



Colorado State University

Todos Santos Center

BAJA CALIFORNIA SUR, MEXICO



**SMBE Regional Workshop on
Computational Biology in
Todos Santos, Mexico**

April 8-12, 2019



Tai



Mark



Alissa



Dan



Aines

Contact Information

Tai Montgomery

- Tai.Montgomery@colostate.edu
- <https://www.montgomerylab.org>

Dan Sloan

- Dan.Sloan@colostate.edu
- <https://sites.google.com/site/danielbsloan>

Mark Stenglein

- Mark.Stenglein@colostate.edu
- <http://www.stengleinlab.org>

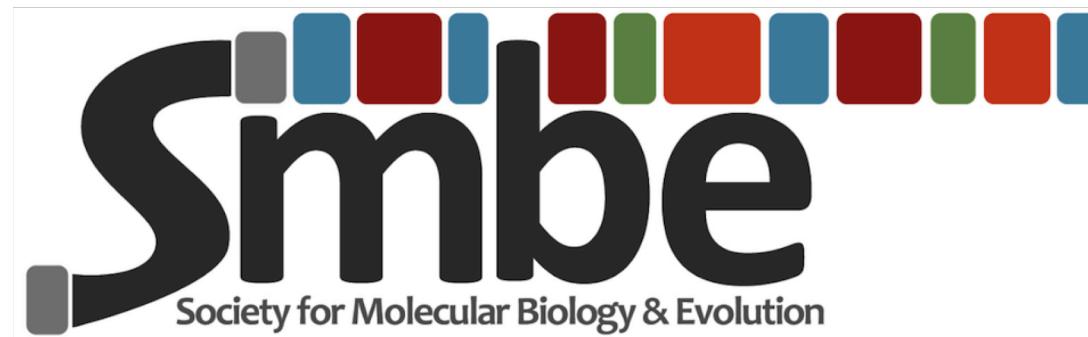
Alissa Williams

- Alissa.Williams@colostate.edu

Aines Castro Prieto

- Aines.Castro.Prieto@colostate.edu

Sponsors



Learning objectives

- Learn how to use UNIX and the command line interface.
- Learn how to design genomics experiments.
- Learn how to handle and manipulate genomics datasets.
- Learn how to analyze genomics data.
- Learn how to visualize genomics data.

Schedule

Monday: Introduction to high-throughput sequencing and computational biology

- Illumina sequencing
- Command line tools
- Obtaining and manipulating genomics data

Tuesday: RNA-seq

- RNA-seq data analysis

Wednesday: Comparative genomics

- Assembly and annotation
- Variant calling

Thursday: Comparative genomics (cont.) and data visualization

- Local BLAST
- Metagenomics
- R, R Markdown and Data Visualization

Friday: Scripting

- GitHub
- Bash and Python

<https://dbsloan.github.io/TS2019/>