

Supplementary information

Transcriptomic analysis of insecticide resistance in the lymphatic filariasis vector *Culex quinquefasciatus*

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```
# This output was generated with AUGUSTUS (version 2.7).
# AUGUSTUS is a gene prediction tool for eukaryotes written by Mario Stanke
(mario.stanke@uni-greifswald.de)
# and Oliver Keller (keller@cs.uni-goettingen.de).
# Please cite: Mario Stanke, Mark Diekhans, Robert Baertsch, David Haussler
(2008),
# Using native and syntenically mapped cDNA alignments to improve de novo gene
finding
# Bioinformatics 24: 637-644, doi 10.1093/bioinformatics/btn013
# No extrinsic information on sequences given.
# Initialising the parameters ...
# aedes version. Using default transition matrix.
# Looks like /data/www/augustus/tmp/AUG-166261241/input.fa is in fasta format.
# We have hints for 0 sequences and for 0 of the sequences in the input set.
#
# ----- prediction on sequence number 1 (length = 4735, name = P450) -----
#
# Constraints/Hints:
# (none)
# Predicted genes for sequence number 1 on both strands
# start gene g1
P450 AUGUSTUS gene 209 1747 0.94 - . g1
P450 AUGUSTUS transcript 209 1747 0.94 - .
g1.t1
P450 AUGUSTUS stop_codon 209 211 . - 0
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS terminal 209 381 0.98 - 2
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS initial 445 1747 0.96 - 0
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS intron 382 444 1 - .
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS CDS 209 381 0.98 - 2
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS CDS 445 1747 0.96 - 0
```

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```
transcript_id "g1.t1"; gene_id "g1";
P450 AUGUSTUS start_codon 1745 1747 . - 0
transcript_id "g1.t1"; gene_id "g1";
# coding sequence =
[atgatcatttactcgctgcttctcatcggtagctcctccggtacatctactcgtactgggatcgcc
#
atggcctgccgaacctcaaacggacatcccgttcgggaacatccgtgccgtcgccctcaagcaggaatcgttcggcgtc
gccctgaacgctctccac
#
gccaaaaccacaggccaactggtcggaatctacactcttccgcccggcgatcctaataccgggacgccacactagccca
ccgcatcataacgtccga
#
cttcaactacttccacgaccggtgtgcactgtgacgagagctcggatcccttttcggcgcacctgtttgccctgcccg
ggaagaggtggcgcagcc
#
tgaggaacaagctgactccgaccttcaccgctgggcagctgcgcggtatgctgccgacgatcttggccgttgggaggaag
ttcagggtttcttgaa
#
ccaaggcgaagcgaggggaggtgattgaggccaggatattgatatcgcgctttgtgctggagatcgtggcgtcgggtgtt
ttcggttacgagatcaa
#
ctcgattcacgatccgcaggattcgtttcggacggttttacgatcatttcgggaggacaatcacgtcacaatttgagaa
cggttggtgctgtttttgt
#
gtccgacgttgctgaaggtcagccgggtcaaacggtagctgaggtggtagacaattttgtaaacaaaatcattagggag
cagatcgagtttcgagcag
#
aagaacaacgttacgaggaaggatttcatccaactggtgatcgtctccgacgggagaagagtgatttcggactttcgtt
ggaacagtgcgcggccaa
#
tgtgtttttgttctacgtagcaggagcggatacctcaacggatgccatcacctacacgggtccacgagctgacctatcgac
cggatcttatgaagaagg
#
ttcaagcagagatcgacgatgctgcttgagaagtccaacggtgaaatcaactacgatgtactccacgaaatgaaactttta
gacaactgctgtaaggaa
#
acccttagaaagtaccggttcccaatttttaaatcgcgagtgtaccaggactatcaggttcagattcgaagctgatcat
caggaagggaactccggt
#
gatcataccgctgcaagcgttcggaatgagtgaggagtacttcccggaacctaatacgtctacactgaacgatttgatt
catccacaaagaattacg
#
acgaaaaagcttacattccatttggagatggtccgaggaattgtattggttcccggatgggcagtgccgtttcgaagatc
ggcatcatcatgctgctt
#
tcgaagttcaactttgaggcactcaaggtgaggagataggctttgctcgggcccatttcgctggctccggagaatgg
catttacttaagatttc
# caacaggataagaaactcgatataa]
# protein sequence =
[MIIYSLLLIGTSIYLILRYIYSYWRHGLPNLKPDIIPFGNIRAVALKQESFGVALNALHAKTTGQLVGIYLLFRPAIL
#
IRDAHLAHRITSDFNYPHVRGVCDESSDPFSAHLFALPGKRWRS LRNKL TPTFTAGQLRGM LPTILAVGRKFQGFLEP
```

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KAKRGEVIEARDLISRFV
#
LEIVASVFFGYEINSIHDPQDSFRTVLRSFREDNHVTNLRTVGAFLCPTLLKVSrvKTVPEVVDNFVNKIIREQIEFREK
NNVTRKDFIQLLIDLRE
#
KSDFGLSLEQCAANVFLFYVAGADTSTDAITYTVHELTHRPDLMKKVQAEIDDALEKSNGEINYDVLHEMKLLDNCVKET
LRKYPFPILNRECTQDYQ
#
VPDSKLIIRKGPVVIPLQAFGMSEEFPEPNRYLPERFDSSTKNYDEKAYIPFGDGPRNCIGSRMGSAVSKIGIIMLLS
KFNFEATQGAEIGFARAQ
# IALAPENGISLKISNRIRNSI]
# end gene g1
###
# start gene g2
P450 AUGUSTUS gene 3848 4639 0.69 - . g2
P450 AUGUSTUS transcript 3848 4639 0.69 - .
g2.t1
P450 AUGUSTUS stop_codon 3848 3850 . - 0
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS terminal 3848 4014 0.96 - 2
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS initial 4072 4639 0.73 - 0
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS intron 4015 4071 0.99 - .
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS CDS 3848 4014 0.96 - 2
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS CDS 4072 4639 0.73 - 0
transcript_id "g2.t1"; gene_id "g2";
P450 AUGUSTUS start_codon 4637 4639 . - 0
transcript_id "g2.t1"; gene_id "g2";
# coding sequence =
[atgaccaacctagcgcagcagcagatgaagtatcgtgagaagaatgacttgctagaaaggatttcttgcaattgctga
#
atgatcttcaccaagttgatttgtcagctgaagagtgcgcatcgaatgtgaatctgttctacactgcaggttcggaaac
accaaactacagtcac
#
tatactcttcacgaactagctcacatccagaagttatgagacggcttgtggaagaagttgatgaatacgtcaagcaatc
agtggtgagattagcta
#
cgatcttgtaagagtatgcatatctggacctgtgcgtgaaggaaacctgagaaagtatccggactgtttttcctga
accggaagtcaccacg
#
actataaggttcccaactctcggctggtcatcaaaaagggtacccaataattatccgctcgatggcctacggcatggat
gagcgggtgtttcccgaat
#
ccggagagctacatccccgaacgatttcttgaggagacaaaaattacgacgaggacgcctacgcaccggttgagaagg
accggaagtgtatcgc
#
tcctcgaatgggaattttcgtcgccaaagtaccttggtgaggctgctgtccaagtttcggttcaggctacgcaagagc
tgaaggttgagtttgccc
# cctcgggtgattccgctcgtgccgaaggatggagtcaggatgaagattcacaaaagaagtgtttggtaa]

```

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```
# protein sequence =  
[MTNLATQQMKYREKNDLARKDFLQLLNDLHQVDLSAEECASNVNLFYTAGSETTKSTVIYTLHELAAHPEVMRRLVEE  
#  
VDEYVKQSGGEISYDLVKSMPYLDLCVKETLRKYPGLFFLNKCTHDYKVPNSRLVIKKGTQIIIPSMAYGMDERCFNP  
ESYIPERFLEETKNYDED  
# AYAPFGEGPRKCIAPRMGIFVAKVTLVRLLSKFRFEATQELKVEFAPSVIPLVPKDGVRMKIHKRSW]  
# end gene g2  
###
```