



VectorBase

Bioinformatics Resource for Invertebrate Vectors of Human Pathogens

VectorBase Hands-on Workshop

November 5 to 7, 2013

Universidad del Tolima, Ibagué, Colombia

Official language

The official language of the workshop will be Spanish; however, you are required to be proficient at reading English as tutorials and handout material are written in English.

Instructor

Gloria I. Giraldo-Calderón, Ph.D.

University of Notre Dame, Notre Dame, Indiana

About the workshop

The goal of the workshop is to present an overview of the VectorBase website and offer a training and data analysis opportunity to scientists working in medical entomology. This three-day event will comprise a mixture of short lectures and hands-on practical sessions where users can discuss their own data sets/problems with the instructor and fellow attendees. The instructor is a trained biologist.

Computer and Internet access

The training room will provide computers for participants. If preferred, you can bring your own laptop to use (arrive early in order to get access to the Internet).

Registration

- ✓ **Application deadline:** September 19, 2013.
- ✓ **Acceptance notification:** September 23, 2013.
- ✓ **Number of course participants:** 30 participants.
- ✓ **Acceptance confirmation:** September 24, 2013. If you have been accepted to attend, you must reply to your acceptance notification with a short email to ggiraldo@nd.edu and gvallejo@ut.edu.co by September 24. If you do not reply we will assume that you are unable to attend and will award your place to another applicant.
- ✓ **Who should apply:** The ideal candidate should have a need to become an expert user of one or more VectorBase tools and resources, and presumably has a bioinformatics

research problem that involves at least one of our genomes or a related organism (<https://www.vectorbase.org/genomes>).

- ✓ Evaluation of applications will focus heavily on applicants' responses to the questionnaire. Priority will be given to professors, post-doctorates and graduate students (Master and doctorates). Undergraduate students may also apply.

<https://docs.google.com/forms/d/1UbO2Q3WXpiOoeWMmBfbJjf9fH-xP6dN1KhxeZlhqZEq/viewform>

- ✓ **Costs and fees:** Registration is free. All training materials and lunches are covered. Attendees are expected to provide their own transportation, breakfasts, dinners and accommodation.

Requirements

On September 26 you will be assigned to working groups of three people and will receive an email with details. If the members of your group do not belong to your same institution or city, please consider meeting using Skype or similar alternatives to work and discuss your question or project. On the first day of the workshop you will be asked to introduce the group question/problem with a 3-minute presentation. If you need help formulating your question/problem you may contact ggiraldo@nd.edu for assistance. Please email ggiraldo@nd.edu your group's 1-2 presentation slides by October 25.

On the last day of the workshop, you will introduce your group's proposed methodology (and preliminary results if you have them), in a short 10-minutes presentation of 3-5 slides. During the workshop you will have time to meet and work with your group. Slides and presentations for both the first and the last day can be made in Spanish.

Agenda

Tuesday, November 5, 2013, 7:30 am – 5:00 pm

7:30 – 8:00 am: Internet set up for attendees with laptops

8:00 – 8:30 am: General introduction to omics

8:30 – 9:00 am: 3-minute group introductions

9:00 – 9:15 am: Glossary survey

9:15 – 9:30 am: Break

9:30 – 10:15 am: VectorBase website navigation

10:15 am – 12:00 pm: Finding, visualizing and exporting data

- Search
- BioMart

12:00 – 2:00 pm: Lunch (lunch will be provided)

2:00 – 3:00 pm: Available data types and Genome Browser I

- Location tab (visualizing and adding tracks)

3:00 – 3:15 pm: Break

3:15 – 5:00 pm: Tools I

- RNAseq analysis using Galaxy (beta)
- BLAST
- ClustalW and HMMER

Wednesday, November 6, 2013, 8:00 am – 5:00 pm

8:00 – 10:00 am: Genome Browser II

- Gene tab (gene data)
- Transcript tab (Gene structure, Protein data)

10:00 – 10:15 am: Break

10:15 am - 12:00 pm: How to contribute to VectorBase and get community visibility for your research work?

- How to do gene manual annotations
- Curate and submit genes
- Link genes to publications
- Add (submit) transcript or protein data

12:00 – 2:00 pm: Lunch (lunch will be provided)

2:00 - 3:00 pm: Tools II

- Ontology Browser
- Insecticide resistance database
- Population biology browser

3:00 – 3:15 pm: Break

3:15 – 5:00 pm: Groups independent work

Thursday, November 7, 2013, 8:00 am – 5:00 pm

8:00 – 10:00 am: Tools III

- Expression Browser and Expression Map (microarrays)
- RNAseq analysis using Galaxy (beta)

10:00 - 10:15 am: Break

10:15 am – 12:00 pm: Genome Browser III

- Gene tab (homology, comparative genomics, ontology, pathways)
- Variation tab (SNPs polymorphisms and population genetics)

12:00 - 2:00 pm: Lunch (lunch will be provided)

2:00 – 3:00 pm: Groups independent work

3:00 - 3:15 pm: Break

3:15 - 4:30 pm: 10-minute group results presentations

4:30 – 5:00 pm: Workshop certificates, exit survey and general discussion

Sponsored and organized by:



Laboratorio de Investigaciones
en Parasitología Tropical



VectorBase