

09:30-10:00 BST 10:30-11:00 CAT	1	Basic searches in VEuPathDB – Site search, filtering, finding genes
10:00-11:00 BST 11:00-12:00 CAT	2	The gene page in VEuPathDB
15 minutes		Coffee Break
11:15-12:15 BST 12:15-13:15 CAT	3	Introduction to Artemis: Artemis exercise
1 hour		Lunch Break
13:15-14:15 BST 14:15-15:15 CAT	4	Identification of novel biomarkers for <i>P. falciparum</i> gametocyte infectivity to Anopheles vector: Combining transcriptomic & peptide array methods
14:15-15:00 BST 15:15-16:00 CAT	5	Genome browser basics
15 minutes		Tea Break
15:15-17:00 BST 16:15-18:00 CAT	6	Group exercise: Interpreting RNAseq data in the genome browser/Apollo
17:00-17:30 BST 18:00-18:30 CAT	7	Group exercise: Genome annotation with Companion

VEuPathDB gene record page

1 Gene models

TGME49_222020

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Search section names.

- » 1 Gene models ☒
- » 2 Annotation, curation and identifiers ☒
- » 3 Link outs ☒
- » 4 Genomic Location ☒
- » 5 Literature ☒
- » 6 Taxonomy ☒
- » 7 Orthology and synteny ☒
- » 8 Phenotype ☒
- » 9 Genetic variation ☒
- » 10 Transcriptomics ☒
- » 11 Sequence analysis ☒
- » 12 Sequences ☒
- » 13 Structure analysis ☒
- » 14 Protein features and properties ☒
- » 15 Protein targeting and localization ☒
- » 16 Function prediction ☒
- » 17 Pathways and interactions ☒
- » 18 Proteomics ☒
- » 19 Immunology ☒

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Exons in Gene ? 6

Transcripts ? 1

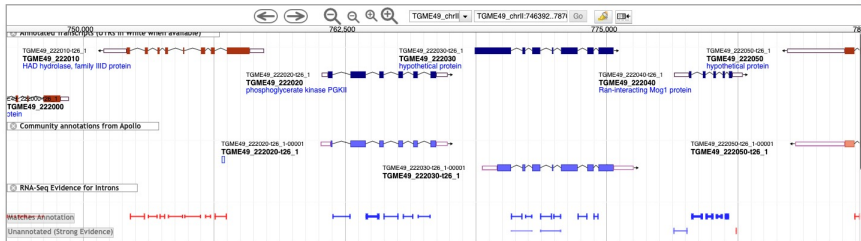
▼ Gene Models

NEW This gene is available in **Apollo** for community annotation. To find out more about Apollo, please visit [this help page](#).

[View in JBrowse genome browser](#)

Annotate in Apollo

 Scroll and zoom 



GenBank

 **National Library of Medicine**
National Center for Biotechnology Information

Log in

Assembly

Advanced Browse by organism

Full Report ▾

Send to: ▾

Try the new Datasets Genome page

GCA_000002765

Organism name: [Plasmodium falciparum 3D7 \(malaria parasite P. falciparum\)](#)

Isolate: 3D7

BioSample: [SAMN00102897](#)

BioProject: [PRJNA13173](#)

Submitter: Plasmodium falciparum Genome Sequencing Consortium

Date: 2019/10/22

Assembly level: Complete Genome

Genome representation: full

GenBank assembly accession: GCA_000002765.3 (latest)

See info
Plas falc

Source database (GenBank or RefSeq) 

File type 

Estimated size is 6.7 MB

See the assembly

```
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CDS complement(join(55390..56400,56516..56584))
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fragment"
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/db_xref="EnsemblGenomes-Tr:PF3D7_0300700"
/db_xref="GOA:Q97327"
```

Artemis

- Genome browser and annotation tool
- Easy to install on your computer
- Visualization of DNA sequence, its six-frame translation and any associated information/features
- Basic analysis
- Launch more complex analysis and searches
- Import and view the results of other searches
- Reads and writes different file formats (EMBL, GFF)

The screenshot displays the Artemis genome browser interface. The title bar reads "Artemis Entry Edit: PF3D7_03_v3.embl". The main window shows a DNA sequence with various features and annotations. The sequence is displayed in a multi-line format, with the top line showing the sequence in reverse (5' to 3') and the bottom line showing the sequence in forward (3' to 5'). The sequence is color-coded by codon: red for the first codon, green for the second, and blue for the third. The sequence is annotated with features such as "RIF" (rifampicin resistance) and "ACS2" (acyl-CoA synthetase). The sequence is also translated into six frames, with the top frame showing the translation in red. The bottom frame shows the translation in blue. The sequence is also annotated with features such as "RIF" (rifampicin resistance) and "ACS2" (acyl-CoA synthetase). The sequence is also translated into six frames, with the top frame showing the translation in red. The bottom frame shows the translation in blue.

Feature	Start	End	Strand	Description
PF3D7_0300300	49772	51152	c	erythrocyte membrane protein 1 (PFEMP1), exon 2, pseudogene
PF3D7_0300400	52280	53273	c	stevor
PF3D7_0300500	55390	56584	c	rifin
PF3D7_0300600	58307	58519	c	Plasmodium exported protein, unknown function, fragment
PF3D7_0300700	61445	62714	c	rifin
PF3D7_0300800	64572	65783	c	rifin
PF3D7_0300900	67928	68682	c	PIR protein
PF3D7_0301000	69460	71919	c	acyl-CoA synthetase
PF3D7_0301100	76494	77474	c	Plasmodium exported protein (hyp13), unknown function
PF3D7_0301200	78195	80393	c	serine/threonine protein kinase, FIKK family
PF3D7_0301300	82011	83515	c	epoxide hydrolase 1

Main Artemis window

Drop Down menus

Entry Button Line

Main
Sequence
View Panel

Magnified
Sequence
View Panel

Feature
Menu



Sliders

Additional information on Artemis

<http://sanger-pathogens.github.io/Artemis>

The Artemis Software

The Artemis Software is a set of software tools for genome browsing and annotation

[View on GitHub](#)

[Home](#) | [Artemis](#) | [ACT](#) | [BamView](#) | [DNAPlotter](#) |

Artemis

Artemis is a free genome browser and annotation tool that allows visualisation of sequence features, next generation data and the results of analyses within the context of the sequence, and also its six-frame translation. Artemis is written in Java, and is available for UNIX, Macintosh and Windows systems. It can read EMBL and GENBANK database entries or sequence in FASTA, indexed FASTA or raw format. Other sequence features can be in EMBL, GENBANK or GFF format. Full information about the latest release of Artemis can be found in the [Artemis manual](#).

The [Artemis poster](#) gives an overview of browsing genomes and visualisation of next generation data in Artemis.