 11600
- landing response, 11479
- larvae, 11210, 11211, 11354
- midgut infection, 11619
- mixed infections, 11618
- morphological variation, 11600
- nutritional levels, female, 11210, 11211
- nutritional status, 11211
- olfactory cells, 11466, 11467
- oocytes, 11211, 11212
- ovarian age, 11211, 11212, 11354
- ovarian cycle, 11354
- ovary, 11210, 11212
- populations, 11213, 11460
  - allopatric, 11379, 11600
- pregnancy, 11210, 11211, 11354
- proboscis infection, 11618, 11619
- pupae, 11210
- pupal period, 11357
- reproductive abnormalities, 11212, 11357
- reproductive loss, 11212
- reproductive status, 11357
- residual dry weight (RDW), 11210, 11211
  - thoracic, 11354
- response to odour, 11466, 11467
- sex composition, 11357
- sex pheromones, 11349
- size, 11354
- spermatheca, 11212
- susceptibility to infection, 11379
- trapping, 11210, 11212, 11219, 11354, 11355, 11356, 11357, 11365, 11368, 11372
- T. brucei* infection, 11619
- T. b. brucei* infection, 11379
- T. congolense* infection, 11228, 11379, 11618, 11619
- T. godfreyi* infection, 11228, 11618
- T. simiae* infection, 11228, 11618
- T. vivax* infection, 11379, 11618, 11619
- trypanosome infection rates, 11379
- wing fray, 11354
- wing length, 11211, 11354
- Wolbachia* infection, 11602
- Glossina palpalis***
- blood meals, 11375
- hosts, 11375
- in Côte d'Ivoire, 11375
- in Nigeria, 11604
- phylogeny, molecular, 11208, 11461
- trapping, 11375, 11604
- Glossina palpalis gambiensis*** 11602
- blood meals, 11489, 11609
- breeding, 11216
- distribution, Burkina Faso, 11609
- dorsal plates, female, 11217
- feeding, 11489
- genetic/s
  - DNA polymorphisms, microsatellite, 11465
  - DNA sequences, microsatellite, 11216
  - gene flow, 11216
  - genotype, analysis, 11216
  - hybrids, × *G. p. palpalis*, 11217
  - intraspecific variability, 11465

- loci
  - size polymorphisms, 11216
  - Mendelian inheritance, 11216
  - variability, 11216
- genital armature, 11217
- habitats, 11489, 11609
- hosts, 11489, 11609
- in Burkina Faso, 11216, 11217, 11465, 11471, 11607, 11609
- in Côte d'Ivoire, 11489
- in Guinea-Bissau, 11605
- in Senegal, 11216, 11248, 11465
- in West Africa, 11216
- inferior claspers, male, 11217
- morphometrics, 11217
- ovarian age, 11471
- populations, 11465, 11471
  - natural, 11216
  - stability, 11607
- pupal period, 11471
- pupal stage duration, 11607
- survival rate, 11471
  - adult, 11607
  - pupae, 11607
- susceptibility to infection, 11379
- transmission, dynamics, 11465
- trapping, 11471, 11609
- T. b. brucei* infection, 11379
- T. congolense* infection, 11248, 11379
- T. vivax* infection, 11248, 11379
- trypanosome infection rates, 11216, 11379, 11609
- wing size, 11465
- Glossina palpalis palpalis*** 11602
  - abundance, Togo, 11218
  - blood meals, 11487, 11489
  - density, 11336
    - Côte d'Ivoire, 11227
  - distribution, 11336
    - age group, 11620
    - mapping, Togo, 11218
  - dorsal plates, female, 11217
  - feeding, 11487, 11489
  - feeds, human, 11227
  - from Nigeria, 11217
  - genetic characterisation, 11352
  - genital armature, 11217
  - habitats, 11489
  - hosts, 11489
  - hybrids, × *G. p. gambiensis*, 11217
- Glossina palpalis palpalis*** (cont.)
  - in Côte d'Ivoire, 11227, 11482, 11487, 11489, 11614, 11620
- in Equatorial Guinea, 11470
- in Ghana, 11358
- in Togo, 11218
- inferior claspers, male, 11217
- larvae, 11351
- lipid synthesis, 11351
- midgut infection, 11614
- morphometrics, 11217
- proteins, genetic analysis, 11463
- puparium, 11346
- survival rate, daily, 11227
- susceptibility to infection, 11379
- teneral rate, female, 11227
- Toll*-like gene, 11603
- trapping, 11227, 11482
- T. brucei* infection, 11614
- T. b. brucei* infection, 11379
- T. congolense* infection, 11379, 11614
- T. vivax* infection, 11379
- trypanosome infection rates, 11379
- Glossina swynnertoni***
  - behaviour, 11220
  - ecology, 11220
  - hybridisation experiments, 11350
  - in Kenya, 11220
  - in Tanzania, 11220
  - trapping, 11220
  - Wolbachia* infection, 11602
- Glossina tachinoides*** 11602
  - abundance, Togo, 11218
  - blood meal, 11609
  - density, 11336
  - distribution, 11336
    - in Burkina Faso, 11609
    - mapping, Togo, 11218
  - habitat, 11609
  - hosts, 11609
  - hydrocarbons, 11349
  - in Burkina Faso, 11200, 11455, 11609
  - in Ethiopia, 11339
  - in Ghana, 11358
  - in Togo, 11201, 11218
  - puparium, 11346
  - susceptibility to infection, 11379
  - trapping, 11609
  - T. b. brucei* infection, 11379
  - T. congolense* infection, 11379
  - T. vivax* infection, 11379
  - trypanosome infection rates, 11379, 11609
- goats**
  - trypanosome infection
    - diagnostic study, 11244
  - T. brucei* infection, 11244
  - T. b. brucei* infection (exp.), 11486



- T. congolense* infection, 11244  
*T. congolense* infection (exp.), 11486  
*T. vivax* infection, 11244  
*T. vivax* infection (exp.), 11486  
  anaemia, monitoring, 11509  
  serum free fatty acid levels, 11509  
trypanosomiasis  
  diagnosis, 11390  
  distribution, Uganda, 11390  
  prevalence, Uganda, 11390  
  *T. brucei* infection, 11390  
  *T. vivax* infection, 11390  
West African Dwarf  
  mixed *T. brucei*/*Cowdria ruminantium*  
  infection (exp.)  
    serum biochemical changes, 11634  
  *T. congolense* infection  
    effect on health and productivity, 11255  
  *T. vivax* infection  
    effect on health and productivity, 11255  
  trypanosome infection  
    effect on productivity, 11511  
  trypanosome prevalence, Gambia, 11255  
  trypanosomiasis risk,  
    effect of anthelmintic intervention,  
    11511  
    Gambia, 11255  
  trypanotolerance, 11255, 11511  
**Guinea-Bissau**  
  *G. longipalpis* in, 11605  
  *G. m. submorsitans* in, 11605  
  *G. p. gambiensis* in, 11605  
  trypanosomiasis in, 11605  
  tsetse survey, 11605  
**guinea pigs**  
  *T. evansi* infection, 11409  
**homidium bromide** 11290  
  control of animal trypanosomiasis, 11369  
  detection in serum, ELISA, 11402, 11403  
  metabolism by hepatocytes, 11413  
  pharmacokinetic evaluation, 11402, 11403  
  treatment in cattle, 11403, 11404  
**homidium chloride** 11667  
  control of animal trypanosomiasis, 11369  
**horses**  
  *T. equiperdum* infection  
    diagnosis, 11645, 11646, 11647  
    in Ethiopia, 11503  
  trypanosomiasis  
    in Kenya, 11675  
    *T. congolense* infection, 11675  
**identification**  
  *see also* characterisation, detection  
  by PCR, 11381, 11609, 11618, 11621  
    *T. brucei* sspp., 11265  
    *T. evansi*, 11265  
  ELISA-based, of blood-fed tsetse, 11378  
**immune response**  
  in buffalo  
    serum oxidative response, 11260  
    suppression of parasitaemia, 11260  
  in camels  
    antibody titre, complement fixing, 11257  
    circulating trypanosome antigen levels,  
    11257  
     $\gamma$ -globulins, 11507  
    haemolytic complement activity, 11257  
    hyperprotidemia, 11507  
    hypocomplementaemia, 11256  
    serum C3 levels, 11256  
  in cattle  
    antibodies, 11501, 11502, 11632, 11633  
      IgG, 11247  
      IgM, polyreactive, 11247  
    cytokine mRNA profile, 11252, 11259  
    erythropoietin receptor gene expression,  
    11259  
    interleukin gene expression, 11252  
    macrophage function, 11635  
    TNF- $\alpha$  gene expression, 11252  
    transforming growth factor gene expression,  
    11252  
  in humans  
    antibodies  
      anti-galactocerebroside, 11627, 11628  
      auto-, 11628  
      titre, 11495  
    IgG, 11627  
    IgM, 11627  
  in mice  
    antibodies, 11523, 11628  
      anti-conjugated-NO-cysteine, 11275  
      neutralising, 11271  
    antibody-induced effector mechanisms,  
    11278  
    cytokines, 11268  
      interleukin 4, 11406  
  immunoglobulin isotype switching  
    antigen-specific, 11523  
  macrophages  
    cytokine production, 11660  
    nitric oxide production, 11272, 11660  
  T-cell responses, 11274  
  Th2 lymphokine production, 11655  
  TNF- $\alpha$  expression, 11407

- trypanosome lymphocyte-triggering factor, 11271
- tumor necrosis factor  $\alpha$ , 11273
- in rabbits
  - antibodies
    - anti-conjugated-NO-cysteine, 11275
  - IgG, 11281
- in rats
  - cytokine production, 11267
  - cytokine profile, 11279
  - interferon- $\gamma$ , 11650
    - expression, 11518
    - gene expression, 11408
  - interleukin-12 gene expression, 11408
  - microglia activation, 11269
  - suppression of *T. b. brucei* infection, 11653
  - trypanosome lymphocyte triggering factor, 11650
- in sheep
  - antibodies
    - IgG, parasite-specific, 11254
    - IgM, parasite-specific, 11254
  - antibody response, 11249
  - cell population changes, peripheral blood
    - B-cell subsets, 11254
    - CD1<sup>+</sup> cells, 11254
    - CD4<sup>+</sup> cells, 11254
    - CD8<sup>+</sup> cells, 11254
    - CD45R<sup>+</sup> cells, 11254
    - MHCII<sup>+</sup> cells, 11254
    - T-cell subsets, 11254
- immunisation**
  - in *T. congolense*-infected mice, 11270
- immunity**
  - acquired, 11494
  - natural, human, 11517
- immunosuppression**
  - effect of rinderpest vaccination in cattle, 11258
  - in animal trypanosomiasis, 11256
  - in *T. brucei*-infected mice, 11655, 11657
  - in *T. b. brucei*-infected rabbits, 11289
  - in trypanosome-infected sheep, 11249
- insect growth regulators**
  - chitin synthesis inhibitors, 11364
  - juvenile hormone mimics, 11364
  - on targets, 11364
- insecticides**
  - application, 11363
  - cattle dip, 11224, 11369
  - cattle treatment, 11359, 11361, 11369, 11610, 11611
  - cyfluthrin, 11479
  - cypermethrin, 11512, 11611, 11612
  - $\alpha$ -cypermethrin, 11479, 11480
  - DDT, 11359, 11477
  - deltamethrin, 11200, 11221, 11224, 11339, 11365, 11370, 11479, 11480
  - dieldrin, 11371
  - dips, 11610
  - endosulfan, 11477
  - on targets/traps/screens, 11200, 11224, 11361, 11364, 11365, 11369, 11472, 11480, 11502, 11613
  - organochlorines, 11477
  - pour-on, 11224, 11361, 11369, 11611, 11612, 11613
  - pyrethroids, 11365, 11369, 11610, 11613
  - Spot-on, 11339, 11370
  - spraying, ground, 11369
- in vitro studies**
  - cultivation of trypanosomes
    - in drugs testing, 11284
    - T. b. gambiense*, 11624
    - T. evansi*, 11284, 11291
  - in drugs testing, 11412
- isometamidium**
  - in sustained release device, 11263
  - intramuscular injection, 11263
  - prophylaxis, in cattle, 11263
  - proprietary formulations
    - chemical equivalence, 11405
  - residues
    - in cattle tissues and milk, 11534
  - treatment
    - in *T. b. brucei*-infected rabbits, 11289
- isometamidium chloride**
  - control of animal trypanosomiasis, 11369
  - resistance to, 11643
  - treatment
    - in trypanosome-infected cattle, 11404, 11514
- juvenile hormone mimics**
  - pyriproxyfen, 11364
- Kenya**
  - Coast Province
    - trypanosomiasis in cattle, 11611
  - G. f. fuscipes* in, 11219
  - G. pallidipes* in, 11213, 11611
  - G. swynnertoni* in, 11220
  - Nguruman
    - G. pallidipes* in, 11372, 11379
  - Shimba Hills, Coast Province
    - G. pallidipes* in, 11379
  - sleeping sickness belt, 11369

trapping studies, 11219, 11220  
trypanosomiasis in animals  
  constraint to production, 11369  
trypanosomiasis in camels, 11264  
trypanosomiasis in cattle  
  incidence, 11258  
trypanosomiasis in horses, 11675  
trypanosomiasis in humans, 11369  
tsetse control, 11364, 11369, 11372  
tsetse resurgence, 11369

#### **land use**

impact  
  of tsetse control, 11388  
  on distribution of human trypanosomiasis,  
  11482  
in Côte d'Ivoire  
  effect on human trypanosomiasis risk,  
  11614  
in Ethiopia, Ghibe Valley  
  effect of trypanosomiasis severity, 11457  
in Togo  
  GIS, 11593  
in Zambia, 11360  
models, 11457

#### **livestock**

treatment  
  pyrethroid pour-on, 11613  
trypanosomiasis, 11456  
  in Ethiopia, 11391, 11456  
  in Tanzania, 11355

#### **Malawi**

*G. brevipalpis* in, 11502  
*G. m. morsitans* in, 11502  
*G. pallidipes* in, 11502  
trypanosomiasis in cattle  
  distribution, 11502  
tsetse control, 11502

#### **Mali**

drug trials in cattle, 11263  
trapping  
  *Stomoxys*, 11222  
  Tabanidae, 11222  
trypanosomiasis in cattle  
  incidence, 11263

#### **man-fly contact** 11614

in Sudan, 11234

#### **megazol**

excretion, 11283  
metabolism, 11283  
pharmacokinetics, 11283  
  in vervet monkey, 11665  
treatment

of human trypanosomiasis  
  primate model, 11665  
of *T. b. brucei*-infected mice and rats, 11283  
uptake by *T. brucei*, 11526

#### **melarsen oxide**

metabolism in mice, 11531  
physico-chemical properties, 11532

#### **melarsomine (Cymelarsan)**

efficacy in *T. evansi*-infected camels, 11261  
resistance

  in *T. congolense*, 11264

  in *T. evansi*, 11264

treatment

  in *T. evansi*-infected camels, 11264, 11369

#### **melarsoprol**

pharmacokinetics, 11237, 11500  
physico-chemical properties, 11532  
susceptibility of trypanosomes, 11237  
treatment

  of human trypanosomiasis, 11236, 11382,  
  11383, 11384, 11386, 11496, 11589,  
  11599, 11630

  failure, 11237, 11499

*gambiense*, 11498, 11499

  protocols, new, 11498

  refractoriness, 11386

  relapse, 11237

  side effects, 11498

  of *T. b. gambiense*-infected mice, 11536  
  dosage rates, 11669

#### **Mel Cy** *see* Cymelarsan, melarsomine

#### **mice in laboratory studies** 11378

drug metabolism, 11531

*T. brucei* infection, 11524

  congenital transmission, 11651

  drug effects, 11643, 11644, 11671

  drug resistance studies, 11563

  immune response, 11273, 11274, 11278,  
  11523

  immunosuppression, 11655, 11657

  suppression of response to *Trichinella*  
  *spiralis*, 11276

  Th2 lymphokine production, 11655

*T. b. brucei* infection

  drug effects, 11283

  immune response, 11268, 11271, 11628

  intestinal pathology, 11521

  modelling human trypanosomiasis, 11533

  nitric oxide synthase

    in CNS, 11652

    induction, 11519

  nitrotyrosine in CNS, 11652

*T. b. gambiense* infection

  diagnosis, 11516

- drug effects, 11669
- drug treatment, 11536
- immune response, 11275, 11406
- T. b. rhodesiense* infection
  - drug effects, 11285
- T. brucei/T. congolense* infection
  - drug effects, 11643
- T. congolense* infection, 11485
  - control, 11649
  - cytokine production, 11660
  - immune response, 11272, 11407, 11660
  - immunisation effects, 11270
  - nitric oxide production, 11660
  - susceptibility, 11649
  - trypanotolerance, genetics, 11401
- T. equiperdum* infection
  - drug effects, 11539
  - platelet cytotoxicity, 11654
- T. evansi* infection
  - susceptibility studies, 11277
- T. vivax* infection
  - drug effects, 11529
- models/modelling**
  - cattle land use, Burkina Faso, 11230
  - economic surplus, 11454
  - effect of human population growth on tsetse, 11451
  - herd, 11454
  - host-vector contact patterns, 11228
  - insecticide applications, 11479
  - land use change, 11457
  - pattern matching
    - for diagnosis of trypanosomiasis, 11387
  - trypanosomiasis in animals, prevalence
    - use of satellite data, 11593
  - trypanosomiasis in humans
    - epidemics, 11542
    - in vervet monkey, 11665
- models/modelling** (cont.)
  - trypanosomiasis in humans (cont.)
    - spread, 11481
    - transmission dynamics, 11483, 11615
  - tsetse populations, 11606, 11607
    - in control studies, 11363
- monitor lizards**
  - host for tsetse, 11489, 11609
- monkeys**
  - T. b. gambiense* infection
    - prevalence, Cameroon, 11621
- monkeys, vervet**
  - T. b. gambiense* infection
    - treatment with megazol, 11665
- Mozambique**
  - fly belt, 11221
- G. m. morsitans* in, 11468
- G. pallidipes* in, 11213
- nagana** 11453
  - in Zululand, 11356
- Namibia**
  - G. m. centralis* in, 11501
  - trypanosomiasis in cattle, 11501
- Nannomonas**
  - infecting tsetse, 11228
- nets, electric** 11212, 11219, 11220
  - in tsetse sampling, 11357
- Nigeria**
  - G. palpalis* in, 11604
  - G. p. palpalis* in, 11217
  - trypanosomiasis in cattle, 11505
  - trypanosomiasis in dogs, 11643, 11644
  - tsetse trapping, 11604
- non tsetse transmitted animal trypanosomiasis (NTTAT)** 11206
- odour attractants/baits/stimuli**
  - acetone, 11220, 11466, 11467, 11473, 11474
  - carbon dioxide, 11219, 11466, 11467
  - methyl phenol, 11356
  - 3-methyl phenol, 11466
  - 4-methyl phenol, 11473, 11474
  - 1-octen-3-ol, 11220, 11356, 11466, 11467, 11473, 11474
  - phenols, 11467
  - propyl phenol, 11356
  - 3-*n*-propyl phenol, 11473
- odour repellents**
  - acetophenone, 11466
  - lactic acid, 11466
  - 2-methoxy-phenol, 11466
  - naphthalene, 11466
- oxen**
  - drug treatment, 11514
  - insecticide-treated
    - in tsetse control studies, 11479
- packed cell volume (PCV)**
  - in camels
    - T. evansi*-infected, 11640
  - in cattle
    - T. congolense*-infected, 11251, 11394, 11512, 11638
    - T. vivax*-infected, 11251, 11508
    - trypanosome-infected, 11200, 11201, 11224, 11392, 11404, 11502, 11598, 11611, 11632
  - in goats
    - T. vivax*-infected, 11509

- in pigs
  - T. brucei*-infected, 11396
- in sheep
  - T. congolense*-infected, 11249, 11255
  - T. vivax*-infected, 11255
- parasitaemia**
  - in buffalo
    - trypanosome-infected, 11260
  - in camels
    - T. evansi*-infected, 11256, 11389
  - in cattle
    - T. congolense*-infected, 11251, 11638
    - T. vivax*-infected, 11251, 11252, 11508
    - trypanotolerant, 11397
  - in goats
    - T. vivax*-infected, 11486, 11509
  - in human trypanosomiasis, 11492
  - in mice
    - T. brucei*-infected, 11278
    - T. b. rhodesiense*-infected, 11491
    - T. congolense*-infected, 11485
  - in pigs
    - T. brucei*-infected, 11396
  - in rats
    - T. b. rhodesiense*-infected, 11491
    - T. congolense*-infected, 11377
  - in sheep
    - T. congolense*-infected, 11249, 11250
    - T. evansi*-infected, 11254, 11393
  - patent
    - in *T. evansi*-infected camels, 11240
- parasites, tsetse**
  - Chrestomutilla glossinae*
    - in control, 11363
- pentamidine**
  - activity *in vitro*, 11412
  - chlorodiazirine analogue
    - activity against *T. brucei*, 11537
  - treatment of human trypanosomiasis, 11589, 11599, 11625
- pigs**
  - hosts for tsetse, 11489, 11609, 11616
    - Côte d'Ivoire, 11375
  - reservoir hosts, 11390
  - T. brucei* infection (exp.)
    - pathogenicity, 11396
  - T. b. gambiense* infection, 11493
  - trypanosomiasis
    - diagnosis, 11390
    - mixed infection, 11390
    - prevalence, Uganda, 11390
    - T. brucei* infection, 11390
    - T. congolense* infection, 11390
- primates**
  - T. congolense* infection, 11621
  - T. simiae* infection, 11621
- prophylaxis**
  - isometamidium, in cattle, 11263
- pyrethroids**
  - cattle treatment, 11610
  - $\beta$ -cyfluthrin, 11365
  - $\lambda$ -cyhalothrin, 11365
  - $\alpha$ -cypermethrin, 11365
  - efficacy, 11365
  - ground spraying, 11369
  - on odour-baited targets, 11365
  - pour-on, 11613
- pyriproxyfen**
  - on targets, 11364
- quinapyramine**
  - efficacy in *T. evansi*-infected camels, 11261
  - efficacy in *T. evansi*-infected rats, 11673
- quinapyramine sulphate**
  - resistance
    - in *T. congolense*, 11264
    - in *T. evansi*, 11264
  - treatment
    - in *T. evansi*-infected camels, 11264
- rabbits in laboratory studies**
  - T. brucei* infection
    - immune response, 11281
  - T. b. brucei* infection
    - chemotherapy, 11289
    - pathological effects, 11280
  - T. b. gambiense* infection
    - immune response, 11275
  - T. b. rhodesiense* infection
    - diagnostic testing, 11231
- rats in laboratory studies**
  - as laboratory hosts, 11377
  - T. brucei* infection
    - anaemia, 11661
    - drug effects, 11538
    - histopathology, 11522
    - immune response, 11267, 11408
    - immunohistochemistry, 11269
    - microglial activation, 11520
    - neurodegeneration, 11538
    - proinflammatory cytokine overexpression, 11522
  - T. b. brucei* infection, 11659
    - chemokine production, 11525
    - cytokine profile, 11279
    - drug effects, 11283
    - immune response, 11518, 11650, 11653
  - T. congolense* infection, 11617

- T. evansi* infection
  - drug effects, 11673
- refuges, artificial**
  - catch, 11354, 11357
- remote sensing** 11597
  - applications in tsetse control areas, 11452
  - assessing settlement density, 11233
  - assessing tsetse and trypanosomiasis, 11218
- reservoir hosts**
  - of animal trypanosomiasis
    - pigs, Uganda, 11390
  - of human trypanosomiasis
    - animals, contribution to epidemics, 11542
    - domestic animals, East Africa, 11202
    - pigs, Uganda, 11390
  - of trypanosomiasis in pigs
    - cattle, Nigeria, 11396
- rhinoceros**
  - trypanosome infection, Kenya, 11395
- RNA**
  - cattle, trypanosusceptible, m
    - cytokine profiles, 11252
  - cattle, trypanotolerant, m
    - cytokine profiles, 11252
  - T. brucei*
    - binding, 11576
    - cis*-splicing proteins, 11308
    - editing
      - uridine insertion/deletion, 11694
- RNA (cont.)**
  - T. brucei* (cont.)
    - elongation, differential
      - controlling VSG expression sites, 11721
    - g, 11298
      - poly(U) tail formation, 11571
    - gene, kinetoplast spiced leader, 11688
    - kinetoplastid, editing, 11298
    - m
      - mitochondrial, editing, 11300
      - pre-, *cis*-splicing, 11568
      - translation, 11704
      - turnover, pathways, 11708
    - metabolism, 11568
    - mt, 11707
    - multiple transferrin receptor, 11294
    - NEO*, 11310
    - polymerase, 11555
    - r, 11311
      - 18S, 11292
      - methylation, 11692
      - small subunit, maturation, 11303
    - sn, fibrillar-in-associated box C/D, 11692
    - sno, U3, 11303
    - t, 11318, 11333
      - dicistronic precursor, 11312
  - T. congolense*
    - r, gene promoter, 11423
  - trypanosome
    - Ls-r, 11676
    - ribosomal, genes, 11331
- rodents, wild**
  - T. b. gambiense* infection
    - prevalence, Cameroon, 11621
  - T. congolense* infection, 11621
  - T. simiae* infection, 11621
- ruminants**
  - hosts for tsetse, 11609
- satellite imagery**
  - predicting trypanosomiasis prevalence, 11593
- screening**
  - for trypanosomiasis in cattle
    - in Nigeria, 11505
  - for trypanosomiasis in humans, 11234, 11491, 11622
    - in Angola, 11495
    - in Cameroon, 11493
    - in Equatorial Guinea, 11493, 11494
- screens** 11343, 11360
  - cloth, 11479
  - coloured, 11480
  - cotton, 11480
  - electric, 11348, 11369
  - evaluation, 11480
  - insecticide-impregnated, 11361, 11480, 11613
  - odour-baited, 11348
- Senegal**
  - breeding programmes for N'Dama cattle
    - resistance to trypanosomiasis, 11590
  - G. m. submorsitans* in, 11248
  - G. p. gambiense* in, 11216, 11248, 11465
  - trypanosome prevalence in cattle, 11248
- serum**
  - animal, in diagnostic testing, 11242
  - buffalo, Cape,
    - trypanocidal activity, 11642
  - camel, in diagnostic tests, 11246
  - cattle
    - non-specific IgM antibodies, 11247
    - screening, in trypanosomiasis, 11505
  - human
    - albumin in, 11627
    - anti-galactocerebroside antibodies in, 11627, 11628
    - immunoglobulins in, 11627
    - in diagnostic tests, 11231, 11232
    - in drugs testing, 11500

- trypanosomes in, 11232
- rabbit, in diagnostic tests, 11231
- sheep**
  - crossbred, Djallonké-Sahelian
    - T. congolense* infection (exp.)
      - effect of dietary level, 11249
      - effect on productivity, 11249
      - immune response, 11249
      - pathological effects, 11249
      - resistance, 11249
  - Djallonké
    - T. brucei* infection, 11241
    - T. congolense* infection, 11241
      - effect on health and productivity, 11255
    - T. congolense* infection (exp.)
      - biochemical changes, 11510
      - effect of dietary level, 11249, 11510
      - effect on host metabolism, 11510
      - effect on productivity, 11249
      - immune response, 11249
      - pathological effects, 11249
      - resistance, 11249
    - T. vivax* infection, 11241
    - trypanosome infection
      - effect of anthelmintic intervention, 11511
      - effect on productivity, 11511
    - trypanosome prevalence, Gambia, 11255
    - trypanosomiasis risk
      - effect of anthelmintic intervention, 11511
      - Gambia, 11255
    - trypanotolerance, 11255, 11510, 11511
  - Scottish Blackface
    - T. congolense* infection (exp.)
      - blood biochemical changes, 11250
      - effect of energy intake, 11250
      - pathophysiological changes, 11250
    - T. evansi* infection (exp.)
      - immune response, 11254
  - Yankasa
    - T. evansi* infection (exp.)
      - infectivity, 11393
      - pathogenicity, 11393
      - pathology, 11506
- South Africa**
  - G. austeni* in, 11472, 11473, 11474, 11608
  - G. brevipalpis* in, 11472, 11473, 11474, 11608
  - tsetse control, 11474
  - tsetse trapping, 11608
  - Zululand
    - G. austeni* in, 11356
    - G. brevipalpis* in, 11356
    - nagana, 11356
    - tsetse density, 11356
    - tsetse trapping studies, 11356
- Spot-on** *see* deltamethrin
- spraying** 11364
  - aerial, 11359, 11478, 11610
    - in Botswana, 11371
  - ground, 11610
    - cost, 11359
    - DDT, 11359
    - dieldrin, 11371
    - in Botswana, 11371
    - in Kenya, 11369
- sterile insect technique (SIT)** 11337, 11349, 11363, 11369, 11476, 11610
  - cost, 11347
  - development, in Ghana, 11358
  - efficacy, 11347
  - evaluation, Unguja Island, Zanzibar, 11361
  - gamma sterilisation, 11374
  - G. austeni* in, 11613
  - in Unguja Island, Zanzibar, 11370, 11613
  - integration, 11362, 11364
  - mass production of flies, 11367
  - quality assessment of flies, 11367
- Stomoxys**
  - trapping, Mali, 11222
- Sudan**
  - Bahr El Arab tsetse belt, 11404
  - Tambura County
    - trypanosomiasis in humans
      - gambiense*, 11234
      - prevalence, 11234
      - screening, 11234
  - T. evansi* infection in camels
    - economic impact, 11203
    - prevalence, 11239
  - trypanosomiasis in cattle, 11404
- suramin** 11662
  - treatment of trypanosomiasis in humans, 11236, 11384, 11589, 11599, 11625
- surra** *see* trypanosomiasis in camels
- surveys**
  - cattle density, Togo, 11201
  - entomological
    - in Burkina Faso, 11609
    - in Côte d'Ivoire, 11482, 11614
  - parasitological, in Burkina Faso, 11609
  - trypanosomiasis in animals, Uganda, 11390
  - trypanosomiasis in cattle
    - in Burkina Faso, 11245
    - in Togo, 11201
  - sero-prevalence, Nigeria, 11505
  - trypanosomiasis in humans
    - in Cameroon, 11616

in Sudan, 11234  
tsetse, in Guinea-Bissau, 11605  
tsetse control  
GIS and remote sensing in, 11452

### **Tabanidae**

trapping, Mali, 11222

### **Tanzania**

*G. brevipalpis* in, 11610  
*G. longipennis* in, 11380  
*G. m. centralis* in, 11610  
*G. m. morsitans* in, 11380, 11610  
*G. pallidipes* in, 11610  
*G. swynnertoni* in, 11220  
trypanosomiasis in cattle, 11610  
Tanga region  
*G. brevipalpis* in, 11355  
*G. morsitans* in, 11355  
*G. pallidipes* in, 11355  
trypanosomiasis in livestock, 11355  
tsetse abundance, 11355  
tsetse distribution, 11355  
tsetse trapping, 11355  
tsetse control, 11610

### **Tanzania (cont.)**

tsetse trapping studies, 11220  
Zanzibar (Unguja Island)  
entomological monitoring, 11373  
*G. austeni* in, 11344, 11345, 11361, 11367,  
11370, 11373, 11374, 11475, 11480,  
11613  
SIT, 11344, 11361, 11367, 11370, 11373,  
11374, 11613  
tsetse control, 11613  
trials, 11480  
tsetse density, 11373  
tsetse eradication programme, 11344,  
11337, 11361, 11388, 11613  
tsetse trapping, 11475

### **targets** 11360

attractiveness, 11472  
barriers to re-invasion, 11224  
black, 11220  
chitin synthesis inhibitors on  
triflumuron, 11364  
catch, 11220, 11357, 11474  
colour, 11356, 11472, 11474  
cost, 11478  
evaluation, 11472, 11474  
insect growth regulators on, 11364  
insecticide-impregnated, 11200, 11224, 11359,  
11364, 11369, 11472, 11502  
pyrethroids, 11365  
juvenile hormone mimics on

pyriproxyfen, 11364  
odour-baited, 11224, 11359, 11364, 11365,  
11369, 11371, 11474, 11502, 11595, 11610  
size, 11356, 11474  
sticky, 11220

### **Togo**

*G. f. fusca* in, 11218  
*G. longipalpis* in, 11218  
*G. medicorum* in, 11218  
*G. m. submorsitans* in, 11218  
*G. p. palpalis* in, 11218  
*G. tachinoides* in, 11201, 11218  
remote sensing studies, 11218  
trypanosomiasis in animals  
modelling with GIS, 11593  
prevalence, 11593  
trypanosomiasis in cattle  
impact, 11201  
prevalence, 11201  
survey, 11201  
tsetse abundance, 11593  
mapping, 11218  
tsetse distribution, mapping, 11218

### **transmission**

cyclical  
by *G. austeni*, 11376  
of trypanosomiasis, 11361  
mechanical, 11486  
of human trypanosomiasis, Côte d'Ivoire,  
11227  
of *T. evansi* to camels, 11203  
of trypanosomiasis, dynamics, 11368

### **traps/trapping** 11343, 11375

allomones on, 11368  
biconical, 11219, 11220, 11222, 11355, 11604  
catch, 11219, 11220, 11222, 11354, 11357,  
11608  
coloured, 11604, 11608  
comparison, 11220, 11222  
cost, 11372, 11478  
efficacy, 11222  
efficiency, 11608  
epsilon, 11355  
evaluation, 11220  
F3, 11355  
cubical, 11222  
H, 11608  
in control monitoring, 11471, 11480  
in entomological monitoring, 11373  
in tsetse sampling, 11604, 11609  
kairomones on, 11368  
larviposition pheromones on, 11368  
NG2G, 11372  
Ngu, 11355, 11368



- NITSE, 11604  
non-biting flies, 11219  
odour attractants, 11219  
odour-baited, 11211, 11220, 11354, 11356,  
11357, 11369, 11608  
pyramidal, 11222  
S1, 11220  
S2, 11220  
S3, 11220  
sticky panel, 11355, 11373, 11475, 11480  
Vavoua, 11222, 11470, 11482  
XT sticky, 11356
- triflumuron**  
on targets, 11364
- trypacide salts**  
treatment of *T. evansi* in camels, 11369
- Trypan**  
efficacy  
in *T. evansi*-infected camels, 11261  
in trypanosome-infected cattle, 11262
- trypanocides** 11282  
anti-parasitic agents, 11528  
chemical, 11287  
amidine derivatives, 11530  
bis(9-amino-6-chloro-2-methoxyacridines),  
11666  
5-chloro-2-mercaptobenzothiazole, 11672  
chloroquine, 11529  
dibutyltin derivatives, 11672  
9,9-dimethylxanthene tricyclics, 11664  
fluoroquinolones, 11288  
manumycin A, 11416  
metronidazole, 11529  
2-mercaptobenzoxazole, 11672  
organotin chlorides, 11671  
organotin compounds, water-soluble, 11539  
squalamine analogues, 11668  
terpinen-4-ol, 11670  
triquin, 11673  
trybizine hydrochloride, 11414  
natural  
*Celaenodendron mexicanum*, 11663  
*Kigelia pinnata* root and stem bark, 11412  
*Melaleuca alternifolia* oil, 11670  
*Melissa officinalis* oil, 11670  
*Moringa stenopetala* leaves, roots, 11411  
plant extracts, 11287  
*Thymus vulgaris* oil, 11670
- Trypanosoma brucei**  
acidocalcisomes, 11444  
aconitase, 11580  
adenylate cyclase GRESAG4.1, catalytic  
domain, 11685  
alkyl dihydroxyacetone-phosphate synthase,  
11450  
antigenic variants, sequential dominance,  
11301  
antigenic variation, 11328, 11447, 11579  
homologous recombination, 11438  
role of RAD51, 11438  
antigens, GPI-anchored, 11658  
basal body, 11551  
2,3-bisphosphoglycerate independent  
phosphoglycerate mutase, 11690  
blasticidin S deaminase, 11687  
bloodstream form, 11300, 11445, 11588,  
11670, 11680, 11684  
hydroxyurea inhibition, 11553  
cAMP signalling, 11572  
calcium mobilisation, arachidonic acid, 11550  
causing nagana, 11453  
cell cycle, 11309, 11557  
cell division, 11225  
chromatin, remodelling, 11683  
cloning, 11415, 11449  
compartmentation, 11546  
control, live, 11304  
cyclic AMP signalling, 11712  
cysteine protease, inhibition, 11286  
cytidine triphosphate, 11554  
cytokinesis, 11577  
cytoplasm, 11580  
cytoskeleton, 11560  
differentiation, 11445  
differentiation defects, novel selection regime,  
11720  
diploidy, 11225  
DNA binding protein, 11548  
DNA, c, 11325  
DNA content, 11225  
DNA, kinetoplast, 11265  
DNA nucleosides, 11565  
DNA, r  
nucleotide sequences, 11541  
probes, 11676  
DNA, repetitive sequences  
RFLP analysis, 11542  
drug effects, 11282, 11285, 11287, 11411,  
11537, 11538, 11664, 11666, 11668, 11670,  
11671  
drug resistance, 11315, 11563, 11570, 11643  
determinant, 11689  
drug targets, 11681  
drug uptake, 11526  
ectoprotein phosphatase, acidic, 11680  
endocytosis, 11440  
receptor-mediated, 11705

- energy metabolism, 11584
- environmental sensing, pathways, 11714
- enzyme, drug target, 11719
- epimastigotes, 11225
- evolution, 11292, 11677
- evolutionary relationships, 11542
- farnesyltransferase inhibition, 11416
- fatty acid remodelling pathway, 11710
- fatty acid synthesis, 11711
- flagellar pocket, 11432, 11695
- flagellum assembly, 11419
- flagellum attachment zone, 11309
- $\alpha$ -galactosyltransferase inhibition, 11562
- genetics
  - chromosomes, 11415, 11541
  - clones, 11541
  - diversity, 11542
  - DNA, PCR analysis, 11415
- Trypanosoma brucei*** (cont.)
  - genetics (cont.)
    - evolutionary, 11677
    - exchange, 11415, 11433, 11542
    - gene/s, 11334, 11579
      - conversion, 11328
      - CYC2* and *CYC3* cyclin, 11698
      - editing, 11298, 11300
      - encoding, 11434
      - expression, 11294, 11421, 11581, 11588, 11725
      - expression sites, 11293, 11294, 11323, 11421, 11589, 11721
      - expression system, 11700
      - glutamate dehydrogenase, 11300
      - histone H2B, 11428
      - marker, 11687
      - novel, 11682
      - phosphoenolpyruvate carboxykinase, 11725
      - procyclic acidic repetitive protein, 11311
      - promoters, 11423
      - RNA, kinetoplastid spliced leader, 11688
      - 60S ribosomal protein L27a (L29), 11297
      - transcription, 11293, 11294, 11310, 11311, 11323, 11332, 11428, 11548, 11555, 11559, 11688
      - VSG, 11293, 11311, 11323, 11328, 11421, 11588, 11721
    - genome, 11310, 11436, 11693
    - genome project, 11420
    - genotype, 11415
    - genotypic composition, 11542
    - inheritance, 11415
    - mapping, 11459
    - markers, minisatellite, 11415
    - ploidy, 11433
    - population, 11542
    - regulatory 3' untranslated region, 11425
    - RNase HI
      - conserved RNA binding motif, 11701
      - divergent spacer subdomain, 11701
      - domain organisation, 11702
    - RNA
      - binding, 11576
      - differential elongation, 11721
      - editing, uridine insertion/deletion, 11694
      - g, poly (U) tail formation, 11571
      - guide, 11298
      - kinetoplastid, editing, 11298
      - Ls-r, 11676
      - m, glyceraldehyde-3-phosphate dehydrogenase, translation, 11704
      - m, mitochondrial, editing, 11300
      - m, pre-, *cis*-splicing, 11568
      - m, translation, 11704
      - m, turnover pathways, 11708
      - mt, 11707
      - metabolism, 11568
      - multiple transferrin receptor, 11294
      - NEO*, 11310
      - polymerase, 11555
      - r, 11311
      - r, 18S, 11292
      - r, methylation, 11692
      - r, small subunit, maturation, 11303
      - sn, fibrillar-in-associated box C/D, 11692
      - sno, U3, 11303
      - t, 11318, 11333
      - t, dicistronic, precursor, 11312
    - spliced leader transcript, 11674
    - telomere, maintenance, length regulation, 11699
    - U insertion, 11298
    - glucose transport, 11296
    - Glu-Pro-rich polypeptides, 11544
    - glycerol kinase, 11703
    - glycerol-3-phosphate dehydrogenase, NAD-dependent, 11569
    - glycolysis, 11295, 11546, 11547
    - glycolytic flux, 11296
    - glycoprotein, major surface
      - post-transcriptional regulation, 11722
    - GPI anchor, 11427
      - synthesis, 11545
    - GPI anchoring, 11329
    - GPI anchors, myristate, 11711
    - GPI biosynthetic pathway, 11556
      - inhibition, 11446

- GPI cleavage/attachment site, 11724
- GPI glycans, 11588
- GPI membrane anchors, biosynthetic pathway, 11691
- GPI myristoylation, 11710
- GPI phospholipase C
  - catalysis, 11442
  - expression, 11441
- GPI signal transduction, 11583
- GPI-specific phospholipase C
  - regulation, 11715
  - tetramerisation, 11678
- H<sup>+</sup>-ATPase, 11585
- HSP60, 11523
- human infectivity, 11542
- 3-hydroxy-3-methyl-glutaryl-coenzyme A reductase, 11697
- identification, 11265
- infecting buffalo, 11260
- infecting cattle, 11200, 11245, 11390, 11391, 11505
  - Zebu, 11392
- infecting dogs, 11390, 11643, 11644
- infecting goats, 11244, 11390
  - West African Dwarf, 11634
- infecting mice, 11273, 11274, 11276, 11278, 11416, 11523, 11524, 11643, 11644, 11651, 11655, 11657
- infecting pigs, 11390, 11396
- infecting rabbits, 11281
- infecting rats, 11267, 11269, 11408, 11520, 11522, 11538, 11661
- infecting sheep
  - Djallonké, 11241
- infecting tsetse, 11225, 11415, 11614, 11619
- invariant surface glycoprotein 70, 11523
- karyokinesis, 11706
- karyotypes, molecular, 11541
- kinetoplast segregation, 11577
- life cycle, 11585, 11683, 11686, 11720
- linear poly-*N*-acetyllactosamine, 11440
- lipoprotein acquisition, 11313
- metacyclic form, 11323, 11559
- microdomains, surface, 11573
- mitochondria, 11318, 11333, 11416, 11555, 11580, 11694, 11708
  - protein import, 11684
- mitochondrial matrix, 11697
- mitochondrial translation, 11319
- mitochondrion development, 11324
- N*-linked glycans, 11440
- nucleic acid precursors, 11554
- nucleoside transporter, 11315
  - P1 type, 11581
  - nucleus, 11706
- oligopeptidase B, 11317
- oligosaccharides, *N*-linked, 11588
- ornithine decarboxylase, 11322
  - structure, 11431
- P2 transporter function, 11563
- paraflagellar rod, 11309, 11417, 11418
  - kinetoplastid, 11567
- pathogenicity in pigs, 11396
- pH regulation, intracellular, 11585
- phenotypic variation, 11579
- 6-phosphogluconate dehydrogenase, 11327
- plasma membrane, 11299, 11549
- procyclic form, 11313, 11443, 11445, 11684, 11697, 11705
- procyclin
  - repertoire, 11544
  - transcription promoter, 11548
- proteasome subunits, 11434
  - $\alpha$  5, 11587
- protein import
  - into mitochondria, 11684
  - into nucleus, 11706
- protein/s, 11318, 11324
  - 1, iron-regulatory, 11580
  - acyl-CoA-binding, 11709
  - alanine-rich, 11573
  - coil, 11551
  - DNA-binding, 11422, 11548
  - flagellar pocket, CRAM, 11334
  - glycosylated, 11552
  - GPI anchored, 11552
    - phospholipid C-cleaved, 11695
  - GPI-anchored surface, phosphorylation, 11299
  - GTP-locked Rab, 11557
  - PA26, proteasome-activating, 11586
  - RBP16, mitochondrial Y-box, 11576
  - ribosomal L24, 11325
  - 60S ribosomal L27a (L29), 11297
  - RNA-binding *cis*-splicing, 11308
  - SR, 11308
    - SR domain-containing, 11561
- protein structure, 11588
- protein targeting domain, 11432
- protein transport, 11419
- PTS-1 receptor, 11449
- pyrophosphatase, vacuolar, 11444
- pyruvate-proton symport, 11585
- ribonucleotide reductase, R2 subunit regulation, 11686
- slender form, long, 11524, 11574
- stable transformation, 11687
- STIB 386, 11415

- strain stability, 11542
- stumpy form, 11720, 11524, 11574
- succinyl CoA synthetase, histidine-phosphorylation, 11306
  - inhibition, 11305
- surface glycoproteins, 11443
- TbRAB31 localisation, 11557
- tetraploidy, 11225
- transferrin receptor, 11582
  - recycling, 11700
- Trypanosoma brucei*** (cont.)
  - transferrin receptor expression
    - iron-dependent regulation, 11426
  - transformation, 11524
  - TREU 927, 11415
  - trypanothione reductase, 11566
  - trypomastigotes, 11619
    - mesocyclic, 11225
  - tubulins, 11723
  - VSG, 11421, 11523, 11588, 11721
    - GPI-anchored, 11549
    - transcription promoter, 11548
- Trypanosoma brucei brucei***
  - adenosine transporters, 11435
  - alternative oxidase, ascofuranone-sensitive, 11558
  - AnTat 1.1E, 11628
  - AnTat 1.9, 11628
  - bloodstream form, 11412, 11435
  - Ca<sup>2+</sup>-dependent cell death pathway activation, 11326
  - characterisation, 11540, 11541
  - drug effects, 11283, 11288, 11289, 11412, 11435, 11663
  - epitopes, 11388
  - glycoprotein, 11437
  - Golgi, 11437
  - GUTat 3.1, 11486
  - infecting cattle, 11370
  - infecting goats, 11486
  - infecting livestock, 11339
  - infecting mice, 11268, 11271, 11283, 11519, 11521, 11533, 11628, 11652
  - infecting rabbits, 11280, 11289
  - infecting rats, 11279, 11283, 11518, 11525, 11650, 11653, 11659
  - infecting tsetse, 11376, 11379, 11486
  - lysosome, 11437
  - membrane, 11628
  - methionine metabolism, 11696
  - methionine transport, 11696
  - nucleobase transporter regulation, 11564
  - nucleoside transporter regulation, 11564
  - proteolipid, 11628
  - ribosomal RNA genes, 11331
  - tGLP-1, 11437
  - thioredoxin, 11716
  - trypomastigotes, 11412
- Trypanosoma brucei gambiense***
  - antigen, in diagnostic tests, 11240
  - bloodstream form, 11232
  - characterisation, 11540, 11541
  - DNA, 11381
    - kinetoplast, 11307
  - drug effects, 11414, 11669
  - drug resistance, 11535
  - drug susceptibility, 11237
  - epitopes, nitrosylated, 11275
  - genetics, 11381
  - glyceraldehyde-3-phosphate dehydrogenase, glycosomal, 11302
  - infecting humans, 11232, 11234, 11235, 11237, 11381, 11383, 11386, 11483, 11490, 11491, 11493, 11494, 11495, 11498, 11499, 11596, 11599, 11621, 11623, 11627, 11630
  - infecting mice, 11275, 11406, 11516, 11536, 11669
  - infecting monkeys, 11621, 11665
  - infecting pigs, 11493
  - infecting rabbits, 11275
  - infecting rodents, 11621
  - infecting ungulates, 11621
  - in vitro* culture, 11624
  - procyclic acidic repetitive protein A- $\alpha$  gene, 11307
  - variable surface antigens, 11232
  - virulence, 11483
- Trypanosoma brucei rhodesiense***
  - bloodstream form, 11412
  - characterisation, 11540, 11541
  - DNA, kinetoplast, 11307
  - drug effects, 11285, 11412, 11414, 11500
  - drug resistance, 11535
  - Etat 1.2/R, 11628
  - Etat 1.2/S, 11628
  - genome, analysis, 11314
  - infecting humans, 11231, 11235, 11236, 11384, 11453, 11478, 11490, 11491, 11497, 11599, 11625
  - infecting mice, 11285
  - infecting rabbits, 11231
  - isoenzymes, 11491
  - membrane, 11628
  - methionine metabolism, 11696
  - methionine transport, 11696
  - procyclic form, 11231
  - procyclic acidic repetitive protein A- $\alpha$  gene,

- 11307  
protein, serum resistance-associated  
    expression, localisation, 11439  
proteolipid, 11628  
STI 704 BABA, 11500
- trypomastigotes, 11412  
Utat 4.1, 11231  
zymodemes, 11491
- Trypanosoma congolense***  
antigens, 11633  
bloodstream form, 11257, 11293, 11294, 11295  
characterisation, 11488, 11541, 11675  
differentiation from *T. simiae*, 11488  
rDNA probes, 11676  
drug effects, 11287  
drug resistance, 11264, 11512, 11643  
drug sensitivity, 11264  
epitopes, 11388  
foreign protein expression, 11424  
forest type, 11621, 11679  
GARP, 11679  
    gene promoter, 11423  
genetics  
    loci, 11578  
    spliced leader transcript, 11674  
glucose catabolism, 11575  
glutamic acid, 11578  
glyceraldehyde-3-phosphate dehydrogenase,  
    glycosomal, 11302  
IL 1180, 11377, 11484, 11486, 11617, 11638  
infecting buffalo, 11260  
infecting camels, 11264  
infecting cattle, 11200, 11201, 11258, 11360,  
    11370, 11390, 11401, 11488, 11501, 11502,  
    11632, 11633  
    Boran, 11247, 11252, 11259, 11635, 11638  
    N'Dama, 11251, 11252, 11290, 11335,  
    11394, 11635, 11638  
    Zebu, 11392, 11512  
infecting dogs, 11643  
infecting goats, 11244, 11486  
    West African Dwarf, 11255  
infecting horses, 11675  
infecting livestock, 11339  
infecting mice, 11270, 11272, 11401, 11407,  
    11485, 11643, 11649, 11660  
infecting pigs, 11390  
infecting sheep  
    Djallonké, 11241, 11249, 11255, 11510  
    Djallonké-Sahelian, 11249  
    Scottish Blackface, 11250  
infecting tsetse, 11228, 11248, 11263, 11355,  
    11376, 11377, 11379, 11484, 11486, 11614,  
    11617, 11618, 11619  
Kenya coast, 11618  
Kilifi clone K60/1, 11485  
Kilifi strain, 11228, 11679  
Ls-rRNA, 11676  
mesocyclics, 11377  
mesoprocyclic stage, 11617  
metacyclics, 11377, 11485, 11617  
metacyclogenesis, 11617  
minichromosomes, 11675  
procyclic form, 11321, 11575  
proline catabolism, 11321  
protein, alanine-rich, 11578  
ribosomal RNA genes, 11331  
riverine-forest strain, 11228, 11245  
rRNA, gene promoter, 11423  
savanna strain, 11228, 11245, 11618, 11621,  
    11675, 11679  
serine oligopeptidase, trypsin-like, 11316  
serodemes, 11675  
trypomastigotes, 11619  
Tsavo, 11618  
virulence, 11251, 11485  
VSG, recombinant, 11320
- Trypanosoma cruzi***  
drug effects, 11664  
evolution, 11292  
genome project, 11420  
GPI signal transduction, 11583  
RNA, r, 18S, 11292
- Trypanosoma equiperdum***  
characterisation, 11540  
drug effects, 11539, 11672  
infecting horses, 11503, 11645, 11647  
infecting livestock, 11339  
infecting mice, 11539, 11654  
P2 nucleoside transporter  
    uptake of NO-releasing drugs, 11717, 11718
- Trypanosoma evansi***  
akinetoplasmic, 11330  
antigenic analysis, 11430  
bloodstream form, 11284  
characterisation, 11540, 11541  
control, 11206  
cultivation, 11284, 11291  
detection by PCR, 11648  
diagnosis, 11265  
diagnostic tests, 11206, 11242, 11266  
DNA, kinetoplast, 11265, 11307  
rDNA probes, 11676  
drug effects, 11530, 11673  
drug resistance, 11264  
drug sensitivity, 11264, 11284  
economic impact, 11206, 11229

genome, analysis, 11314

***Trypanosoma evansi*** (cont.)

infecting camels, 11203, 11204, 11238, 11239, 11240, 11243, 11246, 11256, 11257, 11261, 11264, 11369, 11389, 11393, 11504, 11507, 11640

infecting guinea pigs, 11409

infecting livestock, 11339

infecting mice, 11277

infecting rats, 11673

infecting sheep, 11254

Yankasa, 11393, 11506

infectivity in sheep, 11393

isoenzyme characterisation, 11243

isolates, 11206, 11243

Ls-rRNA, 11676

pathogenicity, 11206

in sheep, 11393

procyclic acidic repetitive protein A- $\alpha$  gene, 11307

ribosomal RNA genes, 11331

TREU 2143, 11254

trypomastigotes, 11284, 11530

VSG, 11429

***Trypanosoma godfreyi***

infecting tsetse, 11228

***Trypanosoma rangeli***

evolution, 11292

***Trypanosoma simiae***

differentiation from *T. congolense*, 11488

genetics, spliced leader transcript, 11674

infecting tsetse, 11228, 11379, 11618

ribosomal RNA genes, 11331

***Trypanosoma vivax***

antigens, 11633

bloodstream form, 11251

drug effects, 11529

epitopes, 11388

genetics, spliced leader transcript, 11674

glyceraldehyde-3-phosphate dehydrogenase, glycosomal, 11302

infecting cattle, 11200, 11201, 11245, 11258, 11370, 11390, 11501, 11505, 11632

N'Dama, 11251

Zebu, 11252, 11392, 11508

infecting goats, 11244, 11390, 11486, 11509

West African Dwarf, 11255

infecting livestock, 11339

infecting mice, 11529

infecting sheep

Djallonké, 11241, 11255

infecting tsetse, 11248, 11355, 11379, 11486, 11618, 11619

ribosomal RNA genes, 11331

stock IL 1392, 11486

virulence, 11251

**trypanosome/s**

antigenic variation, 11713

biology, 11459

DNA, extraction, 11226

evolutionary relationships, 11542

identification by PCR, 11609

infecting rhinoceros, 11395

infection rate in tsetse, 11609

molecular evolution, 11543

strains, human-infective, 11202

**trypanosomiasis, general**

epidemiology, 11541

risk

in Burkina Faso, 11609

in Gambia, 11511

**trypanosomiasis in animals**

clinical symptoms/pathological effects

abortion, 11255

anaemia, 11250, 11259, 11393, 11396, 11509, 11634, 11638, 11649

anorexia, 11396

congestion of organs, 11396

convulsions, 11634

corneal opacity, 11640

depression, 11649

dullness, 11393, 11640

emaciation, 11393, 11396, 11503, 11640

epiphora, 11393

fever, 11634, 11640

growth retardation, 11250

haematological changes, 11393, 11396

haemorrhage, 11396

hyperaemia of skin, 11396

incoordination, 11396, 11503

leucopenia, 11638

loss of appetite, 11393, 11640

loss of condition, 11640

lymphadenitis, 11506

lymphadenopathy, 11506

ocular discharge, 11396

oedema, 11634

offspring mortality, 11255

paddling, 11634

pale mucous membrane, 11393

posterior paralysis, 11634

pyrexia, 11249, 11393

reduced weight gain, 11249, 11255, 11396

rough hair coat, 11393, 11396

splenomegaly, 11506

swelling of external genitalia, 11503

unsteady gait, 11634

- weight loss, 11634
- control, 11337, 11341, 11358, 11369, 11388
- diagnosis, 11388, 11390
- distribution, in Uganda, 11390
- eradication programme, Botswana, 11595
- field assessment, 11341
- in Botswana, 11595
- in Burkina Faso, 11200
- in Equatorial Guinea, 11470
- in Gambia, 11341
- in Ghana, 11358
- in Kenya, 11369
- in Togo, 11593
- in Zambia, 11360
- management, 11200
- monitoring, 11388
- prevalence
  - in Gambia, 11341
  - in Togo, mapping, 11593
  - in Uganda, 11390
- reservoir hosts, Uganda, 11390
- surveillance, 11369
- trypanosomiasis in camels**
  - aetiology, 11639
  - clinical aspects, 11640
  - control, 11639
  - diagnosis, 11238, 11239, 11240, 11389, 11639
  - distribution, 11229
  - economic significance, 11229
  - epidemiology, 11229, 11504, 11639
  - haematological aspects, 11640
  - immune response, 11507
  - in Chad, 11504
  - in Kenya, 11264
  - in Sudan, 11239, 11240
  - in Tunisia, 11507
  - in Uganda, 11243
  - incidence, 11229
  - pathology, 11639
  - prevalence, 11229, 11239, 11240, 11389
    - in Chad, 11504
    - in Uganda, 11243
  - surveillance, 11229
  - treatment, 11264, 11639
  - T. congolense* infection, 11264
  - T. evansi* infection, 11229, 11238, 11239, 11240, 11243, 11264, 11389, 11504, 11507, 11640
- trypanosomiasis in cattle**
  - chemoprophylaxis, 11404
  - chemotherapy, 11404
  - control, 11610, 11611
    - in Botswana, 11371
    - in Zambia, 11360, 11514
  - diagnosis, 11245, 11390, 11502
    - modelling, 11387
  - distribution, in Uganda, 11390
  - epidemiology, 11201, 11336
  - expression, 11201
  - in Africa, southern, 11359
  - in Burkina Faso, 11245
  - in Gambia, 11335
  - in Kenya, 11611
  - in Namibia, 11501
  - in Nigeria, 11505
  - in Senegal, 11590
  - in Sudan, 11404
  - in Tanzania, 11610
  - in Togo, 11201
  - in Uganda, 11390, 11591, 11632
  - in Zambia, 11360, 11514
  - incidence
    - in Botswana, 11371
    - in Mali, 11263
    - in Zimbabwe, 11224
  - prevalence
    - in Burkina Faso, 11245
    - in Togo, 11201
    - in Uganda, 11390, 11632
    - in Zambia, 11360
    - in Zimbabwe, 11224
    - modelling, 11387
  - prophylaxis, 11263, 11515
  - resistance, 11590
  - risk
    - factors, 11637
    - in Togo, 11201
    - in Zambia, 11360
  - survey, in Togo, 11201
  - T. brucei* infection, 11390, 11505
  - T. congolense* infection, 11390, 11501, 11502
  - T. vivax* infection, 11390, 11501, 11505
- trypanosomiasis in dogs**
  - diagnosis, 11390
  - distribution, Uganda, 11390
  - in Nigeria, 11643, 11644
  - prevalence, Uganda, 11390
  - T. brucei* infection, 11390, 11644
- trypanosomiasis in goats**
  - diagnosis, 11390
  - distribution, Uganda, 11390
  - prevalence, Uganda, 11390
- trypanosomiasis in goats (cont.)**
  - risk, in Gambia, 11255
  - T. brucei* infection, 11390
  - T. vivax* infection, 11390
- trypanosomiasis in horses**
  - in Kenya, 11675

- prevalence, in Ethiopia, 11503  
*T. congolense* infection, 11675  
*T. equiperdum* infection, 11503
- trypanosomiasis in humans** 11338
- biology, 11202
  - clinical symptoms/pathological effects
    - adenopathy, 11493
    - circadian disturbances, 11235
    - encephalopathy, 11628, 11630
    - erythematous lesion, 11625
    - fever, 11625
    - headache, 11625
    - hypoglycaemia, 11629
    - increased IFN- $\gamma$  synthesis, 11236
    - increased nitric oxide production, 11236
    - meningoencephalitis, 11235, 11626
    - myalgia, 11625
    - nausea, 11625
    - palpable spleen, 11625
    - postural hypotension, 11625
    - rigor, 11625
    - sleep-wake disturbances, 11235, 11383
    - tachycardia, 11625
    - vomiting, 11625
  - control, 11233, 11234, 11340, 11343, 11369, 11451, 11458, 11459, 11478, 11494, 11495, 11622
  - diagnosis, 11231, 11232, 11381, 11451, 11459, 11491, 11492, 11493, 11494, 11495, 11497, 11596, 11622, 11625, 11626, 11627
  - distribution, in Côte d'Ivoire, 11482
  - endemicity, 11202
  - epidemics, 11202, 11451, 11458, 11483, 11542
  - epidemiological risk, Côte d'Ivoire, 11233
  - epidemiology, 11340, 11343, 11482, 11487, 11496, 11542, 11614, 11615, 11616
  - eradication programme, Botswana, 11595
  - foci, 11202, 11340, 11382, 11620
    - historic, 11458, 11483
    - in Angola, 11495
    - in Cameroon, 11458, 11493, 11616, 11621
    - in Burkina Faso, 11496
    - in Central African Republic, 11615, 11622
    - in Côte d'Ivoire, 11482, 11483, 11487
    - in Equatorial Guinea, 11494
    - in Uganda, 11491
  - maintenance, 11542
  - genetics, 11202
  - history, East Africa, 11202
  - in Africa
    - central, 11340, 11596
    - East, 11202
    - West, 11340
    - in Angola, 11381, 11451, 11495, 11498, 11630
    - in Botswana, 11371, 11595
    - in Cameroon, 11458, 11493, 11616, 11621
    - in Central African Republic, 11483, 11615, 11622
    - in Congo, 11383, 11451, 11483, 11491, 11627
    - in Côte d'Ivoire, 11227, 11233, 11382, 11482, 11487, 11496, 11614, 11620
    - in Equatorial Guinea, 11381, 11470, 11494
    - in Kenya, 11369
    - in Nigeria, 11623
    - in Sudan, 11234
    - in Uganda, 11236, 11237, 11478, 11491, 11492
  - incidence, Côte d'Ivoire, 11233
  - man-fly contact, 11456, 11478, 11482, 11614
  - modelling, 11615, 11665
  - neuropathology, 11458
  - perpetuation, 11621
  - post-treatment reactive encephalopathy, 11533
  - prevalence, 11483
    - in Cameroon, 11493
    - in Côte d'Ivoire, 11233, 11487, 11620
    - in Sudan, 11234
  - prevention, 11596
  - reservoir hosts, Uganda, 11390
  - reservoirs of infection, 11202
    - animals, 11542
    - wild animals, 11621
  - resurgence, 11621
  - risk
    - in Côte d'Ivoire, 11482, 11614
  - screening, 11622
  - spread, 11621
    - modelling, 11481
  - stage determination, 11382
  - surveillance, 11227, 11233, 11340, 11343, 11369, 11496, 11616
  - transmission, 11227, 11233, 11615, 11622
    - dynamics, modelling, 11483
  - treatment, 11342, 11343, 11451, 11459, 11492, 11497, 11527, 11596, 11631
    - DFMO, 11385, 11386, 11496, 11589, 11599
    - melarsoprol, 11236, 11237, 11382, 11383, 11384, 11386, 11496, 11498, 11499, 11589, 11599, 11630
    - pentamidine, 11589, 11599, 11625
    - suramin, 11236, 11384, 11589, 11599, 11625
  - T. b. gambiense* infection, 11232, 11234, 11235, 11381, 11383, 11386, 11483, 11490, 11491, 11494, 11495, 11498, 11499, 11596, 11599, 11621, 11623, 11624, 11627, 11630
    - relapse after treatment, 11237



- T. b. rhodesiense* infection, 11231, 11235, 11236, 11384, 11453, 11478, 11490, 11491, 11497, 11599, 11625
- trypanosomiasis in livestock**  
effect of human populations, 11456  
in Ethiopia, 11457  
in Tanzania, 11355
- trypanosomiasis in pigs**  
diagnosis, 11390  
distribution, Uganda, 11390  
prevalence, Uganda, 11390  
*T. brucei* infection, 11390  
*T. congolense* infection, 11390
- trypanosomiasis in sheep**  
risk, in Gambia, 11255
- trypanosusceptibility**  
in cattle  
Boran, 11252, 11259, 11635, 11638  
Gobra zebu  
influence on tick infestation, 11594  
Zebu, 11199  
in mice, 11277
- trypanotolerance**  
genetics, 11252, 11259, 11592  
markers, 11513  
heritability, 11513  
in buffalo, 11260  
Cape  
serum trypanocidal activity, 11642  
in cattle  
genetics, 11397, 11398, 11399, 11400, 11401  
markers, 11397, 11398, 11399, 11401  
N'Dama, 11199, 11251, 11252, 11259  
influence on tick resistance, 11594  
role of bone marrow, 11635, 11638  
socio-economic importance, 11641  
selection, 11399  
taurine, 11592  
trait, 11397, 11398, 11399, 11401  
  
West African Shorthorn  
socio-economic importance, 11641  
in goats  
West African Dwarf, 11255, 11511  
in mice  
genetics, 11401  
in sheep  
Djallonké, 11249, 11255, 11510, 11511  
Djallonké-Sahelian, 11249  
traits, quantification, 11513
- Trypanozoon**  
characterisation of isolates, 11540  
genome, 11540
- TrypsChemo** 11515
- tsetse eradication**  
in Zanzibar, 11345, 11388  
sterile insect project, 11344  
Unguja Island, 11337, 11361, 11370, 11373, 11374, 11613
- Tunisia**  
trypanosomiasis in camels, 11507
- Uganda**  
Buvuma islands  
trypanosomiasis in animals  
distribution, 11390  
prevalence, 11390  
*G. f. fuscipes* in, 11632  
*G. pallidipes* in, 11460, 11600  
Masindi District  
human trypanosomiasis, *rhodesiense*, 11491  
north-west  
trypanosomiasis in humans, 11492  
south-east  
*G. f. fuscipes* in, 11478  
human trypanosomiasis, *rhodesiense*, 11478  
trypanosomiasis control, 11478  
tsetse control, 11478  
trypanosomiasis in camels  
prevalence, 11243  
trypanosomiasis in cattle  
prevalence, 11632  
survey, 11591  
trypanosomiasis in humans  
*gambiense*, 11237, 11499  
*rhodesiense*, 11236  
tsetse control, 11632
- vaccines** 11459
- variant surface glycoprotein (VSG)**  
*T. brucei*, 11523  
expression, 11588
- variant surface glycoprotein (VSG) (cont.)**  
*T. brucei* (cont.)  
gene conversion, 11328  
gene expression sites, 11559, 11721  
control, 11421  
transcription, 11293, 11323  
gene promoters, 11311  
GPI-anchored, 11549  
transcription promoter, 11548  
*T. congolense*, 11320  
*T. evansi*, 11429
- wild animals**  
productivity under tsetse infestation  
in Burkina Faso, 11455

reservoirs of human trypanosomiasis, 11621

**wild ruminants**

as hosts for tsetse, 11489

**wild ungulates**

*T. b. gambiense* infection

prevalence, Cameroon, 11621

**Zanzibar** *see* Tanzania

**Zambia**

*G. f. fuscipes* in, 11360

*G. m. centralis* in, 11360

*G. m. morsitans* in, 11348, 11360, 11468

*G. pallidipes* in, 11360

trypanosomiasis in cattle, 11514

prevalence, 11360

tsetse control, 11359, 11360

**Zimbabwe**

barriers to re-invasion, trials, 11224

*G. morsitans* in, 11224, 11356

*G. m. morsitans* in, 11221, 11354, 11357,  
11468, 11473, 11479

*G. pallidipes* in, 11213, 11221, 11224, 11348,  
11354, 11356, 11357, 11460, 11473, 11479,  
11600

trapping studies, 11354, 11357, 11365

tsetse control, 11359, 11364, 11473, 11479

Zambezi Valley

*G. m. morsitans* in, 11212, 11228

*G. pallidipes* in, 11210, 11211, 11212,  
11228

**Zululand** *see* South Africa