

The VectorBase Newsletter

Issue 7 – October 2009



News

VectorBase is delighted to announce that NIH-NIAID has renewed our funding, confirming that VectorBase will be around for another 5 years. Two staff members have left at the end of the contract: Martin Hammond and Kathy Campbell, who will be missed and we would like to thank them for their efforts over the past 5 years.

A big thank you to the members of the community who showed their support by sending e-mails or letters.

Our plan for the coming years is to keep serving, and updating, the current species, but also to increase the list of organisms. We will soon be adding the genomes of *Rhodnius prolixus*, a triatomine vector of Chagas disease, and *Glossina morsitans*, the tsetse vector of sleeping sickness. Developments in new sequencing technologies will also provide insights into population structure, gene expression and improved gene predictions across all species.

We welcome suggestions from the community so if you have any wishes for VectorBase, please let us know via the forum or the helpdesk.

New data

Expression data

Anopheles gambiae expression data from two recent publications has been added to VectorBase. The Linser lab in Florida has compared the larval salivary gland gene expression to the whole organism, and the Levine lab at Berkeley has measured gene expression at many time points during embryonic development.

For more details, just click on "Expression Data" anywhere in VectorBase.

Anopheles gambiae

An update to the *Anopheles gambiae* gene set, AgamP3.5, is available at [VectorBase](#)¹.

The AgamP3.5 gene annotation is an update of the AgamP3.4 gene set, replacing some of the gene models, rather than a new gene build, where all the gene models are regenerated.

Many additional manual or community annotations were available, including models from chromosome arms 2R and X.

The gene number has increased by about 300, adding new protein-coding genes as well as non-coding RNAs.

Aedes aegypti

An update to the *Aedes aegypti* gene set, AaegL1.2, is available at [VectorBase](#)².

Similarly to the *Anopheles* update this is a modification of the existing gene set, rather than a complete new gene build.

The update incorporates models from both manual and community annotation, especially from the GPCR, GST, cytochrome P450 and esterase gene families.

About 650 new genes have been introduced. The majority of these are protein-coding genes (87%), but the update also includes new non-coding RNA types (snoRNA and miRNA).

Updates to the Expression and Comparative data

The *An. gambiae* and *Ae. aegypti* gene sets required an update of the expression data and the mapping of additional arrays. Comparative data has been re-computed to predict genetrees including the new data sets with existing *Culex* and *Ixodes* data.

¹ <http://agambiae.vectorbase.org/index.php>

² <http://aaegypti.vectorbase.org/index.php>

New tool New Blast Interface

Have a look at the new [Blast server](#)³. As well as a simpler interface, the EST search has been improved to allow searches by species or by individual libraries. This is useful for investigating both spatial and temporal gene expression within the VectorBase species.

BLAST @ VectorBase.org >

FASTA Query Sequence

Example Sequence
CGGTCATTGGGGATCGAACCCATGACGAGCATGATGTTAAGTCGTA

Program

blastn tblastn tblastx blastp tblastx

tblastx - Translated Nucleotide vs. Peptide

Datasets

Anopheles gambiae Click on an organism to view its databases

Aedes aegypti

Anodes scapularis

Culex pipiens

Pediculus humanus

Other Organisms

ESTs

Select all

Options

Maximum E-Value

Word Size

Scoring Matrix

Complexity Masking

Number of Results

Job Control

VectorBase top tip

Did you know that VectorBase hosts several mailing lists? These range from the Newsletter recipient list, announcements to lists dedicated to specific species projects. We use the GUI mailman system and subscription is open to anyone. A detailed list of all mailing lists can be found on the [Help Wiki](#)⁴.

The VectorBase Editors.
newsletter@vectorbase.org

³ <http://www.vectorbase.org/Tools/BLAST/>

⁴ http://www.vectorbase.org/Help/Mailing_lists